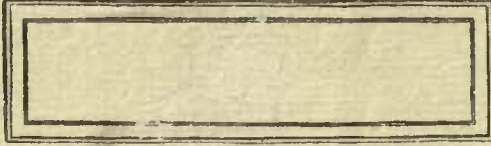


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DEPARTMENT OF AGRICULTURE.

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REPORT

UPON AN

EXAMINATION OF WOOLS

AND

OTHER ANIMAL FIBERS,

BY

WM. McMURTRIE, E. M., Ph. D.



MADE UNDER THE DIRECTION

OF THE

COMMISSIONER OF AGRICULTURE.

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WASHINGTON:  
GOVERNMENT PRINTING OFFICE.  
1886.



TS1630  
M3

**Joint resolution to print ten thousand copies of the Report of the Commissioner of Agriculture on the International Sheep and Wool Show held in Philadelphia in September, eighteen hundred and eighty.**

*Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, That there be printed ten thousand copies of the Report of the Commissioner of Agriculture on the International Sheep and Wool Show held in Philadelphia, Pennsylvania, in September eighteen hundred and eighty; of which three thousand copies shall be for the use of members of the Senate, six thousand copies for the use of members of the House of Representatives, and three thousand copies for the use of the Commissioner of Agriculture; the work to be subject to the approval of the Commissioner of Agriculture.*

Approved, August 4, 1886.

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- P. 34. In caption of table, read VII instead of VIII.  
 P. 41. At end of second paragraph, instead of Plate VI, at *a a*, read Plate XXV.

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At end of second paragraph instead of Line 21, at a word Plate XXV.  
in edition of 1861, read VII instead of VIII.





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## INTRODUCTORY NOTE.

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UNITED STATES DEPARTMENT OF AGRICULTURE, COMMISSIONER'S OFFICE,  
*Washington, D. C., September 20, 1886.*

It gives me great pleasure to state that in accordance with a recommendation contained in my first annual report, Congress provided at its last session for printing the following report, originally made to my immediate predecessor, in 1883. By my direction it has been revised and corrected, and its interesting and important information, based upon an elaborate system of tests and scientific examination, and, happily, furnishing a scientific indorsement of American wool, is now laid before the country.

NORMAN J. COLMAN,  
*Commissioner of Agriculture.*







## LETTER OF TRANSMITTAL.

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CHAMPAIGN, ILL., August 25, 1886.

SIR: I have the honor herewith to submit a report on the examination of wools and other animal fibers prepared under the direction of your predecessors in office, and that I have finally had the pleasure to revise and correct for publication by your order. I may venture to express the hope that the results and conclusions here presented may not have diminished in value or interest from the delay in their publication, and my satisfaction that this product of several years of labor is to be brought before the public through your influence and exertions.

Very respectfully,

WM. McMURTRIE,  
*Professor of Chemistry, University of Illinois.*

Hon. NORMAN J. COLMAN,  
*Commissioner of Agriculture.*

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## ORIGINAL TRANSMITTAL.

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CHAMPAIGN, ILL., July 1, 1884.

SIR: I have the honor to submit herewith a report of my investigation of the physical properties of wools and other animal fibers made in pursuance of the provisions of an act of Congress, approved April 16, 1880.

This act of Congress provided for making a collection of wools and other animal fibers exhibited at the International Exhibition of Sheep, Wool, and Wool Products held in Philadelphia in September, 1880, and for "making a scientific examination of the fineness, textile strength, and felting properties" of the material so collected. These provisions were construed to direct a study of all the important qualities of the fibers named, and the work prosecuted has therefore been extended to the minute structure of the fiber of different breeds, its length, crimp, fineness, strength, and elasticity, and the discussion of the relation of each of these properties to the other, and to the breed, sex, age, and portion of fleece represented.

In a work of this kind it is natural that most of the results should be of a statistical character and should therefore be expressed in tabular form, and it is thus that we have for the most part presented them. In a few cases the relations are shown by series of curves, but these are principally explanatory of tables that have preceded. In the construction of the tables we have aimed to so present the results as to clearly show all the important relations to be taken into account and make them readily intelligible to all interested. Each property named is illustrated in the tables and discussed in the text, first separately and afterward as regards the others. We do not claim to have pointed out all the relations that may be shown by these figures, nor would it be possible for us under the circumstances to do so. We have therefore submitted, first of all, all the results obtained, so that whenever it may be desirable other hands may take up the work, develop other relations here overlooked, and formulate conclusions of interest and value either to the agricultural or commercial side.

The examination was begun with pure breeds alone, but it was afterwards extended to a study of the commercial grades of the markets of Philadelphia and Boston by means of material for which we are indebted to the generous interest of Mr. J. D. Whitham, of Valley Grove, W. Va., and Mr. William G. Markham, of Avon, N. Y., and I desire here to express my high appreciation of the valued assistance thus afforded. It has enabled us



to show the variation occurring in these grades and determine, to an imperfect extent it is true, yet with some considerable degree of satisfaction, the standards that should be adopted for each grade. These must of necessity largely depend in this country, as may be seen from the notes of the catalogue list of the grades, not upon one property alone, but upon a combination of all. And while the present condition of the commercial demands admit of the wide variations here shown, it is to be hoped that the time will come when manufacturers will be more exacting in their demands, requiring greater uniformity in the quality of their raw material, and securing as a result greater uniformity and stability in the quality of the products of their looms. Nothing but such demands by manufacturers can overcome the more or less careless habits of American wool-growers, and on the other hand the exercise of greater care in the management of flocks must undoubtedly have an important influence in reducing the demand for a foreign product for the manufacture of the better and finer grades of woolen goods. It therefore behooves all interested in the great woolen industries of the country to use every endeavor to bring about this greatly desired end.

In conclusion I desire to acknowledge the intelligent and efficient assistance I have received at the hands of Mr. F. B. Dosh, now deceased, Mr. A. S. Hall, and Prof. N. Clifford Ricker, in the practical work of their investigations and the discussions of the results; and of the Messrs. J. W. Queen & Co., of Philadelphia, and Edward Kübel, of Washington, in the construction of the special apparatus required in the work.

And finally I desire to thank you, sir, for the continued and generous support and encouragement I have received at your hands throughout the course of this investigation.

Respectfully submitted.

WM. McMURTRIE, E. M. PH. D.,  
*Professor of Chemistry, Illinois Industrial University.*

Hon. GEO. B. LORING,  
*Commissioner of Agriculture.*

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#### ANNOUNCEMENTS, REGULATIONS, PREMIUM LISTS, &C.

*International Exhibition of Sheep, Wool, and Wool Products, to be held in the Main Exhibition Building, Fairmount Park, Philadelphia, September, 1880, under the auspices of the Pennsylvania State Agricultural Society.*

The International Exhibition of Sheep, Wool and Wool Products will be held in response to the general and earnest desire of American sheep-breeders and wool-growers, expressed in their correspondence with the Pennsylvania State Agricultural Society during two years past.

The effect of such an exhibition on great branches of agricultural and mechanical industry, both of which will be represented, cannot fail to be most salutary. Nor on these branches only; chemistry in its applications to the manufacture and fixing of dyes, and the arts of design in the production of original and tasteful patterns, will also feel the impulse.

Active competition for prizes, among the best animals of the most improved breeds of this and foreign countries, will lead to a more intimate knowledge and more general adoption of the methods of breeding, by which marked and permanent improvement has been gained. It will stimulate to further investigation into the effects of breed, climate, soil, and forage upon the quality and quantity of wool and flesh, facilitate the interchange of views among the best growers, and insure the more general introduction of improved stock.

The exhibition will also lead to a better understanding between manufacturers and growers on the subject of the needs of the former and the methods of supplying them; it will tend to show the latest and most approved inventions for cleaning, combing, bleaching, spinning, weaving, and felting wool, the newest and most durable dyes, the apparatus and processes for their production and application, and the most elegant fabrics from celebrated mills at home and abroad.

A general and cordial invitation to participate in the exhibition, and to compete for the prizes, is extended to the people of all nations.

The United States Commissioner of Agriculture will use whatever influence and co-operation it may be in his power individually and through his Department to afford.

Congress has enacted, and the President of the United States has approved, a bill authorizing and directing the Commissioner of Agriculture to make a full and complete report of the Exhibition; and the Treasury Department has decided that the Exhibition Building may be treated for the purposes of the show as a United States warehouse, from which withdrawals for consumption may be made in the usual manner, after entry therefor at the custom-house.

The objects must be accompanied by consular invoices, and be entered for warehouse in the usual manner. The entry should show the purpose of the importation, and the importer attach his affidavit to the effect that the objects are imported for the sole purpose of exhibition, as authorized by the statute.\*

All objects, including sheep, will be placed within the main building of the International Exhibition of 1876.

Railroad stations opposite the Park will afford every facility for the transfer of passengers, live stock, machinery, and goods. Arrangements have been made with the railroad companies of Pennsylvania for the free return, over their lines, of all unsold articles and animals on which full freight to the Exhibition has been prepaid; and the committee of arrangements will promptly co-operate with exhibitors in securing a similar reduction on lines beyond the State.

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\*A circular giving full information to exhibitors of foreign products who desire at the close of the exhibition to dispose of them, or withdraw them for exportation, will be sent free on application to the Secretaries.



## NATIONAL COMMITTEE OF CO-OPERATION.

Hon. Wm. G. Le Due, *Commissioner of Agriculture, Chairman.* Pennsylvania: Hon. W. S. Shallenberger, Beaver. New York: Wm. G. Markham, esq., Avon. Ohio: E. J. Hiatt, Chester Hill. Maryland: Hon. James T. Earle, Centreville. Massachusetts: John L. Hayes, esq., Boston. Tennessee: Hon. J. B. Killebrew, Nashville. Maine: C. P. Mattocks, esq., Portland. New Jersey: Henry C. Kelsey, Trenton. Vermont: Albert Chapman, esq., Middlebury. Texas: F. W. Shaeffer, San Diego. West Virginia: Hon. Henry G. Davis, Piedmont. Kentucky: T. J. Meglbbin, esq., Cynthiana. South Carolina: Hon. D. Wyatt Alken, Cokesbury. Illinois: Daniel Kelly, esq., Wheaton. Virginia: Hon. Thos. Pollard, Richmond. Colorado: J. S. Stanger, esq., Denver. California: Bergimer Flint, esq., San Juan. Oregon: H. V. Sanborn, esq., Portland. Missouri: Samuel Archer, esq., Kansas City. Wisconsin: Charles R. Gibbs, esq., Whitewater. Michigan: J. P. Sanborn, Port Huron. Ontario: Hon. David Blair, Toronto. Quebec: Hon. Edward A. Bernard, Quebec.

## COMMITTEE OF ARRANGEMENT.

William S. Bissell, Allegheny County, *President.* John C. Morris, Susquehanna County. Alfred L. Kennedy, Philadelphia. D. W. Seiler, Harrisburg, *Recording Secretary.* John McDowell, Washington County. William H. Egle, Harrisburg. Elbridge McConkey, Harrisburg, *Corresponding Secretary.*

*Regulations of the International Exhibition of Sheep, Wool, and Wool Products.*

Competition is open to the People of all Nations.

No entry fee is required except for the Sweepstakes prizes, when a fee equal to ten per cent. of the prize must accompany the entry in all cases.

The Books of Entry are now open at the office, northwest corner of Tenth and Chestnut streets, Philadelphia.

All Sheep, Wool, and Hair must be entered on the books of the Secretary on or before Tuesday, September 14, and all other objects, except Sheep-dogs, on or before Tuesday, August 31.\*

All Sheep entered for competition must be entered in the name of the *bona fide* owner or owners or firm or authorized agent, giving the names of the breed and breeders as well as the owner's residence.

When an allotment of space has been definitely made, the applicant will be notified and a Permit for Space sent him.

All objects intended for the International Exhibition, except animals, hair, and wool, must be in their places on or before Monday, September 6, the day of the opening of the State Fair. They will thus continue on exhibition during three weeks, *i. e.*, the two weeks of the State Fair, and the week of the International Show.

Pens for the reception of Sheep, and spaces for the display of Hair and Wool, will be in readiness on Saturday, September 18, noon. Before that time no Sheep will be permitted to enter the grounds.

All animals must be within the gates on Monday, September 20, in order that they may be arranged for immediate examination by the juries.

Hay and straw will be furnished free. Grain will be provided at cost price for those who desire to purchase feed for their stock.

A certificate of authentic pedigree must be filed with the Secretary, setting forth that the Sheep entered for competition are regularly recorded in a sheep-breeder's register, recognized as such in one or more of the States, or by a foreign association of sheep-breeders, or that they are qualified for entry therein, by descent and beyond dispute, where such registry exists. If registered, a copy of said certificate must be filed with the Secretary for the use of the Jury of Awards; if unregistered, satisfactory proof of their eligibility to registration must be furnished at the time of entry.

All sheep entered as Merino, middle wool, or long wool, and intended for competition in their respective divisions, are not to be overfed, or in other words, overfat, but must be in good breeding condition. As the great object of the exhibition is to encourage breeders, overfat Sheep, except as hereinafter provided, other than lambs, will be excluded.

Merines entered for competition must be shorn of uniform length over the entire surface, leaving the stubble not longer than three-eighths of an inch when shorn, exhibitor to state the time of last shearing. Any subsequent clipping into shape, smoothing the surface, or adding any foreign substance or coloring to the surface, shall disqualify from competition. An exhibitor adjudged to be practicing fraud, whether by violating this rule or by any other false representation of his exhibit, shall forfeit all his rights and privileges as an exhibitor.

All exhibitors of thoroughbred Sheep of any of the three divisions may have the privilege of submitting to the Juries of Awards in such class the scale of points used in entering the animals for registration, where such registration is provided and recognized. When two or more scales of points are submitted, the jury of awards shall have the power to select values from those scales for use in determining the award. Sheep unregistered, but eligible to registration, unable to scale the requisite points, are declared ineligible to compete for prizes, but if exhibited in pens or flocks they may contribute to make up the number required; but no prize can be awarded unless such pen or flock, on the average, is the highest of those in competition above the minimum required in any recognized register. Sheep in pens, or otherwise, unable to scale the above number of points, can receive only the third or lowest premiums of award. A pen of sheep shall be understood to include three or more in number.

In the English breeds, where no recognized registry exists, the members of the Jury of Awards shall be governed by such scale of points and such certificates of pedigree and pure breeding, as to them shall seem best, such certificates to be filed with the Secretary, as shall establish that the animals have been imported or descended directly from one or more importations from Great Britain.

The members of the Juries of Award shall be selected from among the most expert and efficient residents of the several States of the Union and of foreign wool-growing countries. Officers and members of the Pennsylvania State Agricultural Society shall not be appointed to membership in the Juries.

Overfat Sheep can compete only as fat animals. For fat Sheep the awards shall be governed by the rules adopted by the Illinois State Board of Agriculture.

Lines of shafting, having velocities of 120 and 240 revolutions per minute, respectively, extend lengthwise of the building, at the height of 24 feet from the floor.

\* For regulations of the Collie trials, see Division F, of List of Premiums.



## LETTER OF TRANSMITTAL.

Shafting and steam power will be supplied gratuitously to exhibitors of machinery in motion. Countershafts, pulleys on the main shafts, and all necessary appliances, must be furnished by exhibitors at their own cost. Pulleys for main shafts must not exceed 3 feet in diameter. They must be balanced in halves, and so secured as not to weaken or injure the shafting. Exhibitors will be required to maintain supervision over all gear supplied by them, and to furnish attendants to operate their machinery.

Application for motive power should be made before September 1. It should state actual horse-power required and width of face and number of revolutions of driving-pulley.

W. S. BISSELL, *President.*

D. W. SEILER, *Recording Secretary.*

ELBRIDGE McCONKEY, *Corresponding Secretary.*

Office of International Exhibition of Sheep, Wool, and Wool Products, northwest corner Tenth and Chestnut streets, Philadelphia, July 7, 1880.

## LIST OF PREMIUMS.

[The diploma of the International Exhibition will accompany each cash premium.]

## DIVISION A.—MERINOS.

Premium list, number.	Description.	First premium.	Second premium.	Third premium.
1	Ram over three years .....	\$100 00	\$50 00	\$25 00
2	Ram, two years and under three .....	75 00	40 00	20 00
3	Ram, one year and under two .....	50 00	25 00	15 00
4	Ram lamb .....	30 00	20 00	10 00
5	Pen three ewes over three years .....	75 00	50 00	25 00
6	Pen three ewes, two years and under three .....	50 00	35 00	20 00
7	Pen three ewes, one year and under two .....	30 00	25 00	15 00
8	Pen three ewe lambs .....	20 00	15 00	10 00
9	Stock ram, and ten of his get—two males, eight females; not more than three to be shown under one year old .....	125 00	75 00	50 00
10	Stock ram, as above, under one year old .....	125 00	75 00	50 00
11	Pen to consist of one ram, of any age, three ewes two years and over, three ewes between one and two years, and three ewe lambs .....	125 00	75 00	50 00
SWEEPSTAKES.				
12	Best pen to consist of two rams and fourteen ewes; all to be line bred, of one breed .....	*450 00	.....	.....
13	Two rams and ten ewes over one year .....	200 00	.....	.....

## DIVISION B.—MIDDLE WOOLED.

SOUTHDOWNS.				
1	Ram, two years or over .....	\$100 00	\$50 00	\$25 00
2	Ram, one year and under two years .....	75 00	40 00	20 00
3	Ram lamb .....	50 00	25 00	15 00
4	Pen three ewes, two years or over .....	75 00	40 00	20 00
5	Pen three ewes, one year and under two years .....	50 00	25 00	15 00
6	Ewe lamb .....	30 00	20 00	10 00
7	Stock ram, and five of his get, over one year .....	75 00	50 00	25 00
OTHER MIDDLE WOOLED.				
9	Ram, two years and over .....	100 00	50 00	25 00
10	Ram, one year and under two years .....	75 00	40 00	20 00
11	Ram lamb .....	50 00	25 00	15 00
12	Pen three ewes, two years and over .....	75 00	40 00	20 00
13	Pen three ewes, one year and under two years .....	50 00	25 00	15 00
14	Pen three ewe lambs .....	30 00	20 00	10 00
15	Stock ram and five of his get, over one year .....	75 00	50 00	25 00
16	Stock ram and five of his get, under one year .....	75 00	50 00	25 00
SWEEPSTAKES.				
17	Best two rams and ten ewes over one year .....	200 00	.....	.....

## DIVISION C.—LONG WOOLED.

1	Ram, two years old and over .....	\$100 00	\$50 00	\$25 00
2	Ram, one year and under two years .....	75 00	40 00	20 00
3	Ram lamb .....	50 00	25 00	15 00
4	Pen three ewes, two years and over .....	75 00	40 00	20 00
5	Pen three ewes, one year and under two years .....	50 00	25 00	15 00
6	Pen three ewe lambs .....	30 00	20 00	10 00
	Stock ram and five of his get, over one year, one male and four females .....	125 00	75 00	50 00
	Stock ram and five of his get, under one year, one male and four females .....	125 00	75 00	50 00
SWEEPSTAKES.				
	Two rams and ten ewes .....	250 00	.....	.....

## DIVISION D.—FAT SHEEP.

1	Ten merinos .....	\$100 00	\$50 00	.....
2	Ten long or combing wools .....	100 00	50 00	.....
3	Ten middle wool or mutton .....	100 00	50 00	.....
4	Best single fat sheep .....	50 00	.....	.....
5	Best dressed carcass .....	30 00	20 00	\$10 00

\* \$250 of this sum subscribed by breeders.

NOTE.—Amount of premiums offered under division A, merinos, \$2,230; under division B, middle woolled, \$2,020; under division C, long woolled, \$1,435.



\* LIST OF PREMIUMS—Continued.

DIVISION E.—GOATS.

Premium list number.	Description.	First premium.	Second premium.	Third premium.
1	Angora, best pen, one buck, three does, over eighteen months old.....	\$50 00	\$25 00	.....
2	Cashmere, best pen, one buck, three does, over eighteen months old.....	40 00	20 00	.....
3	Alpaca, best pen, one buck, three does, over eighteen months old.....	30 00	15 00	.....

DIVISION F.—SHEPHERD'S DOGS.

[International Collie trials will be held daily on the grounds during the week of the exhibition under the personal direction of the superintendent. In these trials the intelligence and training of the Collie variety of the shepherd's dog will be practically tested, and the success of the competing animals in herding, driving, and penning sheep be made the basis of the awards. Prizes will be awarded in two classes.]

1	All-aged class.....	\$100 00	\$50 00	\$25 00
2	Puppy class.....	50 00	25 00	10 00

DIVISION G.—WOOL AND HAIR.

[The report of the Commissioner of Agriculture on the wool and hair exhibited, which has been ordered by the United States Government, will include microscopic and experimental observations. Printed blanks containing the items of information required of exhibitors for the purposes of the report will be furnished on application to the Secretaries.]

Premium list No.	Description.	Premium.	Premium list No.	Description.	Premium.
MERINO WOOL.			MIDDLE WOOL—continued.		
1	Fleeces: Best superfine.....	\$20 00	15	Best collection ten fleeces.....	\$50 00
2	Best XXX.....	20 00	16	Best collection samples.....	10 00
3	Best ram's.....	20 00	LONG WOOL.		
4	Best ewe's.....	20 00	Fleeces:		
5	Best ram's, scoured.....	20 00	17	Best Lincoln.....	20 00
6	Best ewe's, scoured.....	20 00	18	Best Cotswold.....	20 00
7	Best scoured in proportion to weight of carcass.....	20 00	19	Best Leicester.....	20 00
8	Best collection ten fleeces.....	50 00	20	Best scoured in proportion to weight of carcass.....	20 00
9	Best collection samples.....	10 00	21	Best collection ten fleeces.....	50 00
10	Best sample delaine wool.....	10 00	22	Best collection samples.....	10 00
MIDDLE WOOL.			HAIR.		
11	Fleeces: Best Southdown.....	20 00	23	Angora, best collection, six fleeces.....	20 00
12	Best Oxforddown.....	20 00	24	Alpaca, best collection, six fleeces.....	20 00
13	Best Shropshiredown.....	20 00	25	Cashmere, best collection, six fleeces.....	20 00
14	Best scoured in proportion to weight of carcass.....	20 00			

DIVISION H.—WOOLEN MACHINERY.

1	Best dyer's vat, manual.....	\$5 00	13	Best felting machine, in operation.....	\$50 00
2	Best dyer's vat, mechanical, in operation.....	20 00	14	Best power knitting machine, in operation.....	25 00
3	Best wool washer, in operation.....	30 00	15	Best fulling machine.....	10 00
4	Best dryer, with heat.....	15 00	16	Best shears, for cloth.....	5 00
5	Best dryer, without heat, in operation.....	15 00	17	Best jig, for raising cloth.....	5 00
6	Best carding machine, in operation.....	25 00	18	Best cloth folding machine.....	15 00
7	Best comb, for fine wool, in operation.....	50 00	19	Best apparatus for extracting vegetable coloring substances, in operation.....	10 00
8	Best comb, for coarse wool, in operation.....	50 00	20	Best cloth-pressing machine, in operation.....	15 00
9	Best mule, self-acting, in operation.....	100 00	21	Best collection of instruments for determining the strength and purity of dye liquors.....	10 00
10	Best loom, Jacquard, for carpets, in operation.....	100 00			
11	Best loom, Jacquard, for other figured fabrics, in operation.....	100 00			
12	Best loom, improved harness, in operation.....	100 00			

DIVISION I.—DYE STUFFS.

1	Best collection aniline dyes.....	Diploma.	6	Best collection vegetable coloring matters, crude.....	Diploma.
2	Best sample aniline green.....	Diploma.	7	Best collection vegetable coloring matters, extracted.....	Diploma.
3	Best sample aniline black.....	Diploma.	8	Best sample vegetable coloring matters, extracted.....	Diploma.
4	Best sample aniline red.....	Diploma.	9	Best collection mineral dyes and mordants.....	Diploma.
5	Best sample artificial alizarin.....	Diploma.	10	Best collection cleansing and bleaching agents.....	Diploma.

DIVISION K.—WOOLEN FABRICS.

FOREIGN.			AMERICAN.		
1	Best broadcloth, two pieces, assorted.....	\$25 00	21	Best broadcloth, two pieces, assorted.....	\$25 00
2	Best cassimeres, plain, two pieces, assorted.....	20 00	22	Best cassimeres, plain, two pieces, assorted.....	20 00
3	Best cassimeres, fancy, two pieces, assorted.....	20 00	23	Best cassimeres, fancy, two pieces, assorted.....	20 00
4	Best worsted coatings, two pieces, assorted.....	20 00	24	Best worsted coatings.....	20 00
5	Best merinos, two pieces, assorted.....	10 00	25	Best cashmere, cotton and wool, two pieces, assorted.....	10 00
6	Best cashmere, all wool, two pieces, assorted.....	10 00	26	Best delaine, cotton and wool, two pieces, assorted.....	10 00
7	Best delaine, all wool, two pieces, assorted.....	10 00	27	Best poplin, cotton and wool, two pieces, assorted.....	10 00
8	Best poplin, all wool, two pieces, assorted.....	10 00	28	Best hunting, all wool, two pieces, assorted.....	10 00
9	Best hunting, all wool, two pieces, assorted.....	10 00	29	Best flannel, all wool, two pieces, assorted.....	10 00
10	Best flannel, all wool, two pieces, assorted.....	10 00	30	Best blankets, all wool, two pair.....	10 00
11	Best blankets, all wool, two pair.....	10 00	31	Best carpet, Axminster, two pieces.....	10 00
12	Best carpet, Axminster, two pieces.....	10 00	32	Best carpet, Wilton, two pieces.....	10 00
13	Best carpet, Wilton, two pieces.....	10 00	33	Best carpet, Brussels, two pieces.....	10 00
14	Best carpet, Brussels, two pieces.....	10 00	34	Best carpet, tapestry, two pieces.....	10 00
15	Best carpet, tapestry, two pieces.....	10 00	35	Best carpet, Venetian, two pieces.....	10 00
16	Best carpet, Venetian, two pieces.....	10 00	36	Best carpet, Ingrain, two pieces.....	10 00
17	Best carpet, Ingrain, two pieces.....	10 00	37	Best drugget, two pieces.....	5 00
18	Best drugget, two pieces.....	5 00	38	Best felt, two pieces.....	5 00
			39	Best collection of bleached and dyed yarns, assorted colors.....	5 00



## LETTER OF TRANSMITTAL.

## INTERNATIONAL SHEEP-DOG TRIALS.

## DIVISION F.—SPECIAL RULES.

Blank applications for entry may be obtained of the secretaries up to the time of running the trials. The applications containing columns for names, age, sex, color marks, &c., of the dog are to be filled up by the exhibitor. All entries are free, and kennels will be provided for the dogs. No dog can be entered except for trial.

Each dog competing will be required to take five sheep from a pen, drive them a certain distance to another, and pen them there.

A fresh flock of sheep will be provided for each dog. He, in driving, may bark or not as may be his habit, but biting his sheep will be a demerit.

Each shepherd may take his dog over the ground before the sheep are brought in, and show or tell him what he wants him to do.

The shepherd may precede or follow the sheep as he may choose; he will not be permitted to assist his dog except by voice or gesture. Hallooing, berating, or much bidding, or noise, will detract from the estimate of the performance of the dog.

When a dog is working, no other dogs shall be present to distract his attention.

No person except the superintendent in charge, and the members of the jury shall enter the sheep ring while the dog is working.

The jury will carefully note the disposition and docility of the different flocks of sheep, and make due allowance for those which are more wild than others.

Each shepherd will have the privilege of exhibiting the working of his dog by choosing his own kind of work with the sheep, after the regular trial has been completed. He may also show the training of his dog for other practical purposes as a farm or house dog.

Dogs and bitches fifteen months old, or over, must compete in the aged class. Puppies under fifteen months, having competed in the puppy class, will also be eligible for entry in the aged class.

All ties will be run off on flocks of three sheep.

Tractability, ready obedience, steadiness in driving, gentleness in working the sheep, and general aptitude in the dog for the business before him, will have due influence with the jury in making the awards.

CORRESPONDENCE BETWEEN THE PENNSYLVANIA STATE AGRICULTURAL SOCIETY AND THE COMMISSIONER OF AGRICULTURE RELATIVE TO THE INTERNATIONAL EXHIBITION OF SHEEP, WOOL, AND WOOL PRODUCTS OF 1880.

OFFICE OF PENNSYLVANIA STATE AGRICULTURAL SOCIETY,  
Harrisburg, February 11, 1880.

Mr. COMMISSIONER: In behalf of the Pennsylvania State Agricultural Society, we have the honor to inform you of the intention of the society, to hold an International Exhibition of Sheep and Wool in the Main Centennial Building, Fairmount Park, Philadelphia, in September next.

For more than two years the society, through a committee appointed for the purpose, has been in correspondence on the subject with prominent sheep breeders and wool-growers throughout the country. The opinion expressed by them is earnestly in favor of an international exhibition.

We therefore respectfully and cordially ask your approval of the enterprise, and your influence and co-operation in advancing it.

We cannot doubt that you fully recognize the value of a branch of agriculture which furnishes the most nutritious of meats for home consumption and for exportation, and which also constitutes the basis of a manufacturing industry of the highest importance, and that you moreover regard it as a branch which appeals strongly and deservedly to the fostering care of Government.

The returns from your department show in States North and South, deprived of their fertility by slovenly and wasteful cultivation, that sheep husbandry so well adapted to supply the lost fertility, is scarcely, if at all, on the increase;

That sheep are bred for mutton or for wool only, when both, of fine and desirable quality, may be advantageously produced by means of one and the same animal;

That the benefit resulting from the infusion of pure blood into our native flocks needs to be more widely known, and the practice more generally followed;

That our country is capable of growing every grade of combing and fine wool, and that the 48,000,000 pounds annually imported by our manufacturers can be produced here;

That immense tracts of waste land in the Atlantic and the Western States may be most profitably utilized by the raising of sheep upon them.

The value of the careful and protracted investigations carried on in this and foreign countries in order to determine the conditions most favorable to fecundity, early maturity, palatable flavor of flesh and fineness, soundness, weight, strength, elasticity, length, and luster of the wool can be made manifest by bringing together the best animals and fleeces in an international competitive exhibition.

The year of the census is an eligible one for showing how we compare with other nations in this department of industry. Pennsylvania is centrally and conveniently situated for such an exhibition. Her farmers are awakening to the importance of sheep-husbandry. One of her counties, Washington, has, as you have recently published, "over four hundred thousand sheep, producing as good merino wool as there is in the world." You also published the statement that "the greatest of American inventions and progress in the manufacture of wools is in the production of carpets." We need not remind you that Philadelphia is the center of this branch of manufactures, and that one of her carpet mills employs three thousand hands.

The Main Centennial Building, the grandest and most appropriate structure for the holding of the proposed exhibition has been engaged for the purpose, and sufficient funds for the payment of all expenses, including a liberal and attractive list of premiums, have been secured.

Again asking for this important work of our Society, the influence and co-operation of your Department, we are,  
Very respectfully, your obedient servants,

W. S. BISSELL, *President*,  
JOHN McDOWELL, *Vice-President*,  
ALFRED L. KENNEDY, *Vice-President*,  
D. W. SEILER, *Recording Secretary*,  
ELBRIDGE McCONKEY, *Corresponding Secretary*,  
*Committee of Pennsylvania State Agricultural Society.*

Hon. W. G. LE DUC,  
*Commissioner of Agriculture, Washington, D. C.*



DEPARTMENT OF AGRICULTURE,  
Washington, D. C., February 20, 1880.

GENTLEMEN: I acknowledge the receipt of your communication of 11th instant, advising me of the intention of your Society to hold an International Exhibition of Sheep and Wool, in the Main Centennial Building, Philadelphia, in September next.

I do not hesitate to express my hearty approval of the enterprise, and to promise whatever influence and co-operation it may be in my power, individually and through this Department, to afford.

I recognize fully the vast importance of Sheep Husbandry, in its connection with agriculture and the great industrial interests of the country, and I can readily conceive of the advantages which must result from such a competitive exhibition as your Society contemplates, of animals and fleeces and methods of management in the production of wool, which distinguish the industry in the different countries of the world.

Our widespread country, in the possession of natural advantages to an almost unlimited extent, is eminently adapted to the increase of this branch of industry far beyond our own needs for domestic consumption, and in view of the wealth of the nation it is entitled to every encouragement which the Government can legitimately bestow upon it.

I am, very respectfully, your obedient servant,

WM. G. LE DUC,  
Commissioner of Agriculture.

Messrs. W. S. BISSELL, *President*,  
JOHN MCDOWELL, *Vice-President*,  
ALFRED L. KENNEDY, *Vice-President*,  
D. W. SEILER, *Recording Secretary*,  
ELBRIDGE MCCONKEY, *Corresponding Secretary*,  
*Committee of Pennsylvania State Agricultural Society.*

A BILL to authorize and direct the Commissioner of Agriculture to attend, in person or by deputy, the International Sheep and Wool Show, to be held in the Centennial Buildings, Fairmount Park, Philadelphia, in September, anno Domini eighteen hundred and eighty, and to make full and complete report of the same, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Commissioner of Agriculture be, and he is hereby, authorized and directed to attend in person or by deputy the International Sheep and Wool Show, to be held in the Centennial Buildings, Fairmount Park, Philadelphia, in September, anno Domini eighteen hundred and eighty, and to make a full and complete report of the same.

SEC. 2. All sheep and wool which shall be imported for the sole purpose of exhibition at the international show hereinbefore mentioned, shall be admitted without the payment of duty, or customs fees or charges, under such regulations as the Secretary of the Treasury may prescribe: *Provided*, That all sheep and wool which shall be sold in the United States, or withdrawn for consumption therein at any time after such importation, shall be subject to the duties, if any, imposed on like imports by the revenue laws in force at the date of importation: *And provided further*, That in case any sheep or wool, imported under the provisions of this act, shall be withdrawn for consumption, or shall be sold without payment of the duty required by law, all the penalties prescribed by the revenue laws shall be applied and enforced against such imports and against the person who may be guilty of such withdrawal or sale.

Approved:

RUTHERFORD B. HAYES,  
*President.*

WASHINGTON, April 1, 1880.

#### CONVENTION TO PROMOTE THE SHEEP AND WOOL INDUSTRY.

DEPARTMENT OF AGRICULTURE, Washington, D. C., August 12, 1880.

To whom it may concern:

Having been directed by Congress to attend and make a full report of the International Exhibition of Sheep, Wool and Wool Products, to be held in Philadelphia, under the auspices of the Pennsylvania State Agricultural Society, in September next; and having in consultation with the committee of arrangement of the exhibition, concluded that much valuable information could be elicited, profitable alike to those engaged in sheep breeding, wool-growing, and wool-manufacturing, by bringing them together for the mutual interchange of views, the statement of needs, and the presentation and discussion of methods and results: it has been determined to call a convention of persons interested in the afore-mentioned branches of industry, to meet in the Main Centennial Building, Fairmount Park; Philadelphia, on Wednesday, September 22, 1880, at 11 o'clock, a. m.

While thus notifying you of the holding of the convention, a cordial invitation is hereby extended to you to attend and participate in the proceedings, either as a representative of the society or association to which you may belong, or in your individual capacity.

The following, among other subjects, are suggested for the consideration of the convention:

Advancement of the general interest of the wool-grower.

Prompt and systematic collection and distribution by this Department, of information concerning the supply of flock products, and the demand for them.

Relative advantages of our sheep-breeding States, and the breeds best adapted to them.

Methods of shearing and handling sheep, and of packing and grading wool for the market.



Increasing the production of the mountain lands of the Atlantic States, by the systematic extension of sheep-husbandry.

Benefits resulting from the introduction of pure blood into our native flocks.

Breeds capable of yielding from a given acreage, the most profitable returns in mutton and wool taken jointly.

Management of sheep in summer and winter—of lambs most profitable for market.

Recent inventions in wool manufacture and their relative importance.

Recent discoveries and inventions in the production of dyes and the art of dyeing—their relative importance.

Grades of wool which this country must produce, in order fully to supply the demands of her looms, and how best to produce them.

WM. G. LE DUC,  
Commissioner of Agriculture.

[Circular.—1880. Department No. 34, Secretary's Office.]

IMPORTATIONS FOR THE INTERNATIONAL SHEEP AND WOOL SHOW AT PHILADELPHIA, IN SEPTEMBER, 1880.

TREASURY DEPARTMENT, *Washington, D. C., April 8, 1880.*

*To collectors and others :*

Your attention is invited to the following provisions of the act approved April 1, 1880, relating to an "International Sheep and Wool Show," to be held at Philadelphia in September of the present year, viz :

"*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Commissioner of Agriculture be, and is hereby, authorized and directed to attend in person, or by deputy, the international sheep and wool show to be held in the Centennial buildings, Fairmount Park, Philadelphia, in September, anno Domini eighteen hundred and eighty, and to make a full and complete report of the same.*

"SECTION 2. All sheep and wool which shall be imported for the sole purpose of exhibition at the international show hereinbefore mentioned, shall be admitted without the payment of duty or customs fees or charges, under such regulations as the Secretary of the Treasury may prescribe: *Provided, That all sheep and wool which shall be sold in the United States, or withdrawn for consumption therein at any time after such importation shall be subject to the duties, if any, imposed on like imports by the revenue laws in force at the date of importation: And provided further, That in case any sheep or wool imported under the provisions of this act shall be withdrawn for consumption, or shall be sold without payment of the duty required by law, all the penalties prescribed by the revenue laws shall be applied and enforced against such imports and against the person who may be guilty of such withdrawal or sale.*"

The articles mentioned must be accompanied by consular invoices, and be entered for warehouse in the usual manner. The entry should show the purpose of the importation, and the importer be required to attach his affidavit to the effect that the merchandise is imported for the sole purpose of exhibition, as authorized by the statute.

The buildings specified in the act may be treated, for the purposes thereof, as United States warehouses, from which withdrawals for consumption may be made in the usual manner, after entry therefor, at the custom-house.

No portion of the merchandise can be removed from said buildings except on a permit to be obtained from the collector of customs, and under the supervision of a customs officer. Such permits will be given only on payment of duties, or on withdrawals for transportation or exportation, or on the removal of wool to bonded warehouses.

After the expiration of the month mentioned in the act, the merchandise not entered for consumption, transportation, or (in the case of wool) not placed in bonded warehouse, at the expense of the owners, may be taken possession of by the collector of customs in the usual manner.

Sheep or wool imported at other ports, for the show, may be transported to Philadelphia, under the relations relating to the entry of merchandise for immediate transportation, without appraisement.

The merchandise may be withdrawn for exportation or transportation without payment of duties, and no customs fees or charges will be levied either on entries for exhibition or for exportation; on other withdrawals the usual fees will be collected.

The attention of all parties concerned is invited to the penalties denounced by the act for illegal sales or withdrawals of the merchandise.

By order :

H. F. FRENCH,  
*Assistant Secretary.*

DEPARTMENT OF STATE, *Washington, July 15, 1880.*

*To the consular officers of the United States :*

GENTLEMEN: I inclose herewith a copy of a circular dated the 8th of April last, and issued by the Assistant Secretary of the Treasury to collectors and others in reference to the provisions of the act of Congress approved April 1, relating to an International Sheep and Wool Show to be held in Philadelphia in September of the current year.

It will be observed therefrom that all sheep and wool imported for the sole purpose of exhibition are to be admitted without the payment of duty or customs fees or charges, under such regulations as the Secretary of the Treasury may prescribe. These regulations are contained in the circular. The articles mentioned must be accompanied by consular invoices, across the face of which it is suggested that consular officers should write a statement that the articles are intended for the exhibition. It will be expected that you should comply with this suggestion in case invoices of the articles adverted to are presented to you for verification.

I am, gentlemen, your obedient servant,

JOHN HAY,  
*Acting Secretary.*



LETTER OF TRANSMITTAL.

The following is the list of the premiums awarded by the judges in the different classes :

DIVISION A.—MERINOS.

Premium list number.	Description.	Premium.	To whom awarded.	Amount.
1	Ram, over 3 years.....	1	S. S. Campbell, Cadiz, Ohio .....	\$100 00
		2	Robert Perrine, Patterson's Mills, Pa.....	50 00
		3	George Hammond, Middlebury, Vt.....	25 00
2	Ram, over 2 years and under 3.....	1	John M. Miller, Hickory, Pa.....	75 00
		2	S. C. Work, Hickory, Pa.....	40 00
		3	E. Peck & Son, Streator, Ill.....	20 00
3	Ram, over 1 year and under 2.....	1	George Hammond, Middlebury, Vt.....	50 00
		2	McCalmont Glass, Miller & Work.....	25 00
		3	John M. Miller, Hickory, Pa.....	15 00
4	Ram lamb.....	1	Glass & Work.....	30 00
		2	S. S. Campbell, Cadiz, Ohio.....	20 00
		3	R. Perrine, Patterson's Mills, Pa.....	10 00
5	Pen of 3 ewes, 3 years.....	1	George Hammond, Middlebury, Vt.....	75 00
		2	Robert Perrine, Patterson's Mills, Pa.....	50 00
		3	James Glass, Pennsylvania.....	25 00
6	Pen of 3 ewes over 2 years and under 3.....	1	John M. Miller, Hickory, Pa.....	50 00
		2	S. C. Work, Hickory, Pa.....	35 00
7	Pen of 3 ewes over 1 year and under 2.....	1	George Hammond, Middlebury, Vt.....	30 00
		2	S. S. Campbell, Cadiz, Ohio.....	25 00
		3	Robert Perrine, Patterson's Mills, Pa.....	15 00
8	Pen of 3 ewes, lambs.....	1	S. S. Campbell, Cadiz, Ohio.....	20 00
		2	John M. Miller, Hickory, Pa.....	15 00
		3	Alexander McCalmont.....	10 00
9	Stock ram, and 10 of his get.....	1	George Hammond.....	125 00
		2	S. C. Work.....	75 00
10	Stock ram, and 10 of his get, any age.....	1	James Glass and S. S. Campbell.....	125 00
11	Pen, 1 ram and 9 ewes.....	1	W. L. Archer.....	125 00
		2	John M. Miller.....	75 00
		3	Robert Perrine.....	50 00
12	Sweepstakes.....		W. L. Archer.....	450 00
13	.....do.....		.....do.....	200 00

DIVISION B.—MIDDLE WOOLS.

SOUTHDOWNS.				
1	Ram, 2 years old and over.....	1	T. S. Cooper, Coopersburg, Pa.....	\$100 00
		2	T. S. Cooper.....	50 00
		3	R. M. Fisher, Danville, Ky.....	25 00
2	Ram, over 1 year and under 2.....	1	T. S. Cooper.....	75 00
		2	.....do.....	40 00
		3	R. M. Fisher.....	20 00
3	Ram lamb.....	1	.....do.....	50 00
		2	S. J. Sharpless, Philadelphia, Pa.....	25 00
		3	.....do.....	15 00
4	Pen of 3 ewes, 2 years and over.....	1	R. M. Fisher.....	75 00
		2	S. J. Sharpless.....	40 00
		3	Fairmount Park, Philadelphia, Pa.....	20 00
5	Pen of 3 ewes, over 1 year old and under 2.....	1	T. S. Cooper.....	50 00
		2	.....do.....	25 00
		3	R. M. Fisher.....	15 00
6	Ewe lamb.....	1	.....do.....	30 00
		2	.....do.....	20 00
		3	S. J. Sharpless.....	10 00
7	Stock ram and his get.....	1	T. S. Cooper.....	75 00
		2	.....do.....	50 00
		3	R. M. Fisher.....	.....
OTHER DOWNS.				
9	Ram, 2 years old and over, Oxforddown.....	1	T. S. Cooper.....	100 00
		2	.....do.....	50 00
10	Ram, over 1 year old and under 2, Oxforddown.....	1	.....do.....	75 00
		2	.....do.....	40 00
		3	.....do.....	20 00
11	Ram lamb, Shropshiredown.....	1	William Homewood, Newark, Del.....	50 00
		2	.....do.....	25 00
		3	T. S. Cooper.....	15 00
12	Pen of 3 ewes, 2 years old and over, Oxforddown.....	1	.....do.....	\$75 00
		2	.....do.....	40 00
13	Pen of 3 ewes, over 1 year and under 2, Oxforddown.....	1	.....do.....	50 00
		2	.....do.....	25 00
		3	.....do.....	15 00
14	Pen of 3 ewe lambs, Oxforddown.....	1	.....do.....	30 00
15	Stock ram over 1 year and 5 of his get, Oxforddown.....	1	.....do.....	75 00
16	Stock ram under 1 year and 5 of his get, Oxforddown.....	1	.....do.....	75 00
	Sweepstakes.....		.....do.....	200 00

DIVISION C.—LONG WOOL.

1	Ram, 2 years old and over, Cotswold.....	1	Abner Strawn, Ottawa, Ill.....	\$100 00
		2	Edward Hicks, Goshenville, Pa.....	50 00
		3	T. C. Wade, Media, Pa.....	25 00
2	Ram, over 1 year old and under 2, Cotswold.....	1	Abner Strawn.....	75 00
		2	.....do.....	40 00
		3	.....do.....	20 00
3	Ram lamb, Cotswold.....	1	.....do.....	50 00
		2	.....do.....	25 00
		3	Edward Hicks.....	15 00
4	Pen of 3 ewes under 2 years old and over 1, Cotswold.....	1	Abner Strawn.....	75 00
		2	.....do.....	40 00
		3	Edward Hicks.....	20 00
5	Pen of 3 ewes over 1 year and under 2, Cotswold.....	1	A. Strawn.....	50 00
		2	.....do.....	25 00
		3	Edward Hicks.....	15 00



## LETTER OF TRANSMITTAL.

## DIVISION C.—LONG WOOLS—Continued.

Premium list number.	Description.	Premium.	To whom awarded.	Amount.
6	Pen of 3 ewe lambs, Cotswold.....	1	A. Strawn.....	\$30 00
		2	Edward Hicks.....	20 00
	Pen of 3 ewe lambs, Lincoln.....	3	T. C. Wade.....	10 00
7	Stock ram, of any age, and 5 of his get over 1 year old, Cotswold.....	1	Edward Hicks.....	125 00
	Stock ram, of any age, and 5 of his get over 1 year old, Lincoln.....	2	T. C. Wade.....	75 00
8	Stock ram, of any age, and 5 of his get under 1 year, Cotswold.....	1	A. Strawn.....	125 00
9	Sweepstakes, Cotswold.....	1	.....do.....	250 00

## DIVISION D.—FAT SHEEP.

1	10 merinos.....	1	No entries.....	.....
2	10 long-wools.....	2	No entries.....	.....
3	10 middle wools.....	3	R. M. Fisher.....	\$100 00
4	Single fat sheep.....	4	.....do.....	50 00

## DIVISION F.—COLLIE TRIALS.

	Dog "Tom".....	1	Charles Pugh, Philadelphia, Pa.....	\$100 00
	Dog "Oscar".....	2	T. S. Cooper.....	37 50
		2 and 3	J. W. Downey*.....	.....

\*Cooper's and Downey's dogs were, in the opinion of the committee, a tie in points requisite for the 2d premium, and in justice to both made the above award. In the other "all-aged stakes," the dogs performed tolerably well; prominent among them for good work was the dog "Lad," owned by George Taylor, of Philadelphia, Pa. In the puppy stakes, T. S. Cooper's "Fannie" is entitled to 1st premium, owing to perfect performance for her age.

First premium, T. S. Cooper "Fannie," \$30; second premium, Dr. J. W. Downey.

## DIVISION G.—WOOL AND HAIR.

Premium list number.	Description.	To whom awarded.	Amount.
MERINO WOOL.			
1	Superfine fleece.....	John McDowell, Washington, Pa.....	\$20 00
2	" * * * " fleece.....	.....do.....	20 00
4	Ewes' fleece.....	.....do.....	20 00
8	Best 10 fleeces.....	.....do.....	50 00
3	Rams' fleece.....	S. A. Cockayne, West Virginia.....	20 00
5	Rams' fleece, scoured.....	J. W. Hardy, New York.....	20 00
9	Collections of samples.....	H. D. Sanborn, Oregon.....	10 00
6	Ewes' fleece.....	Peter Martin, New York.....	20 00
MIDDLE WOOL.			
16	Collection samples.....	C. Henry Rooney, Philadelphia, Pa.....	10 00
11	Southdown fleece.....	S. J. Sharpless, Philadelphia, Pa.....	20 00
LONG WOOL.			
18	Cotswold fleece.....	A. Strawn, Ottawa, Ill.....	20 00
17	Lincoln fleece.....	T. C. Wade, Media, Pa.....	20 00
21	Collection of Lincoln fleeces.....	T. C. Wade.....	50 00
22	Collection of Cotswold samples.....	H. D. Sanborn, Oregon.....	10 00



# EXAMINATION OF WOOL AND OTHER ANIMAL FIBERS.

## CHAPTER I.

### HISTORY AND RESULTS OF THE EXHIBITION OF SHEEP, WOOL, AND WOOL PRODUCTS, HELD IN PHILADELPHIA IN SEPTEMBER, 1880.

At the close of the Universal International Exhibition of 1876 a strong feeling of dissatisfaction prevailed among the sheep-breeders and wool-growers of this and other countries, concerning the character of the work accomplished there and the results flowing from it. As time passed this dissatisfaction in this country strengthened among those who had been more directly interested, and it finally ripened into energetic action, with a view to the inauguration of an international exhibition of the products of sheep-husbandry, and of the methods and apparatus employed in preparing them for human consumption.

Many of those most forward in this work were to be found among the breeders of what is known as the wool-growing district of Western Pennsylvania, Southeastern Ohio, and West Virginia, and their feeling in the matter began to take definite shape in the course of the preparations for the annual fair of the Pennsylvania Agricultural Society to be held in the Centennial buildings in Philadelphia in the autumn of 1879. During the meetings of the executive committee of this society from time to time in that year the matter was fully discussed, and correspondence was opened with prominent sheep-breeders and wool-growers, and with the several sheep-breeders' and wool-growers' associations in different parts of the country, asking their opinions with regard to the advisability of such a course, and the result of this was the expression of a general desire that such an exhibition be held.

It was the first intention of the Agricultural Society to hold a national exhibition, but it was afterwards decided that the subject was one of such importance as to warrant making the exhibition an international one, and in order to carry out the plan proposed, that of holding it under the auspices of the Pennsylvania Agricultural Society and in connection with one of its annual fairs, it was finally decided to hold it in connection with the fair of 1880. In due time, therefore, the committee of arrangements to prepare for the International Exhibition of Sheep, Wool, and Wool Products was appointed, instructed, and organized, clothed with all necessary power. This committee, consisting of Mr. William S. Bissell, president; John C. Morris, Alfred L. Kennedy, D. W. Seiler, John McDowell, William H. Engle, and Elbridge McConkey, determined that the exhibition should be held in the Centennial buildings in Philadelphia immediately after the close of the annual fair of the State Agricultural Society, to be held in the same place in September, 1880. Under date of February 11, 1880, the committee of arrangements informed this Department of the intention of the society, asking its approval of the enterprise and its influence and co-operation in advancing it. This approval, together with the assurance of all the influence and co-operation within the power of the Department, was heartily given.

At about the same time an appeal was made to Congress to authorize and direct the Commissioner of Agriculture to attend the exhibition, in person or by deputy, and make a full and complete report of the same. This appeal also asked for the establishment of such customs regulations as would provide for the convenient entry of any exhibits that might be sent from foreign countries. As a consequence Congress enacted a law, approved April 1, 1880, giving the Commissioner the desired authority and direction, and providing that all sheep and wool imported for the sole purpose of exhibition, and not sold or withdrawn for consumption in the United States, should be admitted without the payment of duty or any customs fees or charges, under such regulations as the Secretary of the Treasury should prescribe. In pursuance of these latter provisions the Secretary constituted the Centennial buildings in Philadelphia, in which the exhibition was held, a bonded warehouse, and detailed an officer to superintend the entry of articles from foreign countries thereto. The immediate connection of the Department of Agriculture with the exhibition began shortly after the approval of the above-mentioned act by the President.



About April 10 there were received ten thousand copies of a circular embodying the correspondence between the committee of arrangements appointed by the Pennsylvania Agricultural Society and the Commissioner of Agriculture, and a copy of the act of Congress already referred to. It was requested that the Department should distribute these circulars to the agricultural and wool-growers' societies and Department correspondents, and, through the Department of State, to all ministers and consuls of the United States resident in foreign countries, for the information of the respective Governments and peoples.

But as the circular contained no announcement to all people of all nations of the intention of holding the exhibition, and no invitation to take part in it, and as it was desirable that it should be accompanied with copies of the regulations for the government of the exhibition, the system of classification and the list of premiums offered, it was considered better to withhold its distribution until the further documents could be obtained.

Upon application for them the Department was informed that no formal invitations to foreign Governments had been sent out; that it was understood that such an invitation would be sent out by the Department of State, and in absence of any action by the Department of State, this Department was further requested to give advice as to the method of extending the invitation in question. In response to this request it was suggested that there be at once prepared a document containing—

First. An announcement of the time and place of holding the exhibition, and a general invitation to the people of all nations interested in the production of sheep, wool, and woollen materials, and of machinery, apparatus, and processes of manufacturing the latter, to take part in the exhibition.

Second. A statement of the system of classification of animals, products, machinery, apparatus, &c., to be exhibited.

Third. A list of prizes offered for superiority in each class.

Fourth. Specification of the information required with the exhibits in each class.

Fifth. General regulations to govern the exhibition.

Expedition in the matter of preparing this document for distribution was strongly urged on account of the limited time intervening previous to the opening of the exhibition, and it was at once prepared, but printing it was delayed on account of a desire on the part of the committee of arrangements to embody in it a copy of the circular of regulations relative to entry of foreign exhibits at our ports and an announcement by the Secretary of the Treasury that the exhibition building would be constituted a bonded warehouse. The document comprising regulations and premium list and embodying a general invitation to the people of all nations to take part in the exhibition was not received for distribution until June 30, when it was at once sent out by the Department to all the agricultural and wool-growers and sheep-breeders' societies and associations, to correspondents and reporters of the Department in the different parts of the United States, and to all the ministers, consuls-general, and consuls residing in foreign countries, with the request that the facts contained in it be disseminated among the people with whom they respectively came in contact.

On or about May 5 a conference was had in this Department with representative members of the committee of arrangement, in the course of which the Department was requested to name gentlemen from different sections of the country to be invited to become members of a national committee of co-operation to act in conjunction with the committee of arrangement in carrying out the objects of the Exhibition, viz, the promotion of the interests of sheep-breeding and wool-production, and better defining the relation between producers and manufacturers by bringing the results of labor in all branches of the industry together in one great exhibition. In addition to the gentlemen who had already been chosen by the committee of arrangement, the Department nominated William G. Markham, Avon, N. Y.; E. J. Hiatt, Chester Hill, Ohio; Hon. James T. Earle, Centreville, Md.; John L. Hays, Boston, Mass.; John J. B. Killebrew, Nashville, Tenn.; C. P. Mattox, Portland, Me.; Henry C. Kelsey, Trenton, N. J.; Albert Chapman, Middlebury, Vt.; F. W. Shaeffer, San Diego, Tex.; Hon. Henry G. Davis, Piedmont, W. Va.; J. T. Megibbin, Cynthiana, Ky.; Daniel Kelly, Wheaton, Ill.; Hon. Thomas Pollard, Richmond, Va.; J. S. Stanger, Denver, Colo.; Benjamin Fliut, San Juan, Cal.; Samuel Archer, Kansas City, Mo.; Charles R. Gibbs, Whitewater, Wis.; J. P. Sanborn, Port Huron, Mich.; Hon. David Blaine, Toronto, Ontario, and Hon. Edward A. Bernard, Quebec.

Letters were at once addressed to these gentlemen by the Department, announcing its action in nominating them, and asking them to confirm this action by accepting the position. All the gentlemen named promptly communicated their acceptance, and were referred to the committee of arrangement for instructions as to what was expected at their hands. On July 25, the Department received from the committee of arrangement a request that it should name gentlemen considered competent to act as judges, and whose appointment to act in that capacity would be satisfactory to the Department; and in response to this request the following gentlemen were named: John L. Hays, Boston, Mass.; George W. Bond, Boston, Mass.; A. M. Garland, Springfield, Ill.; Richard Peters, Atlanta, Ga.; John D. Patterson, Westfield, N. Y.; Samuel Archer, Kearney, Mo.; William G. Markham, Middlebury, Vt., and Charles W. Jenks, Boston, Mass. Most of these gentlemen were invited to act as judges in the different classes, and four of them performed efficient service during the exhibition.

The animals and objects to be exhibited were separated by the system of classification into eleven divisions, as follows:



A.—Merinos.  
 B.—Middle-wooled sheep; (a) Southdowns; (b) other middle-wooled.  
 C.—Long-wooled sheep.  
 D.—Fat sheep.  
 E.—Goats.

F.—Shepherds' dogs.  
 G.—Wool and hair: (a) merino wool; (b) middle wool; (c) long wool; (d) hair.  
 H.—Woolen machinery.  
 I.—Dye-stuffs.  
 K.—Woolen fabrics: (a) foreign; (b) American.

The total amounts of money offered for prizes in the several divisions were as follows :

A.....	\$2,230	G.....	550
B.....	2,000	H.....	755
C.....	1,435	I.....	(*)
D.....	560	K.....	405
E.....	180		
F.....	260	Total.....	7,975

On the 3d of August the committee met with the executive committee of the Pennsylvania Agricultural Society to discuss the feasibility and advisability of holding a convention for the consideration of various conditions affecting the sheep and wool industries. It was the opinion of some of the members of the executive committee that while the members of the committee of co-operation, the judges who would be chosen, and the breeders, wool-growers and manufacturers who would exhibit, were present in the city during the exhibition, a fit opportunity would be offered for a mutual interchange of views, the statement of needs, and the presentation and discussion of methods and results in the branches in which those present were severally interested, and that much valuable information could be elicited in this way. These views were accepted by the executive committee, and the Commissioner of Agriculture agreed to issue a call to convene in the main Centennial building, Fairmount Park, Philadelphia, on Wednesday, September 22, 1880, at 11 o'clock a. m.

The printed call was accompanied by a list of subjects which had been suggested for consideration, and the whole was distributed among all the agricultural societies, sheep-breeders and wool-growers, and manufacturers' associations, the correspondents of the Department of Agriculture, and to gentlemen of prominence in the branches of industry to be represented. The hope was expressed that such a convention would prove profitable alike to those engaged in sheep-breeding, wool-growing, and wool-manufacturing.

Such, then, were the preparations for the exhibition in which the Department was in any way concerned. It acted as adviser in all matters in which advice was asked, and co-operated with the Pennsylvania Agricultural Society in every way in its power to advance the interests of the exhibition and the welfare of those engaged in the great industry to be represented.

The Exhibition was officially opened according to arrangement, at 12 o'clock, noon, on Tuesday, September 21, 1880, with appropriate ceremony. All the animals and articles to be exhibited were in place and duly entered and recorded, and the judges in the several classes were ready for work. There were in all 32 separate entries of sheep, but of these only 24 lots were exhibited in the several classes. The breeds represented were the Merino, Southdown, Oxforddown, Hampshiredown, Shropshiredown, Cotswold, and Lincoln, and included 366 animals, worth, in the aggregate, \$85,000. In the class of shepherds' dogs there were 9 exhibitors of 13 dogs. In the class of wools there were exhibited 60 fleeces and 75 samples, besides four lots of graded wools from various sources.

In the classes of machinery and dyes there were but 4 exhibitors. They included 2 exhibits of looms with improved harness motion, 1 of a drying and tentering machine, 1 of centrifugal hydro-extractors, and 1 of a collection of dyes.

The aggregate amounts of money awarded in premiums in the various divisions were as follows :

Division A.....	\$2,035	Division F.....	\$250
Division B.....	1,795	Division G.....	310
Division C.....	1,240	Division H.....	115
Division D.....	150		
Division E.....	(†)	Total.....	5,895

It is greatly to be regretted that with the exception of one flock of Southdown sheep from Canada no animals or articles were received for exhibit from foreign countries, and this can only be explained by the fact that the invitations extended to the people of all nations to take part in the Exhibition were not sent out until July 1, leaving insufficient time for the necessary preparation and for transportation. For the same reason probably the number of exhibits from the United States were smaller than was hoped for or expected—only seven of the States being represented; these were Vermont, New York, Pennsylvania, West Virginia, Ohio, Illinois, and Oregon.

Among the breeds of sheep the Merinos were present in the largest numbers. Most of the animals exhibited in this class were descendants of the famous Atwood family, of the Humphrey importation of Spanish sheep of 1802, and were good representatives of their class. In only two cases was it necessary for the judges to rule animals out of competition on account of the provision in the regulation that to compete animals must be qualified by undisputed descent for entry in a recognized sheep-breeders' register. These were the sheep exhibited by Mr. Daniel

\* Diplomas.

† No entries.



Kelly, of Wheaton, Ill., and one ram belonging to Mr. Frank T. Spivey, of Fair View, Hancock County, West Virginia. In the first of these cases it was claimed by the exhibitor that his sheep were directly descended from the Crowninshield importation from Spain, or to other Spanish importations. But the evidence as to purity of blood was unsatisfactory to the judges, and the animals were consequently excluded from competition in the class in which they were entered. Similar considerations governed the action of the judges in excluding some of the animals of the exhibit of Frank T. Spivey.

In the work of the judges as well as in the collection of information for making the report and carrying on the work by the Agricultural Department, each exhibitor was requested to give full and complete data concerning the conditions of breeding, feeding, and care of the animals, together with the samples of the wool of each taken from different parts of the body. At the time the animals were examined by the judges they were weighed and compared with the weights of their respective fleeces in grease, showing the average yield in wool in pounds for each animal to be, for rams 19 per cent. the weight of the carcass, and for ewes 17 per cent. the weight of the carcass. For ewes the weight of carcass varied between 64 and 99 pounds, and for rams between 92 and 146 pounds. From the weights taken it appears that the maximum average is reached only after the second year's growth. Relations of this kind will be compared with the length of the staple, the fineness and strength of the fiber, &c., and with the conditions of climate and feeding to which the animal has been subject; this latter statement applies also to the long and middle wool sheep exhibited. For the coarse-wooled breeds it was difficult to secure the same extent of data.

From those we were able to secure, however, we may construct the following table showing the comparative weights of the animals and the average weight of fleece yielded by each breed expressed in percentages of weights of animals:

Breed.	Weight of rams.	Weight of ewes.	Average weight of fleece expressed in percentages of weights of carcasses.	
			Rams.	Ewes.
	<i>Pounds.</i>	<i>Pounds.</i>		
Southdown .....	154 to 240	149 to 182	6.6	6.6
Oxfordown .....	233 to 318	175 to 248	5	
Shropshiredown .....	124 to 176		8	
Cotswold .....	161 to 245	150 to 155	7.3	8.3
Lincoln .....	134 to 250	100 to 172	5.3	5.5

This table shows for itself, to a limited extent at least, the comparative value of the several breeds for the production of both mutton and wool, both as regards each other and in relation with the merinos. In pursuance of the provision made by act of Congress for testing wools and other animal fibers exhibited, samples of wool were taken from all the fleeces and from large numbers of the animals. Some difficulty was experienced in securing them from the latter source, from the fact that during the greater portion of the week the exhibitors were busily engaged with the judges, who were making the examinations and comparisons of the sheep, and the work was, therefore, necessarily hindered and delayed.

But notwithstanding these difficulties, about 500 samples were secured, and nearly all are accompanied by complete data concerning the conditions of breeding, feeding, and care of the animals that might have had any effect upon them. Representative animals from the different flocks were also taken out and photographed by the instantaneous process, and from the negatives thus secured illustrations will be produced showing the outward peculiarities of typical individuals of the several breeds represented in the Exhibition. In all 32 photographs were secured. In this connection it is proper that we should express our thanks to the officers of the Pennsylvania Agricultural Society and to the judges for the very efficient aid rendered in securing the information and samples to which we have referred.

The Convention to Promote the Sheep and Wool Industries, to be held in connection with the Exhibition, met at the appointed time. Gentlemen placed their names on the rolls as members or delegates. Original papers upon the subjects named in the call were presented by Mr. A. M. Garland, Springfield, Ill., president of the National Wool Growers' Association; Mr. W. G. Markham, Avon, N. Y., president of the New York Wool Growers' Association; Mr. John L. Hayes, president of the National Association of Wool Manufacturers; Mr. Henry C. Kelsey, Trenton, N. J.; Dr. Thomas Pollard, commissioner of agriculture of Virginia, Richmond; and nearly all the questions mentioned, and many others of interest to breeders, wool-growers, and manufacturers alike, were freely discussed by the members present.

The interest manifested in this convention and Exhibition is shown in the frequent requests already made to this Department for reports upon them, and for directions as to where to purchase the best breeds of sheep and as to the best sources of information concerning the relative advantages of the different sections of the country to sheep-breeding and wool-growing.



## CHAPTER II.

### EXAMINATION OF WOOLS.

#### THE MATERIAL AND ITS SOURCES.

By act of Congress approved June 16, 1880, an examination of wools and other animal fibers by the Department of Agriculture was provided for in the following terms:

For testing, by scientific examination, the textile strength, felting capacity, and other peculiarities of the different wools and other animal fibers on exhibition at the International Sheep and Wool Exhibition to be held in Philadelphia in 1880, four thousand dollars.

The Exhibition in question was held in Philadelphia September 20 to 25, 1880, inclusive, and in compliance with directions, I was present and made the collection of material necessary to the examination contemplated in the law. The examination thus ordered was considered to apply to wool from the animals exhibited, as well as that included in bales or fleeces, and since the quantity of clipped wool exhibited was comparatively small as regards number of exhibits, the series of samples secured represented the animals more extensively than the wool, a fact which has proven very satisfactory in our investigations, because of the extended information we were able to secure with the samples, and the important and interesting relations it has been possible to work out from the data thus afforded. An attempt was made to secure this information in the greatest detail, but this proved impracticable from various causes, the principal of which resides in the fact that so few of our American breeders, and especially those represented in our collections, keep careful written records of the conditions of breeding and management beyond a register of pedigree. In answer to inquiries made upon the several points here involved, therefore, the exhibitors of animals were forced to rely entirely upon memory, and in many cases they had given little or no attention to some of the important considerations upon which reliable information would have proved of almost inestimable value in the determination of relations existing in the results of our examinations. However, there was, of course, no difficulty in securing perfectly reliable data as to breed, sex, age of animal, and date of last shearing, while in some cases, as we shall see later on, the kind and daily rations of food, form a part of our record.

As already intimated, the exhibits of fleece wool were very limited. On the other hand, among the live animals most of the more important breeds were represented. There were Cotswold, Lincoln, Southdown, Hampshire-down, Shropshire-down, Oxforddown and Merino. The animals had all been shorn in the preceding spring, and the fleece they bore was a little more than half a year's growth. Yet it was considered quite sufficient for the purposes of comparative examination, and we had no hesitation therefore in taking it. From the fleeces and bales single samples were taken, but from the animals concerning which it was possible to secure fuller information with reference to the conditions influencing the production of wool, four samples were taken, and these were cut as nearly as possible from the same parts of the shoulder, side, hip, and belly, respectively. The object of this selection, as will appear later on, was to provide for determinations of differences in the quality of the fiber in different parts of the fleece considered to justify the division into which the fleece is usually classified by graders both in this country and abroad, and to satisfy the desires of the exhibitors who wished to establish their claims to the even character of the wool from the different parts of the bodies of the animals they were breeding, and to furnish exact data concerning the characteristics of the fiber of each breed. In some cases also in which the skin of the Merino was greatly folded, and this quality is well known to be very common in the "American" type, samples were taken from the tops of the wrinkles or folds and from between them. We thus secured material for the determination of the fineness of the fiber in each part, a matter that has been the subject of no inconsiderable amount of controversy among breeders of "wrinkly" and "even" animals. The parts of the fleece just mentioned were considered sufficient to represent the different qualities of wool available for commercial work or determined by conditions of breeding and management. To have extended the selection to other parts of the fleeces or to have adopted more complete division of the fleece into the grades of quality that have been adopted by German and French experts for the products passing through their hands or the yield of their own flocks, would have required too much work



for the facilities at our command, and more than would be required by the breeders, or even of the American manufacturers, who at present aim at the production of goods of medium degrees of fineness rather than of the superfine grades, such as issue largely from the European looms.

There were in all about 300 animals on exhibition, and though, as the results of our investigations have shown, much valuable information could have been gained by taking samples from all, this would have been impracticable from several causes. The selections were therefore made to a large extent from animals considered by the judges worthy of prize, while at the same time samples were taken from the animals of each exhibitor. Each sample as soon as taken was inclosed in a separate envelope, upon which was inscribed a number corresponding with the number of the description of the sample in the catalogue in which the information given by each exhibitor concerning the animals selected was recorded. This information was furnished in response to the queries given in the following blank form :

Number of samples, _____.	Method of feeding, _____.
Breed of animal, _____.	Daily quantities of food, _____.
Register number or name, _____.	Character of soil, _____.
Gender, _____.	Topography of country, _____.
Age, _____.	Prevailing winds, _____.
Weight of carcass, _____.	Frequency and force of same, _____.
Weight of fleece in grease, _____.	Influence of climate on animal, _____.
Weight of second fleece, _____.	Name of exhibitor, _____.
How scoured, _____.	Post-office, _____.
Age of staple, _____.	County, _____.
Animal pastured or stabled, _____.	State, _____.
Time for each, _____.	General remarks, _____.

This applies more especially to the fine wools (Merinos) though the same method of collection was followed in the case of the coarse and long wools. But in connection with the latter we were favored with the assistance of the judges in the corresponding classes, who undertook to clip samples of wool from the leading animals presented to them for examination. They followed the same plan adopted in connection with the Merinos, that is, of taking samples from the different parts of the fleece, shoulder, side, hip, and belly, respectively, while at the same time they caused to be filled, as far as possible, the blanks of a form for giving information concerning the conditions of breeding, feeding, and management of the animals.

Premium list number, _____.	Average amount of grain daily for each :
Name of breeder, _____.	During year, _____.
Breed of sheep, _____.	Since last shorn, _____.
Flock register, name and number, _____.	Kind of grain :
Book register, name and number, _____.	During year, _____.
Date of birth, _____.	Since last shorn, _____.
Sex, _____.	Cottonseed-cake, oil-cake or meal, flaxseed, peas, or beans fed :
Weight of sheep, _____.	During year, _____.
Condition of sheep, _____.	Since last shorn, _____.
Weight of fleece in grease, _____.	Kind of roots fed :
Date of last shearing, _____.	How ? _____.
Length of stubble, _____.	When ? _____.
Number of sheep in flock, _____.	Salt, sulphur, ashes, chalk, &c., fed :
Number of months at pasture :	How ? _____.
During year, _____.	When ? _____.
Since last shorn, _____.	Average weight of fleeces of flocks in grease, _____.
Number of months foddered :	Character of soil on which sheep were raised (whether limestone,
During year, _____.	clay, slate, or sand), _____.
Since last shorn, _____.	Topography of country, _____.
Kind of hay or fodder fed, _____.	Latitude, _____.
Number of months fed grain :	Altitude above sea-level, _____.
During year, _____.	Length of staple, _____; shoulder, _____; side, _____; hip, _____.
Since last shorn, _____.	Additional measurements, _____.
	Any additional particulars.

They also caused many of the animals to be weighed, and the records of this operation, in connection with the other information, added very materially to the value of the samples collected. By this means we were enabled to secure an exceedingly interesting and valuable series, and our acknowledgments are due these gentlemen for their courteous and efficient assistance.

In addition to the material obtained at the Exhibition, it was considered of importance to secure an examination, in connection with these wools of known breed, of those of the commercial grades, and we were able, through the generous assistance of Mr. J. D. Whitham, of Valley Grove, W. Va., to obtain full collections representing the principal commercial grades of the markets of Boston and Philadelphia, which may be said to govern the wool grading, and may, therefore, be accepted without reserve as fully representing the leading characteristics of



the several grades. And besides these, also we have been so fortunate as to secure from Mr. William G. Markham representative samples of the different grades of wool established by German wool-growers and merchants, to be studied in connection with those of American origin. Mr. Markham's contributions, as may be seen below, also contained samples of the staple from some of the leading flocks of France, and one from probably the only pure-bred Merino flock of England. The whole collection, represented in the results we are now able to present, is of great interest as showing in many particulars as regards the fine wools, the characteristics impressed upon the Merino type in each of the countries named.

As already stated, and as may be seen from what we have to present, the information we were able to obtain concerning the conditions of breeding, feeding, and management, of the animals represented in our collections, was not all that could reasonably be desired; but we have considered it on some accounts advisable to collect here the principal points presented by each exhibitor, for the benefit of those who may wish to give the possible relations more careful study than we have been able as yet to devote to them, as well as for the better elucidation of some of the points to which attention will be called in our results. The statements included below are intended to cover the general information secured in our inquiries, rather than the age and pedigree of each animal, the latter being given in the catalogue of samples, to be found in the subsequent pages.

*Cotswolds.*—Abner Strawn, Ottawa, La Salle County, Illinois, a breeder of Cotswolds. Most of the animals exhibited were recent importations; so little or no reliable information was obtainable concerning their previous feeding and management. The country over which they were expected to range is flat, the soil loam, with tolerably strong winds prevailing from the West.

Edward Hicks, Goshenville, Pa., breeder of Cotswolds, had a flock of 60 sheep which were shorn May 13, 1880. The animals exhibited were pastured four to six months and foddered six or seven months, timothy hay being the fodder fed. During about two months of the year they were fed a pint a day of a mixture of bran and oats with no other kind of concentrated food. A mixture of salt and sulphur was constantly accessible to them. The average weight of the fleece in grease for the flock was 11½ pounds. The ranges were upon rolling land and a soil of clay.

*Lincolns.*—Thomas C. Wade, Media, Pa., breeder of Lincolns. The animals exhibited were shorn May 20, 1866, giving nine to eleven pounds of brook-washed wool. They were pastured from the date of shearing to September 1, and during the remainder of the year were foddered upon a mixture of hay, cornstalks, and cabbage. They were fed about three quarts of oats per day during six weeks in the fall but, with that exception, received no grain or other concentrated food throughout the year. In winter they were fed upon turnips washed and cut, and always had salt accessible to them.

*Downs.*—T. S. Cooper, Coopersburg, Pa., is a breeder of Oxforddowns and Southdowns. The animals exhibited were mostly imported from England. They had been shorn April 20, 1880. They were pastured seven months of the year, but received throughout the year daily rations of 2 pounds of clover hay and 1 pint of a grain mixture consisting of equal parts of oats, peas, and beans, and occasionally they were given a small quantity of flaxseed cake. About 6 months of the year (during the winter) they were fed with mangolds which were preserved in pits, sometimes as late as July, and usually dried about four days in the sun before feeding. Rock salt was supplied the flock *ad libitum*, while sulphur was occasionally mixed with the feed. The flock gave an average yield of 10 pounds of wool in grease, per head. They ranged upon limestone land located in a valley.

R. M. Fisher, Danville, Ky., breeder of Southdowns. The animals exhibited had been shorn April 25, 1880. They were pastured throughout the year and were stalled only at lambing time. In some years it was found necessary to supply them with fodder for about one month, though in many years they received none whatever. When supplied, a mixture of clover hay and sometimes a little corn fodder was fed. Grain was given only about two months, though it was not a common practice. After being shorn, however, the animals exhibited were fed grain at the rate of one quart per day per head up to the time of exhibition. The grain food consisted of a mixture of equal parts of corn and oats, and besides this a daily ration of one pint of oil-cake meal was given in addition. The weight of fleeces in grease for the flock varied between eight and ten pounds. The country in which the animals were grown is mountainous, and the farm on which they ranged rolling, with a soil of clay loam.

S. J. Sharpless, Philadelphia, Pa., breeder of Southdowns. The animals exhibited were shorn May 15, 1880. As far as possible and when not prevented by snow in winter, they were pastured throughout the year, but as a general rule ten months was the average extent of the period of pasturage. During about four months in winter they were foddered upon mixed clover hay and received daily rations of one quart of oats and half a pint of wheat bran. Beets and turnips also were fed to the ewes after lambing at the rate of half to three-quarter pounds. The proportion of turnips fed exceeding that of the beets. Rock salt was always accessible.

Fairmount Park Association, Philadelphia, Pa., breeders of Southdowns. The animals exhibited were shorn the first week in May as closely as possible. They were pastured during seven months, but after August 6, 1880, they had been penned because of their range being in the park, but the principal object was to prepare them for exhibition. During the remaining five months of the year they were foddered with mixed hay, though clover is much preferred by the managers. As a rule the flock was fed grain about six months of the year, beginning with a ration of a half pint per day for each animal which was continued until the lambing season, when it was increased



to one quart. The grain mixture fed consisted of eight parts oats, six parts bran, and four parts corn. No concentrated foods such as oil-cake, &c., nor roots of any description were fed. Sulphur is mixed with the feed at the rate of one pound per week as needed, while salt was always accessible to the animals to take as desired. The yield of fleece in grease by the whole flock was seven pounds eleven ounces, with limits of eleven and a half and four pounds. The country over which the animals ranged is rolling and the soil a slaty clay.

William Homewood, Newark, Del., breeder of Shropshire and Hampshire downs. The animals exhibited were shorn about May 20, 1880. They were pastured during seven months of the year, and during the remainder foddered upon clover hay. Throughout the latter period they received daily rations of one quart of a mixture of oats and corn, with no oil-cake or other concentrated foods, but in the winter months they were fed upon sliced mangolds. Throughout the entire year they had constant access to salt in boxes, but received no sulphur, ashes, or other like material. They ranged over level land upon a soil of clay loam.

George Hammond, Middlebury, Vt. Flock sheared April 1, 1880. Pastured about five and a half months, and foddered the remainder of the year upon herds grass containing a little clover. During eight months of the year the animals received a daily ration of one pint of oats part of the time, and the remainder of the year the same quantity of a mixture of oats and bran. Salt and sulphur are constantly administered to all except breeding ewes in winter. The country in which the animals were bred is hilly and rolling and the soil clay. The flock gave an annual yield of 12 pounds wool.

William L. Archer, Burgettstown, Pa., a breeder of Spanish Merinos descended from the Humphrey importation. His flock is pastured about seven and a half months, and during the remainder of the year foddered on mixed clover, timothy, and blue-grass hay. It was also fed daily with about a half pint of a mixture of two parts oats, one part corn, and one part bran, and had continual access to a mixture of ten parts salt, one part ashes, and one part sulphur. The country is hilly but mostly tillable, and the soil a mixture of limestone, clay, and sandy loam. The average yield of wool for the flock was twelve pounds.

John M. Miller, Hickory, Washington County, Pa. A breeder of Merinos of Atwood descent. In winter the flock is stabled, but during the summer months is pastured. During six months of the year it is fed grain at the rate of one peck per day for fifty head, the mixture being two parts oats, one part corn, and one part wheat bran. The country over which the sheep ranged is hilly, but the land all tillable and the soil sandy clay loam underlaid with limestone. The prevailing winds are southwest and mild and are considered very favorable to the animals.

Alex. McCalmont & Sons, Hickory, Pa. Breeders of Merinos of the Humphrey importation of 1802. The flock was sheared on the first Saturday of April, 1880. It was pastured seven months of the year, and for the remainder was foddered with mixed clover and timothy hay. During the second period each animal received a daily ration of about a half pint of a mixture of two-thirds corn and oats, and one-third bran, and during the first period the same quantity of a mixture of oats and bran. The country over which the sheep ranged is hilly, but all tillable and the soil limestone. The average yield of wool for the flock is ten and a half pounds.

S. S. Campbell, Cadiz, Ohio, breeder of Merinos. The animals exhibited were sheared April 2, 1880. They were pastured about eight months of the year, and received dry fodder about four months in a mixture of clover and timothy hay. They also received daily rations of about half a pint of mixture of mill feed and oats, and for about two weeks some sugar-beets. Salt was given twice a week and a mixture of sulphur and ashes once a month. The soil on which the sheep were pastured is limestone and sandstone, and the country partly hilly.

S. C. Work. Sheep shorn April 17, 1880. His animals are pastured throughout the year, and have access to a mixture of three-quarters timothy and one-quarter clover. About eight months of the year they receive daily rations of about one pint of mixed oats and bran. During the winter they are fed a few mangolds. They have continual access to salt, and receive sulphur and ashes once a month. In 1879 the average yield of wool for the flock was twelve and a quarter pounds. The country is somewhat hilly and the soil limestone.

James Glass, Burgettstown, Pa., breeder of Merinos. Follows same rules as Archer.

Robert Perrine, Patterson Mills, Washington County, Pennsylvania, breeder of Merinos of Atwood descent. The animals exhibited had been shorn April 15 previous. They were pastured about seven months of the year, and were foddered on mixed timothy and clover hay nearly six months; that is, part of the time they had access to hay at night. They received grain most of the year at the rate of about one-half pint mixed corn and oats daily, with a ration of salt twice a week and of ashes semi-monthly. Sometimes they were fed on mixed corn and wheat with a little wheat bran. The soil of the land upon which the sheep ranged and were pastured is limestone, and part of it creek bottom. The country somewhat hilly. The prevailing winds of the section are southwest, tending to north in the winter, the latter having an unfavorable influence upon the health of the animals.

Frank P. Spiney, Fairview, Hancock County, West Virginia. Flock sheared April 7, 1880. Pastured nine months, and received fodder four months as mixed timothy and clover hay. During eight months they received daily rations of half a pint of mixed corn and oats, and every other day salt is mixed with the food. The country represented is rolling or hilly and the soil clay. The average yield of the flock twelve and three-quarter pounds (1879).



Daniel Kelly, Wheaton, Ill., breeder of Spanish Merinos of the Crowninshield importation, but the flock is not registered. It was shorn April 23, 1880, pastured 7½ months, and the remainder of the year foddered upon timothy hay. It receives a daily ration equivalent to 1 bushel of corn per 100 head. As a hygienic measure it is also fed with a mixture of 1 quart ashes and 1 quart salt. When the grass is too fresh in winter it is always fed with a mixture of half a pound copperas and 1 peck of salt. The country is rolling and the soil on clay.

E. Peck & Sons, Geneva, Ill., breeder of Spanish Merinos. Flock sheared May 10, 1880. Pastured 7 months, and foddered 5 months with mixed clover and timothy hay. During four or five months the sheep are fed with 1 pint of mixed corn and oats, and salt once a week. The average yield of the flock is 12 pounds, 1880. The country is slightly rolling prairie, and soil part loam, part clay, underlaid with gravel.

Of the wools exhibited little or no information concerning the animals yielding it could be obtained. That shown by Mr. McDowell, of Washington, Pa., was of Merino type, descended from the Wells and Dickinson flocks of southwest Pennsylvania and northern West Virginia, so doubtless of Saxon or Silesian blood. The samples sent from Oregon were labeled with the facts given in our catalogue given below. In the latter we have endeavored to present all the facts concerning the animal represented in each sample examined that could be well shown in a tabulated statement. But before giving this catalogue it will be of interest to present some of the data obtained from measurements upon the bodies of the animals, made by the judges in each class. These measurements, as may be seen below, show the weights and sizes of the animals and the length of the staple on different parts of the body, to show the thickness of the fleece. In the following tables giving these data we have given with each set under the head of each breed the name of the owner or exhibitor, the register number or name of the animal represented, and its age and sex. By these facts the data given may be compared with the measurements of the wool given in the tables of our results in this branch.

The weights of the animals need no explanation. They were taken with the animals in fleece as exhibited. The length of staple was taken by parting the fleece at the parts represented and measuring its depth with an ordinary foot rule. The other measurements were taken with tape measure. The shoulder girth was taken as closely as possible to the fore-leg, and the flank girth as near to the hind-leg as possible. The length of body represents the distance from between the ears to the root of the tail. The figures thus obtained will be of especial interest for the comparison of the several breeds named. They show the relative development of the animals at different ages with a very considerable degree of accuracy, and though a larger number of measurements would be desirable, those here given will be of value because they are reliable, and may, we hope, stimulate such measurements for comparison on the part of others.

*Weight and age of certain animals represented.*

Owner.	Sex.	Register number.	Weight.	Age.	Weight of fleece.	Owner.	Sex.	Register number.	Weight.	Age.	Weight of fleece.
<i>COTSWOLD.</i>						<i>SOUTHDOWN.</i>					
A. Strawn, Ottawa, Ill.	Ram	365	300	3½ years	<i>Pounds.</i>	R. M. Fisher, Danville, Ky.	Ram	2	246	4 years	<i>Pounds.</i>
	do	372	273	1½ years			do	4	198	1 year	11
	do	363	268	do			do	1	97	6 months	12
	do	364	251	do			Ewe	23	168	2½ years	8
	do	368	154	7 months			do	54	149	1½ years	9½
	do	369	122	6 months			do	52	147	do	8½
	do	367	133	do			do	67	89	6 months	do
	Ewe	247	230	2½ years		S. J. Sharpless, Philadelphia, Pa.	Ram	Stalwart	190	2½ years	11½
	do	248	237	2 years			do	34	163	3 years	11½
	do	170	232	do			do	27	163	do	11½
	do	247	236	do			do	54	168	2 years	11½
	do	243	249	do			do	53	154	do	11½
	do	161	245	do			do	101	133	1 year	do
	do	214	221	do			do	106	132	do	do
	do	160	246	do			do	4	86	7 months	do
	do	161	215	do			Ewe	86	136	2 years	do
	do	249	222	do			do	202	101	1 year	do
	do	158	227	do			do	2	72	8 months	do
	do	492	171	1 year							
	do	439	177	do							
	do	439	147	do							
	do	443	178	do							
	do	437	177	do							
	do	428	171	do		William Homewood, Newark, Del.	Ram		176	1½ years	9
	do	440	172.5	do							
	do	429	166	do							
<i>OXFORD.</i>						<i>SHROPSHIRE.</i>					
T. S. Cooper, Coopersburg, Pa.	Ram	Freeland	287	6 years	11	William Homewood.	Ram		124	6 months	
	do	Prince of the West	318	2 years							
	do	50	223	1 year							
	do	29	358	do							
	do	12	226	do							
	do	16	97	6 months							
	Ewe		174	4 years							
	do		248	2 years							
	do		215	1 year							
	do		171	do							
	do		159	do							
	do		132	6 months							
<i>LINCOLN.</i>						<i>HAMPSHIRE.</i>					
						Thomas C. Wade, Media, Pa.	Ram		250	5½ years	16
							do		192	2½ years	9½
							do		154	1½ years	9
							do			5 months	do
							Ewe		172	2½ years	9
							do			do	9
							do			do	9
							do		101	6 months	do
							Ram		89	5 months	do



INTERNATIONAL EXHIBITION OF SHEEP AND WOOL.

Weights and ages of certain animals represented—Continued.

Owner.	Sex.	Register number.	Weight.	Age.	Weight of fleece.	Owner.	Sex.	Register number.	Weight.	Age.	Weight of fleece.
T. S. Cooper	SOUTHDOWN.					A. Strawn, Ottawa, Ill.—Continued.	COTSWOLD—continued.				
	Ram		273	2 years			Ewe	389	97	Lamb	
	do		252	3 years			do	387	124	do	
	do		213	1 year	14		do	384	138	do	
	do		190	do	16		do	382	111	do	
Fairmount Park Association.	Ewe		171	1½ years	13-15	Ram		279	3½ years		
	do		173			do	245	2½ years	15		
	do		144			do		161	1½ years	15	
	Ram	7	213	3 years	9	do		97	6 months		
	do		128	0 months		Ewo		161	2½ years	15	
A. Strawn, Ottawa, Ill.	Ewo	1	182	3 years	8	do			do	13	
	do	50	123	6 months		do			do	13	
	COTSWOLD.					do		165	do	13	
	Ewe	No mark	167	1 year		do			2 years	13	
	do	381	119.5	Lamb		do		152	2½ years	13.5	
	do	383	109	do		do		150	do	13.5	
	do	385	104	do		do		151	do	13.5	
	do	388	116.5	do		do		*79	4 months		
	do	388	102	do		Ram		106	4½ years	12	

\* Triplets.

Dimensions of the animals exhibited.

COTSWOLD.

Owner.	Number or name.	Sex.	Age.	Shoulder girth.	Flank girth.	Length of body.	Girth of fore leg.	Girth of hind leg.
Edward Hicks		Ram	3½ years	4 7	4 8	3 11½	15½	16½
Do		do	2½ years	4 0	4 0	3 9	15	17½
Do		do	1½ years	3 4	3 3	3 7	16	17
Do		do	6 months	2 9	2 7	3 4	14½	17
A. Strawn	365	do	3½ years	4 11	4 7½	4 4	17	18
Do	372	do	1½ years	4 6	4 1	4 2½	18	19
Do	383	do	do	4 3	4 0	4 2	20	16
Do	364	do	do	4 3	3 10	4 2	16	18
Do	368	do	7 months	3 3½	3 4	3 7½	16	18
Do	369	do	6 months	3 1	3 ½	3 4½	15	17
Do	367	do	do	3 0	3 0	3 5	15½	17

LINCOLN.

T. C. Wade		Ram	5½ years	4 3	3 11	4 0	16	16½
Do		do	2½ years	3 8	3 7	3 10	16	15
Do		do	1½ years	2 5	3 4	3 3½	16½	17
Do		do	6 months	2 10	2 8½	2 10	13	15
Do		do	1½ years	3 4	3 2	3 6	15½	17½

SOUTHDOWN.

T. S. Cooper		Ram	3 years	4 11	4 10	4 1		
Do		do	2 years	5 1	4 10	4 0		
Do		do	1 year	4 8	4 8	3 7		
Do		do	do	4 7	4 7	4 6		
Do		Ewe	1½ years	4 7½	4 2½	3 2½		
Do		do	do	4 5	4 3	3 1½		
Park Commission		do	3 years	3 6	3 10	3 6		
R. M. Fisher	2	Ram	4 years	4 10	4 10	4 9		
Do	4	do	1 year	4 5	4 5	4 6		
Do	1	do	6 months	3 6	3 7	3 4		
Do	33	Ewe	2½ years	3 10½	3 11½	3 6		
Do	54	do	1½ years	4 3	4 3½	3 8		
T. S. Cooper	64	do	6 months	3 5	3 6	3 0		
Do	67	do	do	3 6	3 7	3 3		
S. J. Sharpless		do	3 years	3 6	3 9½	3 1		
Do	2	do	7 months	3 4	3 6	3 3		

HAMPSHIRE.

William Homewood		Ram	6 months	4 0	4 3	3 8		
Do		do	do	3 11	4 0	3 5		

OXFORD.

T. S. Cooper	Freeland	Ram	6 years	5 1	5 0	4 5		
Do	Princo of the West	do	2 years	5 10	5 8	4 0		
Do		do	1 year	4 11	4 11	4 0		
Do		do	do	5 2	5 2	3 11		
Do		do	do	5 4	5 4	4 3		
Do		Ewe	6 months	3 11	4 1	3 3		
Do		do	4 years	4 5	4 0	3 7		
Do		do	2 years	5 6	5 4	3 10		
Do		do	1 year	5 3	4 11	3 5		
Do		do	do	4 0	4 3	3 4		
Do		do	do	4 9	4 10	3 6		
Do		do	6 months	4 5	4 4	3 5		



Depths of staple of certain animals represented.

SOUTHDOWN.

Owner.	Number or name.	Sex.	Age.	Shoulder.	Side.	Hip.	Belly.
				Inches.	Inches.	Inches.	Inches.
T. S. Cooper		Ram	2 years	1 1/2	1 1/2	1 1/2	1 1/2
Do.		do	3 years	1 1/2	1 1/2	1 1/2	1 1/2
Do.	17	do	1 year	1 1/2	1 1/2	1 1/2	1 1/2
Do.	22	do	do	1	1	1	1
Do.		Ewo	1 1/2 years	2	1 1/2	1 1/2	1 1/2
Do.		do	do	1 1/2	1 1/2	1 1/2	1 1/2
Park Commission		do	3 years	1 1/2	1 1/2	1 1/2	1 1/2
K. M. Fisher	2	Ram	4 years	1 1/2	1 1/2	1 1/2	1 1/2
Do.	4	do	1 year	1 1/2	1 1/2	1 1/2	1 1/2
Do.	1	do	6 months	1 1/2	1 1/2	1 1/2	1 1/2
Do.	33	Ewo	2 1/2 years	1 1/2	1 1/2	1 1/2	1 1/2
Do.	54	do	1 1/2 years	1 1/2	1 1/2	1 1/2	1 1/2
Do.	64	do	6 months	1 1/2	1 1/2	1 1/2	1 1/2
Do.	67	do	do	1 1/2	1 1/2	1 1/2	1 1/2
S. J. Sharpless		Ram	7 months	1 1/2	2	2	1 1/2
Do.		do	do	1 1/2	1 1/2	1 1/2	1 1/2
Do.		Ewo	3 months	1 1/2	1	1	1 1/2
Do.	2	do	6 months	1 1/2	2	2	1 1/2

HAMPSHIRE.

William Homewood		Ram	6 months	2 1/2	2 1/2	2	2
Do.		do	do	2 1/2	2 1/2	2	1 1/2

OXFORD.

T. S. Cooper	Freeland	Ram	6 year	2 1/2	2	1 1/2	1 1/2
Do.	Prince of the West	do	2 years	2 1/2	2 1/2	2 1/2	1 1/2
Do.		do	1 year	2 1/2	2 1/2	2 1/2	2 1/2
Do.	59	do	do	2 1/2	2 1/2	2 1/2	2 1/2
Do.	20	do	do	2 1/2	2 1/2	2 1/2	2 1/2
Do.	13	do	do	2 1/2	2 1/2	2 1/2	2 1/2
Do.		do	6 months	3	3	2 1/2	2 1/2
Do.	55	Ewo	3 years	2 1/2	2 1/2	2 1/2	2 1/2
Do.	23	do	4 years	2 1/2	2 1/2	2 1/2	1 1/2
Do.		do	1 year	2 1/2	2 1/2	2 1/2	2 1/2
Do.		do	do	3	3	2 1/2	2 1/2
Do.		do	do	2 1/2	2 1/2	2 1/2	2 1/2
Do.		do	6 months	3 1/2	3 1/2	3 1/2	2 1/2

The following tabular statement constitutes the catalogue of the samples of wool collected at the Exhibition and elsewhere, and examined in accordance with the provisions of the law, with the results detailed further on. In this catalogue we have aimed to include only such data as might show the origin of the sample as regards breed, age, and sex of the animal represented, and the contributor, and must refer the reader to the previous pages for the facts concerning the feeding and management of the animals represented. It will be seen that we have been especially indebted to Mr. J. D. Whitham, of Valley Grove, W. V., and Mr. William G. Markham for material of a commercial character, the study of which has added greatly to the interest and value of our work. Further than this the catalogue will explain itself.

Catalogue of samples of wool collected at the International Exhibition of Sheep, Wool, and Wool Products.

Catalogue number of sample.	Breed of animal.	Register number or name.	Gender.	Age.	Weight of car case.	Weight of fleece in grease.	Age of staple.	Name and address of exhibitor.
					Pounds.	Pounds.		
34	Cotswold	372	Ram	Yearling		16	5 months	A. Strawn, Ottawa, Ill.
35	do	365	do	3 years			do	Do.
36	do	368	do	6 months	154		do	Do.
37	do	382	Ewo	Lamb			do	Do.
38	do	249	do	2 years		17	5 months (April 2)	Do.
39	do	430	do	Yearling	147		5 months	Do.
109	do							— Reed, Oregon.
110	do							Do.
170	do						5 months	E. Hicks, Gosbenville, Pa.
171	do		Ewo	Lamb			do	Do.
172	do		Ram	do			do	Do.
173	do		do	do	196		do	Do.
174	do		do	1 year	161		do	Do.
175	do		do	2 years	245		do	Do.
176	do		do	do	279		do	Do.
177	do		Ewo	do	161		do	Do.
178	do		do	do	165		do	Do.
179	do		do	1 year			do	A. Strawn, Ottawa, Ill.
180	do		do	2 years			do	Do.
181	do		do	do			do	Do.
182	do		do	do			do	Do.
183	do		do	Lamb			do	Do.
184	do		Ram	1 year			do	Do.
185	do		do	Lamb			do	Do.
186	do		do	2 years	300		5 months	Do.
187	do		Ewo	Lamb			5 months	Do.
188	do		do	do			do	Do.
189	do		Ewo	1 year			do	Do.
190	do		do	2 years			5 months	Do.
193	do		do	do			do	Do.



Catalogue of samples of wool collected at the International Exhibition of Sheep, Wool, and Wool Products—Continued.

Catalogue number of sample.	Breed of animal.	Register number or name.	Gender.	Age.	Weight of carcass.		Age of staple.	Name and address of exhibitor.
					Pounds.	Pounds.		
113	Leicester							— Reed, Oregon.
114	do							Do.
59	Lincoln		Ram	3½ years		13½	4 months (May 20)	T. C. Wade, Media, Pa.
60	do		Ewe	2 years		9½	5 months (April 20)	Do.
61	do		do	Lamb	120		5 months	Do.
164	do		do	do			do	Do.
165	do		Ram	do			do	Do.
166	do		do	2 years			do	Do.
167	do		do	1 year			do	Do.
108	do		Ewe	2 years			do	Do.
169	do		do	do			do	Do.
101	do		do	do			do	Do.
25	Southdown							S. J. Sharpless, Philadelphia, Pa.
*62	do		Ram	2 years				T. S. Cooper, Coopersburg, Pa.
*03	do		Ewe	1 year		9		Do.
91	do		do	2 years	155			R. M. Fisher, Danville, Ky.
92	do	31	do	1 year				Do.
93	do	56	do	1 year				Do.
93	do	26	do	3 years	180			Do.
94	do	40	do	1 year	100			Do.
95	do		do	6 months				Do.
132	do		Ram	3 years				T. S. Cooper, Coopersburg, Pa.
133	do		do	2 years				Do.
134	do		do	4 years				R. M. Fisher, Danville, Ky.
135	do		do	1 year				Do.
136	do		do	do				Do.
137	do		do	do				Do.
138	do		do	Lamb				Do.
139	do		do	do				S. J. Sharpless, Philadelphia, Pa.
140	do		do	do				Do.
141	do		Ewe	2 years				R. M. Fisher, Danville, Ky.
142	do		do	do				S. J. Sharpless, Philadelphia, Pa.
143	do		do	do				Fairmont Park, Philadelphia.
144	do		do	1 year				T. S. Cooper, Coopersburg, Pa.
145	do		do	do				Do.
146	do		do	do				R. M. Fisher, Danville, Ky.
147	do		do	do				Do.
148	do		do	Lamb				Do.
149	do		do	do				S. J. Sharpless, Philadelphia, Pa.
162	Hampshire		Ram	do				William Homewood, Newark, Del.
103	do		do	do				Do.
*04	Oxford		Ewe	1 year				T. S. Cooper, Coopersburg, Pa.
65	do		Ram	2 years				Do.
66	do	20	do	1 year				Do.
*07	do	12	do	do				Do.
107	do		do	do				Do.
108	do		do	do				Do.
150	do		Ram	2 years			6 months	T. S. Cooper, Coopersburg, Pa.
151	do		do	6 years			do	Do.
152	do		do	1 year			do	Do.
153	do		do	do			do	Do.
154	do		do	do			do	Do.
155	do		do	Lamb			do	Do.
156	do		Ewe	2 years			do	Do.
157	do		do	do			do	Do.
158	do		do	1 year			do	Do.
159	do		do	do			do	Do.
100	do		do	do			do	Do.
161	do		do	Lamb			do	Do.
8	Merino							P. Martin, Rush, N. Y.
9	do		Ram					J. W. Hardy, New York
10	do							—, Oregon.
11	do							Do.
12	do							Do.
13	do							Do.
21	do		Ram					S. A. Cochran, West Virginia.
22	do							R. H. Russell, Washington, Pa.
23	do		Ram					John McDowell, Washington County, Pa.
26	do		Ewe					R. H. Russell, Washington County, Pa.
27	do		Ram					Do.
28	do		Ewe					Do.
29	do							Do.
30	do	182	Ram	2 years	156	28½	5½ months	R. Ferrine, Patterson's Mills, Pa.
31	do	159	Ewe	1 year			do	F. P. Spivey, Fairview, W. Va.
32	do	167					do	G. Hammond, Vermont.
33	do	145					do	Do.
40	do	20	Ewe				do	Do.
41	do	23	do	1 year		12	5½ months (April 6)	John M. Miller, Hickory, Pa.
42	do	204	do	do			do	Do.
43	do	208	do	do			5½ months	S. S. Campbell, Cadiz, Ohio.
44	do	205	do	do			do	Do.
45	do	64	do	6½ months			do	Do.
46	do	114	do	2 years		13½	6½ months	John M. Miller, Hickory, Pa.
47	do	Centennial	Ram	4 years	144	24½	6 months	Do.
48	do	Boom	do	2 years	128	27	5½ months	Do.
49	do	72	Ewe	3 years			do	S. S. Campbell, Cadiz, Ohio.
50	do	54	do	do			do	Do.
51	do	42	Ram	1 year	128	20½	5 months	F. P. Spivey, Fairview, W. Va.
62	do	102	Ewe	5 years			do	Do.
63	do	207	Ram	2 years	110	15	5 months	E. Peck & Sons, East Geneva, Ill.
54	do	Club	do	3 years	128	22½	do	D. Kelly & Son, Wheaton, Ill.
55	do	Tom	do	do	123	22½	do	Do.
56	do	Queen	Ewe	5 years	117	21½	3 months (June 1, 1880)	Do.
57	do	Klt	do	2 years	171	17½	4 months	Do.
68	do	do	do	do	70	14	4½ months	Do.
69	do	Ram						E. Peck & Sons, East Geneva, Ill.
70	do	Snecesa	do	6 years	137	25	4 months	R. Ferrine, Patterson's Mills, Pa.
71	do	149	Ewe	2 years			do	S. C. Work.
72	do	1	Ram	do			5 months	Do.
73	do	2	do	do			do	W. L. Archer, Burgottstown, Pa.
74	do	Excelsior	do	4 years	137½	22	do	Do.
			Ewe	1 year			do	A. McCalmont, Washington, Pa.

\* Imported.



Catalogue of samples of wool collected at the International Exhibition of Sheep, Wool, and Wool Products—Continued.

Catalogue number of sample.	Breed of animal.	Register number or name.	Gender.	Age.	Weight of car-	Weight of fleece	Age of staple.	Name and address of exhibitor.
					case.	in grease.		
					Pounds.	Pounds.		
75	Morino	204	Ewe	1 year				S. S. Campbell, Cadiz, Ohio.
76	do	208	do	do				Do.
77	do	122	do	5 months				Do.
78	do	273	Ram	do				A. McCalmont, Washington County, Pa.
79	do		do	Lamb				R. Perrine, Patterson's Mills, Pa.
80	do	49	Ewe	4 years				J. Glass, Burgettstown, Pa.
81	do	58	do	3 years				Do.
82	do	Randolph	Ram	1 year				McCalmont & Glass, Washington County, Pa.
83	do	582	Ewe	do				W. L. Archer, Burgettstown, Pa.
84	do	503	do	4 1/2 years			4 1/2 months	Do.
85	do	562	do	2 years				Do.
86	do	159	do	1 year				G. Hammond, Middlebury, Vt.
87	do	109	do	do				Do.
88	do	46	do	3 years				Do.
89	do	Jollan, 83	Ram	1 year				Do.
90	do	Rams, 200	do	7 years				Do.
90	do		Ewe	do				John McDowell, Washington, Pa.
97	do		do	17 months				Do.
98	do		Ewe	do				Do.
99	do		Ram	do				Do.
99a	do		Ewe	do				Do.
100	do		do	do				Do.
101	do		do	do				Do.
102	do		Ewe	do				Do.
103	do		do	do				Do.
104	do		Ram	6 years				Do.
104a	do		do	do				Do.
192	do		do	do				J. D. Whitham, Valley Grove, W. Va.
193	do		do	do				B. F. Cockrill, Nashville, Tenn.
230	do		do	do				Samuel Archer, Kearney, Mo.
1	Spanish Merino.		Ewe	5 years	75	38 1/2	1 year	L. P. Clark, Addison, Vt.
5	do	22	Ram	3 years	120	22 1/2	do	A. Chapman, Middlebury, Vt.
105	do		Ewe	do				— Guthrie, Oregon.
106	do		Ram	do				Do.
115	do		Ram	2 years				— Newby, Oregon.
116	do		do	do				Do.
117	do		Ram	do	22			Do.
118	do		do	do	22			Do.
119	do		Ewe	do				— Guthrie, Oregon.
120	do		do	do				Do.
121	do		Ram	do	47 1/2			— Newby, Oregon.
121a	do		do	do				— Oregon.
122	do		Ram	2 years				— Newby, Oregon.
124	do		do	do				— Guthrie, Oregon.
123	French Merino		do	do				Do.
125	do		Ewe	do				Do.
127	do		do	do				— Newby, Oregon.
2	Saxon Merino		Ewes	3 years	75		1 year	Jno. McDowell, Washington, Pa.
3	Silesian Merino		Ram	do	110		4 1/2 months	Carl Hein, Red Hook, N. J.
4	do		Ewe	4 to 5 years	85			Do.
6	Australian Merino.		Ram	do				Jno. L. Currie, Australia.
7	do		Ewe	do				Do.
16	do		do	do				— Oregon.
111	Cotswold and Leicester.		do	do				— Ohio.
10	Cotswold and Southdown.		do	do				— Newby, Oregon.
129	One-half Cotswold and one-half Merino.		do	do				Do.
15	do		do	do				— Wyandotte, Ohio.
20	Cotswold and Merino.		do	do				Do.
24	do		do	do				Bullock & Wunda, Wyandotte, Ohio.
14	Cotswold and Australian Merino.		do	do				— Australia.
126	Seven-eighths Leicester and one-eighth Merino.		do	do				— Newby, Oregon.
128	Seven-eighths Spanish and one-eighth Australian Merino.		do	do				— Oregon.

[Wools submitted by C. H. Roney, Philadelphia, Pa.]

199	Cotswold							Canada.
201	do							Do.
205	do							Do.
227	Lincoln		Ram					J. H. Augers, Collin's Grove, South Australia.
228	do		do	Hogget				Do.
229	do		Wether					W. J. Browne, Moorak, South Australia.
230	do		do	Lamb				Do.
231	do		Ewe					Do.
232	do		do	Hogget				Do.
233	Oxford		do					Canada.
213	Merino		Ewe					A. McFarland, Wellington Lodge, South Australia.
214	do		do					Haywood, Armstrong & Co., Wonoka, South Australia.
215	do		do	Hogget				Do.
216	do		Wether					Do.
217	do		do	Lamb				Do.
218	do		Ewe					W. Crozier, Adelaide, South Australia.
219	do		Ram					Joseph Keyne, Keyneton, South Australia.



Catalogue of samples of wool collected at the International Exhibition of Sheep, Wool, and Wool Products—Continued.

Catalogue number of sample.	Breed of animal.	Register number or name.	Gender.	Age.	Weight of carcass.	Weight of fleece in grease.	Age of staple.	Name and address of exhibitor.
					Pounds.	Pounds.		
220	Merino		Wether					Price & Brown, Wilpena, South Australia.
221	do			Hoggets				Do.
222	do			Lambs				Do.
223	do		Ewe					Do.
224	do							J. H. Augers, Collin's Grove, South Australia
225	do							Do.
226	do			Lamb				Do.
233	do		Ram					John Murray, Adelaide, South Australia.
204	Spanish Merino.							Spain.
205	do							Do.
206	Cluny							Do.
207	do							Do.
208	Silesian Merino.		Wether					Hungary.
209	do		do					Do.
210	do		Ewe					Do.
211	do		do					Do.
212	do							Do.
234	Leicester and Lincoln.							Thomas Graham, Adelaide, South Australia.
*202								Canada.
203	Goat hair							Russia.
117	Combing, half-bred.							Ohio.
118	do							Do.
1130	do							East Oregon.
1181	do							Do.

\* Black.

† Imperfect.

[Boston grades (imperfect) contributed by J. D. Whitham, Valley Grove, W. Va.]

Catalogue number of sample.	Grade or breed.	Remarks.	Catalogue number of sample.	Grade or breed.	Remarks.
237	No. 2		249	Delaine, unwashed	
238	No. 1		250	Spanish Merino	
239	Picklock		251	Picklock	
240	XXX		252	XXX	
241	Delaine, fine		253	XX	
242	Delaine, medium		254	X	
243	Combing, coarse		255	No. 1	
244	Combing, medium		256	No. 2	
245	XX		257	Delaine, fine	
240	X		258	Delaine, medium	
247	Delaine, fine		259	Combing, medium	
248	Delaine, medium		260	Combing, coarse	

[Woola contributed by J. D. Whitham, Valley Grove, W. Va.]

261	Merino	} Woola from flock of Wells & Dickinson, of 1828-'29.	296	XXX, low	} Full blood	
262	do		297	XX, good		
263	do		298	XX, clothing		
264	do		299	XX, low		
265	do		300	X, good		
266	do		301	X, fair		
267	do		302	X, low		
268	do		303	Delaine, fine		
269	do		304	Delaine, very fine		
270	do		305	X and above		
271	do		306	do		
272	do		307	do		
273	do					
BOSTON GRADES			Quarter-blood series.			
274	Between X and I	} Full blood.	308	Quarter-blood, good	} Weak; so made clothing.	
275	Fine, unwashed		309	Combing		
276	Fine, from dead sheep		310	Combing, low		
277	Picklock		Three-eighths blood series.			
278	XXX		311	Three-eighths blood, good		
279	XX		312	Combing		
280	X		Three-eighths and one-half blood series.			
281	No. 1		313	Three-eighths and one-half blood series		
282	No. 2		One-half blood series.			
283	Delaine, fine		314	One-half blood, high		
284	Delaine, medium		315	One-half blood, regular		
285	Combing, fine		310	Combing, washed		
286	Combing, medium		Five-eighths blood series.			
287	Combing, coarse		317	Five-eighths blood		
288	Common	318	Cotts			
289	New Mexico	319	Saxon, imported			
		320	Saxon, domestic			
290	Picklock, best					
291	Picklock, fair					
292	Picklock, medium					
293	Picklock, low					
294	XXX, extra					
295	XXX, good					



Catalogue of samples of wool collected at the International Exhibition of Sheep, Wool, and Wool Products—Continued.

[German grades contributed by W. G. Markham, Avon, N. Y.]

Catalogue number of sample.	Grade.	Remarks.	Catalogue number of sample.	Grade.	Remarks.
321	Super superlecta		334	Tertia	
322	do		335	Quarta	
323	Superlecta		336	High-pedigree wool	
324	do		337	do	
325	I electa		338	Ancient pedigree, pure bred	
326	do		339	Impure-bred wool	
327	II electa		340	French ram	
328	do		341	Rambouillet	
329	I prima		342	English merino	
330	do		343	Australian ewe	
331	II prima		344	Roger ram	
332	do		345	Rambouillet ewe	
333	Secunda		346	do	

[Miscellaneous samples received from various sources.]

Catalogue number of samples.	Breed of animals.	Register number or name.	Gender.	Age.	Name and address of exhibitor.
347	Merino		Ewe	Lamb	Samuel Archer, Kearney, Mo.
348	do		do	do	Do.
349	do		Ram	1 year	Do.
350	do		do	2 years	Do.
351	do		Ewe	do	Do.
352	do		do	do	Do.
353	do		do	do	Do.
354	do		do	do	Do.
355	do		do	do	Do.
356	do		do	do	Do.
357	do		do	do	Do.
358	do		do	do	Do.
359	do		do	do	Do.
360	do		Ram	3 years	Do.
361	do		do	4 years	Do.
362	do	68	do	2 years	J. T. Rich, Elba, Mich.
363	do	73	do	do	Do.
364	do	94	do	1 year	Do.
365	do	109	Ewe	3 years	Do.
366	do	118	do	do	Do.
367	do	139	do	2 years	Do.
368	do	141	do	do	Do.
369	do	157	do	1 year	Do.
370	do	165	do	do	Do.
371	do				W. G. Markham.
372	do				Do.
373	do				Do.
194	Angora goat				F. Strenzel, Martinez, Cal.
195	do			Spring kids	M. S. Cochrill, Nashville, Tenn.
196	do			Aged	Do.
197	do				R. Peters, Atlanta, Ga.
382	do				Robert W. Scott, Frankfort, Ky.
383	do		Ram	2 years	William Patchette, Frankfort, Mo.
384	do				Isaac S. Diehl, Asia Minor.
385	do			1 year	
386	do			6 months	
387	do		Ewe	1 year	
388	do				L. Zavalla, Argentine Republic.
389	do				C. Sogvaia, Argentine Republic.
390	do				Acclimation Society, Victoria, Australia.
391	do				Robert W. Scott, Frankfort, Ky.
392	Cashmere goat				—, Rattlesnake Place, Cal.
393	do				L. B. Thornton, Tuscumbia, Ala.

[Silks submitted by Prof. C. V. Riley, Agricultural Department, Washington, D. C.]

374	Yellow Japanese				C. V. Riley, Washington, D. C.
375	do				Do.
376	Riley's yellow			Race fed 11 years on maclura	Do.
377	Riley's white			do	Do.
378	Fasnach's black Thibet				Do.
379	Crozier's French				Do.
380	Crozier's French, black (larvæ white)				Do.
301	Crozier's French, (larvæ black)				Do.



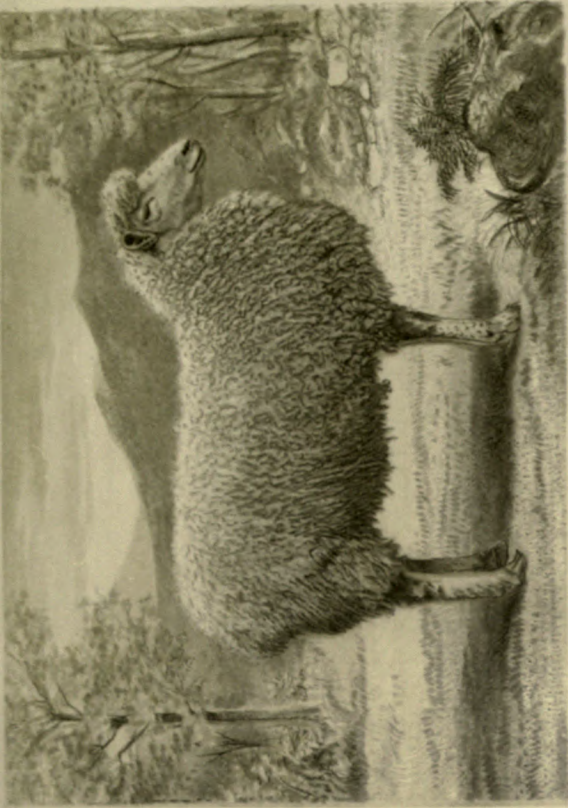
## PLATES SHOWING REPRESENTATIVE ANIMALS EXHIBITED.

In the following plates we present reproductions from photographs of several of the representative animals exhibited by different breeders, believing that they will prove both interesting and valuable in the comparison of the results to be given further on. The photographs were taken at the close of the Exhibition, and some allowance must therefore be made for any apparent defects in condition of the animals, should any be noticed.

*List of figures in Plates I to VIII, inclusive.*

No.	Subject.	Age.	Register number or name.	Name of exhibitor.
1	Cotswold ram.....	3 years.....	365	A. Strawn.
2	.....do.....	1 year.....		Do.
3	Cotswold ewe.....	.....do.....		Do.
4	Lincoln ram.....	5 years.....	Dignity.....	T. C. Wado.
5	Lincoln ewe.....	2 years.....		Do.
6	Lincoln lamb.....			Do.
7	Southdown ram.....	1 year.....		T. S. Cooper.
8	.....do.....		2	R. M. Fisher.
9	Southdown wether.....			Do.
10	Southdown ewe.....		40	Do.
11	Southdown ram.....		Stalwart.....	S. P. Sharpless.
12	Southdown ram lamb.....		1	Fairmount Park.
13	Southdown ewe lamb.....		64	Do.
14	Oxforddown ram.....		Prince of the West.....	T. S. Cooper.
15	Merino ram.....		Saint John, 83.....	George Hammond.
16	Merino lamb.....		Gwendola, 167.....	Do.
17	.....do.....		Model, 145.....	Do.
18	.....do.....	1 year.....	Daisy, 159.....	Do.
19	Merino ram.....	2 years.....		W. L. Archer.
20	.....do.....	.....do.....	2	Do.
21	Merino ewe.....	.....do.....	508	Do.
22	Merino ram.....	3 years.....	Ed. Hammond.....	Campbell & Glass.
23	.....do.....	4 years.....	15	McCalmont.
24	.....do.....	2 years.....	Boon.....	J. M. Miller.
25	.....do.....	6 years.....	Success.....	S. C. Work.
26	Merino.....		Bush, 207.....	Peck & Sons.
27	Merino ewe.....	2 years.....	Town Ewe, 19.....	Do.
28	Merino ram.....	.....do.....	Smuggler, 182.....	F. P. Spivey.





No. 3. Cotswold Ewe, 1 year old, Exhibited by Abner Strawn, Ottawa, Ills.



No. 4. Lincoln Ram, "Dignity," 5 years old. Exhibited by T. C. Wade, Media, Pa.



No. 1. Cotswold Ram, 3 years old, Reg. No. 366, Exhibited by Abner Strawn, Ottawa, Ills.



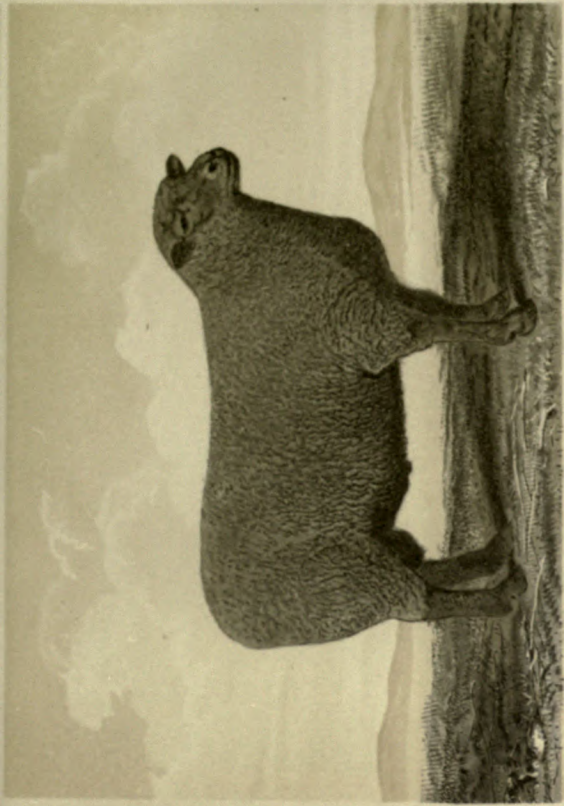
No. 2. Cotswold Ram, 1 year old, Exhibited by Abner Strawn, Ottawa, Ills.

REPRESENTATIVE ANIMALS EXHIBITED IN THE  
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PHILADELPHIA, 1880.

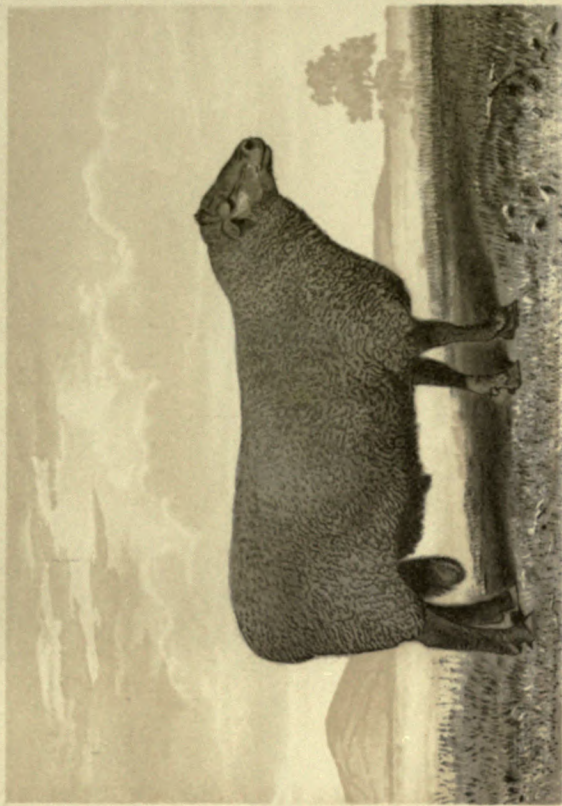








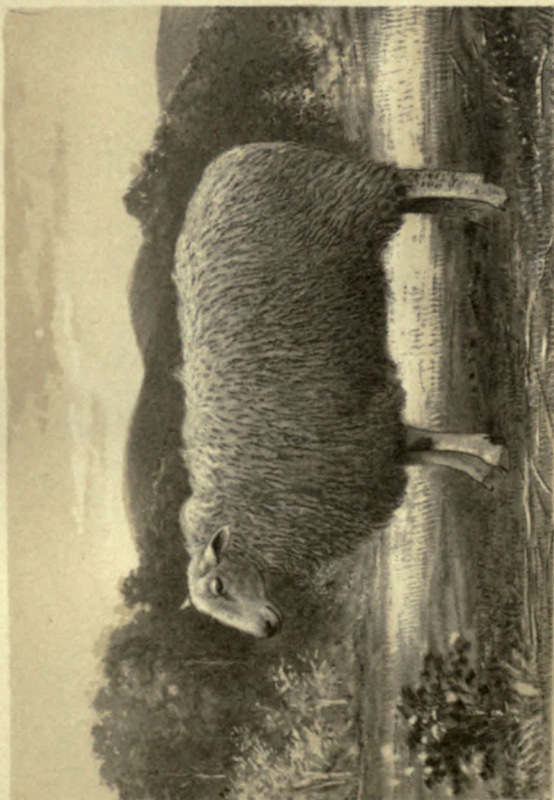
No. 7. Southdown Ram, 1 Year Old. Exhibited by T. C. Cooper, Coopersburg, Pa.



No. 8. Southdown Ram. Reg No. 2. R. M. Fisher, Danville, Ky.



No. 6. Lincoln Ewe, 6 Years Old. Exhibited by Thos. C. Wade, Media, Pa.



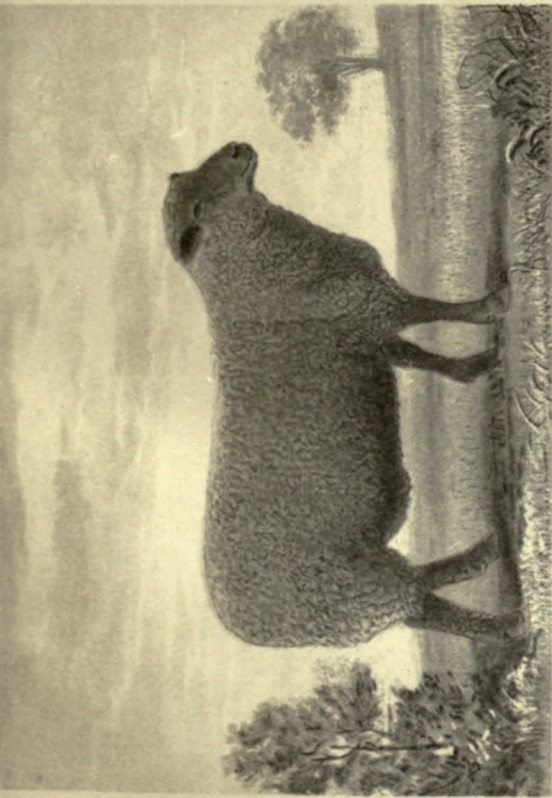
No. 6. Lincoln Lamb. Exhibited by T. C. Wade, Media, Pa.

REPRESENTATIVE ANIMALS EXHIBITED IN THE  
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No. 9. Southdown Wether. Exhibited by R. M. Fisher, Danville, Ky.



No. 11. Imported Southdown Ram "Stalwart," Property of S. J. Sharpless, Philadelphia, Pa.



No. 10. Southdown Ewe. Reg. No. 40. Exhibited by R. M. Fisher, Danville, Ky.



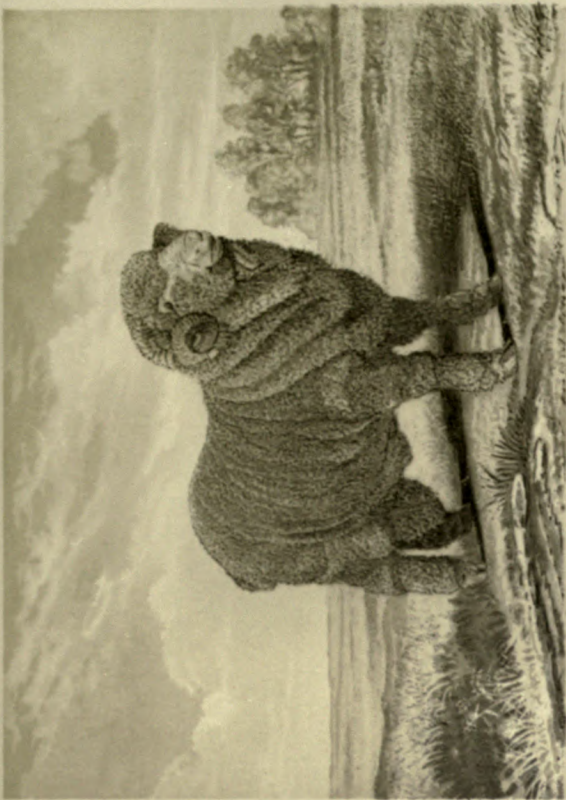
No. 12. Southdown Ram Lamb. Reg. No. 1. Exhibited by Fairmount Park Association, Philadelphia, Pa.

REPRESENTATIVE ANIMALS EXHIBITED IN THE  
INTERNATIONAL EXHIBITION OF SHEEP, WOOL AND WOOL PRODUCTS,  
PHILADELPHIA, 1880.

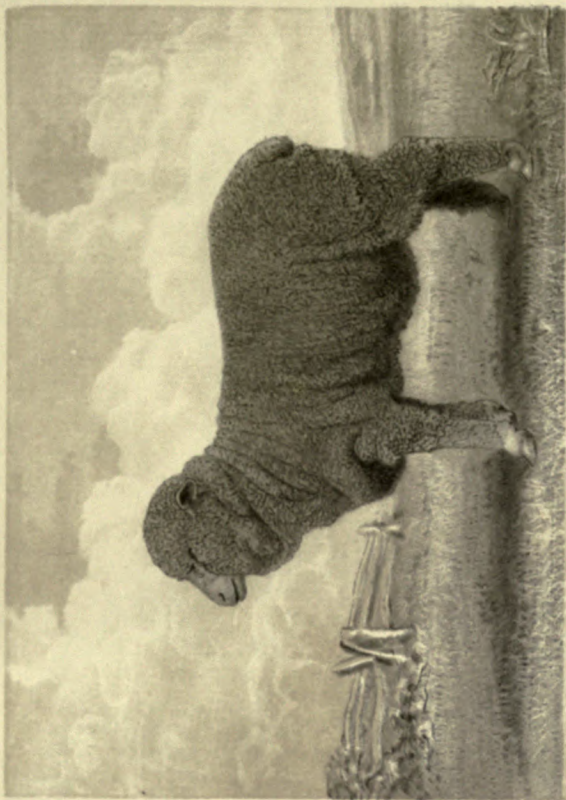




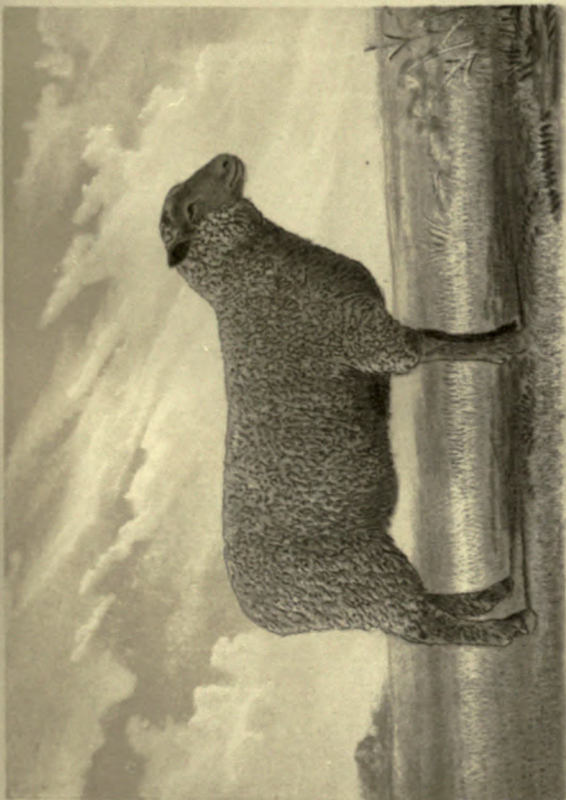




No. 15 Merino Ram "St. Julien" Reg No 83. Exhibited by Geo. Hammond, Middlebury, Vt.



No. 16 Merino Lamb "Gwendola," Reg No. 167. Exhibited by Geo. Hammond, Middlebury, Vt.



No. 13 Southdown Ewe Lamb. Exhibited by Fairmount Park Association, Philadelphia, Pa.



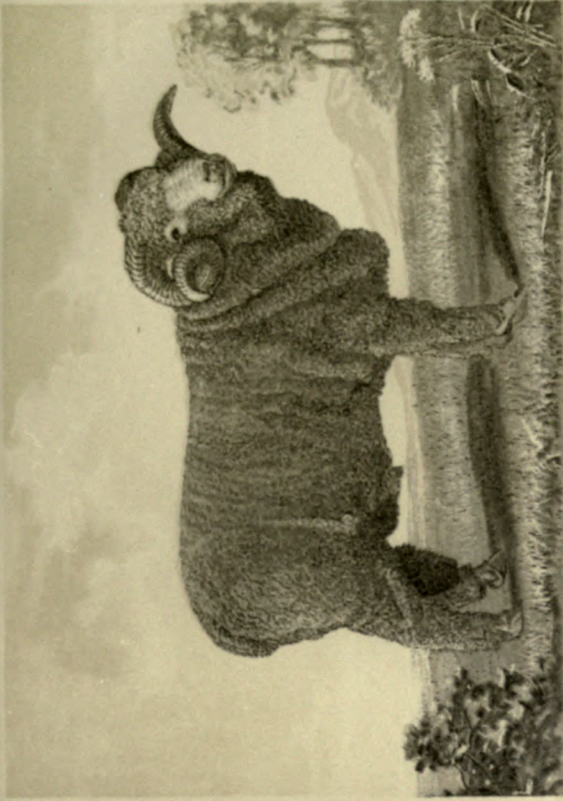
No. 14 Oxforddown Ram "Prince of the West." Exhibited by T. S. Cooper, Coopersburg, Pa.

REPRESENTATIVE ANIMALS EXHIBED IN THE  
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No. 19. Merino Ram, 2 years old. Reg. No. 2 Exhibited by W. L. Archer, Burgettstown, Pa.



No. 20. Merino Ram, 2 years old. Reg. No. 1. Exhibited by W. L. Archer, Burgettstown, Pa.



No. 17. Merino Lamb "Model." Reg. No. 145. Exhibited by Geo. Hammond, Middlebury, Vt.



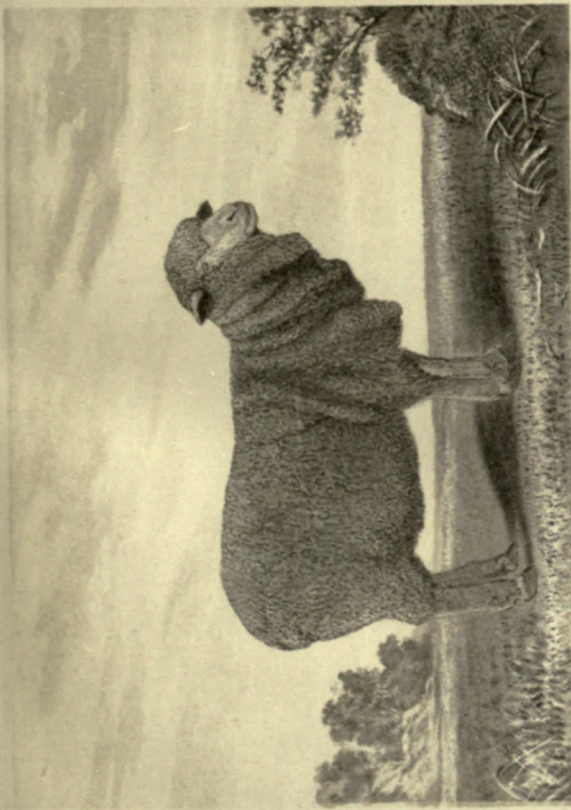
No. 18. Merino Lamb "Daisy." Reg. No. 169. Exhibited by Geo. Hammond, Middlebury, Vt.

REPRESENTATIVE ANIMALS EXHIBITED IN THE  
INTERNATIONAL EXHIBITION OF SHEEP, WOOL AND WOOL PRODUCTS,  
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No. 21. Merino Ewe, 2 years old. Reg. No. 503. Exhibited by W. L. Archer, Burgettstown, Pa.



No. 23. Merino Ram, 4 years old. Reg. No. 15. Exhibited by Alex. McCalmont.



No. 22. Merino Ram, "Ed. Hammond," 3 years old. Exhibited by Campbell & Glass, Cadiz, O.



No. 24. Merino Ram, "Boorn," 2 years old. Exhibited by J. M. Miller, Hickory, Pa.

REPRESENTATIVE ANIMALS EXHIBITED IN THE  
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PHILADELPHIA, 1880.

A. Heas & Co. Lithographic, Baltimore.









No. 25. Merino Ram "Success," 6 years old. Exhibited by S. C. Work.



No. 27. Merino Ewe, "Town Ewe," 2 years old. Reg. No. 19. Exhibited by Peck & Sons, Geneva, Ills.



No. 26. Merino Ram, "Bush." Reg. No. 207. Exhibited by Peck & Sons, Geneva, Ills.



No. 28. Merino Ram, "Smuggler," 2 years old. Exhibited by F. P. Spivey, W. Va.

REPRESENTATIVE ANIMALS EXHIBITED IN THE  
INTERNATIONAL EXHIBITION OF SHEEP, WOOL AND WOOL PRODUCTS,  
PHILADELPHIA, 1880







## CHAPTER III.

### EXAMINATION OF THE FIBERS.

#### MINUTE STRUCTURE AND EXTERNAL FORM.

With the preliminary statements already given we may now proceed to the description of the methods employed in the examination proper, and the consideration of the results that have been obtained. In this connection we have construed the provisions of the law to direct a study of all the important physical characteristics of the staple accepted by breeders and manufacturers to have an influence upon the value of the animal for breeding purposes, or serve as aids in the determination of its value in the factory. This must necessarily embrace consideration of the minute structure of the fiber, its length, fineness, tensile strength, ductility and elasticity, and its evenness as regards any or all of these properties. In some cases it has been necessary to examine them in connection with each other, but in every case we have endeavored to so conduct the tests and arrange the results that the relations between them can be readily made out and their relative importance in the fixing of the value of the material easily determined.

The work of examination proper was begun as soon after the close of the Exhibition as circumstances would allow, but the difficulties which naturally arose, dependent upon the character of the study required, prevented its prosecution in the logical order in which we have endeavored to arrange the results. These difficulties depended upon various causes, among which the more prominent were the lack of precedents in the United States and the consequent lack of reliable instruments and methods with which to carry out the details of the several operations involved. Hence it was necessary to devise new methods of work and new instruments of precision for making the measurements, cause the latter to be constructed, secure and train assistants, and provide for the many apparently unimportant details that could only be cared for as they arose. All these caused serious seeming losses of time, and occasioned great delay in getting the work in that systematic order which can alone furnish satisfactory results. These difficulties will be evident and perhaps partially appreciated upon inspection of the descriptions of the methods and apparatus employed in the several branches of the work.

The study of the minute structure of any material must always be attended with perplexing difficulties, and the examination of fibers in this respect furnishes no exception to the general rule. Not, indeed, because we have no precedents to guide us in such work, for the classic researches of Nathusius and Bohm have furnished many facts of infinite assistance, but because of the properties of the material under consideration. As we shall see further on, wool differs from almost all other kinds of material in several important particulars. To discover special forms of structure the microscope must of course be employed, but the fiber is apparently so uniform throughout, and the lines of structure so weakly defined on account of its transparency, that they may only with considerable difficulty be detected. If, therefore, a specimen of wool be inclosed in any properly refracting and transparent medium, such as water, oil, solution of gum, balsam, or resin, and examined in the microscope with transmitted light, its image presents the appearance of a more or less broad transparent band. With a microscope of high magnifying power and with the light passing through the fiber and the instrument to the eye properly directed, faint lines may be seen crossing the image in a more or less irregular way, while the edges of the image will appear either almost perfectly regular, or it may be slightly serrated, or more properly dentate, the latter quality differing in intensity with the race from which the fiber had been taken. Other than this, and with one further exception, the fiber thus presented appears to be perfectly amorphous and very transparent. This further exception to be noted is found in the pigment that is deposited throughout the center of the fiber of certain breeds of which it appears to be almost characteristic. Forming as it does, an important part of certain classes of wool, it will be described further on, when its peculiarities will be considered in detail.

But if under ordinary conditions the fiber appears to be amorphous in its internal structure, it is quite different when examined after being subjected to the action of re-agents which may impair its transparency or effect its



partial or complete disintegration. Under such circumstances it appears to be cylindrical in shape, covered with irregular scales or epithelia, and consisting of a bundle of elongated fibers, sometimes surrounding a central cellular cavity or canal filled with granules of pigment. These appear to be the three principal parts of the fiber of importance in either a theoretical or practical way, and we shall therefore develop them separately.

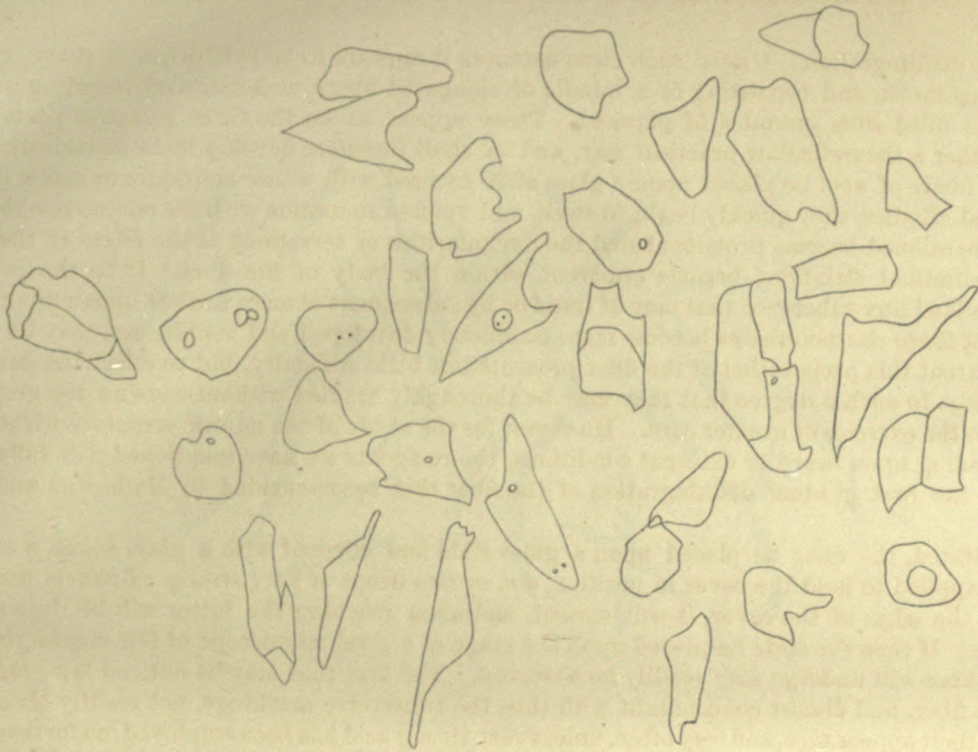
If a bundle of fibers of wool be placed upon a glass slide covered with either sulphuric or acetic acid, or with solutions of the fixed alkalis, they quickly begin to swell, and upon examination with the microscope the transverse markings already mentioned become prominent and the irregularities or serrations at the edges of the image more marked, while longitudinal striations become apparent within the body of the fiber. If to the re-agents thus employed there be added any substance that may of itself or by subsequent change further impair the transparency of the fiber, many of these characteristics become more completely developed and visible, and may be very readily studied. To this extent this preparation of the fiber presents but little difficulty, but to effect the development of the external markings to such a degree that they may be thoroughly studied without causing too great distortion of the parts involves the exercise of greater care. However, for the study of the minute structure without reference to differences depending upon breed or external conditions, the re-agents we have mentioned will fully suffice. Of these we chose for the first gradual disintegration of the fiber that recommended by Nathusius and Bohm, viz, sulphuric acid.

If, as already stated, the fiber be placed upon a glass slide and covered with a glass cover, a small drop of water having been applied to hold the cover in position, one or two drops of very strong sulphuric acid be applied to the slide near to the edge of the cover, it will spread, and upon reaching the latter will be drawn under it by capillary attraction. If then the slide be placed upon the stage of a good microscope of fair magnifying power the changes which the fiber will undergo may readily be observed. The first that may be noticed is a gradual swelling or expansion of the fiber, and almost concomitant with this, the transverse markings, not readily observed without oblique light, make their appearance, and very often, unless very strong acid has been employed, no further action seems to take place. If now the slide be removed from the microscope, gently warmed over a lamp, and quickly returned to the field of observation, the transverse markings become more prominent, the serrations at the edges of the image more distinct, and finally very thin scales or epidermal epithelia, as they may be called, begin to curl at their edges, which cause the transverse markings to ultimately separate from the main body of the fiber and float away through the acting medium. As soon as they separate from the fiber, and even before being completely free, they curl upon themselves, and finally roll into compact coils, so that in their free condition their form cannot be determined with any degree of satisfaction. They are very thin, according to Nathusius, having a thickness of only 0.0014 millimeter, and very transparent.

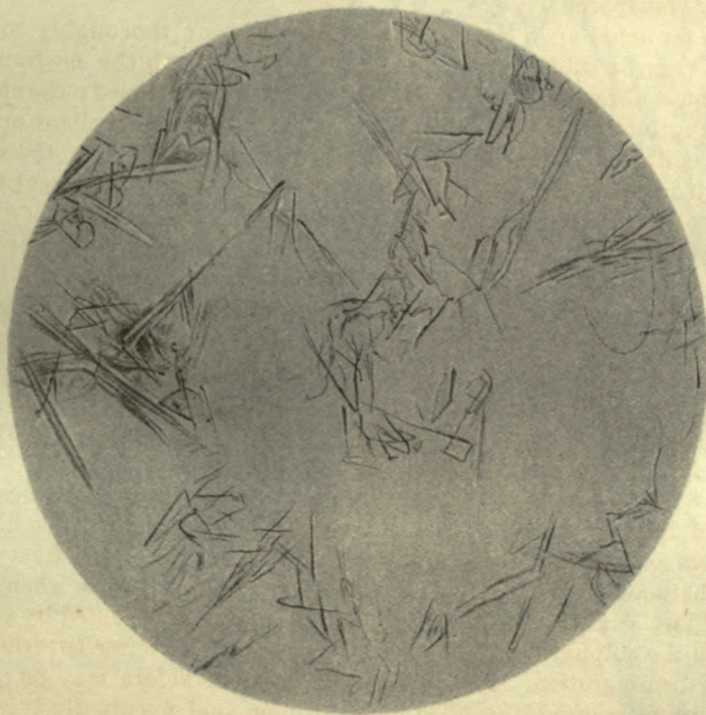
But if when the acid has so far acted upon the fiber that it has become thoroughly softened, and before these epidermal scales begin to curl, they be subjected to strong pressure through the medium of the cover-glass and without any lateral motion to cause abrasion, the fiber may be completely flattened; the epidermal covering seems to split in the direction of the length of the fiber, and spread out, affording an excellent opportunity for the study of the form of these scales or epithelia. Their form naturally varies greatly with the variety of fiber to which they belong, and, in the comparison of the external characteristics of the fibers of different breeds, they form nearly annular layers about the shaft of the Merino fiber, being very narrow in the direction of the axis of the fiber, and comparatively very wide in the direction of the circumference of the fiber in the finer staples and of very irregular forms in the fibers of the coarse-wool breeds. Some of these forms as separated by the acid mediums are illustrated in Plate VIII, A, representing specimens separated from a Cotswold fiber, and as seen floating about in the mounting medium. As they separate they appear to be arranged upon the fiber in somewhat the same manner as the scales on a fish, and they should therefore tend to confer upon the fiber the felting property for which wool is celebrated and upon which the value of the staple for manufacturing purposes so largely depends. But the manner of their attachment must still remain an open question, though the action of these scales in the felting operation need be no matter of doubt. As we see in the sketch they are usually very irregular in form, especially in the coarser wools. In some cases we may detect markings which seem like nuclei, but these are so ill defined, and appear so much like particles of fatty or other extraneous matter, often attached to the fiber in the raw condition, that we can scarcely accept them as nuclei. Many of these scales are entirely free from any such markings, and probably represent the true character with this regard. The forms of the scales when separated as above described are well illustrated in Plate VIII, B, made from a photo-micrograph obtained by solar projection.

After the fiber immersed in the sulphuric acid has been deprived of this outer covering of epidermal epithelia or scales, it suffers still further disintegration. To hasten it, warming as before may be necessary. Longitudinal striations appear and become more marked, the fiber more swollen, and eventually it breaks down to a mass of elongated fibrous cells which overlap each other throughout the length of the shaft. These cells are more or less spindle-shaped, and as they float through the mounting medium, in consequence of currents produced by pressure applied to the cover-glass by means of a mounting-needle or other instrument, they are found to be flattened or oval in their cross-section, nearly of uniform thickness throughout their length in the direction of one axis, but



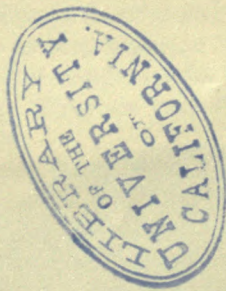


A. Epithelial scales from Cotswold fibre.  
Separated by treatment with sulphuric acid.  
Mounted in water. Drawings traced from  
solar projection.

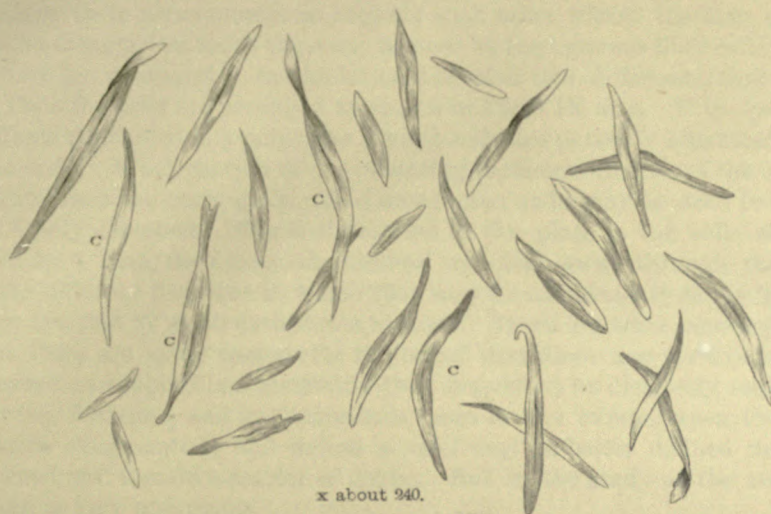


B. Epithelial scales, separated as above  
Photograph x 180.

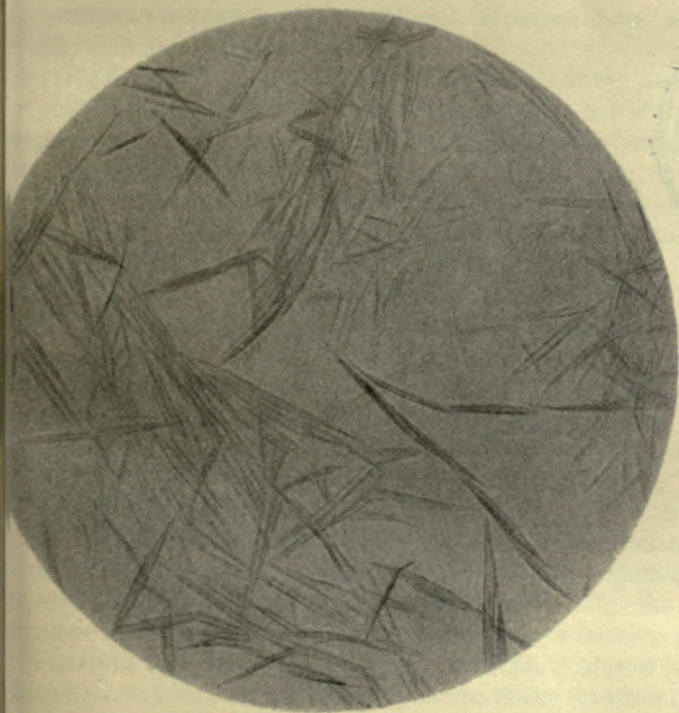




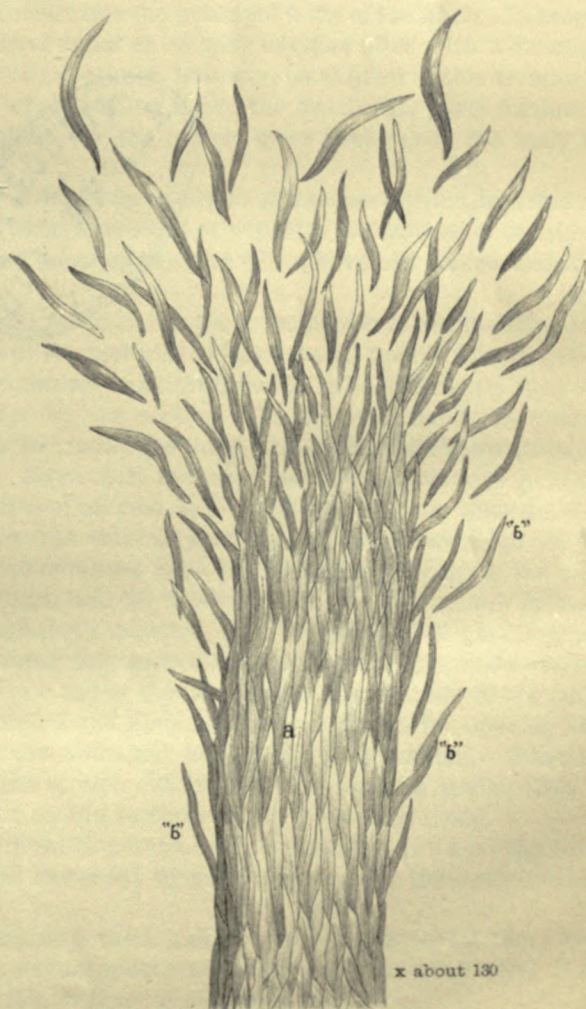




x about 240.



Cells of Fibro-Cellular Cylinder x 180.  
Separated by sulphuric acid and mounted  
in water. Photograph.



x about 130







tapering toward each end in the direction of the other. Generally they may be completely severed from each other by gentle abrasion caused by slight pressure and movement of the cover-glass, but very often they separate in bundles or clumps. Here their arrangement as regards each other within the fiber may be more easily observed, and they are found to be arranged in much the same manner as the ligneous fiber cells in vegetable tissue. Indeed, in many particulars they are comparable to the latter, and with this difference, that when thus treated they are much more pliable. Thus the cells are arranged as shown in Plate IX at *a*. If the portion of the fiber thus under examination have suffered rupture at any point, the fibrous cells are partially separated and give the appearance of great laceration at the ends. When motion of the mounting medium—that is, of the sulphuric acid above referred to—is set up by pressure upon the cover-glass, the disconnected ends may be seen to sway backward and forward with it until they are finally detached. This is illustrated in the plate in the cells shown at *b*. These cells sway backward and forward for a time, then loose themselves and float away through the medium. Both before and after detachment, in the different positions in which they may be examined, it seems impossible to detect any signs of nuclei, though they are said by some authorities to exist. There are some markings which seem somewhat like elongated nuclei, but there are many reasons for the belief that these may be due to refractions of light passing through them, and caused by longitudinal striations that may often be distinctly seen, as shown in the plate at *c*. The cells are more or less flattened, and are sometimes more or less twisted upon themselves, so that these light effects may often become exaggerated; and unless nuclei may be better defined than we have been able to see them, their presence must still remain a matter of doubt. But in the study of the cross-section of the fiber, some kind of central marking is very prominent.

Nathusius says with reference to these cells: "It is difficult to state what may be their size, for they often vary in the same specimen when differently treated. It is probable that they are separated by the solvent action of sulphuric acid upon the true cell membrane, and the horny kernel alone is apparent, so that we may only guess at the true dimensions. This fibrous tissue is swollen by water, and sulphuric acid must swell it even more."

The tissue consisting of these elongated cells therefore constitutes the principal body of the fiber. In some of the coarser fibers there may be found within this portion a central canal of cellular cavities filled with a characteristic granular pigment. The ultimate forms of the parts of this canal cannot, however, be studied in this treatment with sulphuric acid, and we shall therefore describe the method of separating it and the form of its parts further on.

When stronger acid is employed, stronger heat applied, or the action more prolonged, the cells become finally dissolved and disappear.

We have also studied the minute structure of the fiber through the medium of its cross-section, and this method of study is of interest from many points of view, one of the most important of which is the method of obtaining and supporting good sections for examination. All who have had occasion to study fibers have had this serious difficulty to contend with.

The matter of securing sections of any kind of material for microscopic examination is always attended with peculiar difficulties, depending in each case upon the nature of the material to be operated upon. But in most cases the material may be made self-supporting if this be not its natural condition, and if it be sufficiently firm to resist the action of the cutting instrument in the operation of making the section. On the other hand, the thin section obtained usually presents sufficient surface to enable it to be readily mounted and supported for examination and study. But with detached fibers this is scarcely possible. Even with the most perfect instruments it is difficult to make sections of thickness less than one or two thousandths of an inch, and this is often greater than the diameter of the fiber to be examined. Occasionally by rare good fortune thinner sections may be secured, but the thicker ones are the general rule. When, therefore, they come to be mounted upon the slide they fall upon the side, and observations upon the end section become impossible. Then, too, the flexible character of the fiber prevents the possibility of making transverse sections of it, unless it be suitably supported. To this end Rohde has recommended drawing the fiber through a good solid elastic cork and making thin sections of the latter. His mode of operation consisted in threading a needle with silk thread, attaching one end of the fiber under examination to the end of the thread, and thus passing it through the cork. After the thread and fiber are drawn through the opening made by the needle the elasticity of the cork causes it to close over the fiber and hold it firmly in position. When several fibers have thus been put in position the cork is placed in the section cutter and thin sections made. But Rohde found it very difficult to mount upon the slides for examination the sections of the fibers thus made.

Nathusius recommends supporting a bundle of fibers in gutta-percha. He softens the gutta-percha by warming, inserts the fibers while it is warm, and when it is again hardened by cooling mounts in the section cutter and makes sections in the usual way.

Voigtlander uses glue for support in cutting. He makes a thick solution of glue, immerses the fibers in it while warm, and when it becomes sufficiently hardened by cooling makes the sections in the usual way. The glue is then dissolved from the sections by means of water and the sections of fiber mounted.

All of these methods are attended with various serious difficulties. The fibers may readily be put in position in the cork after Rohde's plan, but it is difficult in the first place to secure corks free from hard woody knots which are sure to injure the edge of the cutting instrument, and in the second place it is equally difficult to remove the



wool sections from the cork and mount them upon the slide for examination. The gutta-percha support of Nathusius is apparently more desirable, but Bohm objects that the heat necessary to soften it may affect the fiber, while the material itself is difficult to cut. The glue of Voigtlander is still more undesirable, both because when it may be cut it is scarcely sufficiently firm and because of the objections urged by Bohm that the water it contains, and that employed in separating the sections of fiber from it preparatory to mounting, has a tendency to distort the fiber and make it unfit for proper examination.

In our own investigations all of these materials and many others have been made the subject of careful experiment. In the first place we adopted the method of Rohde of supporting the fiber for cutting in selected cork, but this was soon rejected because of the objections already stated. It was difficult to find and mount the sections after they were made. The edge of the cutting instrument was ruined by the action of the little hard knots occurring in the cork, and the thickness of the sections of the fiber was greater than their diameter, so that it was impossible to maintain them in proper position on the slide for examination. This was followed by placing a bundle of fibers in an upright position in a thick solution of gum contained in the cavity of a section instrument provided with a freezing attachment. The gum was frozen and thin sections made. The section of gum quickly melted and the sections of fibers were liberated; the latter were then collected and mounted for examination. But here, as before, it was found impossible to keep the sections in a proper position on the slide, and this plan too was rejected.

These experiments proved the necessity of selecting for a support in the section instrument some material, sections of which, containing the sections of the fibers, could be mounted upon the slide and the latter examined *in situ* in the supporting medium. To this end the fibers were immersed in various preparations of gelatine. In the first place strong solutions of gelatine in water were made, and the bundles of fiber immersed therein while it was warm and therefore fluid, and held upright by various devices until the glue cooled and became solid. It was then allowed to dry until it became sufficiently hard to cut, when it was placed in the section instrument and sections made. But it was found that the water of the glue had a tendency to contort the fibers on one hand, while the great contraction of the glue by drying made it very undesirable. To avoid this latter difficulty, however, solutions of glue were prepared with glycerine, but it was found that the glue when sufficiently soft to be cut nicely was too elastic, and it was impossible to get good sections, even with the sharpest knife. Finally, all preparations of gelatine were abandoned and various preparations of wax experimented with, but they were found unsatisfactory, principally because they were so deficient in transparency, and hence they too were rejected. After our experiments with all the substances above described, paraffine was presented to our attention and has really proved the most desirable of all. For though many objections may be urged against it, its brittle character, its crystalline structure when cold, its tendency to curl in making sections, yet these difficulties are more than counterbalanced by its easy fusibility, its transparency, and its indifference to the reagents employed in treatment of the fiber. We have, therefore, employed it in all our work in making cross-sections of the fiber, and it has served a most useful purpose. Whenever this may be desirable, the brittleness of the section and its crystalline character may be destroyed by mixing with it varying proportions of cocoa butter. But in our work this did not seem to be desirable or necessary.

In preparing the sample of fiber for making the cross-section the following details were carried out in our experiments. In the first place, the cavity of the section instrument is filled with melted paraffine. The sample to be operated upon is then dipped in the paraffine and left immersed in it until it is thoroughly impregnated and nearly free from air. It is then grasped at each end and firmly stretched to straighten the fibers without deforming them. But before the paraffine has had an opportunity to become perfectly cooled and set, the sample is drawn between the thumb and forefinger to compress it and crowd the fiber into the smallest possible space. It is now again immersed in the melted paraffine, stretched and compressed as before, and allowed to cool. Thus prepared it is cut into two parts. By the aid of a heated rod of iron or steel a small hole is melted in the paraffine, filling the cavity of the section instrument, and one-half of the prepared bundle of fibers introduced vertically to the melted paraffine. It must be kept in an upright position until the latter becomes cool and perfectly hard and firm. Sometimes it is found advantageous to again melt the paraffine about the sample mounted in this way, in order to insure the more perfect amalgamation of the paraffine of the section instrument with that surrounding the fibers. The other half of the specimen is introduced in a similar manner, and, if desirable, others prepared and fixed in the same way. All are then cut off at the surface of the paraffine, and sections through the latter made in the usual way. In this operation a very sharp knife which is not too much hardened must be employed. Treated as just described, the fiber appears to become very hard and has a tendency to injure the edge of the knife, turning or notching it, either of which seriously interfere with success in securing good sections.

It is above all desirable that the sections be made as thin as possible. When too thick they interrupt the transmission of light through the instrument and the proper examination of the fibers. On account of the brittle and crystalline character of the paraffine the sections always separate in close rolls. The latter are broken up, and those parts containing the sections are separated and mounted on the slide for examination and treatment. If it be desirable to color the sections they are simply mounted in solutions of aniline, from which the wool quickly absorbs the dye. But if disintegration is the end in view, they are mounted in strong sulphuric acid or solutions



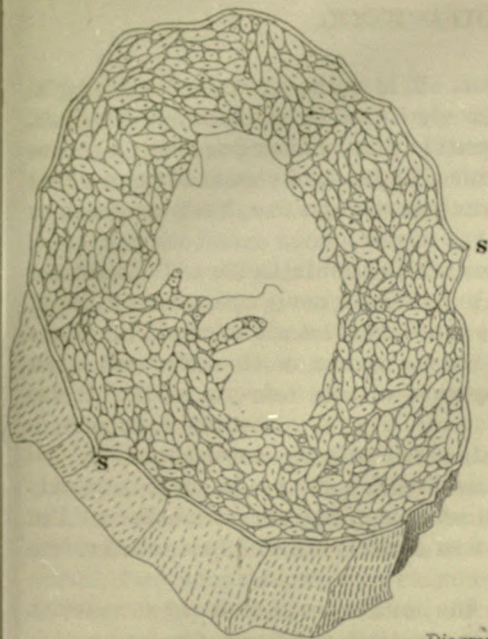


Fig 1.

Diagrammatic sections of Cotswold fibre secured by solar projection and tracing.

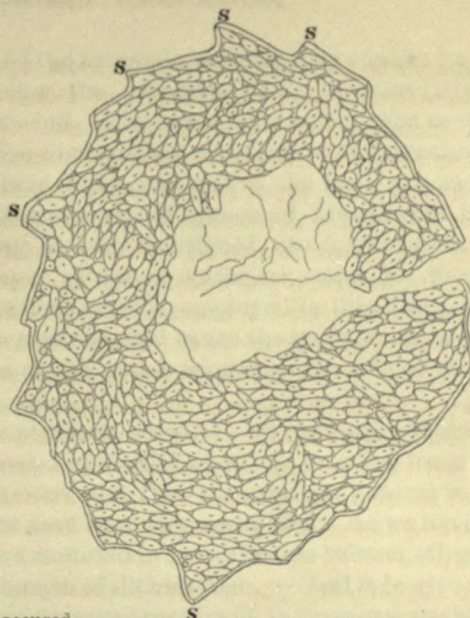
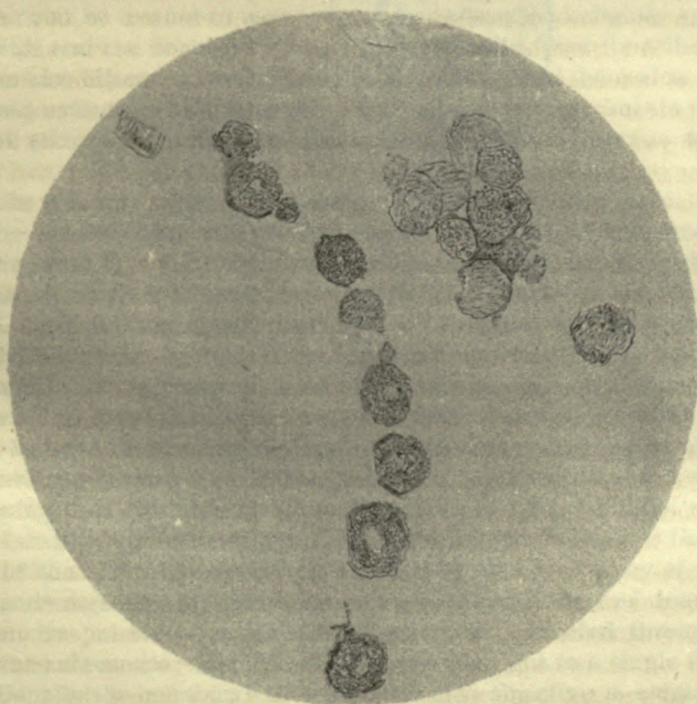


Fig. 2.

x about 3,000.



Photograph of Cross Section of Cotswold fibre x 310.  
Section made by supporting in paraffine,  
and prepared for examination by treatment  
with sulphuric acid and mounting in cotton-  
seed oil.







of potash or soda. By either of the latter means the development of the internal structure may readily be effected. The disintegrating agent acts only upon the wool, without affecting the paraffine. Almost immediately upon mounting the specimen in either of these agents the fibers begin to swell. The outer layer of flat cells or epithelial scales and the inner elongated cells slowly become apparent, and the fiber ultimately presents the structure shown in detail in the figure representing cross-sections of Cotswold fibers. The outlines of the form are secured by projecting the image upon a screen and tracing the image. Here the cylinder of elongated fibrous cells is plainly manifest. The elliptical form of the cells, with the central marking already mentioned, are fully shown. In this figure we have also given somewhat of prominence to the outer layer of flat or epithelial scales, for though they are so thin as to be almost invisible in cross-section with the powers that must be employed in this study, yet under the action of the disintegrating agent employed they soon begin to separate and cause the protuberances shown at S S S. These are also seen to correspond with the division lines of the scales wherever the side of the fiber is visible, as in Plate X.

In this enlargement, also, the central canal, usually filled with pigment, becomes very marked, and the general structure of the fiber is thus fully illustrated. First, we have the outer epithelial covering, then the inner cylinder of fibro-cellular tissue, and finally the inner cylinder or core of pigment, and this will apply in general to fibers of all breeds, though in some of them, as we shall see later, the pigment may be entirely wanting. As we have already stated, if we make a microscopic examination of a bunch of wool fibers mounted in gum, Canada balsam, oil, glycerine, or other highly refractive medium, and with transmitted light as a means of illumination, we find it to give an image almost homogeneous throughout, sometimes having the appearance of a transparent band, in some cases with slightly serrated (Merino), in others with almost uniform or even edges (Lincoln). Sometimes, upon very close examination, the transverse markings already mentioned may be faintly seen, but they are never prominent. Sometimes we find extending through the center of the image a band apparently more dense, dark by transmitted light and brilliantly white in reflected light. It is at once recognized as the pigment canal already mentioned. Occasionally the pigment is dissolved from the canal at the end of the fiber by means of the mounting medium, and the structure of the canal may be observed. This peculiarity, together with the form and arrangement of the external epithelial scales and the forms of the individual fiber, constitute the subject of this branch of our investigation. In the outset it was hoped that the results to be obtained here might serve as a basis upon which to found a system for the determination of purity of blood in different breeds, but how far anything of practical value may be developed from them will appear further on. To make these characteristic markings more prominent, so that they may be readily studied, the fiber under examination must be treated to reduce its transparency and slightly spread the scales upon which the markings depend. To this end the fiber must first be cleansed and freed from the natural grease with which it is covered. This operation also effects the desired slight displacement of the scales. The fiber thus cleansed is then colored to destroy to some extent the transparency. Very extensive experiments were made with vegetable colors, aniline dyes, and other staining materials ordinarily employed, to determine which of them could find useful application here.

But all these failed to give any satisfactory result. We then tried a solution of silver-nitrate in the strongest water of ammonia. The fiber without any previous treatment could be immersed in this solution directly, and after sufficiently long digestion it is removed, dried, and either exposed to sunlight or heated on the drying-plate. This whole treatment causes the fiber to swell somewhat, but the distortion occurring is more than counterbalanced by the results obtained. All the transverse markings showing the form and arrangement of the scales may be easily seen. So also the fiber may be washed with an alkaline solution or soap, dyed with aniline, and finally treated with sulphuric acid. But the treatment with ammoniacal solution of silver-nitrate has proved by all means the most satisfactory in all the drawings we have made and have now to present.\* But before proceeding to their discussion it will be of interest to describe the method we have used to enable us to secure accurate and faithful drawings of their external characteristics. In the first place, the fiber is treated with the silver solution just mentioned. Then after drying it is mounted in Canada balsam, or other suitable mounting medium, and the slide holding it placed on the stage of the microscope. The latter is then inclined so that the tubes occupy a horizontal position, and an image of the fiber be projected on a screen by means of a ray of sunlight.

Let me describe the arrangement of the instrument in somewhat more of detail: In the first place, the ray of sunlight is caught upon the mirror of a Keith's heliostat, and reflected through two condensing lenses to the Webster condenser of the microscope; the latter condenses the light to a single focus at or near the center of the field of observation. Usually the one-fourth or one-eighth inch objective is employed, though a Spencer one-half inch, with 100° angular aperture, was sometimes employed. The image formed by the eye-piece is projected to the screen, or, by means of a small reflecting camera to be attached to the eyepiece, it is projected upon the table; when the focus is properly adjusted, the details of the image are traced with either pencil or pen, or they may be secured by photograph. The figures given in Plates XI to XXXVI were secured by tracings of projections thrown upon the

\* Later work proved that strongly condensed solar light and oblique rays will develop very clearly the details, so that they may readily be traced from projection. The mounting medium, however, is important, and a mixture of equal parts of glycerine and alcohol will give by far the most satisfactory result.



table. In most cases higher powers were employed to bring out the details, for in this connection the one-fourth Crouch and the one-eighth Spence were found to serve a better purpose. In the examination of these figures it must be borne in mind that the fibers when employed for making the drawings were somewhat distorted by the preliminary treatment of staining they had received, but as a fact the deformity from this cause was very slight. When examined in the natural condition the projections at the edges of the images are very slight, and in the cases of the Cotswold, Lincoln, and Leicester fibers, scarcely perceptible. This is true to a large extent even when the fibers have been treated, so that, as might be expected, some little exaggeration has been necessary in the drawings to give prominence to those peculiarities that could only be brought out in the microscope by varying the focus or the direction of the incident light. Here we have an appearance of overlapping in the arrangement of the scales, but it is difficult to determine with certainty that this occurs, though from the form there is every probability that it does to a greater or less extent, and that the scales occupy much the same relative position toward the fiber that the pavement epithelia do to the mucus surfaces. On this subject Bohm makes the following remarks:

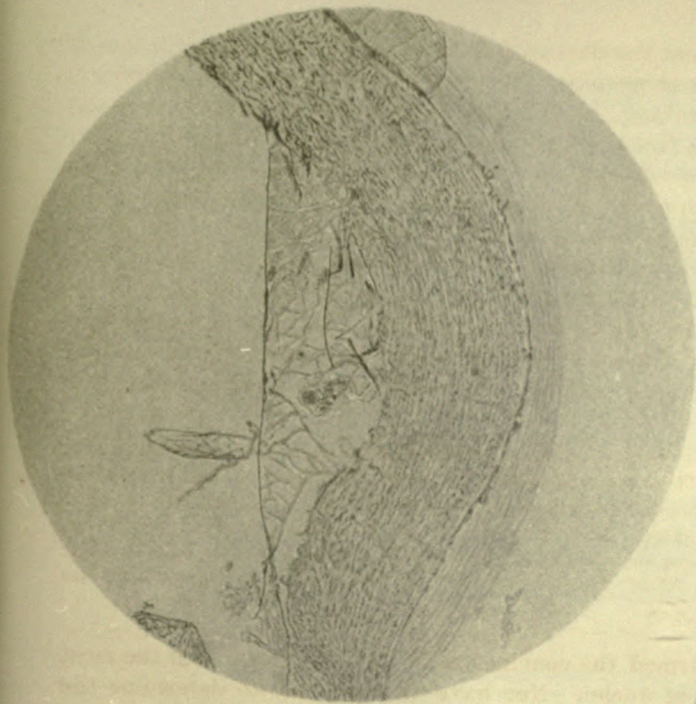
The epidermis (*cuticula pili*), or outer covering, completely surrounds the fibro-cellular portion of the fiber, and consists of extremely thin, flat epithelial scales lying across the spindle-shaped cells within. These scales are either joined at their edges, or they overlap like shingles, the latter giving to the image of the fiber the dentate appearance characteristic of certain breeds. They are differently arranged in the fibers of different races of animals, and even in different breeds of sheep. In some we find the scales alternately arranged without overlapping at the edges, so that they appear like shingles, while in others, such as in the pure-bred Merine, they seem to form annular layers around the whole fiber, and appear like cones inserted within each other. It is this overlapping, when visible, that gives a dentate appearance. Thus far no nuclei have been detected in these epithelial scales.

As to the latter point, our own investigations have confirmed the conclusions of Bohm. Even with the most varied treatment we have been unable to develop any traces of nuclei. Nor have we been able to determine the manner in which the scales are joined to each other. There are many reasons to support the conclusion that they are attached to a special membrane surrounding the fibro-cellular cylinder, a membrane exceedingly thin and transparent, and difficult to detect even under the most favored condition. This layer or membrane with its scales, like the contents of the pigment canal, seems much less soluble in strong alkaline solutions than the fibro-cellular mass, and while the latter is rather quickly broken down and dissolved by the re-agent mentioned, this with its scales remains intact for a long time under the same treatment. This becomes apparent if a fiber of the coarser wools be placed upon a glass slide and covered with a small quantity of a strong solution of potassium hydroxide (caustic potash) and left for some time to digest. The same effects may be obtained more readily by careful heating.

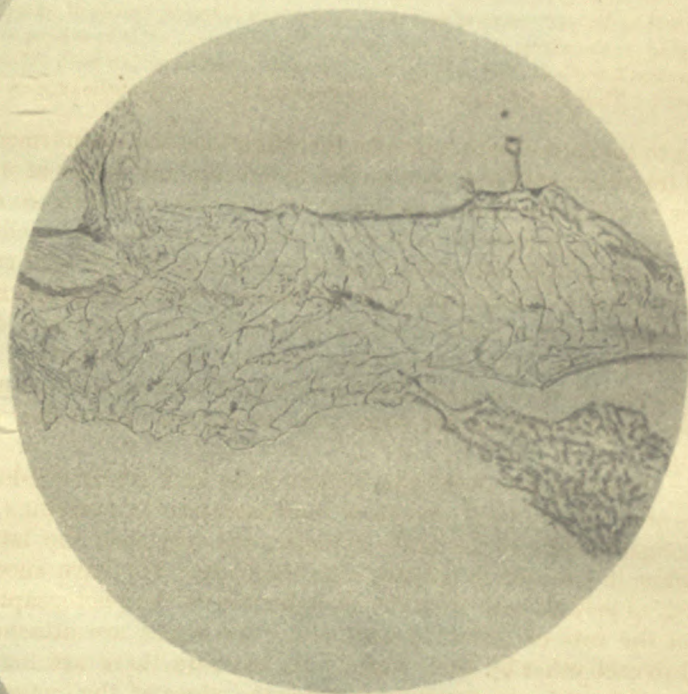
By observing the fiber, from time to time, and gently crushing it by pressure upon the cover glass, the fiber will be seen first to swell and show the characteristic markings due to the scales, then to exhibit the outlines of the elongated cells of the inner cylinder, and very soon the latter disappear completely by solution, leaving the membrane in question in patches over the plate. We have succeeded admirably in separating the scales by this method, as may be seen from the reproduction of the photograph we have to present herewith, Plate XI, showing that in the case of Cotswold wool, either the scales are attached to an exceedingly thin membrane or they are joined to each other by their edges. At any rate there are here no evidences of the overlapping mentioned by Bohm. Yet, when we carefully examine the edges of the image in the microscope before the disintegration takes place, we note a dentate appearance that can scarcely be ascribed to any other cause. But even the popular knowledge concerning the long wools would lead us to expect this to be less prominent in the long coarse wools than in the shorter finer ones. But as concerns the scales, what we have most seriously to consider here, with a possible practical end in view, is the character of the workings in the image of the fiber developed by this form and general arrangement, for it has been suggested, and the results of our investigations have tended to confirm it, that these markings, together with others, might be employed by breeders for the determination of the purity of the blood of any breed operated upon, and especially those having fine wools in which contamination with coarser-wooled blood may have occurred.

Referring to our plates, which it is to be regretted had to be curtailed both because of the space they naturally require and the time involved in their preparation, we find upon general examination that while the differences between the fibers of several breeds here represented are to some extent indefinite, they are sufficiently decided to distinguish between the two great classes into which wools are naturally divided; that is to say, between the long wools and short wools; the Cotswolds and Lincolns on the one hand, and the Merinos and Downs on the other. In the coarser and longer wools we find a greater tendency to angular forms, less difference in the width of the fibers in different directions, greater approach to the rhombic forms as suggested by Bohm. The outlines of the scales are much more broken, and the edges have a tendency to form an angle with the longitudinal axis of the fibers instead of being nearly perpendicular to it. There is little or no parallelism in the lines made by the edges of the scales. These characteristics are especially marked in the various plates, XII to XX, showing the forms of typical fibers of the Cotswold, Leicester, and Lincoln races, and they appear more decided when the images are developed with the higher powers. Here, too, we may see some distinctions between the

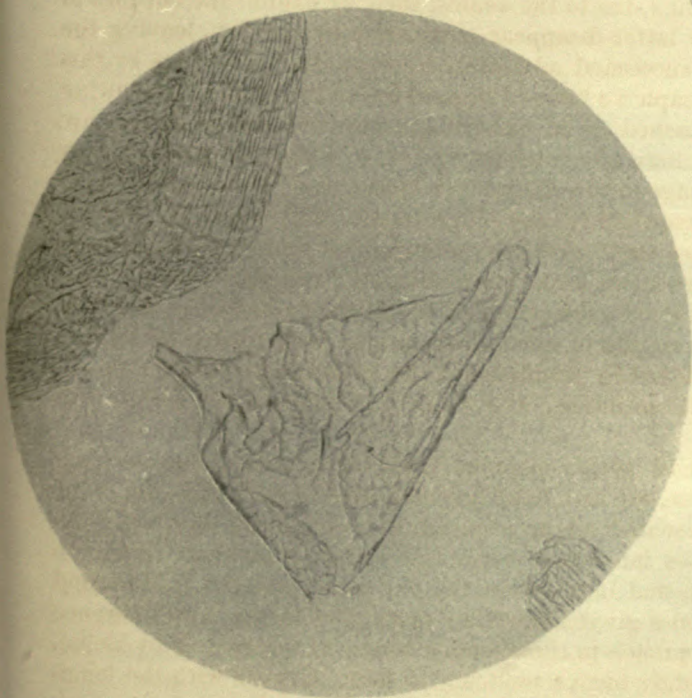




Epithelial Cuticle? x 180. Prepared for Photograph by treatment with potash, mounting in water. The detached Cuticle is seen at "A," the body of the fibre at B.



Epithelial Cuticle? of Cotswold fibre x 180. Prepared for examination by treatment with potash and mounting in water. Photograph taken after drying.

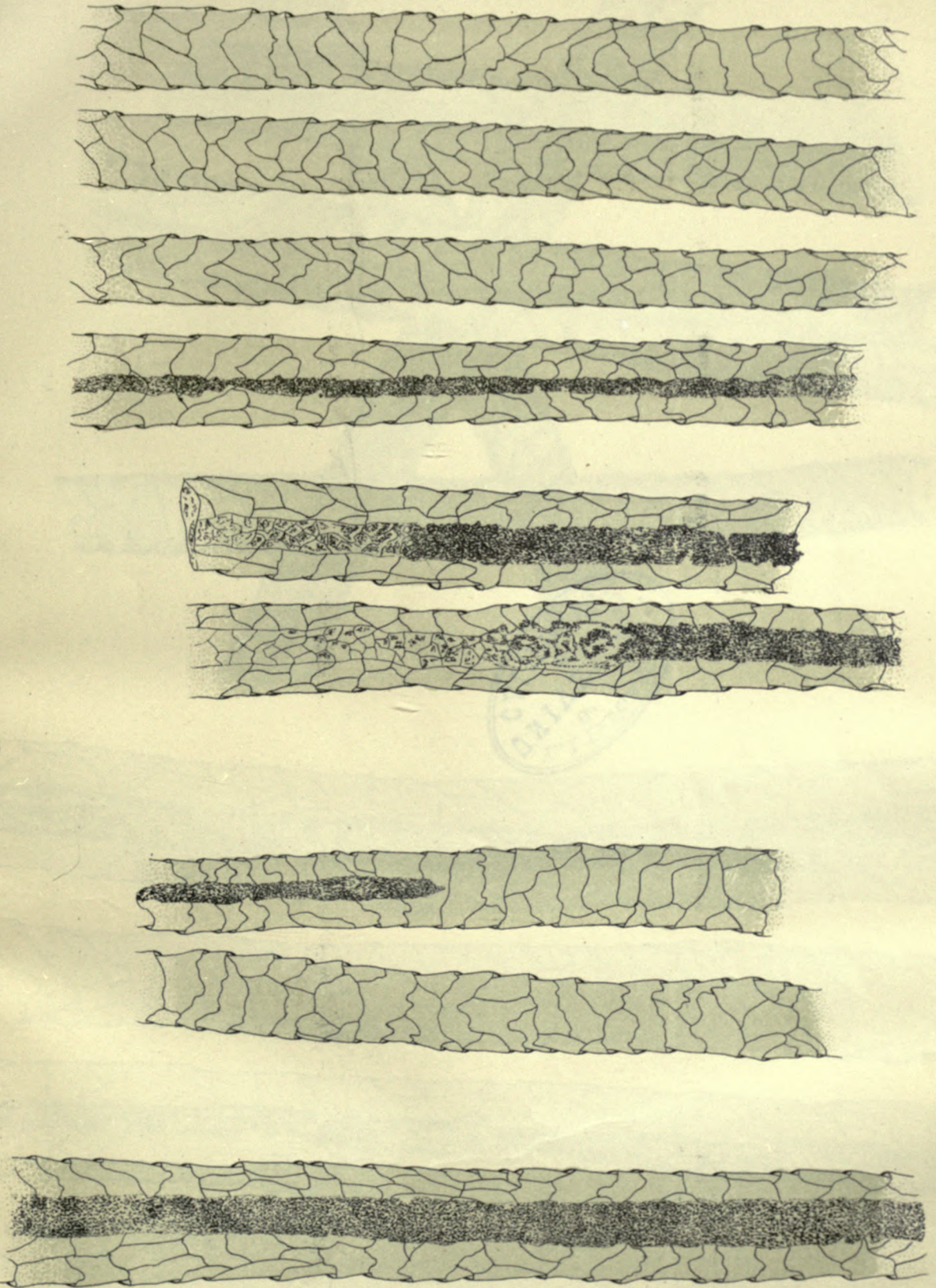


Epithelial Cuticle? (x 180.) detached.









REPRESENTATIVE FIBRES FROM

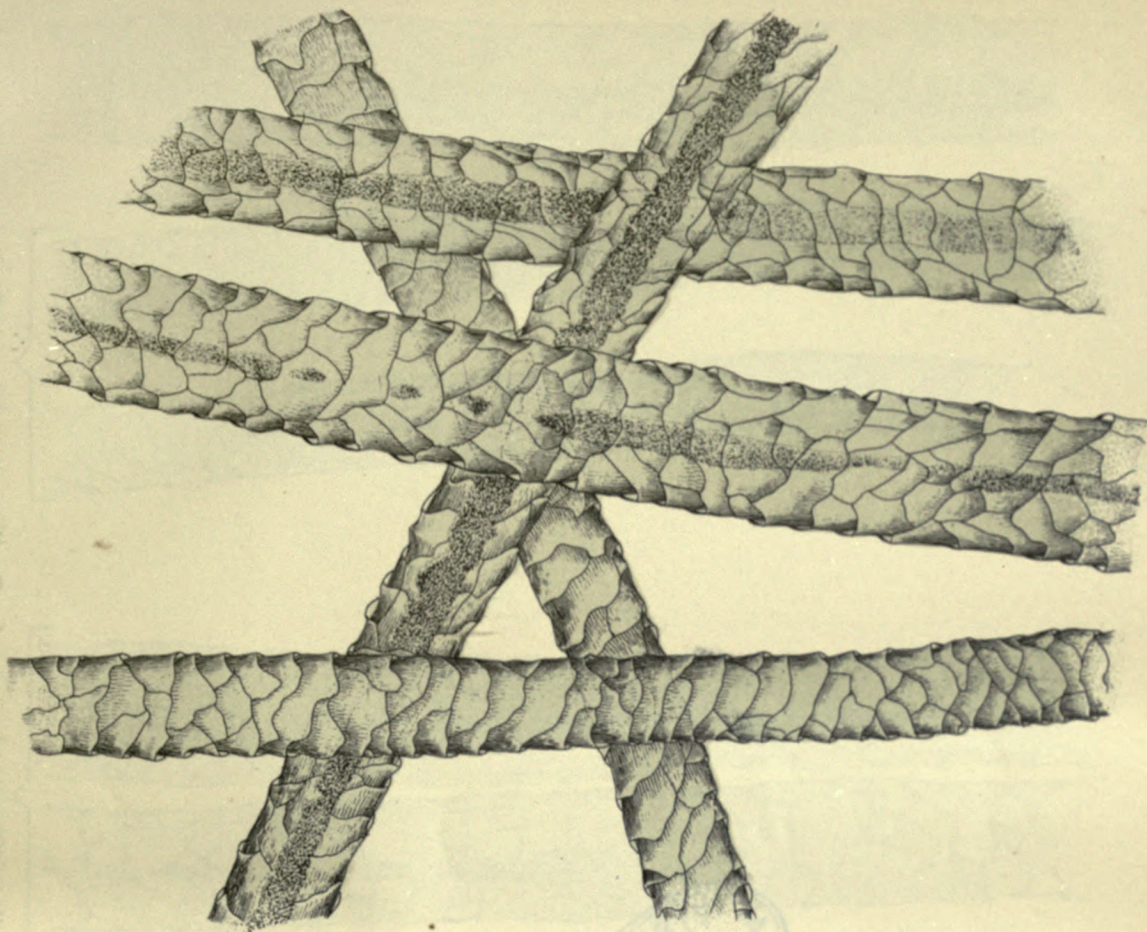
COTSWOLD.

DRAWN FROM SOLAR PROJECTIONS. X 310.





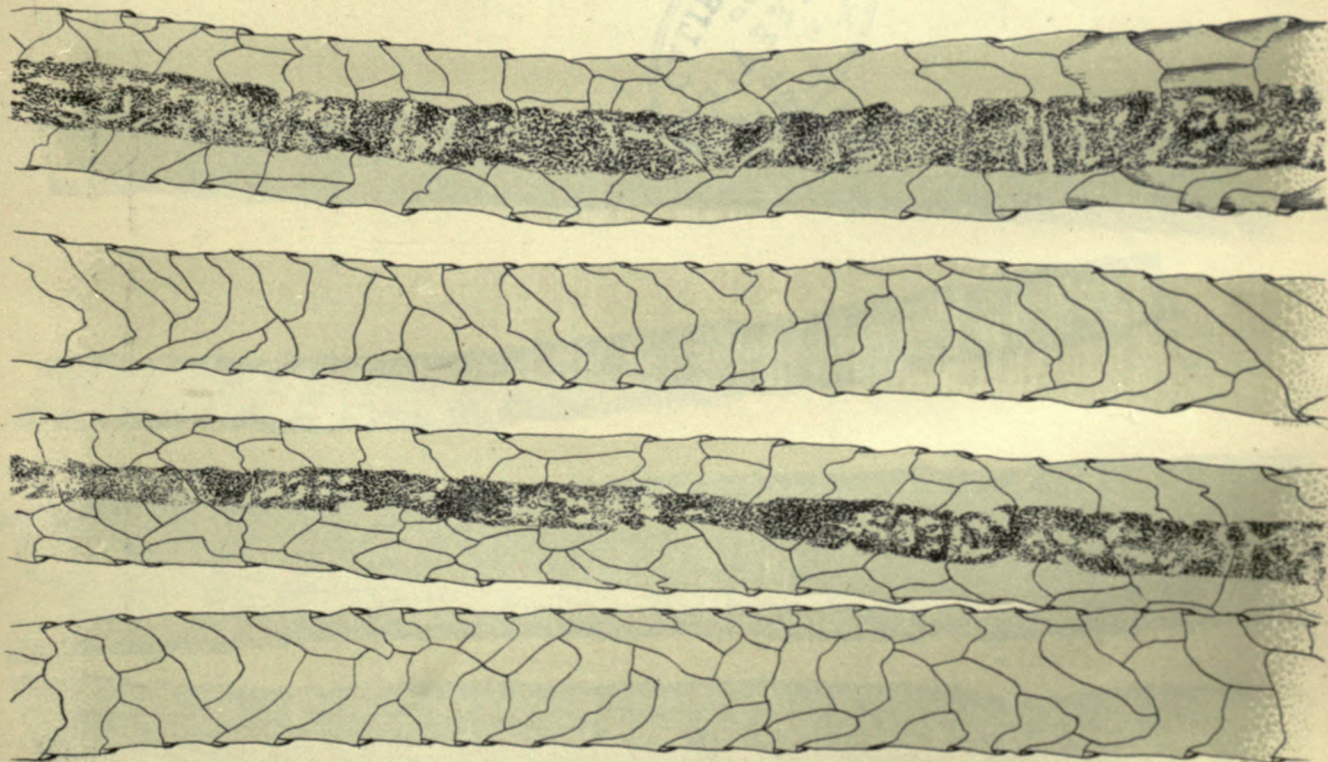




REPRESENTATIVE FIBRES FROM

COTSWOLD.

DRAWN FROM SOLAR PROJECTIONS, X 450.



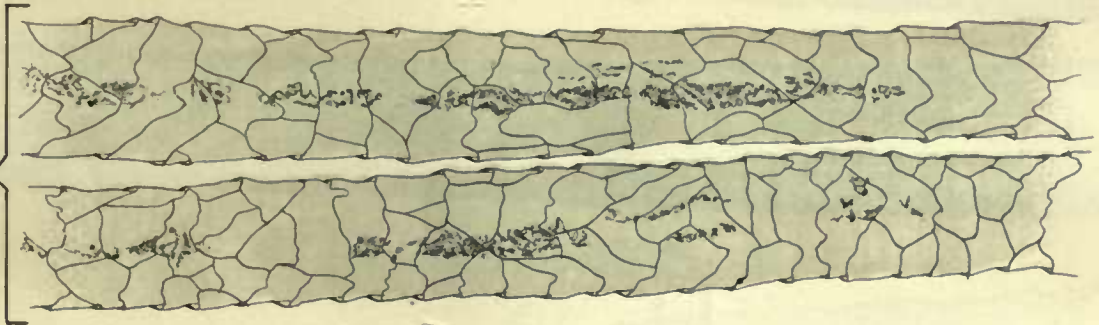




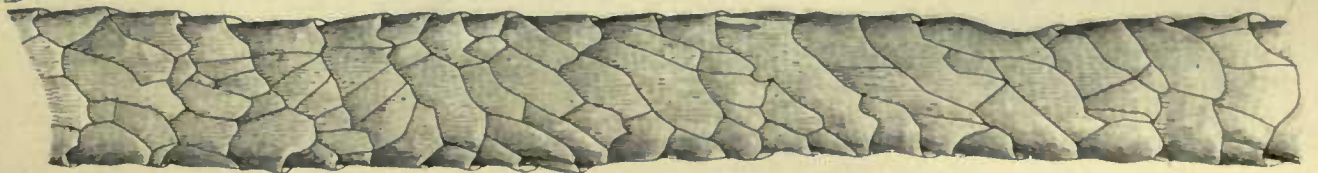
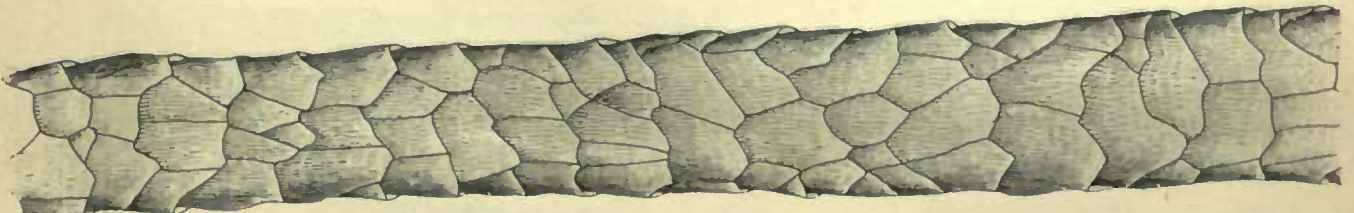




Opposite Sides.



Opposite Sides.



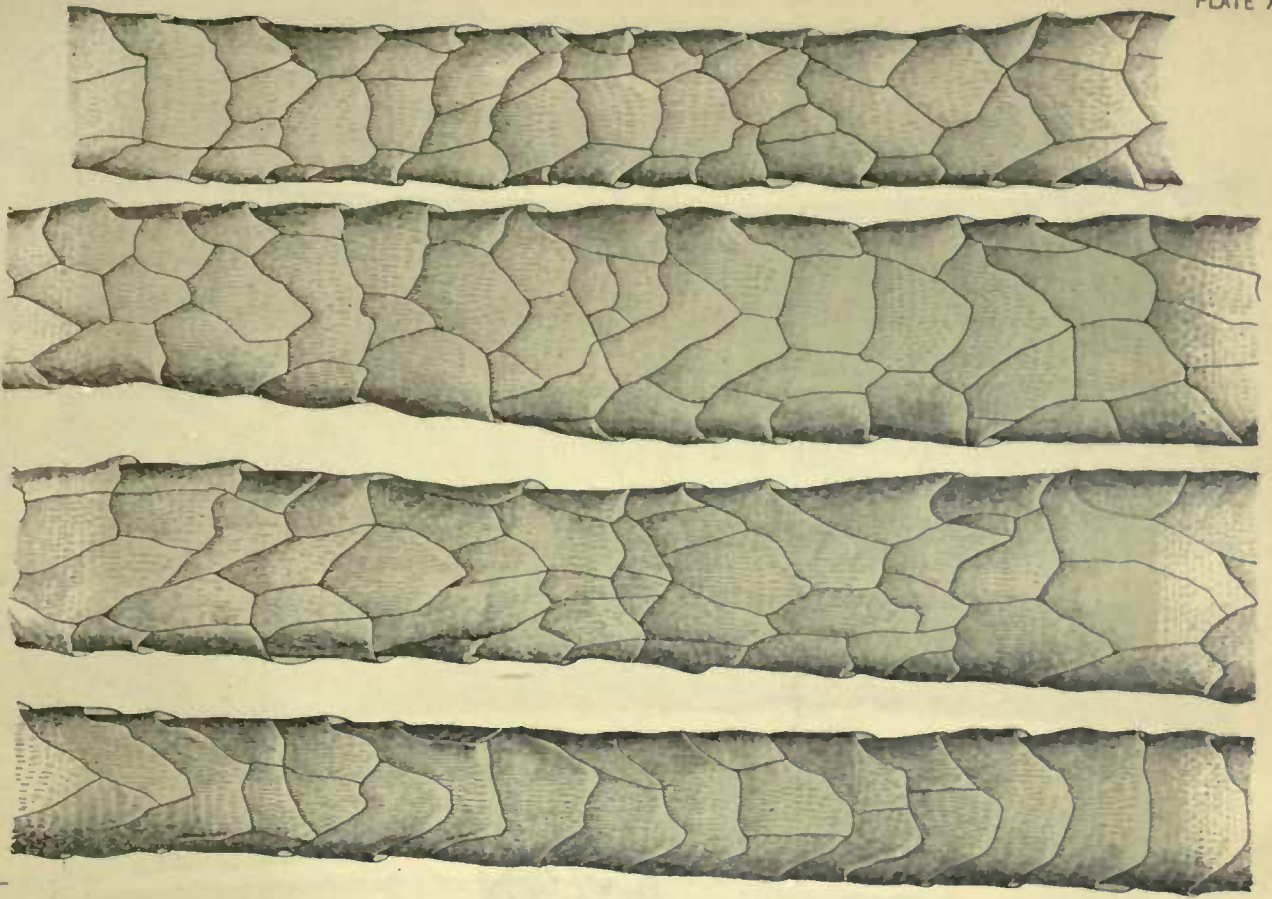
REPRESENTATIVE FIBRES FROM  
COTSWOLD.  
DRAWN FROM SOLAR PROJECTIONS, X 310.

REPRESENTATIVE FIBRES FROM  
LEICESTER.  
DRAWN FROM SOLAR PROJECTIONS, X 575.









X 575.

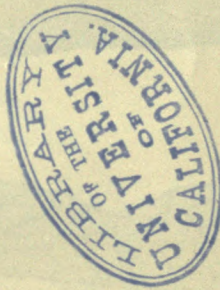
REPRESENTATIVE FIBRES FROM  
LINCOLN.

DRAWN FROM SOLAR PROJECTIONS, ENLARGED AS INDICATED.

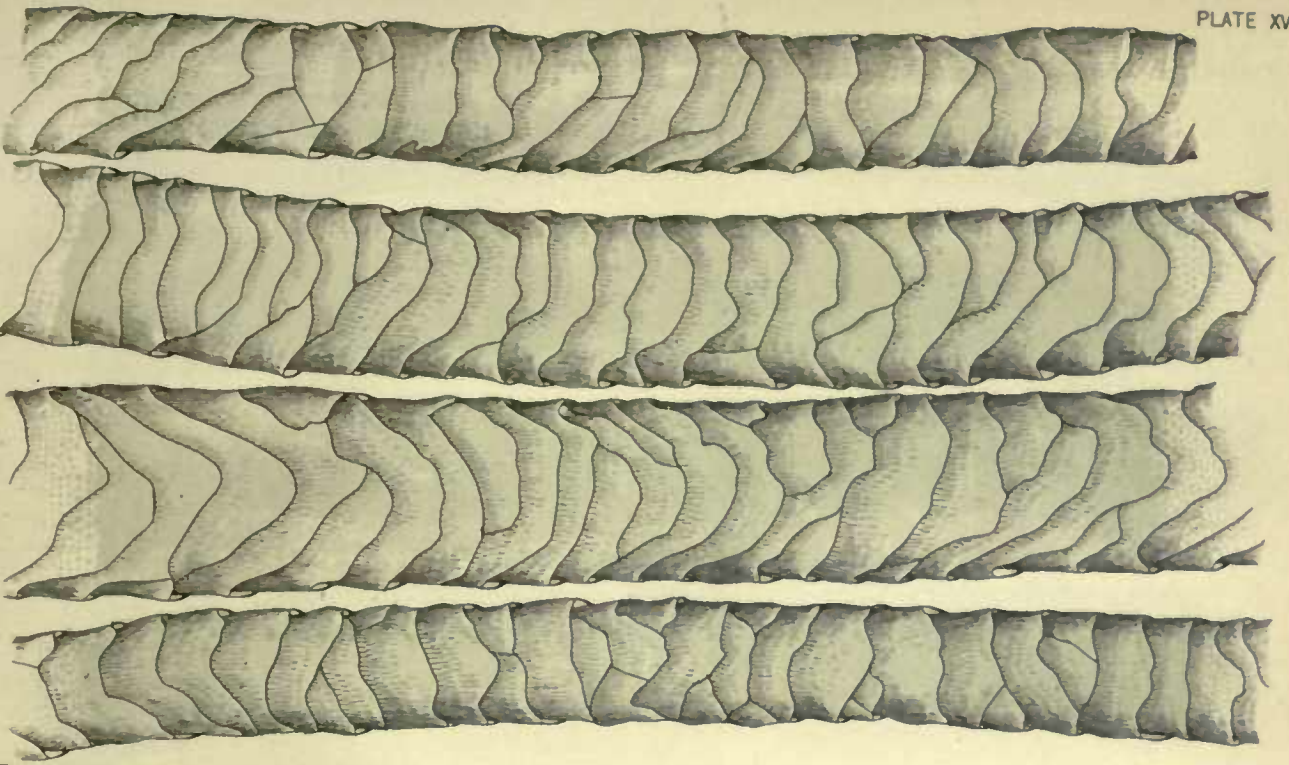


X 310.

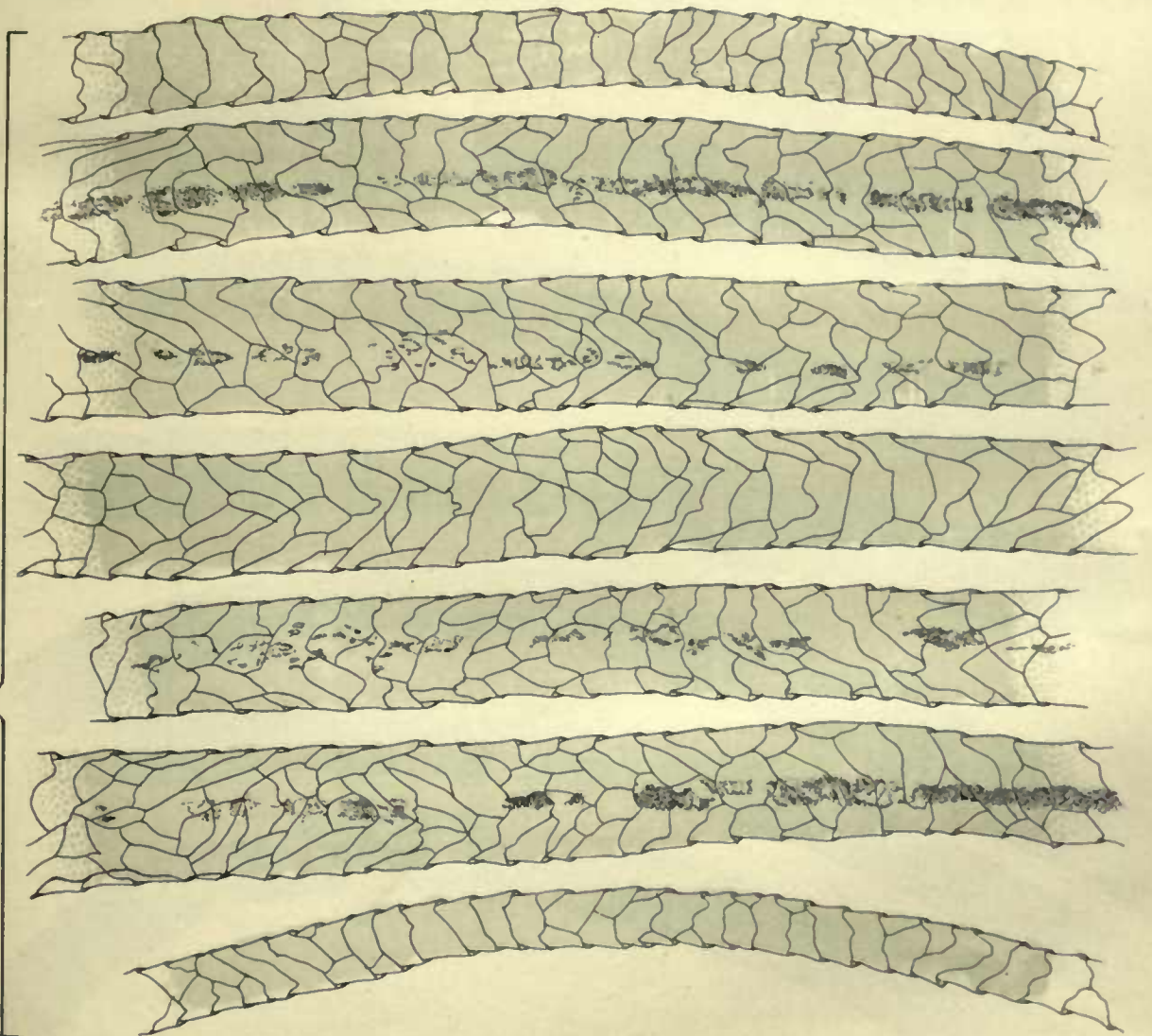








X 575.



REPRESENTATIVE FIBRES FROM OXFORDOWN.

X 310.

DRAWN FROM SOLAR PROJECTIONS, ENLARGED AS INDICATED.







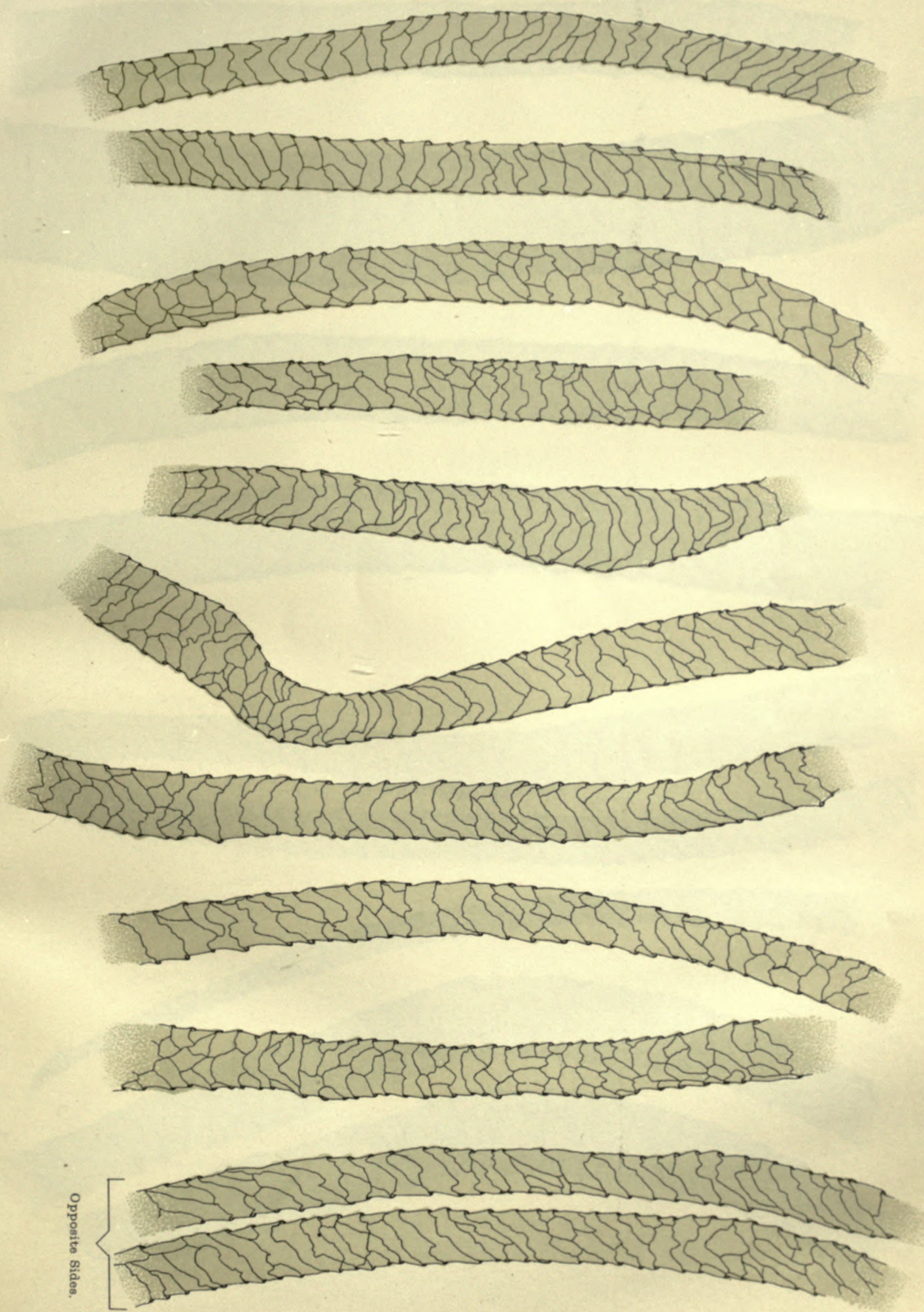


REPRESENTATIVE FIBRES FROM  
SOUTHDOWN.  
DRAWN FROM SOLAR PROJECTIONS, X 450.









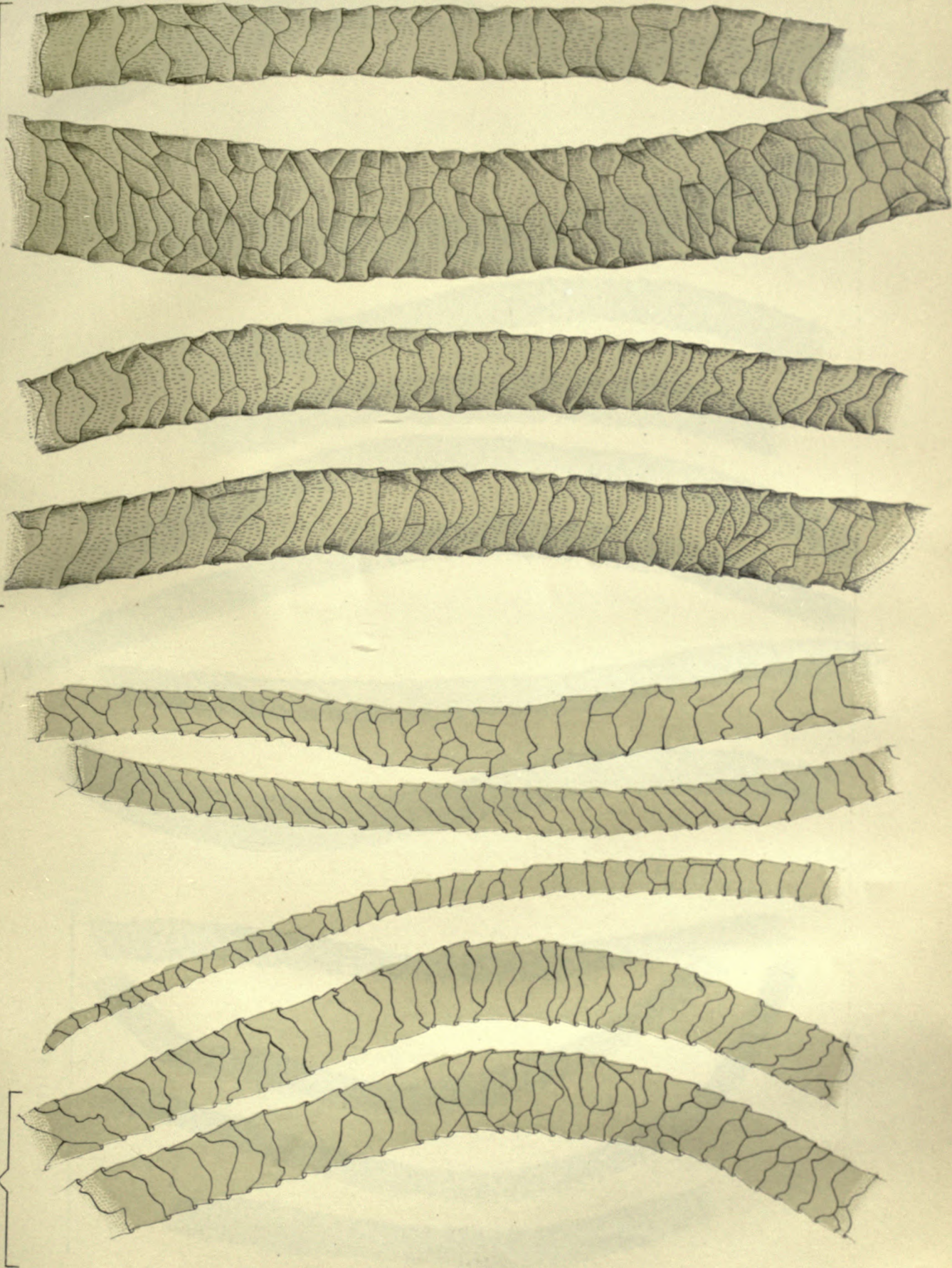
REPRESENTATIVE FIBRES FROM  
HAMPSHIREDOWN,  
DRAWN FROM SOLAR PROJECTIONS, X 310.

Opposite Sides.









X 576.

REPRESENTATIVE FIBRES FROM  
AMERICAN MERINO.

DRAWN FROM SOLAR PROJECTIONS, ENLARGED AS INDICATED.

Opposite Sides.



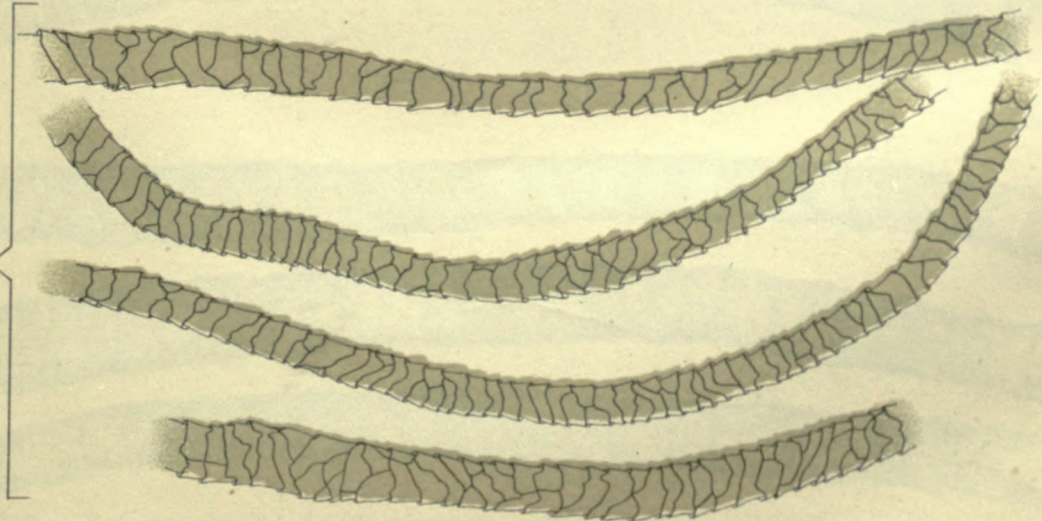






X 310.

REPRESENTATIVE FIBRES FROM  
AMERICAN MERINO.  
DRAWN FROM SOLAR PROJECTIONS, ENLARGED AS INDICATED.



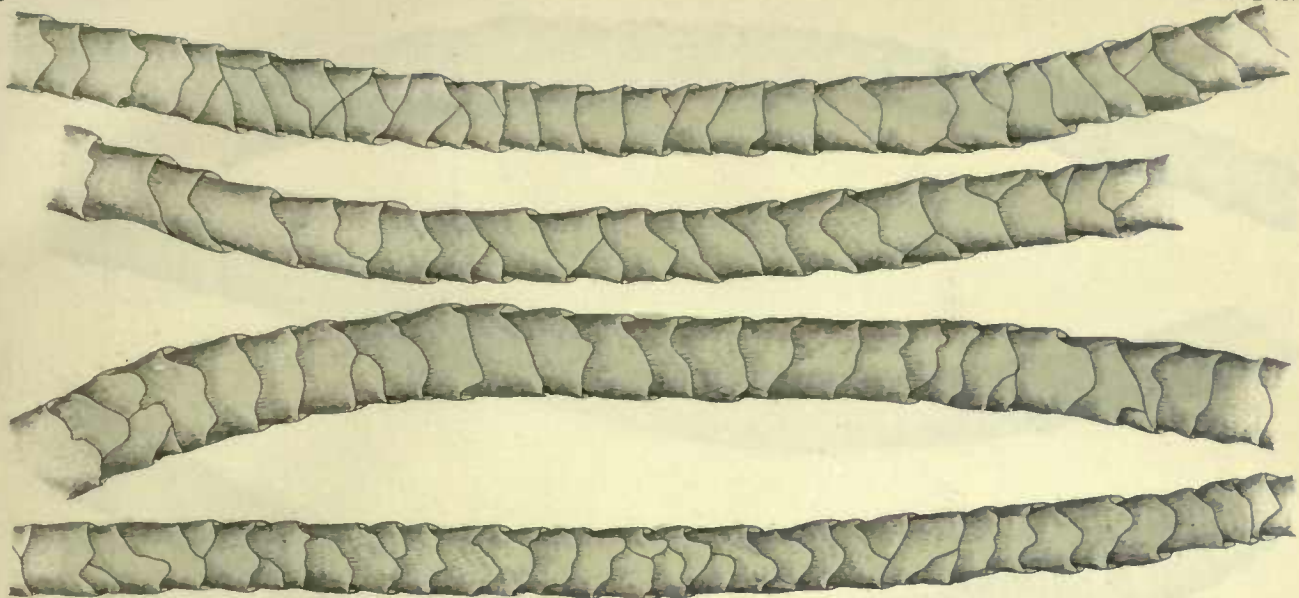
X 140.



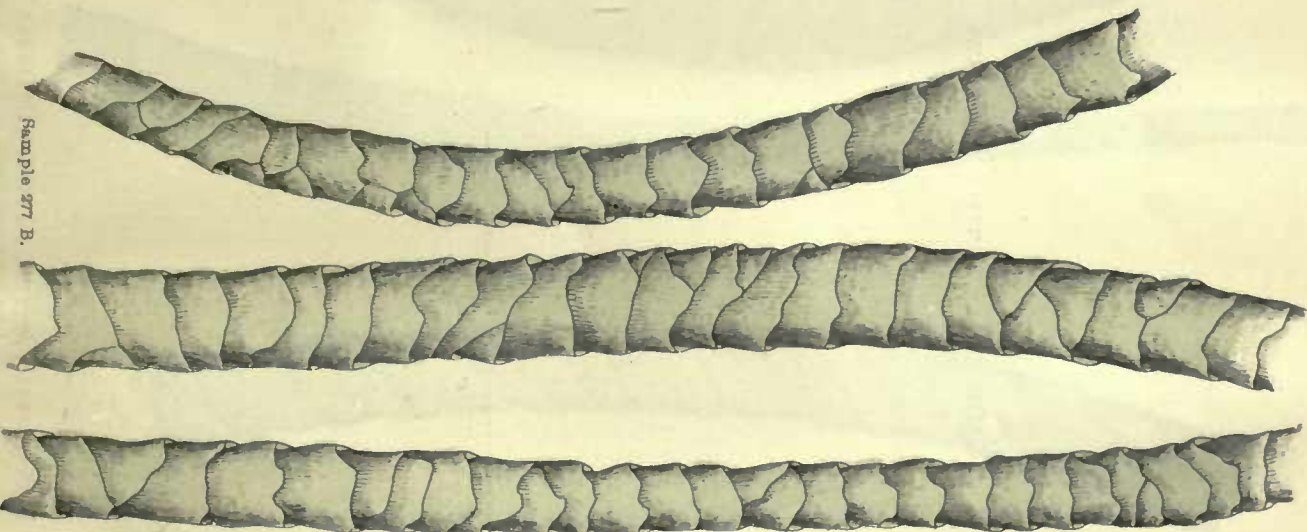




Sample 277 A

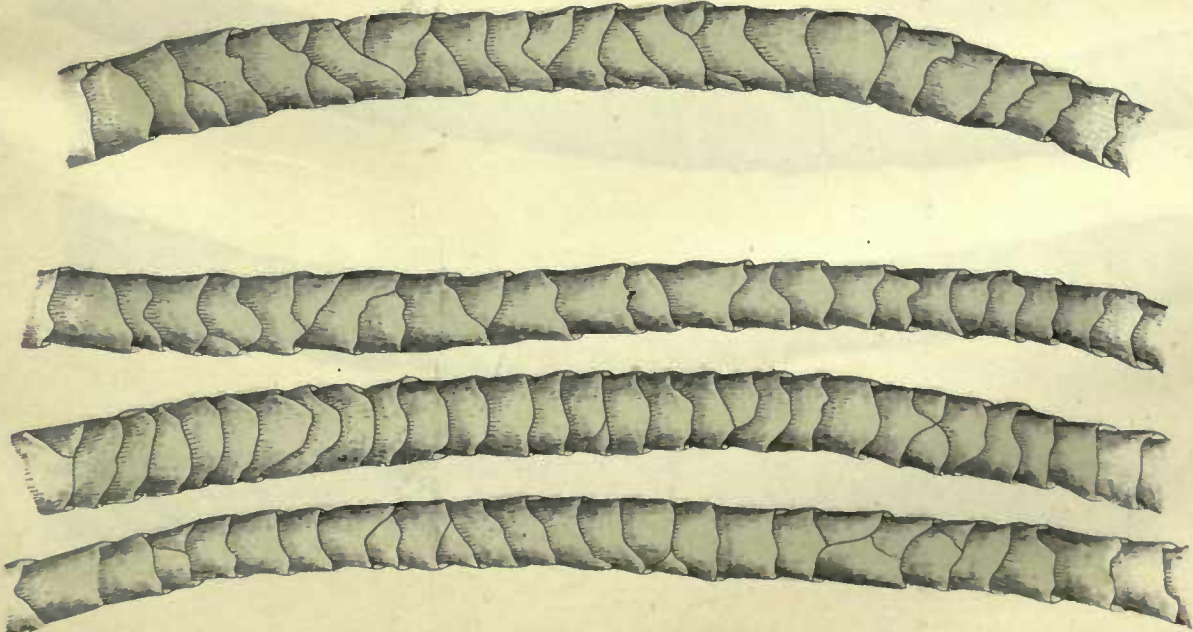


Sample 277 B.



COMMERCIAL GRADES OF BOSTON MARKETS.  
PICKLOCK,  
DRAWN FROM SPECIMENS Y 575

Sample 277 C

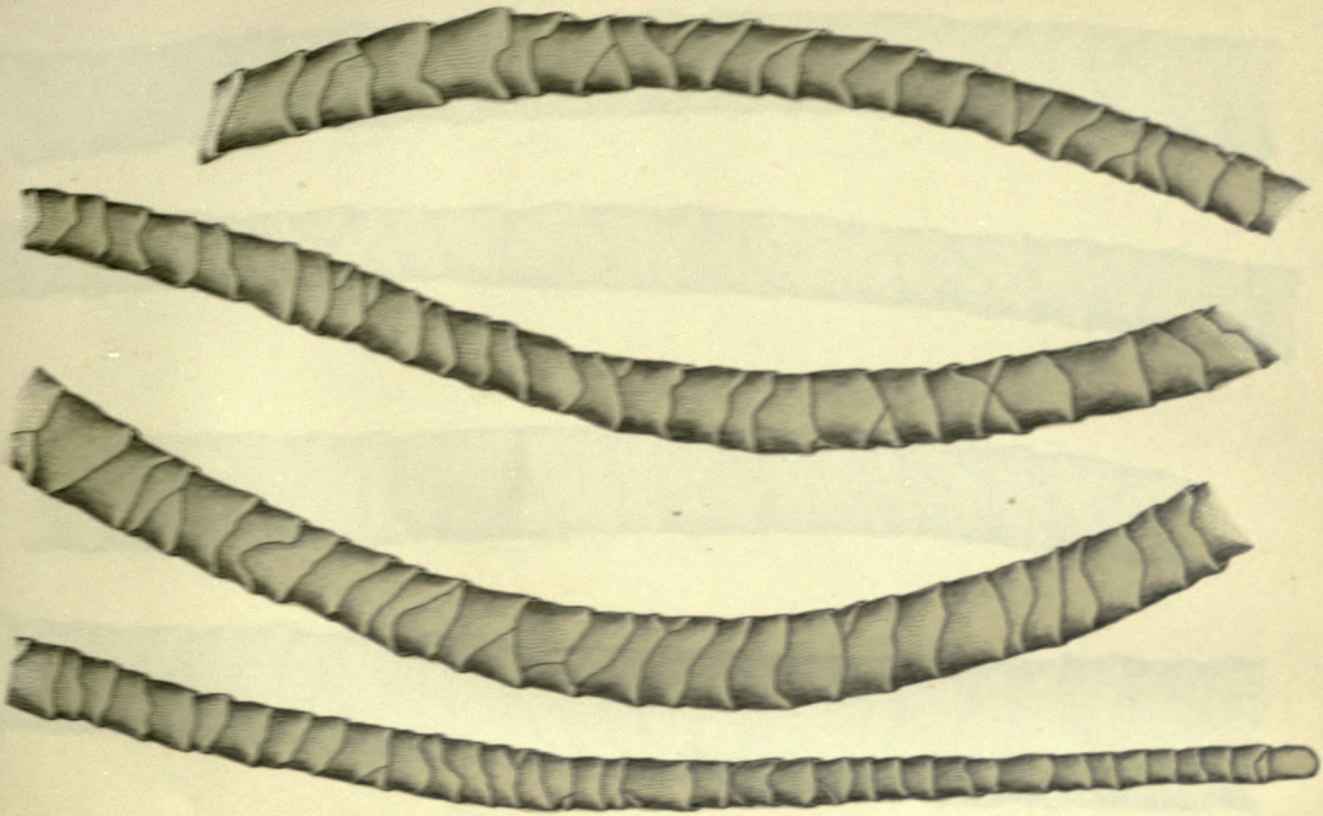








Sample 976 A.



COMMERCIAL GRADES OF BOSTON MARKETS,  
FINE UNWASHED,  
DRAWN FROM PROTECTIONS, K 670.

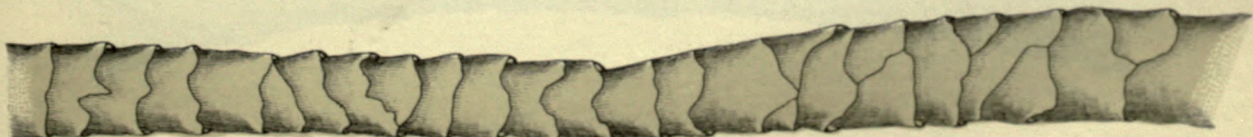
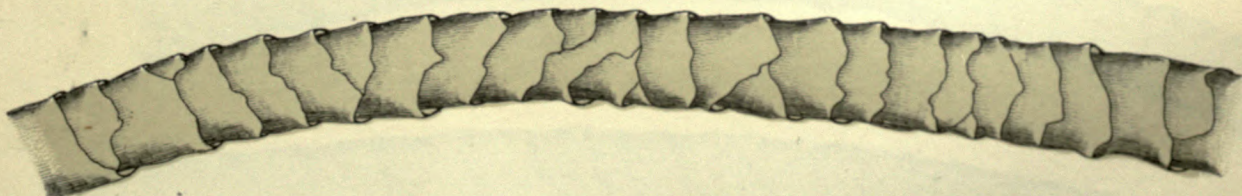
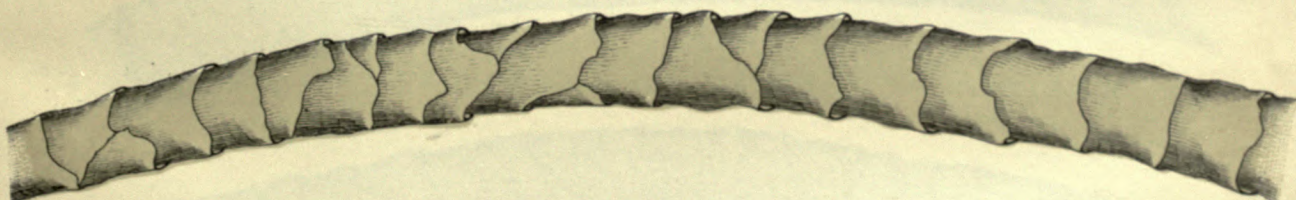
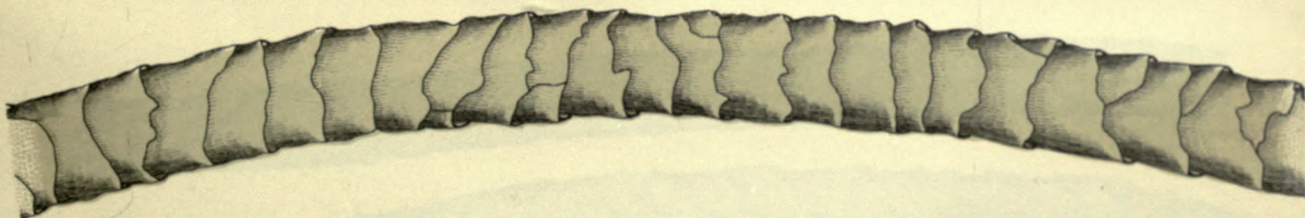
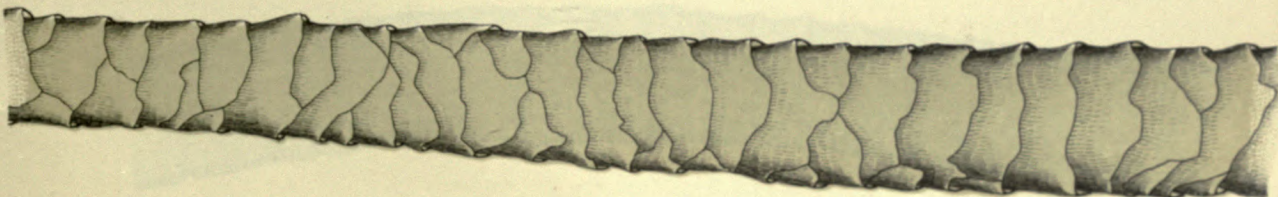
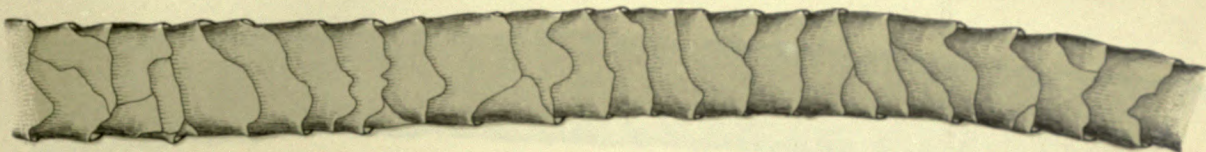
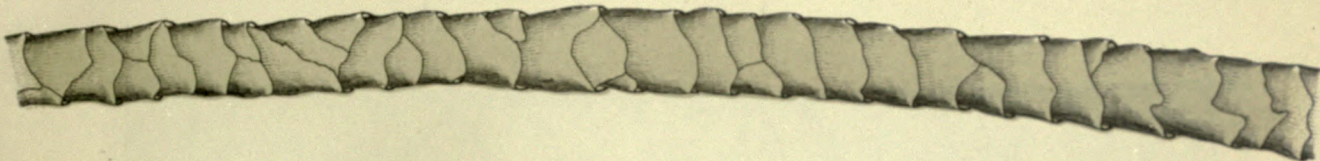
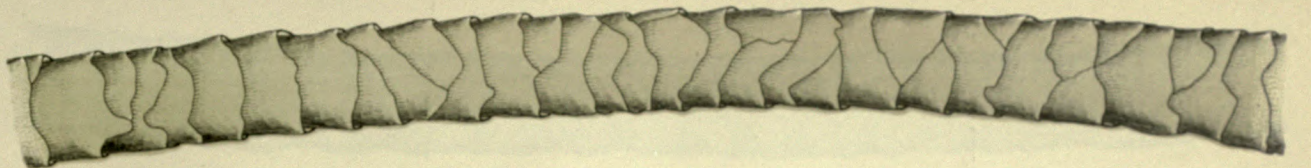
Sample 976 B.











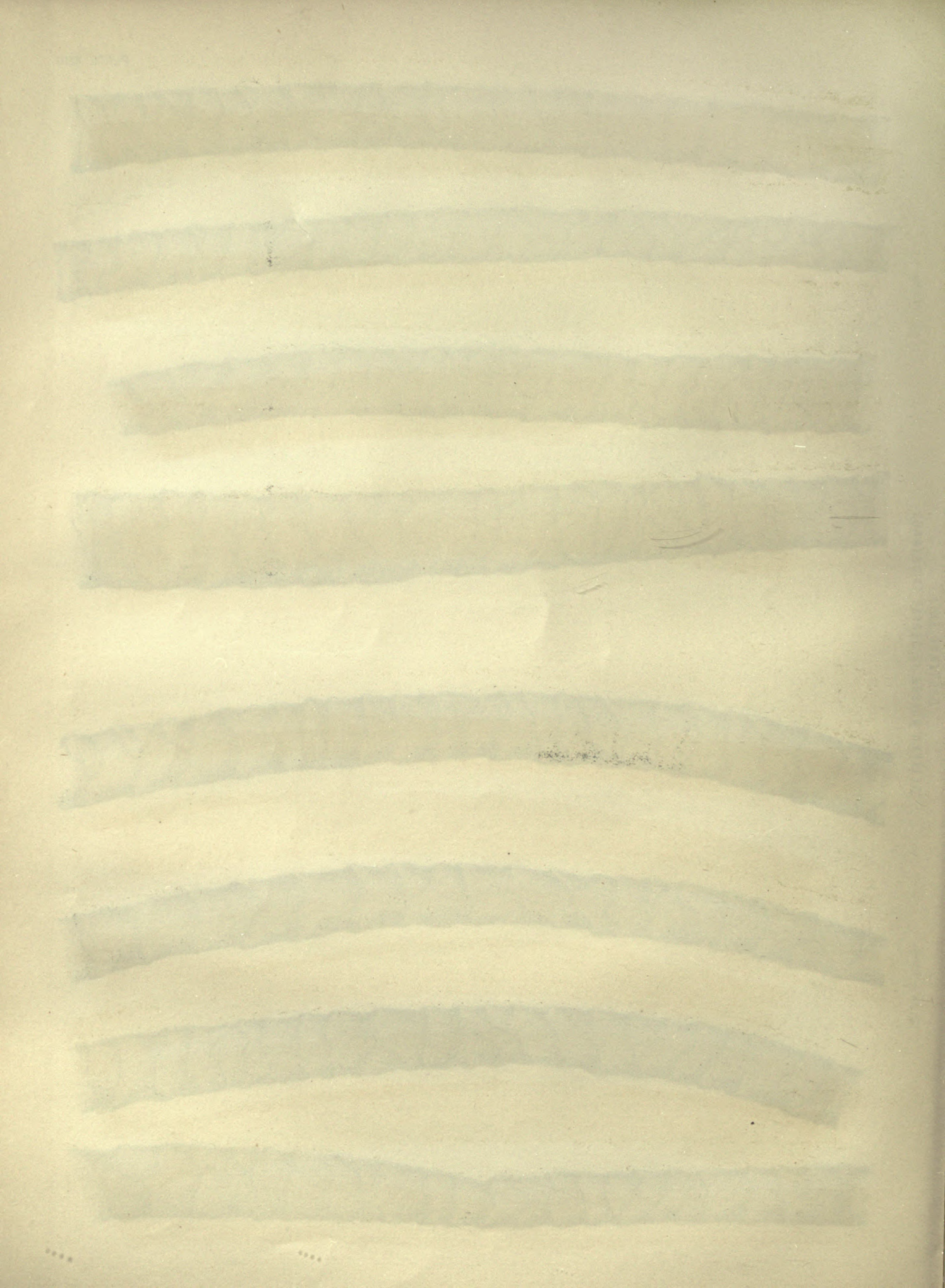
Sample 276 C.

COMMERCIAL GRADES OF BOSTON MARKETS.  
FINE UNWASHED.

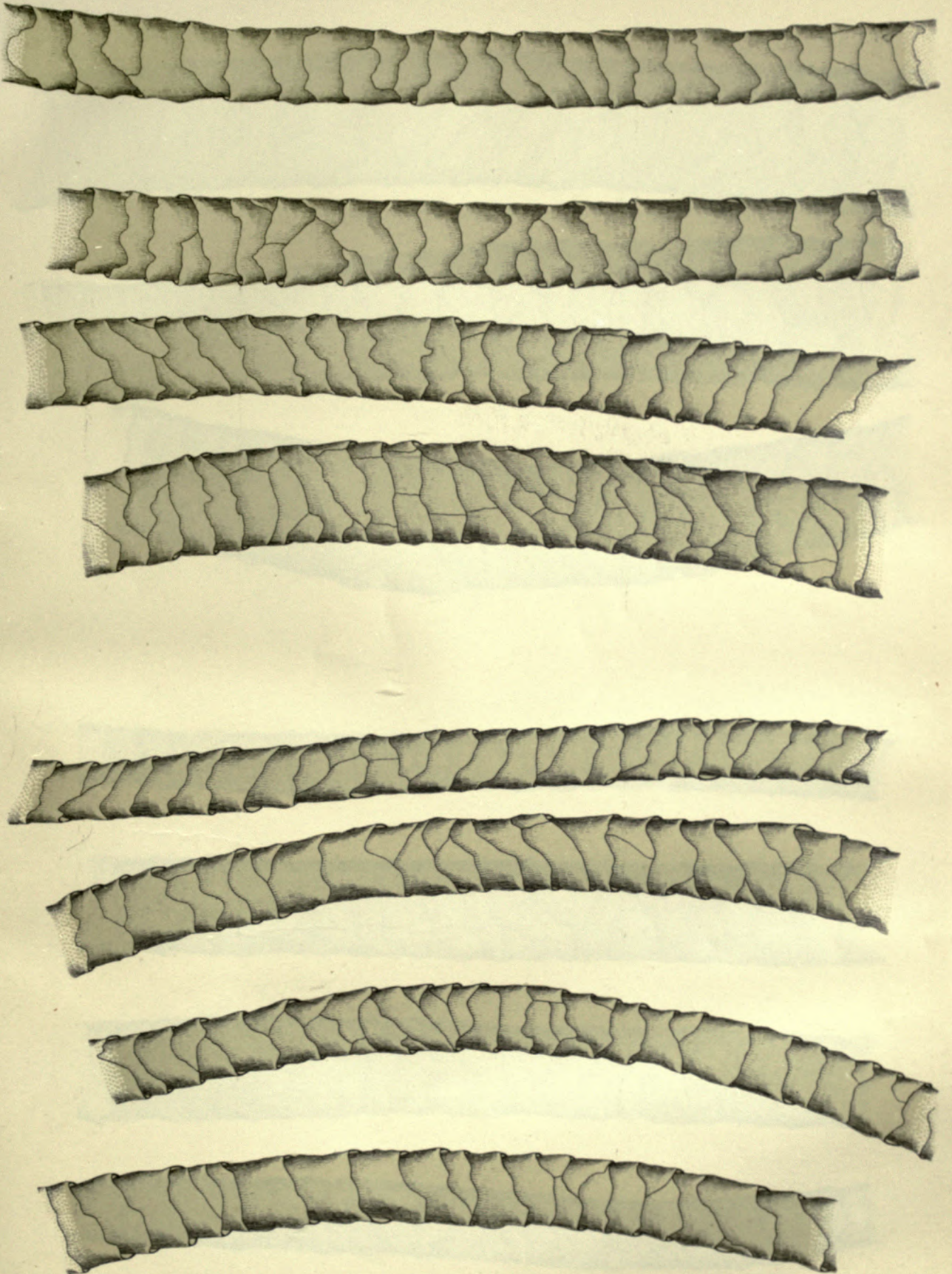
DRAWN FROM PROJECTIONS. X 575.

Sample 276 D.









Sample 276 E.

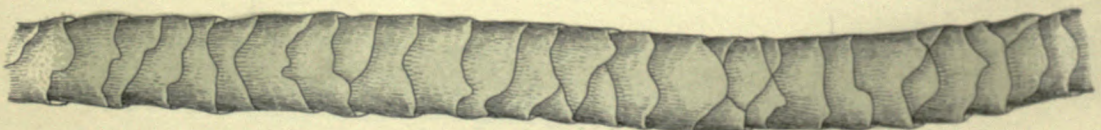
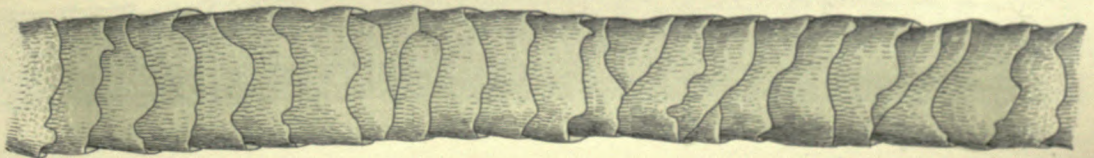
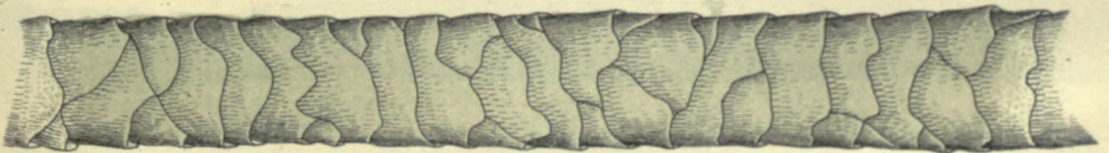
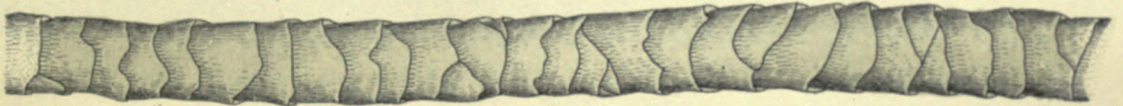
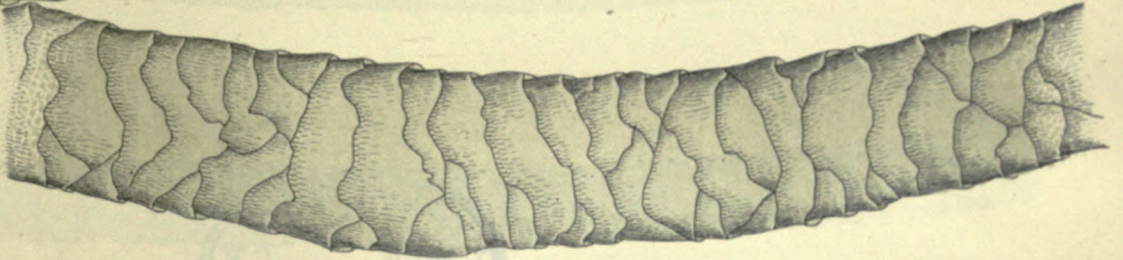
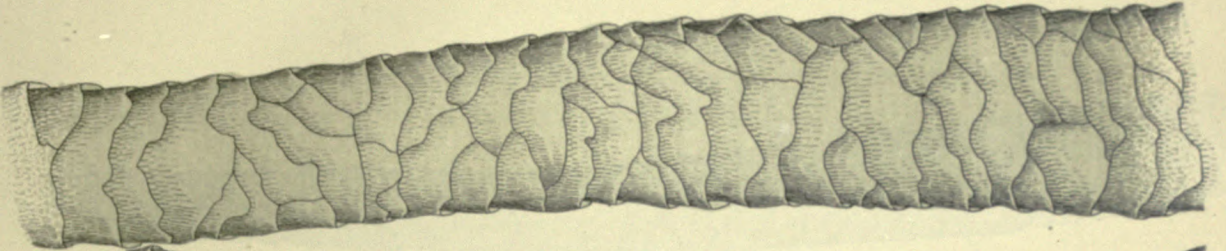
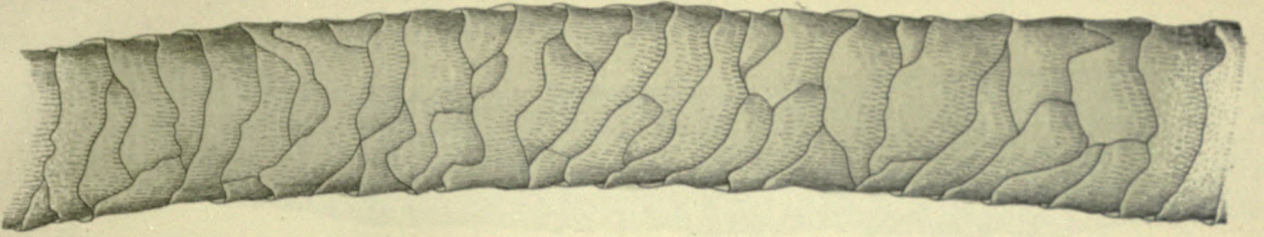
COMMERCIAL GRADES OF BOSTON MARKETS.  
FINE UNWASHED.  
DRAWN FROM PROJECTIONS, X 575.

From David Sheep.







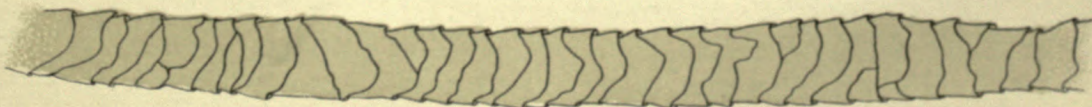
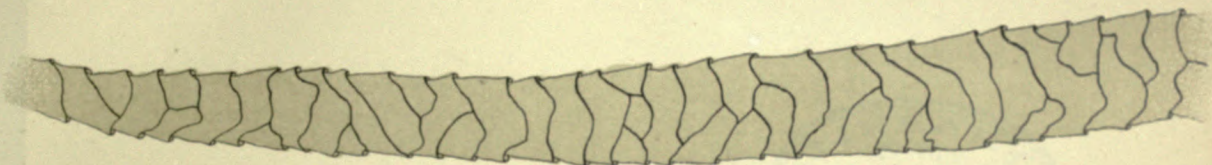
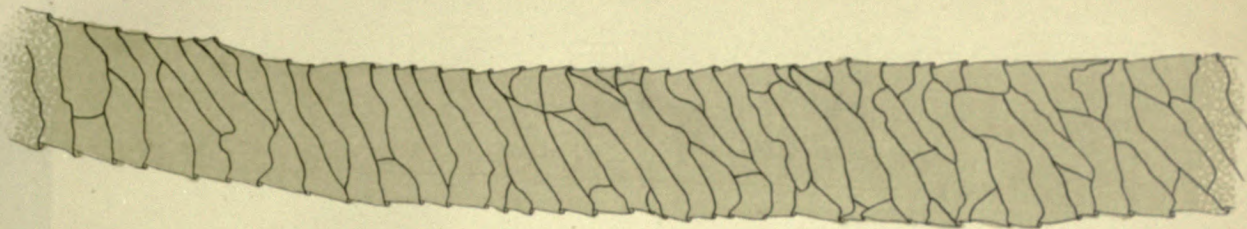


COMMERCIAL GRADES OF BOSTON MARKETS,  
BETWEEN X AND NO. 1,  
DRAWN FROM PROJECTIONS, X 575.









COMMERCIAL GRADES OF GERMANY.  
QUARTZ.  
DRAWN FROM PROJECTIONS, X 450.





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by

by

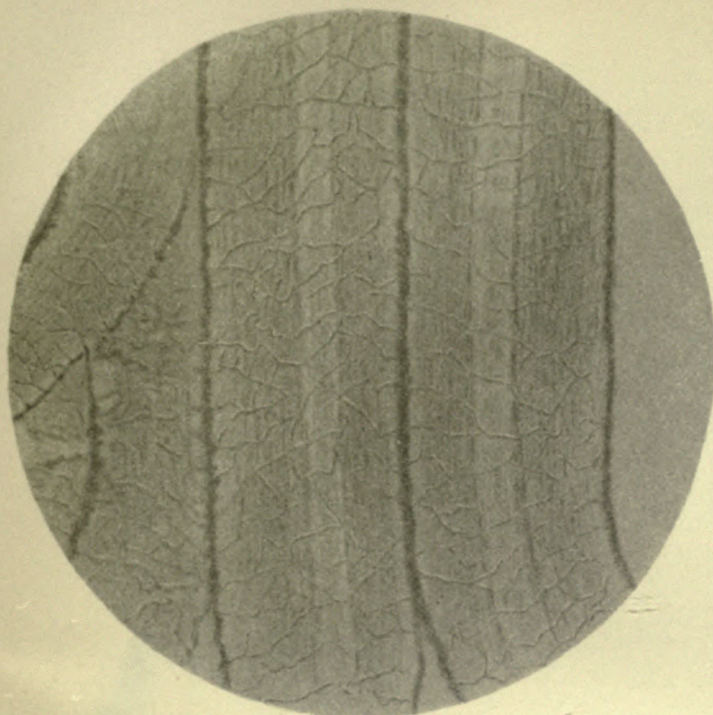




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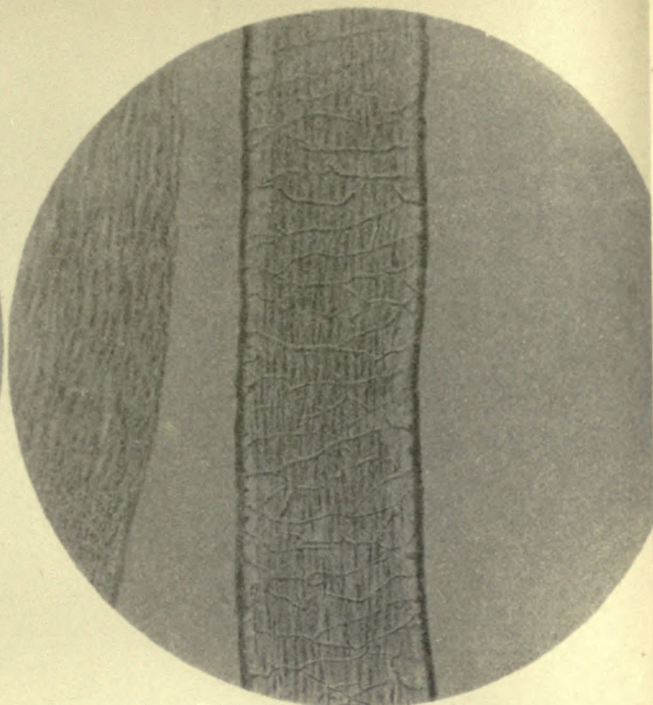


No. 1



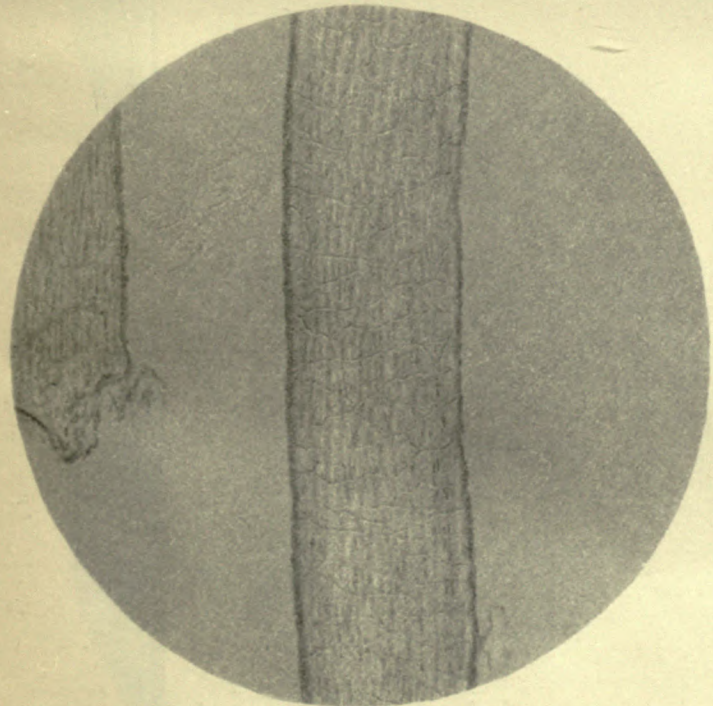
Cotswold fibre x 180. Prepared for Photograph  
by treatment with Potash and mounting in water.  
Sample No. 34.

No. 3



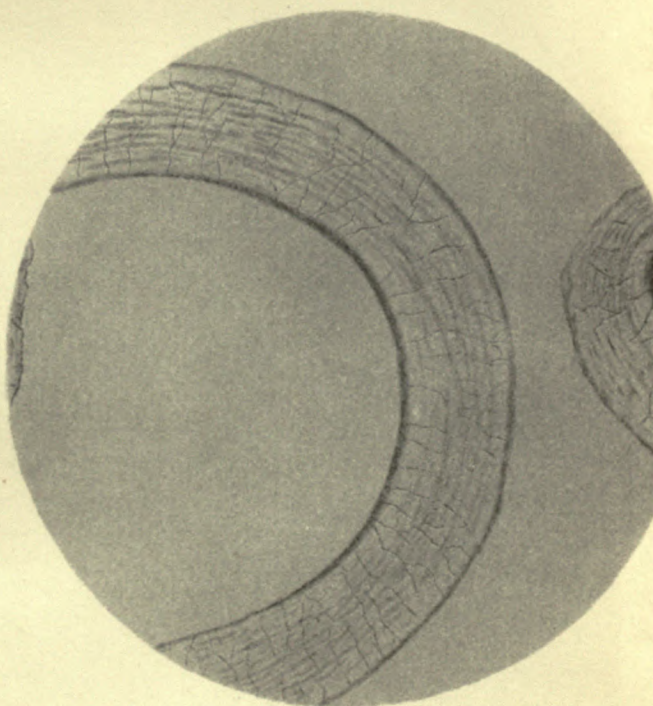
Leicester fibre x 180. Prepared for Photograph  
by soaking in Potash and mounting in water.  
Sample No. 113.

No. 2



Lincoln fibre x 180. Prepared for Photograph  
by treatment with Potash and mounting in water.  
Sample No. 60.

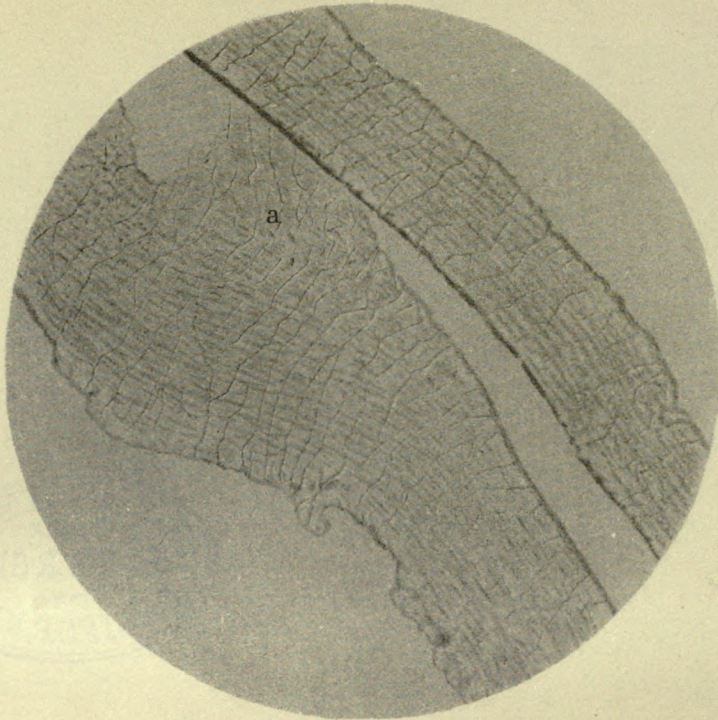
No. 4



Southdown fibre x 180. Prepared for Photograph  
by treatment with Potash and mounting in water.  
Sample No. 94.

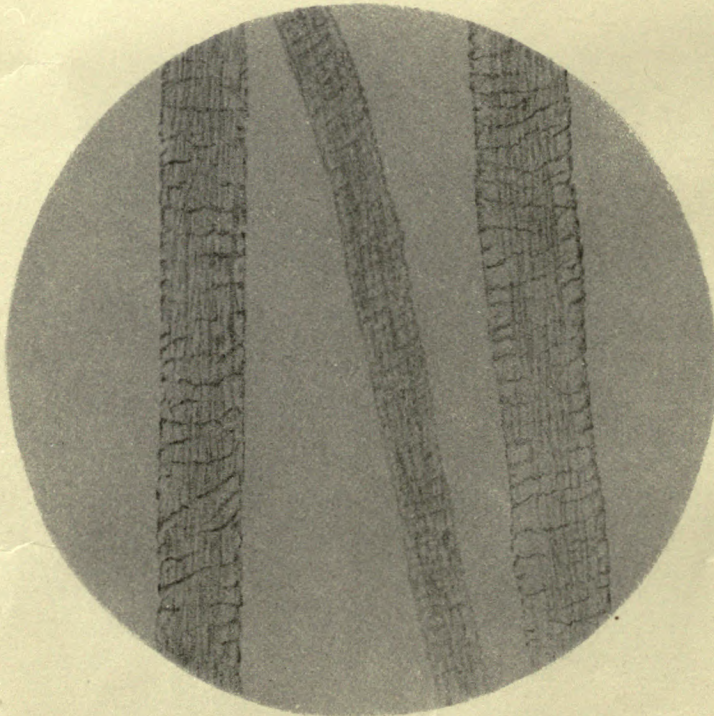


No. 5.



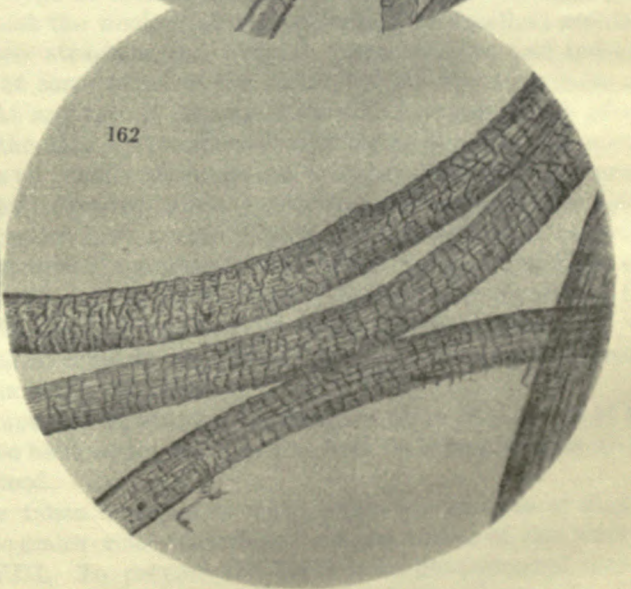
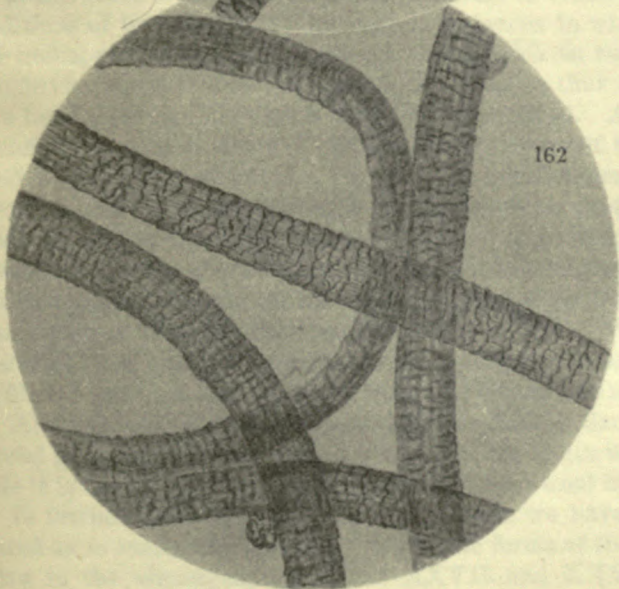
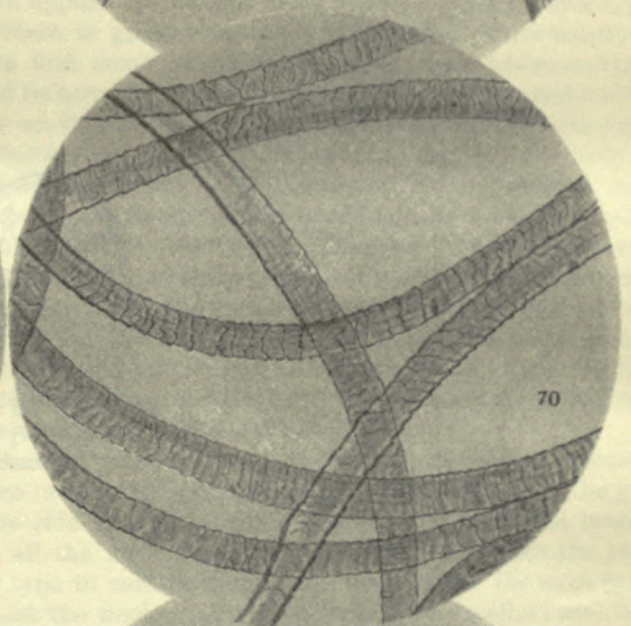
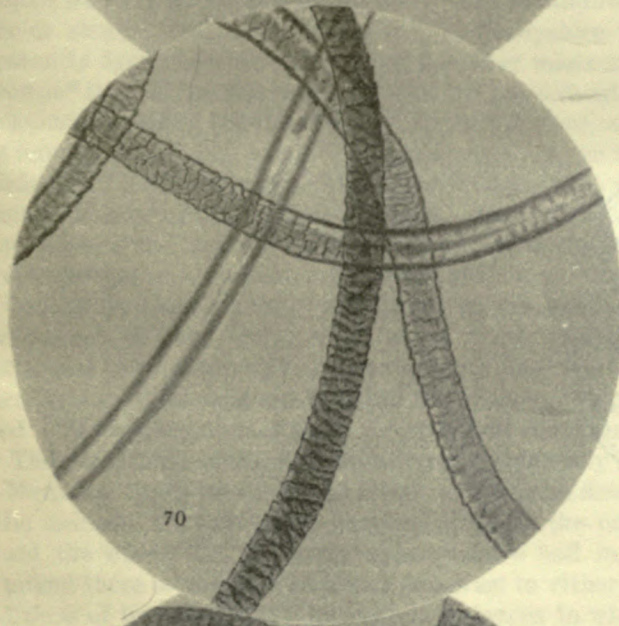
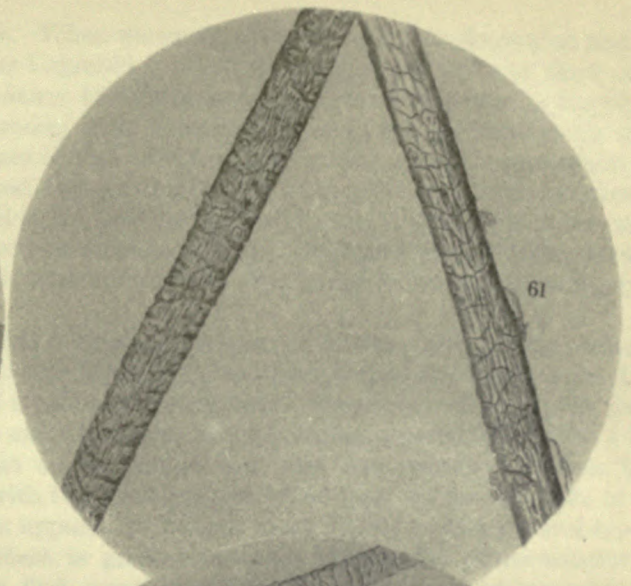
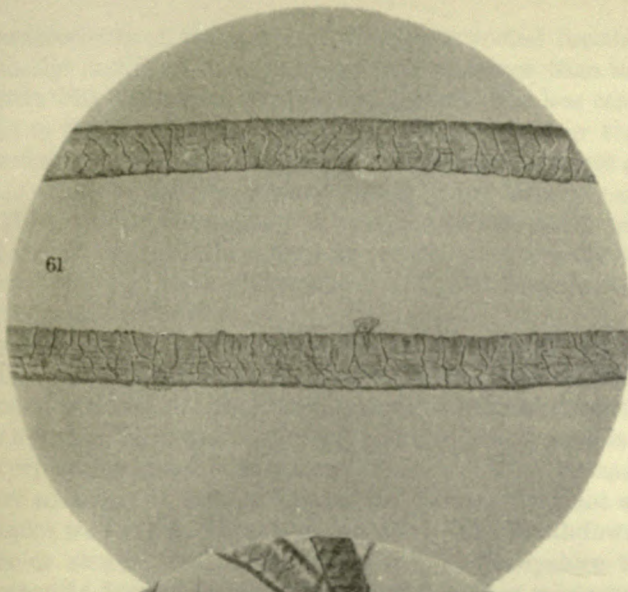
Oxford fibre x 180. Prepared for Photograph  
by treatment with Potash and mounting in water.  
Sample No. 65.  
Enlargement at "a" due to imperfection in fibre.

No. 6.



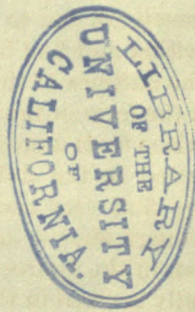
Merino fibre x 180. Prepared for Photograph  
by treating with Potash and mounting in water.  
Sample No. 73.





MERINO FIBRES X 240. PREPARED FOR PHOTOGRAPH  
BY TREATMENT WITH POTASH AND MOUNTING IN WATER.  
SAMPLES NO. 61, 70 AND 162.







characteristics of the fibers of these long-wooled breeds. When we examine the fibers in the fingers we find the Leicester and Lincoln more glossy and smoother than the Cotswold. When we examine the fibers of these same breeds with the microscope we find that there is less tendency to serration in the edges of the image in the former than in the latter, and when we examine them after staining with silver-nitrate, as in the preparation for these drawings, we find that in many cases the angular forms are almost universal, the pavement form is prominent, and little or no overlapping seems to occur in the Leicester and Lincoln, the Lincoln taking the lead in this particular. In the Cotswold the angular character is less marked, and in the Leicester we find certain fibers in which it is wanting, while the gradations from one to the other almost serve as a means for their differentiation. Further study of these forms and their arrangement will doubtless furnish data upon which estimations of the felting property of wools may be based.

Now, in the other classes, on the other hand, we find very great differences in the width of the scales in different directions. In the Merino we find the scales to be somewhat like narrow patches drawn around the circumference of the fiber, and sometimes surrounding it in almost a spiral form. The broken and angular forms are here almost entirely wanting, and the curved form is more common. In many cases a parallelism in the edges is very marked, and especially so in the wools of German origin, though it is also very prominent in those from other sources. It also occurs in the "Down," but not with the same regularity, at least as far as shown in the samples we have had occasion to study. The Southdown appears to adhere most closely to the general type of finer or shorter wool forms, while in the Hampshire there is greater variation, though the characteristics are apparently fixed even here. In all of the short wools we find some exceptions, however, more prominent in the "Downs" than in the Merinos, and whether these should be ascribed to bad blood in either case or to bad nutrition of the animal during the development of the fiber, or an impaired condition of health during the same period, it is impossible without further examination, thus far beyond our power, to determine. But we are fairly well satisfied that none of the exceptions that are here shown are due to any great admixture of foreign blood, except possibly in those of the Hampshire breed. Bad nutrition and bad health should produce variations and abnormal inequalities in the forms of the scales as well as in the outlines of the fiber itself. This point we shall endeavor to develop further on. But the influence of blood upon the form of the scales is prominently illustrated in the wool of the Oxforddown breed, a breed well known to have arisen from a cross between the Cotswold and one of the Downs. Here we see, in some cases, scales whose width varied in the different directions, the parallel edges and the greater or less overlapping; but at the same time we find very many fibers showing the irregular angular forms characteristic of the long wools, while the other markings shown are unmistakable evidences of the origin of the breed. The combination of these forms is well shown in the figures of Plate VI, at *a a*.

The pertinacity of these distinct forms is especially marked in the crosses between the long-wooled breeds and the Merinos. Here we find both forms in the same fleece in varying proportion, depending much upon the grade of the animal. Of course the characteristics of the one side may be largely obliterated by continued breeding toward the other, but the experience we have had in all the work seems to show that when once the bloods are mixed there is always a tendency to revert to either type in certain individuals, even under the most careful conditions of breeding. We have seen instances in which the wool of animals (Merinos) of excellent reputation and undisputed pedigree, contained fibers which in their structure and general characteristics, and indeed in specific characteristics as well, led to the opinion that at some point in the history of the ancestors there must have been some contamination with Cotswold blood. At any rate it impressed us with the importance of more extended and careful study of the minute structure of the fiber by breeders of stud flocks, in which the purity of blood is of the highest value. The forms in question are so readily detected and are so marked that they present a ready means for weeding out the imperfections so greatly dreaded, when pure strains are the principal object in view. So also in the Oxford, which is known to be descended from a cross between the Cotswold and one of the Downs, we find the characteristics of both breeds marked with the greatest distinctness. Some of the fibers show in their minute structure all the characteristics of the Downs; others again appear like the Cotswold, while a third class seems to combine the characteristics of both. The angular forms of the scale of the Cotswold are very persistent here, and the pigment matter confined to a central canal or distributed through a fibro-cellular tissue of the fiber is also present, though to not the same degree as in the Cotswold.

An instance of this may be seen in Plate XXIV, Sample 275 E, showing the image of fibers of a sample of commercial grade of "fine unwashed wool." Of its origin we have no knowledge; but from its characteristics we conclude it is from a Merino contaminated with long-wool blood.

In further illustration of these peculiarities we have taken occasion to make photo-micrographs of fibers so treated as to render the markings due to the forms of the scales more prominent, and the results of this work are shown in the accompanying Plates XXVII and XXVIII. To prepare the fibers to be photographed they are placed upon the glass slide used in microscopic examinations, covered with thin glass and treated carefully with a solution of potassium hydroxide (caustic potash). This causes the fiber to swell and become somewhat distorted, but does not interfere greatly with the object we have in view, viz, to show the different forms of the scales in the wools of different breeds. When the fibers have thus become softened, the cover-glass is carefully pressed down



so as to secure a flat field, the fiber under examination brought into focus, the image projected into the camera and fixed on the plate by the ordinary photographic process. Here we find much the same differences as before, and we see how easy it is to determine the breed to which a fiber belongs. In the Cotswold we find the lines indicating the edges of the scales more irregular and broken than in the Leicester and Lincoln; and more so in the Lincoln than in the Leicester. In all of them the scales are more or less oblong, but in width they are much larger than in the Downs and Merino. The Oxford here, as in other particulars, shows indications of its origin, and the Southdown the similarities with the Merino already mentioned. In this process no staining material was necessary to develop the lines, but in the preparation of the plates given before it was necessary to stain the fibers with silver-nitrate in solution in concentrated ammonium hydroxide (ammonia water). However, the plates will sufficiently explain themselves without further discussion.

We may now return to the consideration of the remaining portion of the structure of the fiber, the pigment canal already mentioned. This is a matter of some importance since it is a leading characteristic of some of the long wools, and is apparently wanting in short wools. If we compare locks of Cotswold and Lincoln wool we find that a large proportion of the fibers in the former are more white and opaque than the others, and that the whole bunch has very much less of luster than the Lincoln wool. When these Cotswold fibers are examined in the natural state with the microscope we find extending through the center a band of matter more or less broad, which is very much more opaque than the matter surrounding it. The forms of this band are given in the various plates showing Cotswold wools. It appears to be of irregular thickness and to allow more light to pass through at certain places than at others. If these fibers be treated with potassium hydroxide as already described until the fibro-cellular tissue is completely broken down we find that there will be separated a column of comparatively large angular cells apparently filled with granular coloring matter or pigment concerning the character of which very little is known. This coloring matter, according to Bohm, is distributed over the inner walls of the cells, but so far as our own examinations go this is difficult to determine. The forms of the cells thus separated from each other, shown in the accompanying diagram, are taken from a microscope projection. In this case the fiber had been completely broken down by treating with potash solution and abrasion. The changes which the structure of the pigment column undergoes in this gradual disintegration are well illustrated in the photomicrographs taken for the purpose. But the fibers here represented had been treated with sulphuric acid and heat, and the action stopped at the proper stages by addition of water.

In Fig. 1 of the plate we have a representation of the first action of the acid or the first stage of the disintegration. The fibro-cellular texture of the fiber is apparent. The pigment column in the center is beginning to break down and the lines of separation between the cells are plainly seen.

In Fig. 2 the fibro-cellular matter is still further destroyed, pressure upon the cover-glass has forced the pigment cells apart, and in some cases they may be seen completely detached. In most of them, also, we see indications of the granular character of their contents.

Passing to Fig. 3, we find the disintegration complete. The cells are fully separated from each other, and the granules of pigment within them are easily seen. These are considered sufficient for our illustration. The several intermediate stages not here shown may be seen by any one having a fairly good microscope. It is only necessary to clean the wool by washing with ammonia, then to place a small tuft on a slide cover with thin glass and apply sulphuric acid and watch its action, occasionally pressing upon the cover. First, the scales will rise and disappear; then the fibro-cellular tissue will be acted upon and eventually dissolved, and at the same time the pigment column will enlarge, the cells begin to separate, and finally float away singly through the acting medium. After the complete disintegration, water may be added to stop further action of the acid, and the cells studied at leisure.

According to the German authorities, the presence of the pigment column or canal in the fibers has a serious effect upon their strength, but we do not find in our experiments that this statement is confirmed. We find it almost peculiar to the Cotswold breed, so far as our examinations have extended, though Bohm and others say it belongs to all animals covered with fibers tending to the hairy type. We have seen only traces of it in the Lincoln wool, however, and none whatever in the wool of the pure Merinos and Downs. In the Oxforddown wools it is naturally present, and is another evidence of the origin of the breed. It is not always confined to a single column or canal, nor does it always extend throughout the entire length of the fiber containing it, for it frequently occurs in detached masses in the center of the fiber, or distributed through nearly the whole of the fibro-cellular tissue. This refers only to the white pigment, which alone we have had an opportunity to study. The colored, black, or brown pigments are not so confined, and differ in character, being distributed through the entire mass of the fibro-cellular tissue. Since it seems to affect neither the strength nor the elasticity of the fiber, so far as we have been able to determine, the principal interest it may have will depend upon the fact that it is peculiar to the long-wool breeds, principally the Cotswold, and entirely wanting in pure Merinos. Taken in connection with the diameter of the fiber and the forms of the scales, it must assist in the determination of the purity of the blood of the animal under consideration. If a fiber containing the pigment canal be treated with a strong solution of potassium or sodium hydroxide, and with the aid of heat it gradually disintegrates, the fibro-cellular tissue is completely broken down and many of the cells dissolved, while the cells constituting the pigment column or canal remain intact. By



Fig 1.

Pigment Canal in Cotswold fibre x 180  
 Beginning of disintegration. Prepared by  
 washing with ammonia, then with sulphuric acid  
 and mounting in water.

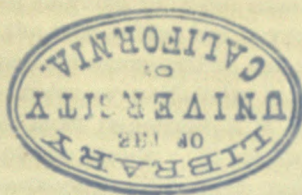
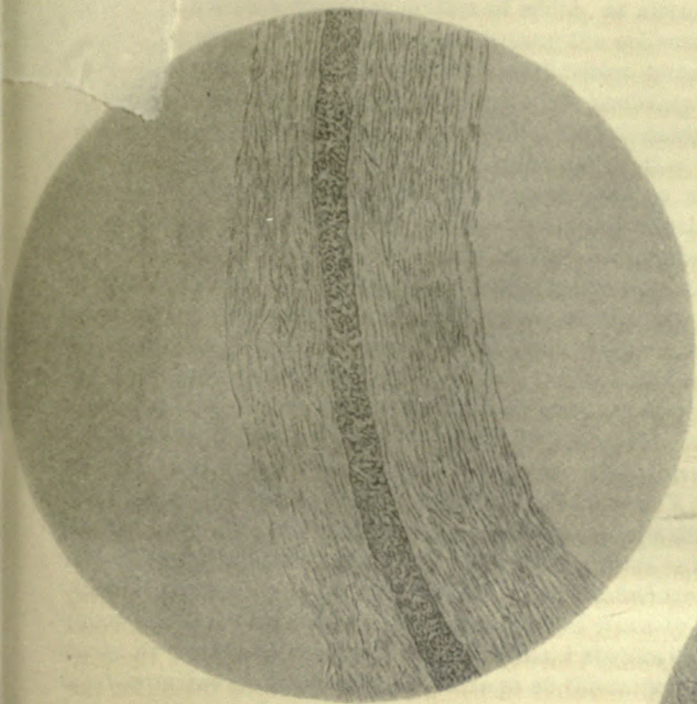


Fig. 2.

Pigment of Cotswold Canal x 180  
 Intermediate stage of disintegration.  
 Prepared by washing in ammonia, treatment with  
 sulphuric acid and mounting in water.

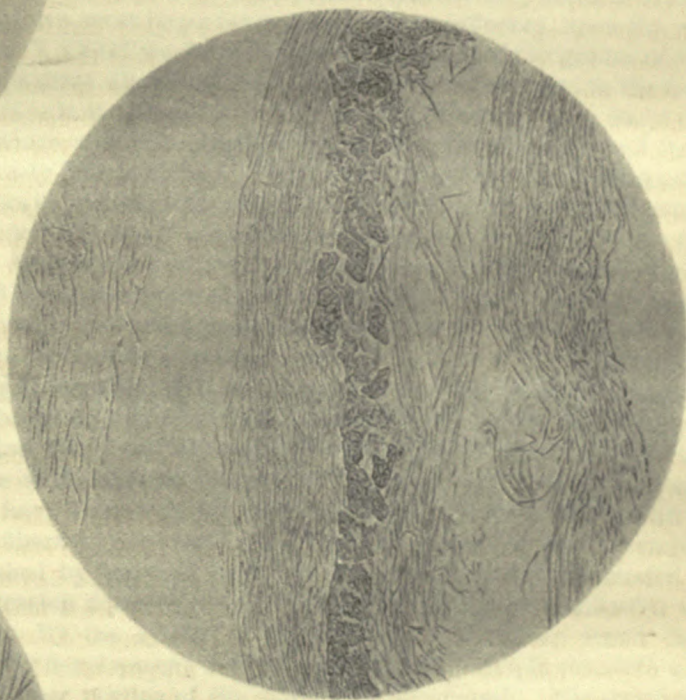
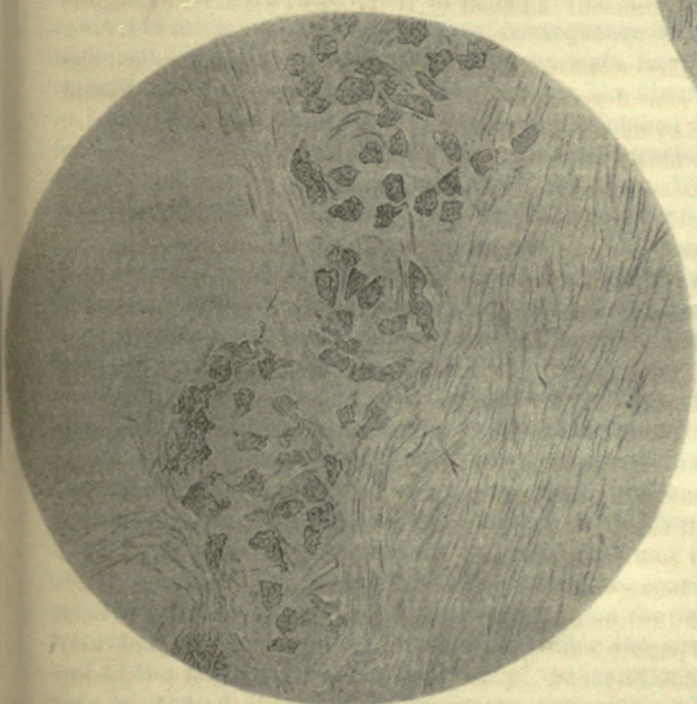


Fig. 3.

Pigment Canal of Cotswold fibre x 180  
 Final result of disintegration.









longer action of the solvent they are separated from each other, and upon agitation caused by pressure upon the cover-glass they separate and become distributed independent of each other through the surrounding mass. We then find them to consist of irregular masses, in many cases angular, in some cases rounded, and generally lined or filled with granular matter of which, as already stated, the true nature has never been determined.

In the study of the wools constituting the collection under present examination, one cannot avoid being struck with the lack of what the German authorities term *Evenness Treue*, or uniformity in the diameter of the fiber throughout its length, and this property is probably one of the most important, if it does not even stand first in the determination of the commercial and industrial value of the staple. It is the result of two causes, the one atrophy of the fiber at certain parts, the other hypertrophy. In other words, when we examine a sample of uneven staple with the microscope, we notice a greater width of the images at some parts than at others, and these variations are by no means wanting in interest, nor are they absent in many of the animals said to have received excellent care and feed. In some cases we find a sudden contraction of the fiber at certain points (atrophy), and this is often sufficient to give the edge of the image a decidedly notched appearance. In other cases the contraction is more gradual, the progressive diminution of the width of the image extending over a greater length of the fiber. In the enlargement, however (hypertrophy), such sharp variations do not obtain; the fiber begins to enlarge at a certain point, and the enlargement may continue through the length of the fiber until it attains a diameter even twice as great as at other parts. These peculiarities as they occur in Oxforddown wools are well illustrated in Plate XXXIV, and the forms here shown are characteristic as they occur in other wools as well. But it is in the Merino wools that they have most importance and greatest influence upon the value of the staple. In Plates XXX, XXXI, XXXII, and XXXIII we have forms found in some of the grades of the Boston market. We see that in almost all cases where these abnormal forms occur there are changes in the form and size of the epithelial scales of the outer layer as well as in the diameter of the fiber, and there can be no doubt that the internal structure is equally affected. Their influence upon the strength of the fiber, its elasticity, and its consequent value for manufacturing purposes can scarcely be questioned. Where atrophies occur the fiber must necessarily be weakened, while on the other hand staples in which the atrophied fibers occur in any important proportion must interfere with the regular passage of the material through the several machines and processes of the factory. In both cases, therefore, they seriously impair the value of the products, and it behooves growers to look to the causes which may have a tendency to bring them out. What these causes may be we have had no opportunity to determine, but there can be little doubt that bad nutrition, exposure, and consequent impaired health or constitution are the more prominent. A fevered condition of the system probably tends to check normal exercise of the functions of the skin, and hence the growth of the fiber resulting in atrophy, or it may have the contrary effect and cause hypertrophy. Indeed, when we examine the fiber of breeding ewes we find a certain regularity in the occurrence of the atrophied parts, and it has been suggested that these may correspond with periods of menstruation when the system is more or less disordered in consequence of the natural exercise of this function.\* At any rate we have sufficient evidence to show that when animals have been well fed and cared for, and when the health of the animal has been uniform, such deformities in the fibers do not exist. And that the growth of wool is retarded, or at least that the diameter of the fiber is diminished by impaired health of the animal, is well illustrated in the following bit of our own experience. On one occasion a prominent breeder of Merino sheep submitted a sample of his wool for the determination of its fineness. By the system of measurement followed we found that the fibers were finer at a certain part or point in their development than at others, and by simple calculation it was easy to determine at what part of the season the finer portion of the staple had developed. We stated that at that season the animal must have been in ill health, and this was afterward confirmed by reference to the record of the condition of the different individuals of the flock during the year. And it further illustrates the importance of great care in the management of sheep and the value of protecting them from any sudden changes, and from the inclemencies of the weather in general.

Finally, in connection with the form of the fiber we have to consider the characteristics of the cross-section. If a fiber be cut off in a direction perpendicular to its longitudinal axis, we find that it is by no means a perfect cylinder with a perfectly curved surface, and that the forms exhibited present certain important peculiarities. The method of making and examining these cross-sections has already been described. In our earlier experiments it was our practice to stain the fibers with silver before mounting them, but we have since learned that this operation, involving the exercise of great care and the expenditure of much time, labor, and patience, may be dispensed with. Our present practice, therefore, consists in supporting the fiber in the paraffine in the natural condition and mounting the sections made upon the microscope slide, then covered with the thin glass circle and a solution of aniline red or blue applied under the cover-glass. After a short time the freshly cut surface of the end of the fiber absorbs the color from the solutions and its outlines become very sharply defined. They may then be studied at leisure, or the image projected and drawn. By the latter means we have been able to trace the figures presented in Plates XXXV to XXXVII, inclusive, showing the outlines of the sections of the fibers of

\* In the wools of stud flocks, where every care is bestowed upon the animals, these peculiarities are scarcely noticeable, but in those large flocks from which the markets draw their largest supplies the conditions seem to be especially suited to their development.

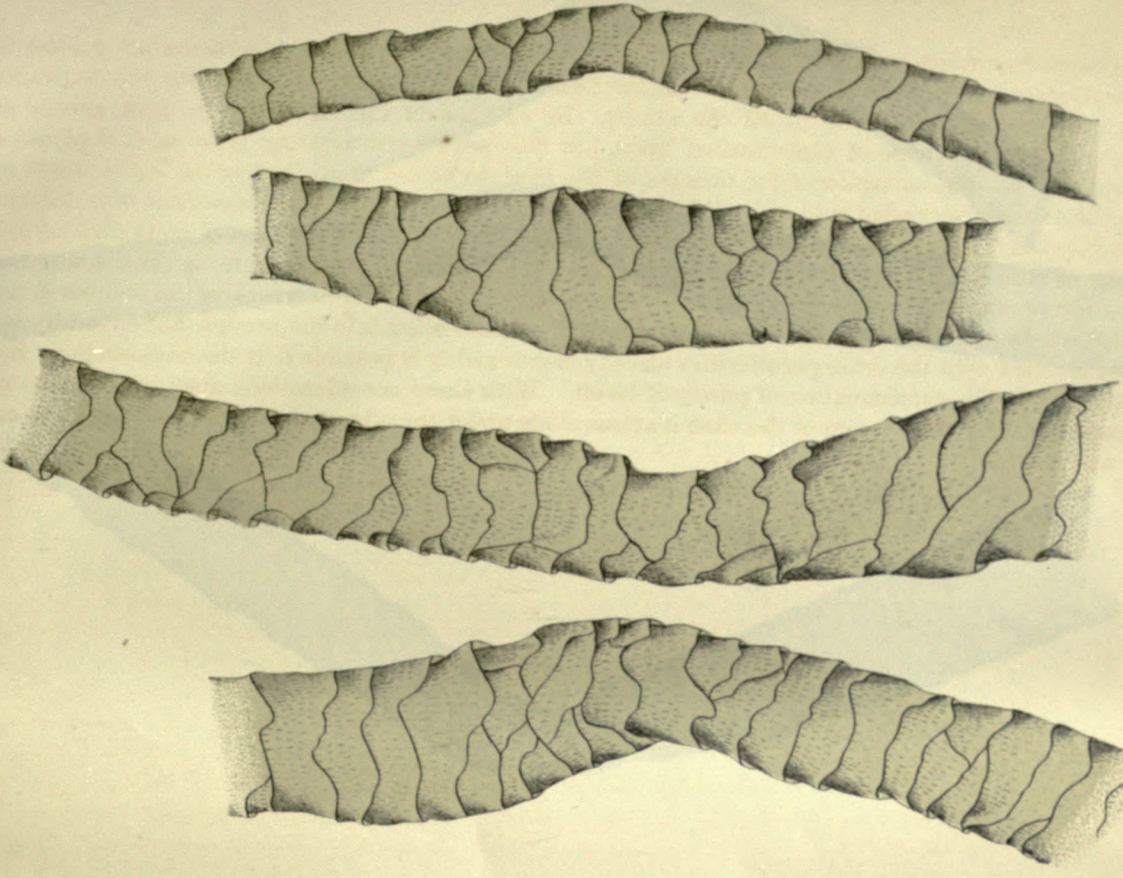


the several more important breeds represented in our collections. We here notice a somewhat greater tendency to the true cylindrical form in the long wools. In the Cotswold and Oxford wools we note the existence of the center of pigment which is wanting in all the others. In no case do the variations in form appear sufficient to base anything like a system of classification upon, but they are very interesting from several points of view, of which probably the determination of the fineness of the fiber, to be discussed further on, is the most important.

Unless the sections be treated with some disintegrating solvent, they present no appearance of cellular structure but seem uniform and transparent throughout; and no distinction between the external epithelial layer and the inner cylinder of fibro-cellular tissue can be detected. It is, however, interesting to note, in the examination of the plates, the striking similarity in the forms of the Cotswold, Lincoln, and Oxford wools on the one hand, and of the Merino and Southdown on the other, showing the justice of a classification into the groups that naturally separated. Taking in connection with the other peculiarities already mentioned it is possible that the cross-sections may prove of some assistance in the determination of purity of blood. With these considerations upon the minute structure we may proceed with the description of the examinations made under the other provisions of the law, and especially the length and fineness of the fiber.



Sample No. 274. Between x and l.



ABNORMAL FORMS IN COMMERCIAL GRADES.  
DRAWN FROM SOLAR PROJECTIONS, X 675.

Sample 275 A. Fine, unwashed.

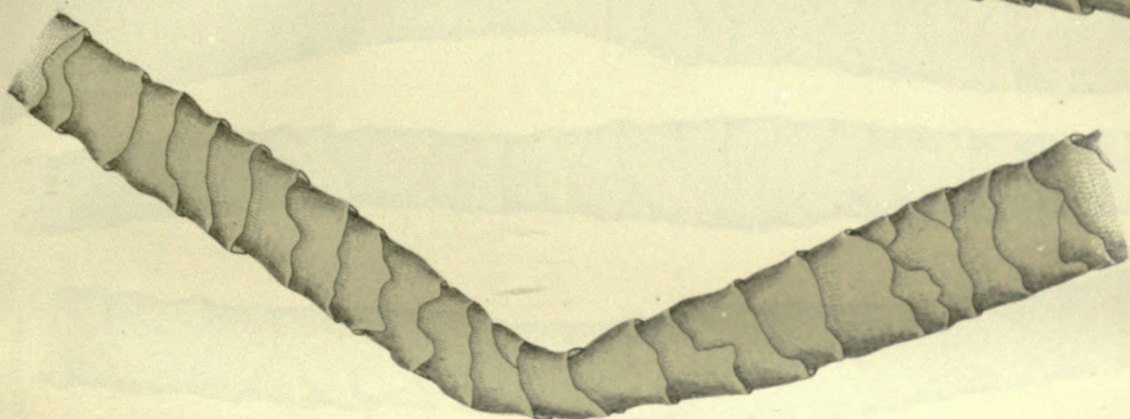
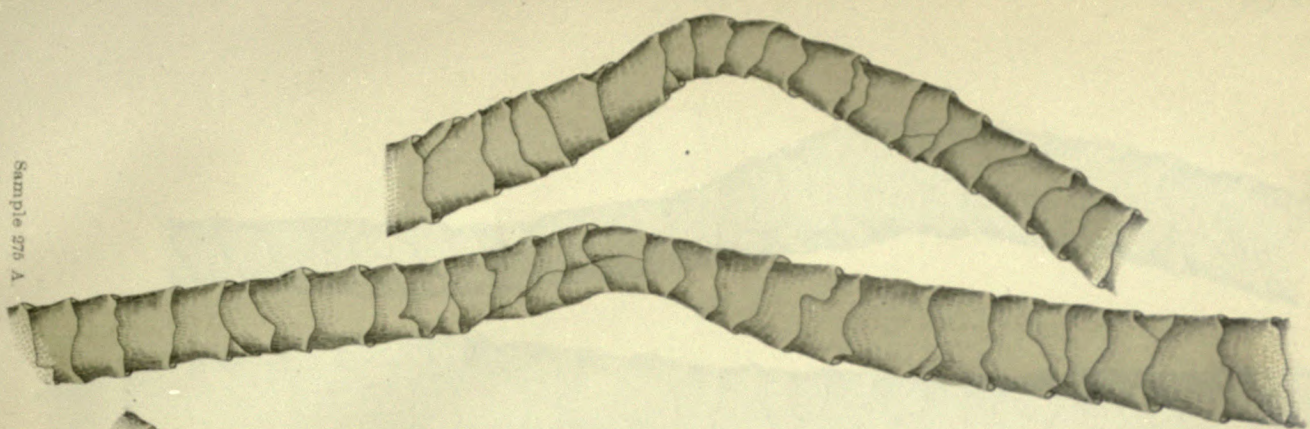




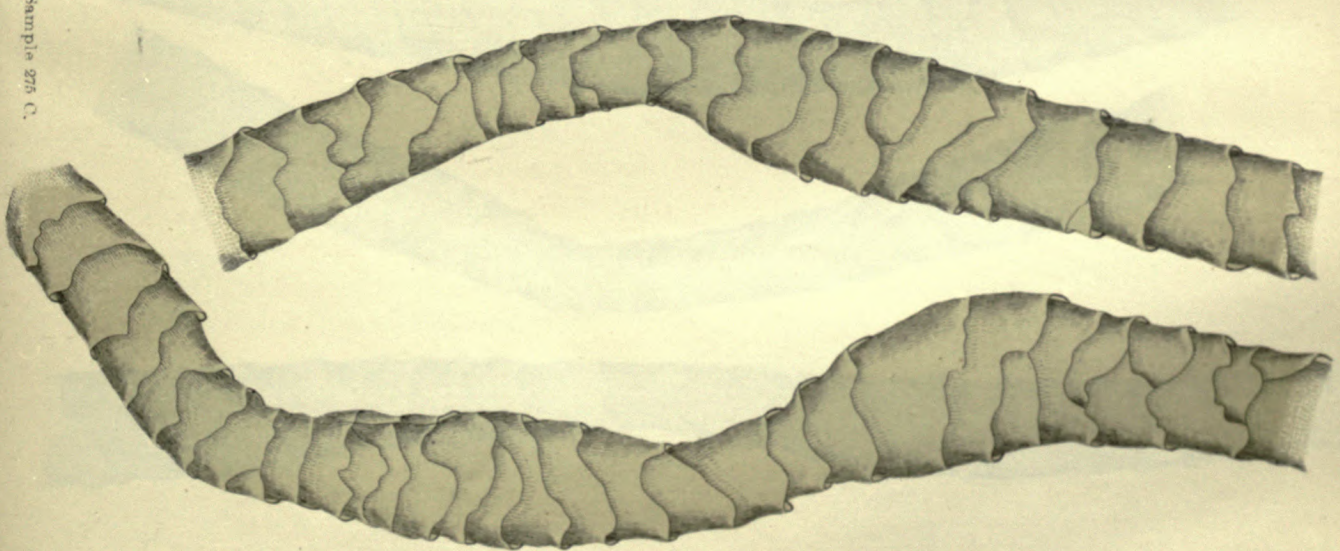




Sample 276 A



Sample 276 C

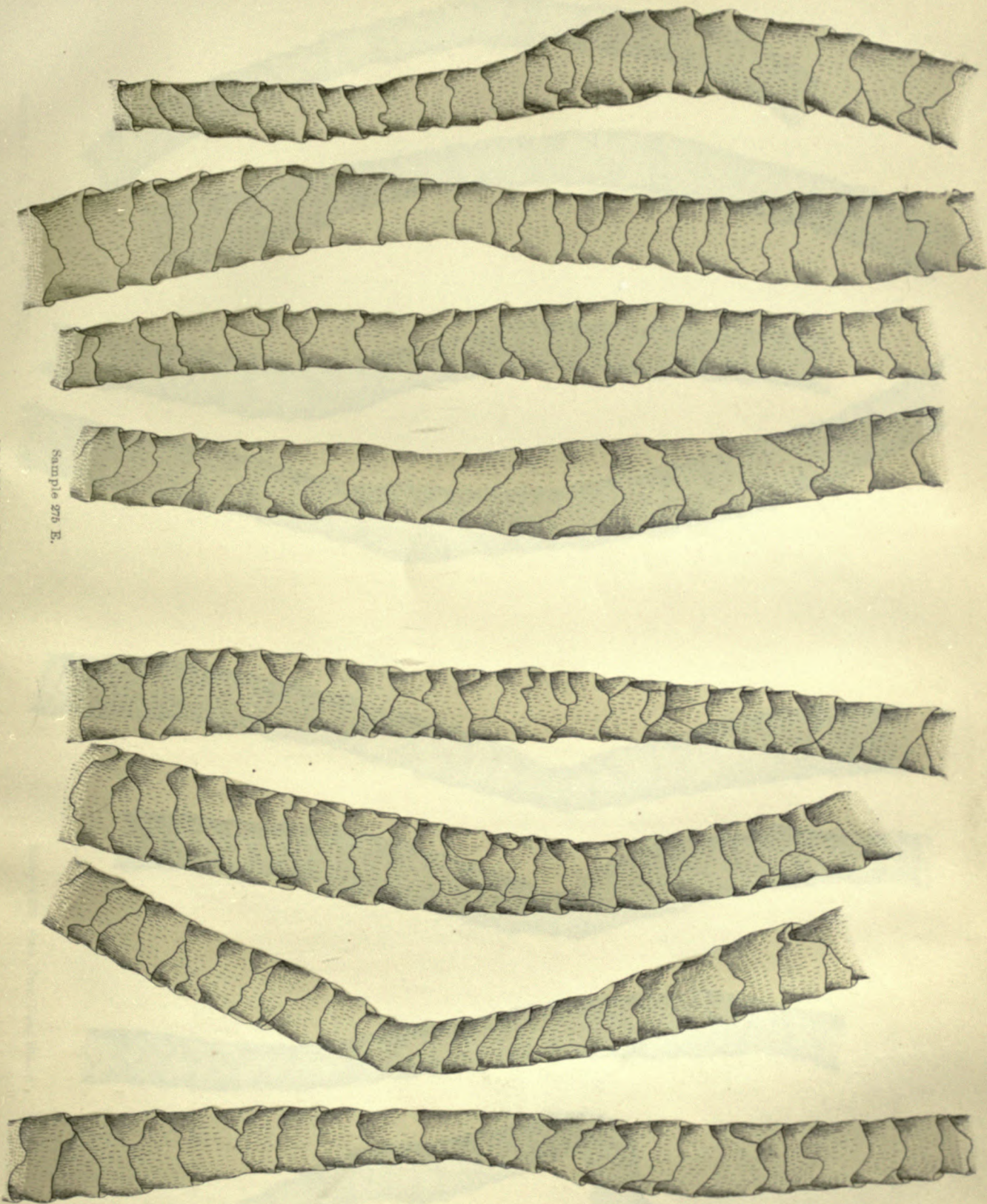


ABNORMAL FORMS IN COMMERCIAL GRADES.  
FINE UNWASHED.  
DRAWN FROM SOLAR PROJECTIONS. X 676.









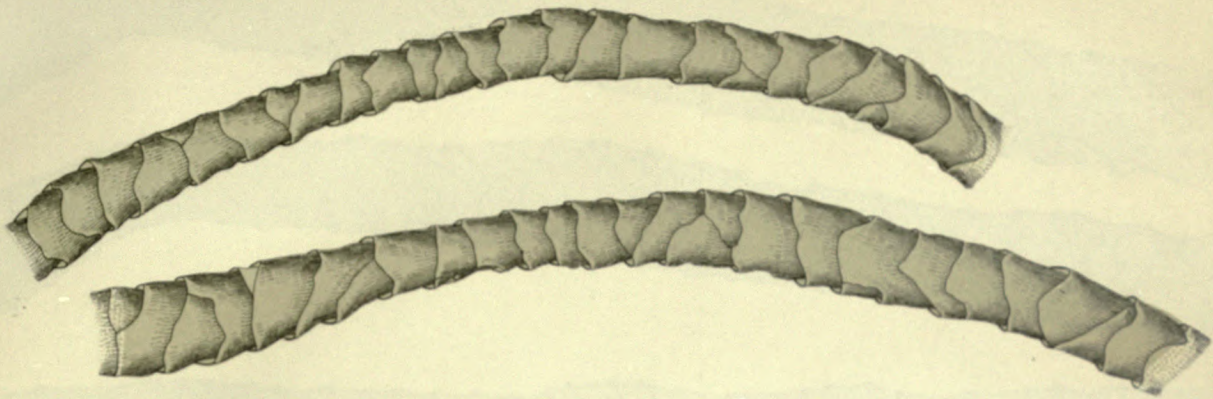
Sample 276 E.

ABNORMAL FORMS IN COMMERCIAL GRADES.  
FINE UNWASHED.  
DRAWN FROM SOLAR PROJECTIONS, X 576.



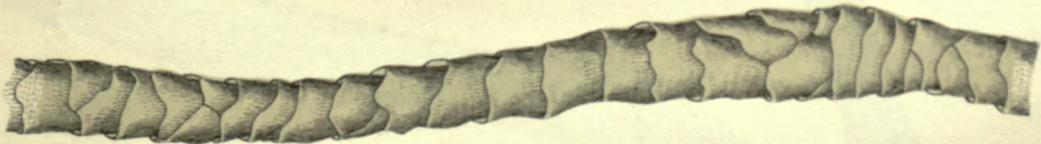
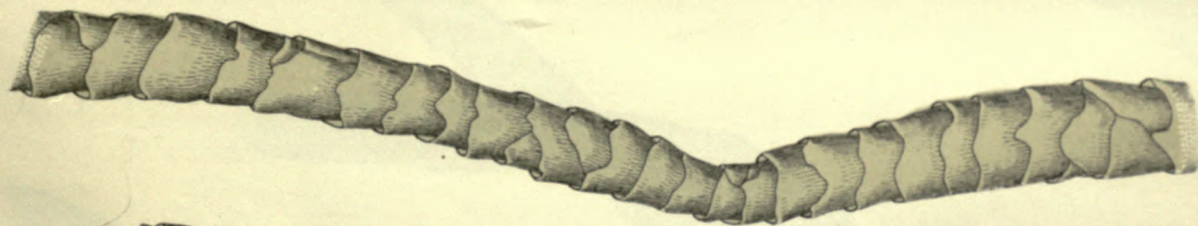
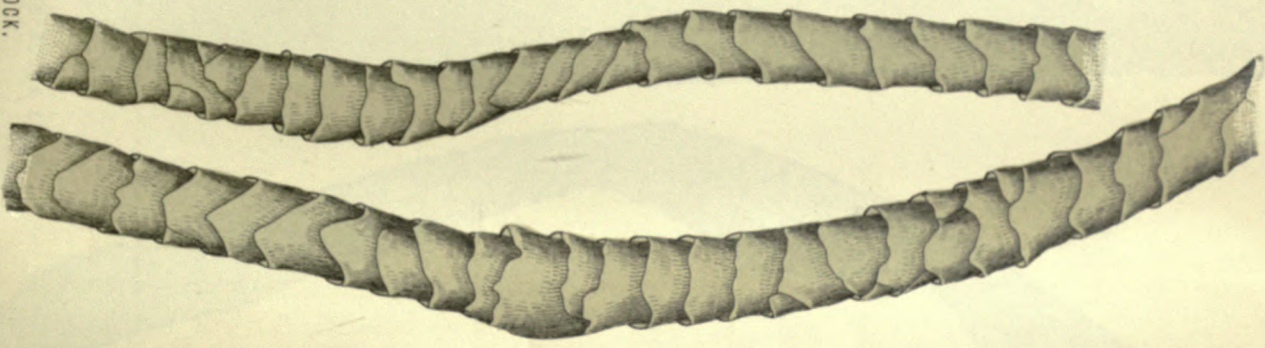






Sample 277 B.

PICKLOCK.



Sample 276 Fine, from Dead Sheep.

ABNORMAL FORMS IN COMMERCIAL GRADES.  
DRAWN FROM SOLAR PROJECTIONS, X 575.









SOUTHDOWN X 450.

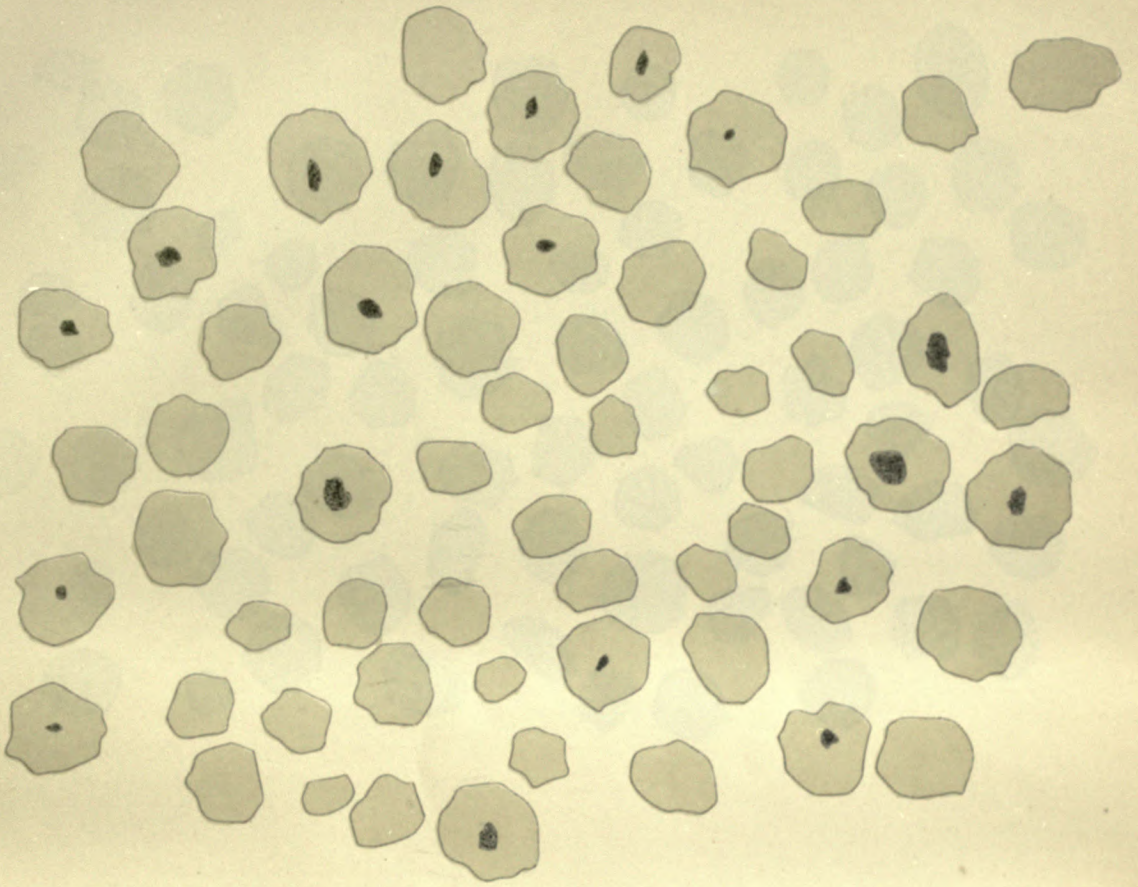
OXFORDDOWN  
X about 200.

ABNORMAL FORMS IN "DOWN" WOOLS,  
DRAWN FROM SOLAR PROJECTIONS, ENLARGED AS INDICATED.

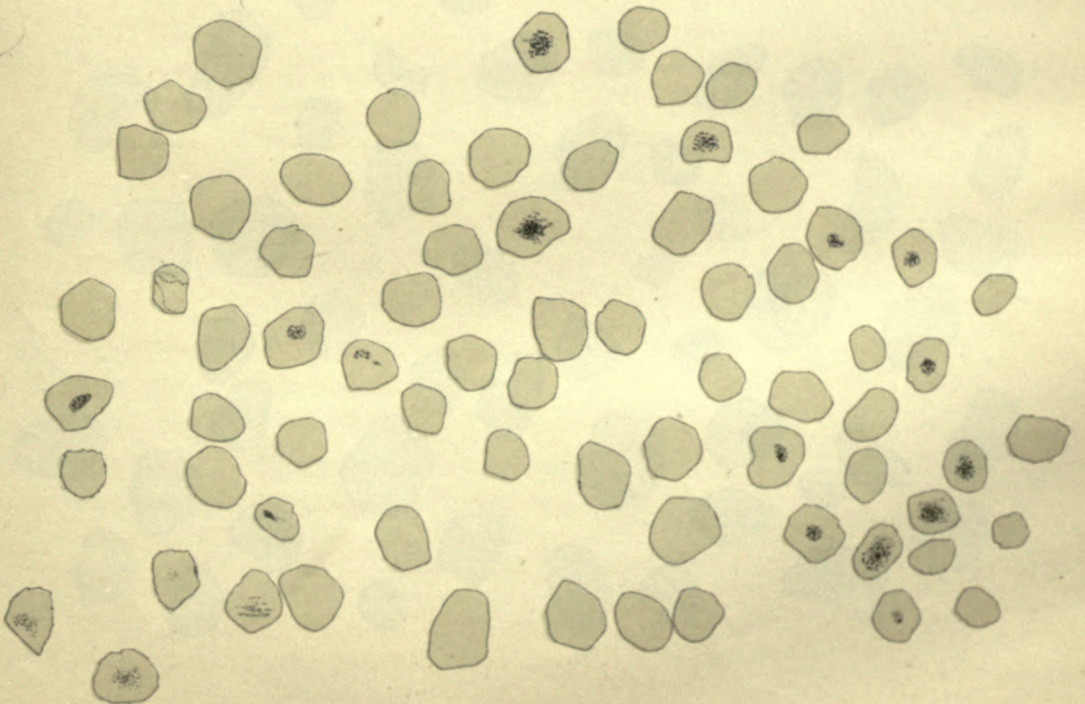








COTSWOLD.



LEICESTER.

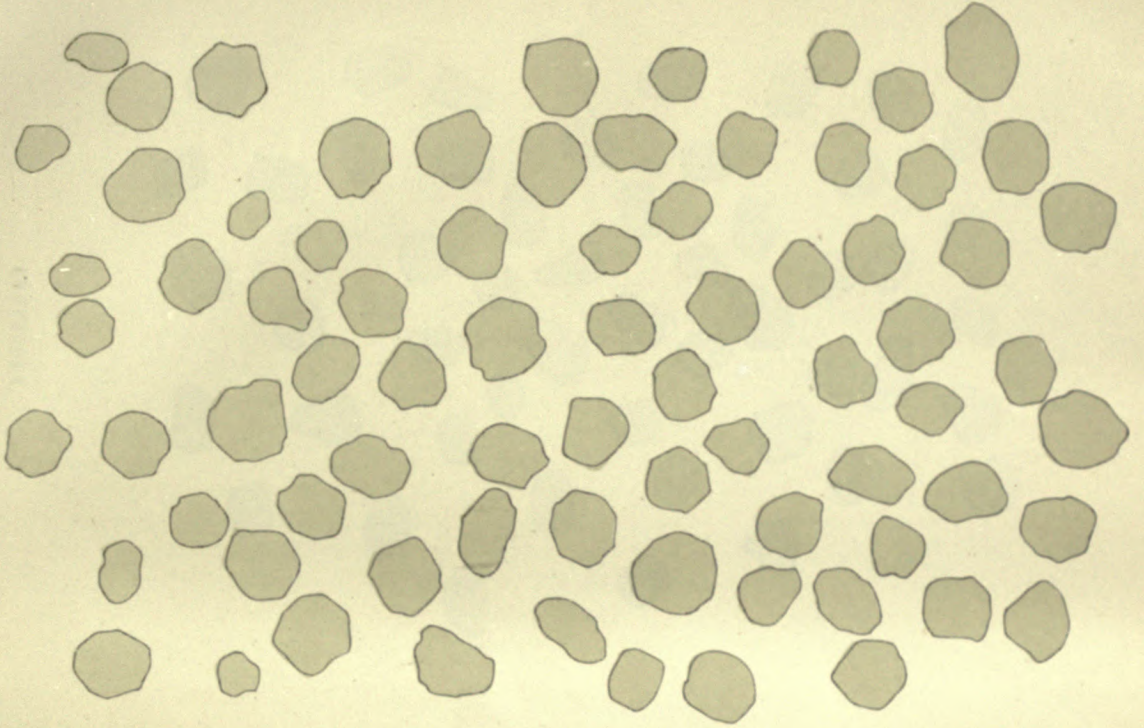
CROSS SECTIONS OF PURE BRED WOOLS,  
DRAWN FROM SOLAR PROJECTIONS, X 200.





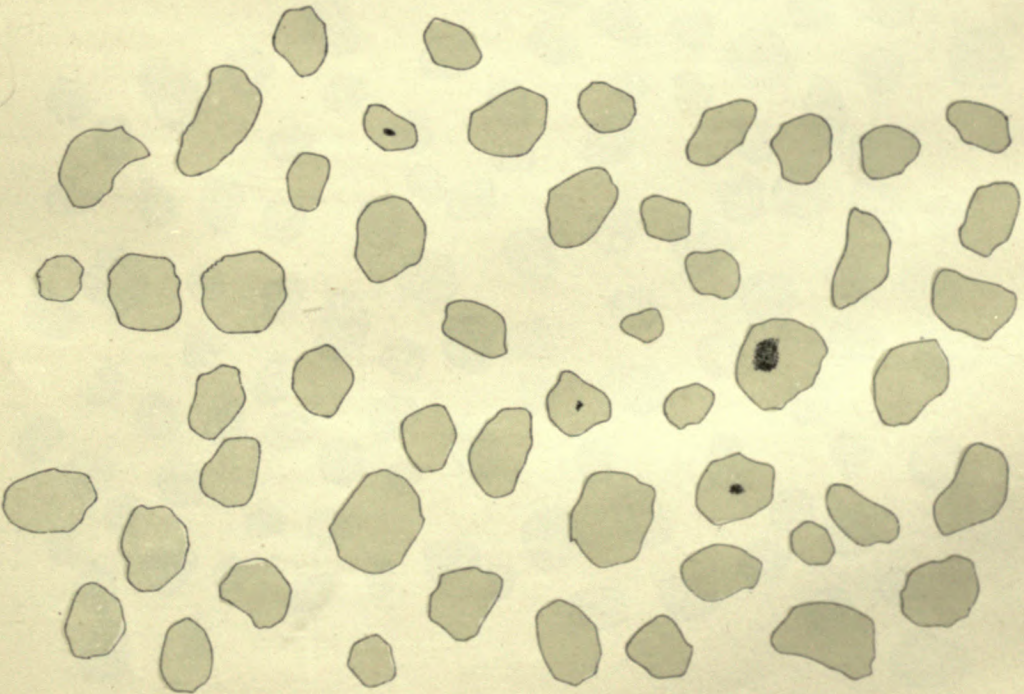


LINCOLN.



CROSS SECTIONS OF PURE BRED WOOLS,  
DRAWN FROM SOLAR PROJECTIONS, X 200.

OXFORD

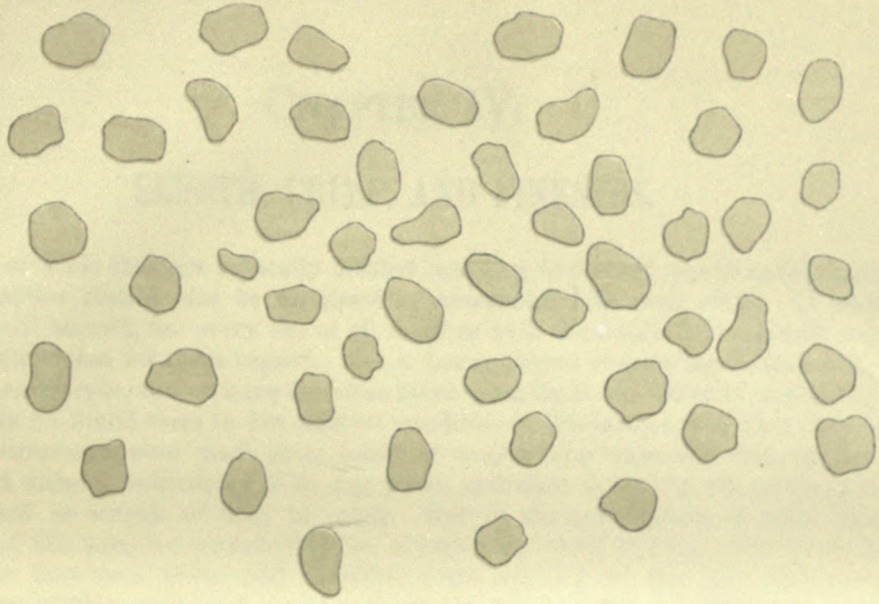




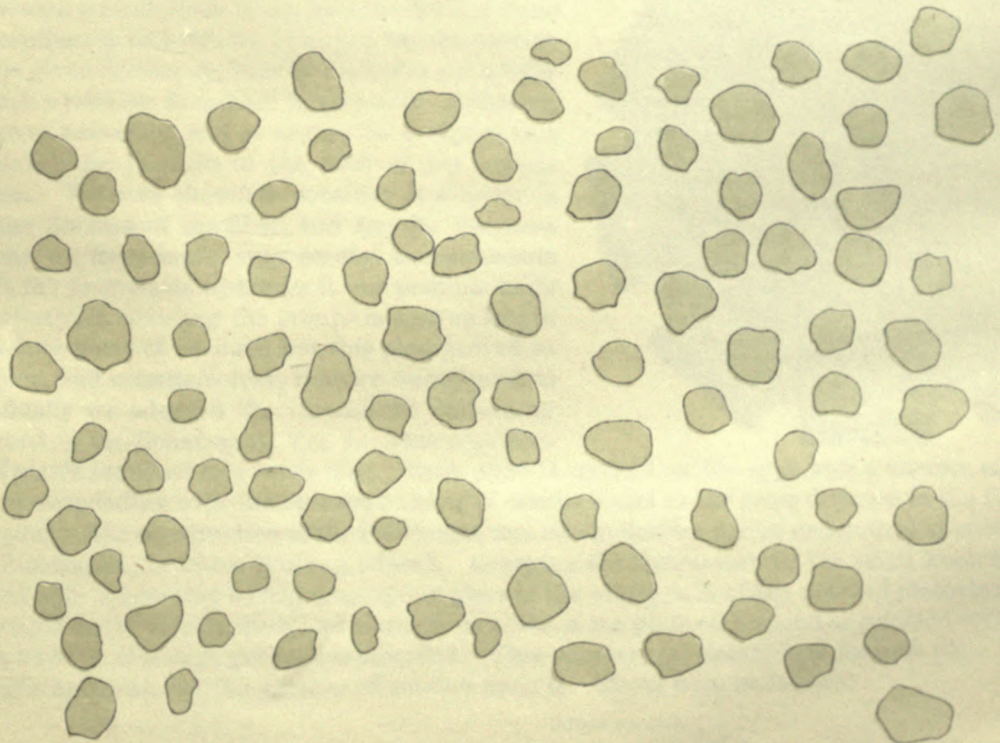




SOUTHDOWN.



MERINO.



CROSS SECTIONS OF PURE BRED WOOLS,  
DRAWN FROM SOLAR PROJECTIONS, X 200.





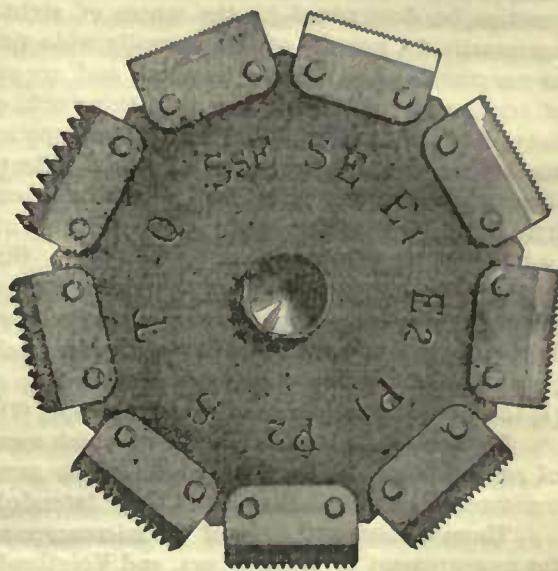


## CHAPTER IV.

### LENGTH, CRIMP, AND FINENESS.

In the classification of wools they are naturally divided into long and short, coarse and fine, and it is therefore natural that these properties should also be discussed in connection with each other. In connection with the length, however, little need be said, for every one at all familiar with the staple in its natural condition will have little need for further information with this regard. Yet it has appeared of some importance not wholly to neglect this property in our measurements, and we have therefore taken occasion in our tables of results to insert the length of the fibers examined, as we found them in the natural condition in the sample, and they may be found in their proper place. The measurements were made upon a lock of wool readily separated from the lot without greatly disturbing its crimp, and without submitting it to any strain sufficient to remove the crimp to any extent. The results are therefore stated as length of fiber in crimp. But in the examination of these figures it must be remembered that most of the samples represented, or at least very many of them, were taken from the animals within six months after they were shorn, and therefore have attained to only half the extent of the annual development. This is true of those samples taken from the animals on exhibition. Those of the commercial grades it is presumed represent a year's growth.

Of the crimp we have even less to say, for however much there may be of interest in this characteristic of the staple from a theoretical point of view, it is not our purpose to enter into a discussion thereof here. We incline therefore to the practical side of the question, and have confined our study and measurements to the relations between the number of crimps in a given length of the crude fiber and the fineness of the latter. To this point the attention of breeders, dealers, and manufacturers, has often been directed, and there prevails a popular belief that fineness in the crimp corresponds in all cases with fineness in the fiber, and while there are prominent exceptions to this rule we find upon the comparison of the results, to be given further on, that this belief is not wholly unjustifiable. Such a relation does exist in very many instances, but it is by no means universal, and it cannot be accepted as a means of determining the fineness of the fiber of any sample under examination. We may therefore consider it directly in connection with the fineness of the fiber, and for the purposes of the comparisons we have made very careful measurements of the crimp in all the finer wools wherever it was possible to do so. At first we attempted counting the crimps in a given length of fiber, say an inch or parts of an inch, but this plan proved so troublesome, tedious, and unsatisfactory, that we were forced to abandon it, and finally we adopted the instrument devised by Bohm, and described in his *Schafzucht*, Vol. 1. This consisted



of a series of steel plates attached to a brass disk. Each plate is notched on the edge with a number of notches for a given distance, corresponding with the average number of crimps found in the same distance in the fiber of wools of the different grades. The construction of the instrument and its application will be understood at once by a glance at the adjoining illustration, in which it is reproduced. Grasping the instrument by the small knob in the center with one hand, and with a tolerably strong magnifying glass in the other, each of the notched plates is successively placed over the sample under examination, and when the notches of the plate correspond or coincide with the crimps of the sample, the number of crimps per inch is recorded. This number was determined for each plate by carefully measuring its length and counting the number of notches upon it. These were as follows:

Crimps per inch.	Crimps per inch.	Crimps per inch.
S. S. E. .... 34	I P. .... 25	II S. .... 16
S. E. .... 30	II P. .... 22	T. .... 14
E. .... 26	I S. .... 20	Q. .... 12



The results of the measurements taken in this way are placed at the head of the column of the measurements of fineness for each sample, so that these two properties may be compared, and very little difficulty will arise in the determination of the relation between the two.

It is of course true that, as a general rule, the coarser fibers have fewer crimps per inch than the finer ones, yet the crimp of the fiber cannot always be accepted as a criterion of the absolute degree of fineness. It is only necessary to make a few comparisons to see this, and though among the breeders considerable importance is attached to it and dealers and graders often use it in making their classifications based upon fineness, its true relation has been fully recognized by those who have made a careful examination of the staple in a scientific way. Thus, Nathusius, in his *Die Woll-Haare des Schafes*, gives the following table bearing upon these relations and giving the average diameter of the fiber in the sample and the length of the wave in the crimp. He has given them in metric measures, and we shall not stop to translate them, referring the reader to the tables given further on by which, if he so desires, he may readily determine the values in the English standards. But as they are, they are quite sufficient for the comparison in view.

No. of sample.	Diameter.	Length of wave.	No. of sample.	Diameter.	Length of wave.
	<i>Centi-millimeters.</i>	<i>Millimeters.</i>		<i>Centi-millimeters.</i>	<i>Millimeters.</i>
25	1.53	1.76	21	2.21	2.09
16	1.54	1.50	26	2.24	2.60
17	1.69	1.61	19	2.76	2.03
14	1.79	1.28	20	2.81	1.61
13	2.02	1.50	22	3.14	2.76
18	2.07	1.55	23	3.40	3.60
15	2.21	1.46	24	4.16	2.01

This has been confirmed in our own measurements, as will be seen further on. This condition of the fiber cannot therefore be accepted as a reliable indication of fineness, and some other means must be adopted for the determination of this latter quality to which such a high value is attached by both breeders and manufacturers, and concerning which, with reference to our American wools at least, there has been a marked demand for information. There can be no doubt that distinctions in the fineness of the fiber may, with long experience and practice, be determined by the senses of sight and touch, but determinations made in this way, as they must necessarily do, because of the naturally wide variations of individual appreciation and judgment, have given rise to vexations and perplexing disputes, and are even less reliable than the differences in the crimp. The difficulty of arriving at satisfactory results in this work, even by methods other than those just indicated, is illustrated in the systems of measurements devised and applied at different periods among the German investigators who have studied the physical properties of wools. The principal difficulty appears to depend upon the fact that the wool fibers are not exactly cylindrical as shown in our figures of cross-sections; that in many cases they are oval or irregular in their section, and the measurement of the size of the fiber, when fixed in one position, would be greater or less than when taken in another position. But, whether from this or other causes, we shall see that the different systems adopted for effecting the work are very numerous, and that each one has some merit is shown by the fact that all have been more or less extensively employed. They are all fully described in Bohm's valuable and interesting work, entitled "*Die Schafzucht nach ihrem jetzigen rationellen Standpunkt*," to which we must refer the reader of this report for more detailed data concerning them. Bohm classifies the systems and instruments as (1) those requiring the use of the microscope, (2) those not requiring the use of the microscope.

To the first division belong those which measure a single fiber at one operation and those taking the measure of several fibers at the same time. In the same way in the second grand division we have those applied to the measurement of single fibers, and those intended for the simultaneous measurement of a number of fibers.

Those involving the use of the microscope are Dollond's, Daubenton's, and Pilgram's, Nathusius's and Bohm's for measurement of single fibers, and Voigtland's and Winkler's for simultaneous measurements of several fibers; and those used without the microscope are Lerebour's, Skiadan's, Grawert's, and Thaer-Klinert's for measuring single fibers, and the Kohler instrument for measurement of a bundle of fibers. It will be impracticable for us to give here detailed descriptions of all these systems and the instruments devised for applying them; yet it will be of interest, in connection with our own work and the method employed in performing it and as a matter of comparison, to call attention to the general principles upon which they are based—they certainly exhibit the ingenuity and patient application of the German investigators in these lines of work.

The Dollond wool measure, as it is called, is one which, Bohm says, in its time enjoyed a high reputation; and it is still largely employed for measuring the fineness of fiber, while the degrees into which its indicator and scale are divided are employed to indicate the grade to which any given quality of wool belongs. It consists of a microscope, in front of which is arranged a dispersion lens, which is divided into two sections by a straight line passing through the center. This division of the lens admits of shifting of the parts upon each other in the direction of the line of section. This motion is communicated by means of a fine ratchet, and the latter, by means of a vernier, is accurately graduated to  $\frac{1}{800}$  of an English inch = 0.127 millimeter. In the use of the instrument the fiber to be



measured is stretched at right angles to the line of section of the divided dispersion lens, and the parts so shifted that two images appear in the field of vision instead of one; but to insure accuracy in the result the opposite edges of the two images must lie in contact, but must not overlap each other. The amount of the motion of the parts of the dispersion lens required to produce this effect will be indicated by the graduations of the ratchet and vernier and will correspond with the diameter of the fiber. The magnifying power of the instrument used is such that the image is enlarged fifty times, and each division of the vernier therefore indicates  $\frac{1}{50} \div 50 = \frac{1}{2500}$  English inch or 0.00254 millimeter, and is called one degree.

The Daubeuton measure consists of a glass microscope slide, which is divided into squares by parallel lines 0.1 Paris line apart. The microscope employed enlarges the image fourteen times, so that each of the squares on the glass slide represents  $\frac{1}{14}$  line,  $\frac{1}{196}$  inch, or 0.0161 millimeter. This instrument is not adapted to the measurement of finer wools, because its graduations are not sufficiently minute, and it has not therefore been received with much favor.

Pilgram's measure consists of a glass microscope slide, highly polished, and bearing a scale ruled to  $\frac{1}{1000}$  Paris line. The fiber to be measured is stretched across the scale, which is placed under the microscope, and the measure read off directly.

Nathusius considered it desirable to measure both axes of the cross-section of the fiber, and to this end he constructed an arrangement by which the fiber could be turned while being examined. Upon a microscope slide he fixed two pieces or standards of wax, and through each of these standards thrust two needles, both in the same line, and their points directed towards each other. The other ends of the needles were covered with balls or knobs of sealing-wax. In operation the fiber to be examined was stretched between the points of the needles and affixed to them by means of wax; so that when brought into the focus of the microscope the fiber could be brought into any position with reference to the axes of cross-section by turning the knobs of the needles.

Bohm, following the same principle, arranged metallic clamps to hold the fiber to be examined. In the microscopic apparatus for measuring several fibers at the same time Voigtland's seems to have been received with the greatest favor. In the operation of his instrument ten fibers are stretched between the prongs of a brass fork, and by a special mechanism they are brought into such contact that they form a comparatively broad band with no interstices intervening between the individual fibers. They are then brought into the focus of the microscope and the band measured by a scale divided into parts of  $\frac{1}{5100}$  Vienna inch each. The result of the measurement divided by ten gives the average size of a single hair. The tedious character of the work involved in arranging the fibers upon the fork and the possibilities of spaces occurring between them renders this arrangement of doubtful value. On the other hand, the variations in a single fiber can be indicated as closely as  $\frac{1}{5100}$  Vienna inch, or 0.00325 millimeter, which corresponds with a little over one-eighth degree Dollond.

Winkler's measure is much the same in principle and construction as Voigtland's. The instruments for measurement of fibers without the use of the microscope depend principally upon the degree of separation of two bodies effected by the fibers to be examined when brought between them. There is one, however, which does not correspond with this description. It is the invention of Lerebour, and consists of a fine round metallic rod or needle bearing a finely divided scale. To measure the fineness of the fiber the latter is wound round the path of the rod bearing the scale in such a way that one coil is in perfect contact with another. Then from the number of degrees covered and the number of coils made the fineness is calculated. The instrument has the same disadvantages as the Voigtland measure with reference to the spaces that may occur between the fibers, and for this and other reasons it has been but little used. Of those measures depending upon the degree of separation of two bodies caused by the insertion of the wool fiber between them three have been devised, differing somewhat in form of construction. The Skiadan measure consists of two metallic bars arranged like the arms of tongs. To one of these bars is attached a long double lever indicator, the extreme point of which, when the bars are separated, moves over a graduated arc, the degrees of which correspond with the size of the opening between the bars magnified 2,000 times. One degree of the scale being 50 English inch would consequently show variations of 0.00001 of an inch or 0.00254 millimeter.

Grawert's measure is constructed on the same principles. He also uses tongs, the jaws of which are of brass, steel, or mother-of-pearl. The tongs are opened and closed by means of a screw, the thread of which is so adjusted that an opening of one Paris line corresponds with one turn of the screw. The opening of the tongs corresponds with a larger opening of the jaws. At the joint of the tongs is arranged an indicator, which swings over a graduated scale, whose larger divisions are equal to one twenty-fifth of a circle. One turn of the screw, opening and closing the jaws, causes the indicator to pass over one of these larger divisions, and these latter being divided into forty parts, one of the smaller divisions of the scale corresponds with  $\frac{1}{4000}$  Paris line or 0.00225 millimeter opening of the jaws. The indicator is provided with a micrometer screw, bearing a scale by which one-tenth of a turn can be read. Each one-tenth turn of this screw, therefore, corresponds with  $\frac{1}{40000}$  Paris line or 0.000225 millimeter opening of the jaws. On each side of the jaws are vertical parts, which are very flexible and elastic, and attached to these and horizontal and parallel with the jaws are small clamps or forceps. The jaws of the instruments being opened and the fiber stretched between these forceps and firmly clamped, it will be held horizontally between



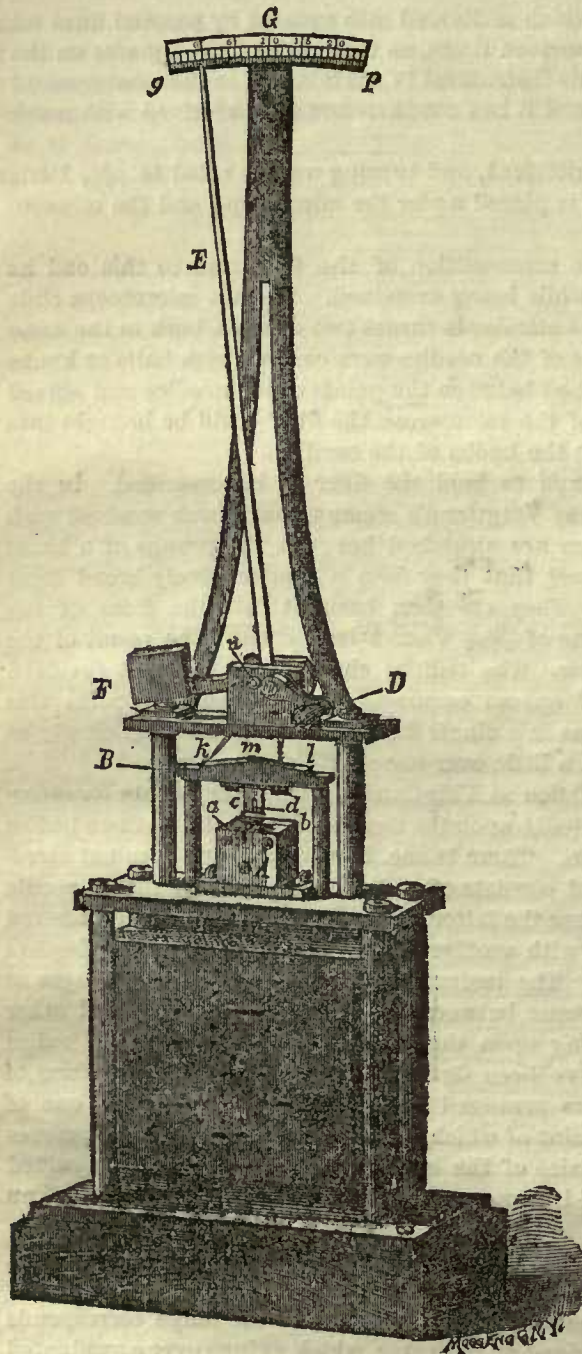
the jaws. By jarring the handles a vibration of the fiber is set up, and the jaws are then carefully closed upon it by means of the screw attachment. As soon as the jaws close upon the fiber the motion is stopped. The position of the indicator upon the scale is recorded and the experiment repeated to insure accuracy of the measurement.

The Thaer-Klinert modification of this instrument offers but few advantages over it. It consists principally in shortening the parts supporting the forceps for holding the fiber, making them somewhat lower than the jaws of the instrument. The inner surface of the jaws is

different, being rounded or oval, so as to come in contact at a single point, and a section would have the appearance of a segment of a circle. The fiber to be examined is stretched tightly between the forceps, and from above, through the jaws of the tongs. The fiber then has the appearance of being bowed. The tongs are then slowly opened until finally the fiber passes through the opening as soon as it is large enough.

Bohm says that both these instruments are desirable; expeditious in operation, giving accurate results, and faultless in construction. But the first may be considered preferable to the second, since in the latter the stretched fiber might pass through the open jaws before the true size would be indicated. So also would a flattened fiber pass through by the smaller exit instead of the larger, though really in either case the average fineness would scarcely be represented.

The difficulties in the way of securing good average measurements of a collection of fibers led Koehler to the idea of measuring by mechanical means a large number of fibers in a bundle at the same time. He reasoned that since only the best thoroughbred fine wool is round or cylindrical, the most accurate method of arriving at correct notions of the fineness of the fiber would be to determine the space a given number of fibers together would occupy or the surface their cross-section would cover, and for this purpose he proposed measuring 100 fibers at one operation and reducing from the area of the cross-section found the average size of the individual fibers. In practice with his instrument the size of the fiber is indicated in degree of fineness. The instrument in question is illustrated in the accompanying cut. In the block A, is the mortise *b*, crossed at right angles by the slot *a*, which extends entirely across the block. Above the block A is the movable piece B, which is connected by the side rods to the weight C. To the middle of the piece B is fixed the plunger *c*, having a rectangular slot, *d*, of the same width as the slot *a*. The plunger is of such size as to exactly fit the mortise *b*. The system of movable piece B and weight C is raised and lowered by means of the chain I, connected with the crank and pulley D. To determine the fineness of a bundle of fibers it is stretched through the slot *a* and the plunger *c* allowed to descend over it. The sides of the plunger fit into corresponding mortises in the larger mortise *b*, which extend deeper into the block than the slot *a* or mortise *b*. The bundle of fibers will then be compressed into a rectangular space bounded by the sides of the slots *a* of the block A and *d* of the plunger *c*. The coarser the fibers the greater will be this space and the less will the plunger descend, and a relation will therefore exist between the vertical motion of the plunger and the size of the fiber. To determine and show this relation the indicator E and the corresponding scale G are employed. The indicator is connected



KOEHLER'S WOOL MEASURE, ONE-HALF SIZE, (FROM BOHM.)

at its lower end at right angles with the loaded lever F. When the indicator is out of gearing with the movable piece B, its point is drawn by means of the loaded lever toward the end (*g*) of the scale. This scale is arbitrarily divided into twenty parts, the 0 being at *g*. To connect the indicator with the movable piece B, the pointed shaft *k* is fixed to the lever-arm F by the nut *n*. On the top of the piece B and at its middle point is a small agate button, *m*, with a conical cavity in the top.

To operate the instrument the bundle of fibers to be measured is put in place, the movable piece and plunger let fall, the lever-arm raised so that the point of the shaft *k* may rest in the conical depression of the agate but-



ton *m*. The pointed shaft *k* now constitutes a support for the lever-arm. The less the plunger descends upon the coarser fibers to be tested the greater will be the elevation of the lever, and the more will the indicator be moved toward the end *p* of the scale *G*, and so the indicator will mark a larger or smaller number on the scale according to the coarseness or fineness of the fibers. The numbers on the scale indicate the relative figure corresponding with the fineness of the sample, and each degree corresponds with an average diameter of fiber equal to 4.233 millimeters.

Koehler's instrument, as said before, is highly recommended by all the German authorities upon the physical properties of wools, and it is largely used everywhere that wools are extensively measured. It was used exclusively by Jeppe in his measurements at the University of Leipzig, and was strongly indorsed by the Leipzig wool convention. Bohm says it is one of the most important instruments we have for arriving at a correct knowledge of the character of the wool fibers. There is no doubt that the instrument may be used in all hands, by breeders as well as wool dealers and manufacturers, and by the scientific student of wools as well as either of these, in cases in which time is an object not to be taken into account. And this brings into consideration the disadvantages of the instrument for the work in which we have been engaged. To insure accuracy, and indeed to secure any kind of satisfactory results with the instrument, it is absolutely necessary that the fibers to be examined be washed, an operation which of itself involves considerable manipulation and consequent consumption of time. This, again, must be accompanied with drying, a matter to which important attention must be given, because of the influence of moisture upon the scoured fiber. Then the fibers must be carefully counted in order that exactly 100 fibers may be employed for each test. This has been mentioned as an advantage to the examiner of wool, because the operation educates the eye and hand in the detection of differences in the external characteristics of the staple; but while this is true, whenever time is the most important consideration other means for securing accurate results in measuring must be resorted to, and on this account we have in our work made use of the microscope.

We recognize the difficulty already referred to depending upon the form of the cross-section of the fibers, but this difficulty we think has been largely obviated in the method we have employed. Our method was as follows: Since when so many fibers are mounted at the same time they are almost free to take any position, in preparing the samples for measurement the length of the fiber in each sample was first taken and recorded, and so also was the number of crimps per inch. A small lock was then taken from each sample, and beginning with the butt and proceeding toward the top it was cut, as nearly as possible, into equal sections varying in length with the length of the fiber of each variety. Thus in the long wools, Cotswold and Lincoln, the sections were made about one inch in length, while in the middle and fine wools they were made about one-half inch long. This divided the locks from the samples of long wools into from five to seven parts and the middle wools into about four and the fine wools into three to five, according to the age of the staple. The locks were cut in sections while in grease and without being washed in any way, and the parts at once mounted in Canada balsam on glass slides and covered with thin glass in condition for examination with the microscope. To each slide was attached a label indicating the number of the sample from which the lock to which the section belonged was taken and a numbered letter indicating the position of the section in the length of the fibers. That in the section taken from the butt end of the lock was numbered B, the next section taken from the part nearest the butt B<sup>2</sup>; the next B<sup>3</sup>, and so on. The slides thus prepared were placed in racks in which they are preserved.

In making most of the measurements we used a Crouch student's binocular microscope with a Spencer student's objective having a one-eighth inch focus and 120° angular aperture; but for part of the measurements, because of greater coarseness of the fiber and greater thickness of the cover-glass, a Crouch objective having a quarter-inch focus and 100° angular aperture was employed. The measure consisted of an eye-piece micrometer in a Crouch's No. 2 eye-piece, and in actual practice when the one-eighth objective was being used and the instrument in focus, the tube was so drawn that two divisions of the eye-piece micrometer corresponded exactly with one division of a stage micrometer ruled to  $\frac{1}{100}$  of a millimeter or centimillimeter. With this arrangement the magnifying power of the instrument corresponded to about 530 diameters. But with the one-fourth inch objective and with the tube extended to the same extent, one division of the stage micrometer was equal to  $1\frac{1}{2}$  divisions of the eye-piece micrometer, and the magnifying power of the instrument was equivalent to about 400 diameters. But before placing the slide in the case, it was placed upon a hot brass plate and allowed to remain there until a moderately brisk boiling of the balsam occurred, when it was removed and placed in a clamp to hold the cover in place and press it firmly upon the group of fibers under it. Thus treated the natural grease or fatty soap of the fiber was completely disintegrated and dissolved, leaving the fiber in perfect condition for the measurement of the diameter presented to view in the microscope. In this way the cleansing and mounting were effected at the same operation. Another advantage of this mode of treatment resides in the fact that because of it the more volatile parts of the balsam are removed by the heat; as a consequence it hardens much more rapidly and the slide is ready in a greatly shorter time for examination with the microscope. At the same time all air bubbles are removed from the mounting medium, and from the fibers, thus insuring intimate contact of the latter with the former.

When the slides are to be preserved there can be no question of the superiority of balsam over the other media for mounting, such as glycerine or oil, though if the slide be needed for further use, the latter are of course to be recommended. Oil will dissolve the fatty matter, especially when heated, and will not affect the fiber, while



linseed or other drying oils might even be recommended for permanent mounts. In the actual operation of measurement each slide was placed upon the stage of the microscope, each fiber brought into focus and the eye-piece so turned that the scale of the micrometer crossed the image of the fiber at right angles. The number of gradations of the micrometer covered by the image were then read off and recorded. To obtain a fair average for the fineness of fiber thirty measurements were in most cases taken with each slide or section. The relative measurements thus obtained were reduced to actual measurements in centimillimeters by dividing by 2 or  $1\frac{1}{2}$ , according as the one-eighth or one-fourth objective was employed and their average calculated to determine the average size of the fibers in the section. From the averages for the sections are calculated the average fineness of the entire sample.

The use of the high magnifying power and the eye-piece micrometer made it possible to determine very slight differences in the size of the fiber, and in mounting so many fibers upon the same slide, and by means of the number of measurements taken to determine the fineness for each sample, the fibers must have been measured in every position, so that the same end was obtained as would have resulted in the use of the Koehler instrument (and we believe that the work was more expeditiously done than would have been possible with the latter). In our work, about two thousand sections were made and measured. The results have been brought together in the tables appended hereto. To make them more generally understood we have stated them in the metric measures in which they were taken and in thousandths of an inch and fractions of an inch. This will render all reductions unnecessary in making comparisons, and will, we hope, be found to add considerably to the value of the work. In the reductions from the French to the English standards, that is, from centimillimeters to thousandths of an inch, we need the factor 0.3937, and for reduction to fractions of an inch,  $\frac{1}{2539.68}$ . These reductions will have added importance in view of the fact that a leading writer on the subject of wool production has stated the values erroneously, and it is believed that his statement has led to serious errors of comparison of the qualities of wool produced at different epochs in the United States. I do not propose here to enter into a discussion of the matter, my only desire being to put into the hands of those interested in the woolen industry the correct data upon which to base any comparisons they may desire to make.

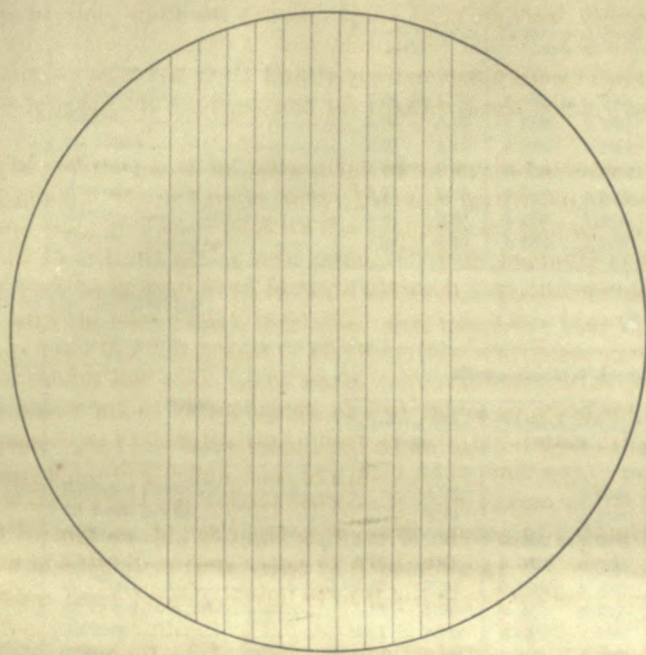
In the succeeding pages will be found a table of reductions constructed for the purpose of working out results. This table will doubtless prove of value in many ways, since it may be employed not only for the reduction of centimillimeters to parts of inches, but, by proper transposition of the decimal points, for the reduction of meters and parts of meters to inches. It may therefore be applied for the reduction of other than microscopic measurements. The relation between the two scales will be better seen and understood by reference to the photolithographic plate in which photo-micrographs of the two scales are reproduced. In this country it has not been the custom to base the commercial grades of wool upon the fineness of the fiber, as is the practice in Germany, and no standards of fineness of grades has therefore been determined. But in order that comparisons may be made if desirable, we give below the standards of fineness determined by the leading German authorities on the subject, believing they will not be without interest. We have selected the figures of Bohm, Jeppe, and Uecherlin. Bohm, in his table, gives the number of crimps per inch corresponding with the different grades of fineness, and we reproduce them here because in the tables of results of our own measurements we have stated the number of crimps per inch in each sample whenever it was obtainable. The relation between the number of crimps per inch and the fineness of the fiber has been a fertile subject of dispute, and will give added interest to the somewhat dry data we have to present.

The figures for the several standard grades given by these authorities are presented in the following tables, in which the French standard employed has been reduced to the English standard. The first table is that given by Bohm in his "Schafzucht," Vol. I, p. 182.

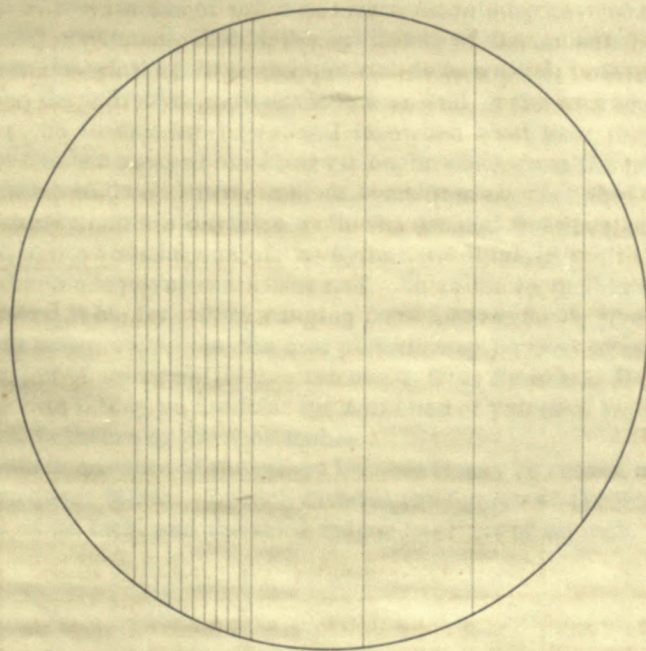
Grade.	Number of crimps per inch.	Measurements of fineness.		
		In centimillimeters.	In thousandths of an inch.	In fractions of an inch.
Super electa plus plus .....	*32	1.25 to 1.50	0.4921 to 0.5905	$\frac{1}{2031}$ to $\frac{1}{1683}$
Super electa plus .....	30 to 32	1.50 1.60	0.5905 0.6299	$\frac{1}{1683}$ $\frac{1}{1607}$
Super electa .....	23 30	1.65 1.775	0.6496 0.6988	$\frac{1}{1567}$ $\frac{1}{1430}$
Prima electa .....	26 28	1.775 1.90	0.6988 0.7480	$\frac{1}{1430}$ $\frac{1}{1338}$
Secunda electa .....	24 20	1.90 2.03	0.7480 0.7885	$\frac{1}{1338}$ $\frac{1}{1267}$
Hohe prima .....	23 24	2.03 2.225	0.7885 0.8759	$\frac{1}{1267}$ $\frac{1}{1141}$
Prima .....	21 23	2.225 2.40	0.8759 0.9448	$\frac{1}{1141}$ $\frac{1}{1058}$
Geringe prima .....	20 21	2.40 2.54	0.9448 0.9999	$\frac{1}{1058}$ $\frac{1}{975}$
Hohe secunda .....	19 20	2.54 2.666	0.9999 1.0496	$\frac{1}{975}$ $\frac{1}{907}$
Secunda .....	17 10	2.666 2.90	1.0496 1.1417	$\frac{1}{907}$ $\frac{1}{817}$
Geringe secunda .....	16 17	2.90 3.175	1.1417 1.2499	$\frac{1}{817}$ $\frac{1}{737}$
Tertia .....	13 10	3.175 3.70	1.2499 1.4560	$\frac{1}{737}$ $\frac{1}{647}$
Quarta .....	0 13	3.70	1.4560	$\frac{1}{647}$

\* And above.





X 380.



X 160.

MICROMETER SCALE USED IN MEASUREMENTS OF FINENESS.  
FROM PHOTO MICROGRAPH.







Jeppe gives the following classification and value:

Grade.	Measurements of fineness.		
	In centimillimeters.	In thousandths of an inch.	In fractions of an inch.
Super electa .....	1.65 to 1.77	0.6496 to 0.6968	$\frac{11}{16}$ to $\frac{1}{2}$
Electa .....	1.90 2.03	0.7480 0.7885	$\frac{1}{2}$ $\frac{1}{16}$
(1) Prima .....	2.09 2.15	0.7909 0.7983	$\frac{1}{2}$ $\frac{1}{8}$
(2) Prima .....	2.215 2.47	0.8720 0.9724	$\frac{1}{2}$ $\frac{1}{8}$
Secunda .....	2.58 2.66	0.9960 1.0496	$\frac{1}{2}$ $\frac{1}{4}$
Tertia .....	2.66 3.42	1.0496 1.3464	$\frac{1}{2}$ $\frac{1}{2}$
Quarta .....	3.29 4.05	1.2952 1.5767	$\frac{1}{2}$ $\frac{1}{2}$

And Wecherlin gives the following:

Grade.	Measurements of fineness.		
	In centimillimeters.	In thousandths of an inch.	In fractions of an inch.
(1) Super electa .....	1.26	0.4960	$\frac{1}{2}$
(2) Super electa .....	1.52	0.5984	$\frac{1}{2}$
(1) Electa .....	1.52 to 1.77	0.5984 to 0.6968	$\frac{1}{2}$ to $\frac{1}{2}$
(2) Electa .....	1.77 2.08	0.6968 0.7885	$\frac{1}{2}$ $\frac{1}{8}$
(1) Prima .....	2.03 2.28	0.7885 0.8976	$\frac{1}{2}$ $\frac{1}{4}$
(2) Prima .....	2.28 2.53	0.8976 0.9960	$\frac{1}{2}$ $\frac{1}{4}$
Secunda .....	2.53 2.785	0.9960 1.0964	$\frac{1}{2}$ $\frac{1}{2}$
Tertia .....	2.785 3.04	1.0964 1.1826	$\frac{1}{2}$ $\frac{1}{2}$
Quarta .....	3.04 3.54	1.1826 1.3936	$\frac{1}{2}$ $\frac{1}{2}$

In the presentation of the results of our own measurements we have considered that it will be of interest not only to those most directly concerned, that is, the exhibitors of the animals here represented, but to all who may have occasion to compare the relations to be pointed out, or to work out others, to give the record of all the figures obtained; that is, to give the individual measurements as well as the averages of the results. For, taken in connection with the data given in our catalogue, and furnished elsewhere, they must afford important subjects for study in lines which have either escaped our observation, or which from the nature of the case we have been unable in the present investigation to dwell upon; and further, from the fact that both breeders and manufacturers in different parts of the country express the fineness in the decimal fractions of an inch, and in the vulgar fractions respectively. We have in our translations of the figures we obtained with the metric scale used in our measurements stated them in the two equivalents mentioned. In order to facilitate these translations or reductions we first constructed the general table for values, ranging from 1.000 to 9.999, given below. This table may be made to serve a useful purpose in many ways. In the first place it may be used by others in the same way in which it has served us in the translation of micrometric measurements from French to English standards, or *vice versa*. Or by removing the decimal points it may be used for the reduction of values of higher denomination, as millimeters, centimeters, or even meters, to inches or parts of inches.

We present this table in advance of the others because it may be needed by our readers for certain comparisons in the study of the subsequent tables. In each division the figures of the first column represent centimillimeters, the second thousandths of an inch, and the third vulgar fractions of an inch.



I.—Table for reduction of centimillimeters to fractions of an inch.

Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.
1.000	0.3937	$\frac{1}{2530}$	1.039	0.4090	$\frac{1}{2444}$	1.078	0.4244	$\frac{1}{2355}$	1.117	0.4397	$\frac{1}{2273}$	1.156	0.4551	$\frac{1}{2196}$	1.195	0.4704	$\frac{1}{2125}$	1.234	0.4858	$\frac{1}{2053}$
1.001	0.3940	$\frac{1}{2537}$	1.040	0.4094	$\frac{1}{2412}$	1.079	0.4248	$\frac{1}{2353}$	1.118	0.4401	$\frac{1}{2271}$	1.157	0.4555	$\frac{1}{2194}$	1.196	0.4708	$\frac{1}{2122}$	1.235	0.4862	$\frac{1}{2056}$
1.002	0.3944	$\frac{1}{2534}$	1.041	0.4098	$\frac{1}{2430}$	1.080	0.4251	$\frac{1}{2351}$	1.119	0.4405	$\frac{1}{2269}$	1.158	0.4559	$\frac{1}{2192}$	1.197	0.4712	$\frac{1}{2121}$	1.236	0.4866	$\frac{1}{2054}$
1.003	0.3948	$\frac{1}{2532}$	1.042	0.4102	$\frac{1}{2437}$	1.081	0.4255	$\frac{1}{2349}$	1.120	0.4409	$\frac{1}{2267}$	1.159	0.4562	$\frac{1}{2191}$	1.198	0.4716	$\frac{1}{2119}$	1.237	0.4870	$\frac{1}{2053}$
1.004	0.3952	$\frac{1}{2529}$	1.043	0.4106	$\frac{1}{2434}$	1.082	0.4259	$\frac{1}{2347}$	1.121	0.4413	$\frac{1}{2265}$	1.160	0.4566	$\frac{1}{2189}$	1.199	0.4720	$\frac{1}{2117}$	1.238	0.4874	$\frac{1}{2051}$
1.005	0.3956	$\frac{1}{2527}$	1.044	0.4110	$\frac{1}{2432}$	1.083	0.4263	$\frac{1}{2345}$	1.122	0.4417	$\frac{1}{2263}$	1.161	0.4570	$\frac{1}{2187}$	1.200	0.4724	$\frac{1}{2116}$	1.239	0.4877	$\frac{1}{2049}$
1.006	0.3960	$\frac{1}{2524}$	1.045	0.4114	$\frac{1}{2430}$	1.084	0.4267	$\frac{1}{2242}$	1.123	0.4421	$\frac{1}{2261}$	1.162	0.4574	$\frac{1}{2185}$	1.201	0.4728	$\frac{1}{2114}$	1.240	0.4881	$\frac{1}{2048}$
1.007	0.3964	$\frac{1}{2522}$	1.046	0.4118	$\frac{1}{2427}$	1.085	0.4271	$\frac{1}{2340}$	1.124	0.4425	$\frac{1}{2259}$	1.163	0.4578	$\frac{1}{2183}$	1.202	0.4732	$\frac{1}{2112}$	1.241	0.4885	$\frac{1}{2046}$
1.008	0.3968	$\frac{1}{2519}$	1.047	0.4122	$\frac{1}{2425}$	1.086	0.4275	$\frac{1}{2338}$	1.125	0.4429	$\frac{1}{2257}$	1.164	0.4582	$\frac{1}{2181}$	1.203	0.4736	$\frac{1}{2111}$	1.242	0.4889	$\frac{1}{2044}$
1.009	0.3972	$\frac{1}{2517}$	1.048	0.4125	$\frac{1}{2423}$	1.087	0.4270	$\frac{1}{2336}$	1.126	0.4433	$\frac{1}{2255}$	1.165	0.4586	$\frac{1}{2179}$	1.204	0.4740	$\frac{1}{2109}$	1.243	0.4893	$\frac{1}{2043}$
1.010	0.3976	$\frac{1}{2514}$	1.049	0.4120	$\frac{1}{2420}$	1.088	0.4283	$\frac{1}{2334}$	1.127	0.4436	$\frac{1}{2253}$	1.166	0.4590	$\frac{1}{2178}$	1.205	0.4744	$\frac{1}{2107}$	1.244	0.4897	$\frac{1}{2041}$
1.011	0.3980	$\frac{1}{2512}$	1.050	0.4133	$\frac{1}{2418}$	1.089	0.4287	$\frac{1}{2332}$	1.128	0.4440	$\frac{1}{2251}$	1.167	0.4594	$\frac{1}{2176}$	1.206	0.4748	$\frac{1}{2105}$	1.245	0.4901	$\frac{1}{2039}$
1.012	0.3984	$\frac{1}{2509}$	1.051	0.4137	$\frac{1}{2416}$	1.090	0.4291	$\frac{1}{2329}$	1.129	0.4444	$\frac{1}{2249}$	1.168	0.4598	$\frac{1}{2174}$	1.207	0.4751	$\frac{1}{2103}$	1.246	0.4905	$\frac{1}{2038}$
1.013	0.3988	$\frac{1}{2507}$	1.052	0.4141	$\frac{1}{2414}$	1.091	0.4295	$\frac{1}{2327}$	1.130	0.4448	$\frac{1}{2247}$	1.169	0.4602	$\frac{1}{2172}$	1.208	0.4755	$\frac{1}{2102}$	1.247	0.4909	$\frac{1}{2036}$
1.014	0.3992	$\frac{1}{2504}$	1.053	0.4145	$\frac{1}{2412}$	1.092	0.4299	$\frac{1}{2325}$	1.131	0.4452	$\frac{1}{2245}$	1.170	0.4606	$\frac{1}{2170}$	1.209	0.4759	$\frac{1}{2100}$	1.248	0.4913	$\frac{1}{2035}$
1.015	0.3996	$\frac{1}{2502}$	1.054	0.4149	$\frac{1}{2409}$	1.093	0.4303	$\frac{1}{2323}$	1.132	0.4456	$\frac{1}{2243}$	1.171	0.4610	$\frac{1}{2168}$	1.210	0.4763	$\frac{1}{2098}$	1.249	0.4917	$\frac{1}{2033}$
1.016	0.3999	$\frac{1}{2499}$	1.055	0.4153	$\frac{1}{2407}$	1.094	0.4307	$\frac{1}{2321}$	1.133	0.4460	$\frac{1}{2241}$	1.172	0.4614	$\frac{1}{2166}$	1.211	0.4767	$\frac{1}{2096}$	1.250	0.4921	$\frac{1}{2031}$
1.017	0.4003	$\frac{1}{2497}$	1.056	0.4157	$\frac{1}{2405}$	1.095	0.4311	$\frac{1}{2319}$	1.134	0.4464	$\frac{1}{2239}$	1.173	0.4618	$\frac{1}{2165}$	1.212	0.4771	$\frac{1}{2094}$	1.251	0.4925	$\frac{1}{2030}$
1.018	0.4007	$\frac{1}{2494}$	1.057	0.4161	$\frac{1}{2402}$	1.096	0.4314	$\frac{1}{2317}$	1.135	0.4468	$\frac{1}{2237}$	1.174	0.4622	$\frac{1}{2163}$	1.213	0.4775	$\frac{1}{2093}$	1.252	0.4929	$\frac{1}{2028}$
1.019	0.4011	$\frac{1}{2492}$	1.058	0.4165	$\frac{1}{2400}$	1.097	0.4318	$\frac{1}{2315}$	1.136	0.4472	$\frac{1}{2235}$	1.175	0.4626	$\frac{1}{2161}$	1.214	0.4779	$\frac{1}{2091}$	1.253	0.4933	$\frac{1}{2026}$
1.020	0.4015	$\frac{1}{2489}$	1.059	0.4169	$\frac{1}{2398}$	1.098	0.4322	$\frac{1}{2313}$	1.137	0.4476	$\frac{1}{2233}$	1.176	0.4629	$\frac{1}{2159}$	1.215	0.4783	$\frac{1}{2090}$	1.254	0.4936	$\frac{1}{2025}$
1.021	0.4019	$\frac{1}{2487}$	1.060	0.4173	$\frac{1}{2395}$	1.099	0.4326	$\frac{1}{2312}$	1.138	0.4480	$\frac{1}{2231}$	1.177	0.4633	$\frac{1}{2157}$	1.216	0.4787	$\frac{1}{2088}$	1.255	0.4940	$\frac{1}{2023}$
1.022	0.4023	$\frac{1}{2485}$	1.061	0.4177	$\frac{1}{2393}$	1.100	0.4330	$\frac{1}{2308}$	1.139	0.4484	$\frac{1}{2229}$	1.178	0.4637	$\frac{1}{2155}$	1.217	0.4791	$\frac{1}{2086}$	1.256	0.4944	$\frac{1}{2022}$
1.023	0.4027	$\frac{1}{2483}$	1.062	0.4181	$\frac{1}{2391}$	1.101	0.4334	$\frac{1}{2306}$	1.140	0.4488	$\frac{1}{2227}$	1.179	0.4641	$\frac{1}{2153}$	1.218	0.4795	$\frac{1}{2084}$	1.257	0.4948	$\frac{1}{2020}$
1.024	0.4031	$\frac{1}{2480}$	1.063	0.4185	$\frac{1}{2389}$	1.102	0.4338	$\frac{1}{2304}$	1.141	0.4492	$\frac{1}{2225}$	1.180	0.4645	$\frac{1}{2152}$	1.219	0.4799	$\frac{1}{2083}$	1.258	0.4952	$\frac{1}{2018}$
1.025	0.4035	$\frac{1}{2487}$	1.064	0.4188	$\frac{1}{2386}$	1.103	0.4342	$\frac{1}{2302}$	1.142	0.4496	$\frac{1}{2223}$	1.181	0.4649	$\frac{1}{2150}$	1.220	0.4803	$\frac{1}{2081}$	1.259	0.4956	$\frac{1}{2117}$
1.026	0.4039	$\frac{1}{2475}$	1.055	0.4192	$\frac{1}{2384}$	1.104	0.4346	$\frac{1}{2300}$	1.143	0.4490	$\frac{1}{2221}$	1.182	0.4653	$\frac{1}{2148}$	1.221	0.4807	$\frac{1}{2080}$	1.260	0.4960	$\frac{1}{2016}$
1.027	0.4043	$\frac{1}{2473}$	1.066	0.4196	$\frac{1}{2382}$	1.105	0.4350	$\frac{1}{2298}$	1.144	0.4503	$\frac{1}{2220}$	1.183	0.4657	$\frac{1}{2146}$	1.222	0.4811	$\frac{1}{2078}$	1.261	0.4964	$\frac{1}{2015}$
1.028	0.4047	$\frac{1}{2470}$	1.067	0.4200	$\frac{1}{2380}$	1.106	0.4354	$\frac{1}{2286}$	1.145	0.4507	$\frac{1}{2218}$	1.184	0.4661	$\frac{1}{2144}$	1.223	0.4814	$\frac{1}{2076}$	1.262	0.4968	$\frac{1}{2014}$
1.029	0.4051	$\frac{1}{2468}$	1.068	0.4204	$\frac{1}{2377}$	1.107	0.4358	$\frac{1}{2284}$	1.146	0.4511	$\frac{1}{2216}$	1.185	0.4665	$\frac{1}{2142}$	1.224	0.4818	$\frac{1}{2074}$	1.263	0.4972	$\frac{1}{2010}$
1.030	0.4055	$\frac{1}{2466}$	1.069	0.4208	$\frac{1}{2375}$	1.108	0.4362	$\frac{1}{2282}$	1.147	0.4515	$\frac{1}{2214}$	1.186	0.4669	$\frac{1}{2141}$	1.225	0.4822	$\frac{1}{2073}$	1.264	0.4976	$\frac{1}{2009}$
1.031	0.4059	$\frac{1}{2463}$	1.070	0.4212	$\frac{1}{2373}$	1.109	0.4366	$\frac{1}{2280}$	1.148	0.4519	$\frac{1}{2212}$	1.187	0.4673	$\frac{1}{2139}$	1.226	0.4826	$\frac{1}{2071}$	1.265	0.4980	$\frac{1}{2007}$
1.032	0.4062	$\frac{1}{2460}$	1.071	0.4216	$\frac{1}{2371}$	1.110	0.4370	$\frac{1}{2278}$	1.149	0.4523	$\frac{1}{2210}$	1.188	0.4677	$\frac{1}{2137}$	1.227	0.4830	$\frac{1}{2069}$	1.266	0.4984	$\frac{1}{2006}$
1.033	0.4066	$\frac{1}{2458}$	1.072	0.4220	$\frac{1}{2369}$	1.111	0.4374	$\frac{1}{2276}$	1.150	0.4527	$\frac{1}{2208}$	1.189	0.4681	$\frac{1}{2135}$	1.228	0.4834	$\frac{1}{2068}$	1.267	0.4988	$\frac{1}{2004}$
1.034	0.4070	$\frac{1}{2456}$	1.073	0.4224	$\frac{1}{2366}$	1.112	0.4377	$\frac{1}{2273}$	1.151	0.4531	$\frac{1}{2206}$	1.190	0.4685	$\frac{1}{2133}$	1.229	0.4838	$\frac{1}{2066}$	1.268	0.4992	$\frac{1}{2002}$
1.035	0.4074	$\frac{1}{2453}$	1.074	0.4228	$\frac{1}{2364}$	1.113	0.4381	$\frac{1}{2271}$	1.152	0.4535	$\frac{1}{2204}$	1.191	0.4688	$\frac{1}{2131}$	1.230	0.4842	$\frac{1}{2064}$	1.269	0.4996	$\frac{1}{2000}$
1.036	0.4078	$\frac{1}{2451}$	1.075	0.4232	$\frac{1}{2362}$	1.114	0.4385	$\frac{1}{2270}$	1.153	0.4539	$\frac{1}{2202}$	1.192	0.4692	$\frac{1}{2130}$	1.231	0.4846	$\frac{1}{2063}$	1.270	0.4999	$\frac{1}{1999}$
1.037	0.4082	$\frac{1}{2449}$	1.076	0.4236	$\frac{1}{2360}$	1.115	0.4389	$\frac{1}{2277}$	1.154	0.4543	$\frac{1}{2200}$	1.193	0.4696	$\frac{1}{2128}$	1.232	0.4850	$\frac{1}{2061}$	1.271	0.5003	$\frac{1}{1998}$
1.038	0.4086	$\frac{1}{2446}$	1.077	0.4240	$\frac{1}{2358}$	1.116	0.4393	$\frac{1}{2275}$	1.155	0.4547	$\frac{1}{2198}$	1.194	0.4700	$\frac{1}{2127}$	1.233	0.4854	$\frac{1}{2059}$	1.272	0.5007	$\frac{1}{1996}$



I.—Table for reduction of centimillimeters to fractions of an inch—Continued.

Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.
1.273	0.5011	$\frac{1}{1995}$	1.312	0.5165	$\frac{1}{1935}$	1.351	0.5318	$\frac{1}{1879}$	1.390	0.5472	$\frac{1}{1827}$	1.429	0.5625	$\frac{1}{1777}$	1.468	0.5779	$\frac{1}{1730}$	1.507	0.5933	$\frac{1}{1685}$
1.274	0.5013	$\frac{1}{1993}$	1.313	0.5169	$\frac{1}{1934}$	1.352	0.5322	$\frac{1}{1877}$	1.391	0.5476	$\frac{1}{1825}$	1.430	0.5629	$\frac{1}{1776}$	1.469	0.5783	$\frac{1}{1728}$	1.508	0.5936	$\frac{1}{1684}$
1.275	0.5019	$\frac{1}{1991}$	1.314	0.5173	$\frac{1}{1932}$	1.353	0.5326	$\frac{1}{1877}$	1.392	0.5480	$\frac{1}{1824}$	1.431	0.5633	$\frac{1}{1774}$	1.470	0.5787	$\frac{1}{1727}$	1.509	0.5940	$\frac{1}{1683}$
1.276	0.5023	$\frac{1}{1990}$	1.315	0.5174	$\frac{1}{1931}$	1.354	0.5330	$\frac{1}{1875}$	1.393	0.5484	$\frac{1}{1823}$	1.432	0.5637	$\frac{1}{1773}$	1.471	0.5791	$\frac{1}{1726}$	1.510	0.5944	$\frac{1}{1681}$
1.277	0.5027	$\frac{1}{1988}$	1.316	0.5181	$\frac{1}{1929}$	1.355	0.5334	$\frac{1}{1874}$	1.394	0.5488	$\frac{1}{1821}$	1.433	0.5641	$\frac{1}{1773}$	1.472	0.5795	$\frac{1}{1725}$	1.511	0.5948	$\frac{1}{1680}$
1.278	0.5031	$\frac{1}{1987}$	1.317	0.5185	$\frac{1}{1928}$	1.356	0.5338	$\frac{1}{1872}$	1.395	0.5492	$\frac{1}{1820}$	1.434	0.5645	$\frac{1}{1771}$	1.473	0.5799	$\frac{1}{1724}$	1.512	0.5952	$\frac{1}{1679}$
1.279	0.5035	$\frac{1}{1985}$	1.318	0.5188	$\frac{1}{1928}$	1.357	0.5343	$\frac{1}{1871}$	1.396	0.5496	$\frac{1}{1819}$	1.435	0.5649	$\frac{1}{1769}$	1.474	0.5803	$\frac{1}{1722}$	1.513	0.5956	$\frac{1}{1678}$
1.280	0.5039	$\frac{1}{1984}$	1.319	0.5192	$\frac{1}{1925}$	1.358	0.5346	$\frac{1}{1870}$	1.397	0.5499	$\frac{1}{1817}$	1.436	0.5653	$\frac{1}{1768}$	1.475	0.5807	$\frac{1}{1721}$	1.514	0.5960	$\frac{1}{1677}$
1.281	0.5043	$\frac{1}{1982}$	1.320	0.5196	$\frac{1}{1923}$	1.359	0.5350	$\frac{1}{1868}$	1.398	0.5503	$\frac{1}{1816}$	1.437	0.5657	$\frac{1}{1767}$	1.476	0.5811	$\frac{1}{1720}$	1.515	0.5964	$\frac{1}{1676}$
1.282	0.5047	$\frac{1}{1981}$	1.321	0.5200	$\frac{1}{1922}$	1.360	0.5354	$\frac{1}{1867}$	1.399	0.5507	$\frac{1}{1815}$	1.438	0.5661	$\frac{1}{1766}$	1.477	0.5814	$\frac{1}{1719}$	1.516	0.5968	$\frac{1}{1675}$
1.283	0.5051	$\frac{1}{1979}$	1.322	0.5204	$\frac{1}{1921}$	1.361	0.5358	$\frac{1}{1866}$	1.400	0.5511	$\frac{1}{1814}$	1.439	0.5665	$\frac{1}{1764}$	1.478	0.5818	$\frac{1}{1718}$	1.517	0.5972	$\frac{1}{1674}$
1.284	0.5055	$\frac{1}{1977}$	1.323	0.5208	$\frac{1}{1919}$	1.362	0.5362	$\frac{1}{1864}$	1.401	0.5515	$\frac{1}{1812}$	1.440	0.5669	$\frac{1}{1763}$	1.479	0.5822	$\frac{1}{1717}$	1.518	0.5976	$\frac{1}{1673}$
1.285	0.5059	$\frac{1}{1976}$	1.324	0.5212	$\frac{1}{1918}$	1.363	0.5366	$\frac{1}{1863}$	1.402	0.5519	$\frac{1}{1811}$	1.441	0.5673	$\frac{1}{1762}$	1.480	0.5826	$\frac{1}{1716}$	1.519	0.5980	$\frac{1}{1672}$
1.286	0.5062	$\frac{1}{1974}$	1.325	0.5216	$\frac{1}{1916}$	1.364	0.5370	$\frac{1}{1861}$	1.403	0.5523	$\frac{1}{1811}$	1.442	0.5677	$\frac{1}{1761}$	1.481	0.5830	$\frac{1}{1714}$	1.520	0.5984	$\frac{1}{1670}$
1.287	0.5066	$\frac{1}{1972}$	1.326	0.5220	$\frac{1}{1915}$	1.365	0.5374	$\frac{1}{1860}$	1.404	0.5527	$\frac{1}{1808}$	1.443	0.5681	$\frac{1}{1760}$	1.482	0.5834	$\frac{1}{1713}$	1.521	0.5988	$\frac{1}{1669}$
1.288	0.5070	$\frac{1}{1971}$	1.327	0.5224	$\frac{1}{1913}$	1.366	0.5377	$\frac{1}{1859}$	1.405	0.5531	$\frac{1}{1807}$	1.444	0.5684	$\frac{1}{1758}$	1.483	0.5838	$\frac{1}{1712}$	1.522	0.5992	$\frac{1}{1668}$
1.289	0.5074	$\frac{1}{1970}$	1.328	0.5228	$\frac{1}{1913}$	1.367	0.5381	$\frac{1}{1857}$	1.406	0.5535	$\frac{1}{1806}$	1.445	0.5688	$\frac{1}{1757}$	1.484	0.5842	$\frac{1}{1711}$	1.523	0.5996	$\frac{1}{1667}$
1.290	0.5078	$\frac{1}{1968}$	1.329	0.5232	$\frac{1}{1910}$	1.368	0.5385	$\frac{1}{1856}$	1.407	0.5539	$\frac{1}{1805}$	1.446	0.5692	$\frac{1}{1756}$	1.485	0.5846	$\frac{1}{1710}$	1.524	0.6000	$\frac{1}{1666}$
1.291	0.5082	$\frac{1}{1966}$	1.330	0.5236	$\frac{1}{1909}$	1.369	0.5389	$\frac{1}{1855}$	1.408	0.5543	$\frac{1}{1808}$	1.447	0.5696	$\frac{1}{1755}$	1.486	0.5850	$\frac{1}{1709}$	1.525	0.6004	$\frac{1}{1665}$
1.292	0.5086	$\frac{1}{1965}$	1.331	0.5240	$\frac{1}{1908}$	1.370	0.5393	$\frac{1}{1852}$	1.409	0.5547	$\frac{1}{1802}$	1.448	0.5700	$\frac{1}{1753}$	1.487	0.5854	$\frac{1}{1707}$	1.526	0.6007	$\frac{1}{1664}$
1.293	0.5090	$\frac{1}{1964}$	1.332	0.5244	$\frac{1}{1906}$	1.371	0.5397	$\frac{1}{1852}$	1.410	0.5551	$\frac{1}{1801}$	1.449	0.5704	$\frac{1}{1752}$	1.488	0.5858	$\frac{1}{1706}$	1.527	0.6011	$\frac{1}{1663}$
1.294	0.5094	$\frac{1}{1963}$	1.333	0.5248	$\frac{1}{1905}$	1.372	0.5401	$\frac{1}{1851}$	1.411	0.5555	$\frac{1}{1799}$	1.450	0.5708	$\frac{1}{1751}$	1.489	0.5862	$\frac{1}{1705}$	1.528	0.6015	$\frac{1}{1662}$
1.295	0.5098	$\frac{1}{1961}$	1.334	0.5251	$\frac{1}{1909}$	1.373	0.5405	$\frac{1}{1849}$	1.412	0.5559	$\frac{1}{1797}$	1.451	0.5712	$\frac{1}{1750}$	1.490	0.5866	$\frac{1}{1705}$	1.529	0.6019	$\frac{1}{1661}$
1.296	0.5102	$\frac{1}{1959}$	1.335	0.5255	$\frac{1}{1903}$	1.374	0.5409	$\frac{1}{1846}$	1.413	0.5562	$\frac{1}{1797}$	1.452	0.5716	$\frac{1}{1749}$	1.491	0.5870	$\frac{1}{1703}$	1.530	0.6023	$\frac{1}{1659}$
1.297	0.5106	$\frac{1}{1958}$	1.336	0.5259	$\frac{1}{1900}$	1.375	0.5413	$\frac{1}{1847}$	1.414	0.5566	$\frac{1}{1796}$	1.453	0.5720	$\frac{1}{1747}$	1.492	0.5874	$\frac{1}{1702}$	1.531	0.6027	$\frac{1}{1658}$
1.298	0.5110	$\frac{1}{1956}$	1.337	0.5263	$\frac{1}{1899}$	1.376	0.5417	$\frac{1}{1846}$	1.415	0.5570	$\frac{1}{1794}$	1.454	0.5724	$\frac{1}{1746}$	1.493	0.5877	$\frac{1}{1701}$	1.532	0.6031	$\frac{1}{1657}$
1.299	0.5114	$\frac{1}{1955}$	1.338	0.5270	$\frac{1}{1898}$	1.377	0.5421	$\frac{1}{1845}$	1.416	0.5574	$\frac{1}{1793}$	1.455	0.5728	$\frac{1}{1745}$	1.494	0.5881	$\frac{1}{1699}$	1.533	0.6035	$\frac{1}{1656}$
1.300	0.5118	$\frac{1}{1953}$	1.339	0.5267	$\frac{1}{1896}$	1.378	0.5425	$\frac{1}{1843}$	1.417	0.5578	$\frac{1}{1793}$	1.456	0.5732	$\frac{1}{1744}$	1.495	0.5885	$\frac{1}{1698}$	1.534	0.6039	$\frac{1}{1655}$
1.301	0.5123	$\frac{1}{1952}$	1.340	0.5275	$\frac{1}{1895}$	1.379	0.5429	$\frac{1}{1841}$	1.418	0.5582	$\frac{1}{1791}$	1.457	0.5736	$\frac{1}{1743}$	1.496	0.5889	$\frac{1}{1697}$	1.535	0.6043	$\frac{1}{1654}$
1.302	0.5125	$\frac{1}{1950}$	1.341	0.5279	$\frac{1}{1893}$	1.380	0.5433	$\frac{1}{1840}$	1.419	0.5586	$\frac{1}{1790}$	1.458	0.5739	$\frac{1}{1741}$	1.497	0.5893	$\frac{1}{1696}$	1.536	0.6047	$\frac{1}{1653}$
1.303	0.5129	$\frac{1}{1849}$	1.342	0.5283	$\frac{1}{1893}$	1.381	0.5436	$\frac{1}{1839}$	1.420	0.5590	$\frac{1}{1788}$	1.459	0.5743	$\frac{1}{1740}$	1.498	0.5897	$\frac{1}{1695}$	1.537	0.6051	$\frac{1}{1652}$
1.304	0.5133	$\frac{1}{1847}$	1.343	0.5287	$\frac{1}{1892}$	1.382	0.5440	$\frac{1}{1837}$	1.421	0.5594	$\frac{1}{1787}$	1.460	0.5747	$\frac{1}{1739}$	1.499	0.5901	$\frac{1}{1694}$	1.538	0.6055	$\frac{1}{1651}$
1.305	0.5137	$\frac{1}{1845}$	1.344	0.5291	$\frac{1}{1891}$	1.383	0.5444	$\frac{1}{1836}$	1.422	0.5598	$\frac{1}{1785}$	1.461	0.5751	$\frac{1}{1738}$	1.500	0.5905	$\frac{1}{1693}$	1.539	0.6059	$\frac{1}{1650}$
1.306	0.5141	$\frac{1}{1844}$	1.345	0.5295	$\frac{1}{1889}$	1.384	0.5448	$\frac{1}{1835}$	1.423	0.5602	$\frac{1}{1784}$	1.462	0.5755	$\frac{1}{1737}$	1.501	0.5909	$\frac{1}{1691}$	1.540	0.6063	$\frac{1}{1649}$
1.307	0.5145	$\frac{1}{1843}$	1.346	0.5299	$\frac{1}{1888}$	1.385	0.5452	$\frac{1}{1833}$	1.424	0.5606	$\frac{1}{1783}$	1.463	0.5759	$\frac{1}{1735}$	1.502	0.5913	$\frac{1}{1690}$	1.541	0.6067	$\frac{1}{1648}$
1.308	0.5149	$\frac{1}{1841}$	1.347	0.5303	$\frac{1}{1886}$	1.386	0.5456	$\frac{1}{1832}$	1.425	0.5610	$\frac{1}{1782}$	1.464	0.5763	$\frac{1}{1734}$	1.503	0.5917	$\frac{1}{1689}$	1.542	0.6071	$\frac{1}{1647}$
1.309	0.5153	$\frac{1}{1840}$	1.348	0.5307	$\frac{1}{1885}$	1.387	0.5460	$\frac{1}{1831}$	1.426	0.5614	$\frac{1}{1780}$	1.465	0.5767	$\frac{1}{1733}$	1.504	0.5921	$\frac{1}{1688}$	1.543	0.6075	$\frac{1}{1646}$
1.310	0.5157	$\frac{1}{1838}$	1.349	0.5311	$\frac{1}{1884}$	1.388	0.5464	$\frac{1}{1829}$	1.427	0.5618	$\frac{1}{1779}$	1.466	0.5771	$\frac{1}{1732}$	1.505	0.5925	$\frac{1}{1687}$	1.544	0.6079	$\frac{1}{1645}$
1.311	0.5161	$\frac{1}{1837}$	1.350	0.5314	$\frac{1}{1881}$	1.389	0.5468	$\frac{1}{1828}$	1.428	0.5622	$\frac{1}{1778}$	1.467	0.5775	$\frac{1}{1731}$	1.506	0.5929	$\frac{1}{1686}$	1.545	0.6083	$\frac{1}{1644}$



I.—Table for reduction of centimillimeters to fractions of an inch—Continued.

Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.
1.540	0.6086	$\frac{1}{1642}$	1.585	0.6240	$\frac{1}{1602}$	1.624	0.6303	$\frac{1}{1563}$	1.663	0.6347	$\frac{1}{1527}$	1.702	0.6700	$\frac{1}{1492}$	1.741	0.6854	$\frac{1}{1458}$	1.780	0.7007	$\frac{1}{1426}$
1.517	0.6090	$\frac{1}{1641}$	1.586	0.6244	$\frac{1}{1601}$	1.625	0.6307	$\frac{1}{1562}$	1.664	0.6351	$\frac{1}{1526}$	1.703	0.6704	$\frac{1}{1491}$	1.742	0.6858	$\frac{1}{1457}$	1.781	0.7011	$\frac{1}{1425}$
1.548	0.6094	$\frac{1}{1640}$	1.587	0.6248	$\frac{1}{1600}$	1.626	0.6401	$\frac{1}{1561}$	1.665	0.6355	$\frac{1}{1525}$	1.704	0.6708	$\frac{1}{1490}$	1.743	0.6862	$\frac{1}{1456}$	1.782	0.7015	$\frac{1}{1425}$
1.540	0.6098	$\frac{1}{1639}$	1.588	0.6251	$\frac{1}{1599}$	1.627	0.6405	$\frac{1}{1560}$	1.666	0.6359	$\frac{1}{1524}$	1.705	0.6712	$\frac{1}{1489}$	1.744	0.6866	$\frac{1}{1455}$	1.783	0.7019	$\frac{1}{1424}$
1.550	0.6102	$\frac{1}{1638}$	1.589	0.6255	$\frac{1}{1598}$	1.628	0.6409	$\frac{1}{1559}$	1.667	0.6362	$\frac{1}{1523}$	1.706	0.6716	$\frac{1}{1488}$	1.745	0.6870	$\frac{1}{1455}$	1.784	0.7023	$\frac{1}{1423}$
1.551	0.6100	$\frac{1}{1637}$	1.590	0.6259	$\frac{1}{1597}$	1.629	0.6413	$\frac{1}{1558}$	1.668	0.6366	$\frac{1}{1522}$	1.707	0.6720	$\frac{1}{1487}$	1.746	0.6874	$\frac{1}{1454}$	1.785	0.7027	$\frac{1}{1422}$
1.552	0.6110	$\frac{1}{1635}$	1.591	0.6263	$\frac{1}{1596}$	1.630	0.6417	$\frac{1}{1558}$	1.669	0.6370	$\frac{1}{1521}$	1.708	0.6724	$\frac{1}{1486}$	1.747	0.6877	$\frac{1}{1453}$	1.786	0.7031	$\frac{1}{1421}$
1.563	0.6114	$\frac{1}{1635}$	1.592	0.6267	$\frac{1}{1595}$	1.631	0.6421	$\frac{1}{1557}$	1.670	0.6374	$\frac{1}{1520}$	1.709	0.6728	$\frac{1}{1486}$	1.748	0.6881	$\frac{1}{1452}$	1.787	0.7035	$\frac{1}{1421}$
1.551	0.6118	$\frac{1}{1634}$	1.593	0.6271	$\frac{1}{1594}$	1.632	0.6425	$\frac{1}{1556}$	1.671	0.6378	$\frac{1}{1519}$	1.710	0.6732	$\frac{1}{1485}$	1.749	0.6885	$\frac{1}{1452}$	1.788	0.7039	$\frac{1}{1420}$
1.555	0.6122	$\frac{1}{1633}$	1.594	0.6275	$\frac{1}{1593}$	1.633	0.6429	$\frac{1}{1555}$	1.672	0.6382	$\frac{1}{1518}$	1.711	0.6736	$\frac{1}{1484}$	1.750	0.6889	$\frac{1}{1451}$	1.789	0.7043	$\frac{1}{1419}$
1.556	0.6125	$\frac{1}{1632}$	1.595	0.6279	$\frac{1}{1592}$	1.634	0.6433	$\frac{1}{1554}$	1.673	0.6386	$\frac{1}{1517}$	1.712	0.6740	$\frac{1}{1483}$	1.751	0.6893	$\frac{1}{1450}$	1.790	0.7047	$\frac{1}{1418}$
1.557	0.6120	$\frac{1}{1631}$	1.596	0.6283	$\frac{1}{1591}$	1.635	0.6436	$\frac{1}{1553}$	1.674	0.6390	$\frac{1}{1516}$	1.713	0.6744	$\frac{1}{1482}$	1.752	0.6897	$\frac{1}{1449}$	1.791	0.7051	$\frac{1}{1418}$
1.558	0.6133	$\frac{1}{1630}$	1.597	0.6287	$\frac{1}{1590}$	1.636	0.6440	$\frac{1}{1552}$	1.675	0.6394	$\frac{1}{1516}$	1.714	0.6748	$\frac{1}{1481}$	1.753	0.6901	$\frac{1}{1448}$	1.792	0.7055	$\frac{1}{1417}$
1.559	0.6137	$\frac{1}{1629}$	1.598	0.6291	$\frac{1}{1589}$	1.637	0.6444	$\frac{1}{1551}$	1.676	0.6398	$\frac{1}{1515}$	1.715	0.6751	$\frac{1}{1480}$	1.754	0.6905	$\frac{1}{1447}$	1.793	0.7059	$\frac{1}{1416}$
1.560	0.6141	$\frac{1}{1628}$	1.599	0.6295	$\frac{1}{1588}$	1.638	0.6448	$\frac{1}{1550}$	1.677	0.6402	$\frac{1}{1514}$	1.716	0.6755	$\frac{1}{1480}$	1.755	0.6909	$\frac{1}{1446}$	1.794	0.7062	$\frac{1}{1415}$
1.561	0.6145	$\frac{1}{1628}$	1.600	0.6299	$\frac{1}{1587}$	1.639	0.6452	$\frac{1}{1549}$	1.678	0.6406	$\frac{1}{1513}$	1.717	0.6759	$\frac{1}{1479}$	1.756	0.6913	$\frac{1}{1446}$	1.795	0.7066	$\frac{1}{1414}$
1.562	0.6149	$\frac{1}{1625}$	1.601	0.6303	$\frac{1}{1586}$	1.640	0.6456	$\frac{1}{1548}$	1.679	0.6410	$\frac{1}{1512}$	1.718	0.6763	$\frac{1}{1478}$	1.757	0.6917	$\frac{1}{1445}$	1.796	0.7070	$\frac{1}{1414}$
1.563	0.6153	$\frac{1}{1624}$	1.602	0.6307	$\frac{1}{1585}$	1.641	0.6460	$\frac{1}{1547}$	1.680	0.6414	$\frac{1}{1511}$	1.719	0.6767	$\frac{1}{1477}$	1.758	0.6921	$\frac{1}{1444}$	1.797	0.7074	$\frac{1}{1413}$
1.564	0.6157	$\frac{1}{1623}$	1.603	0.6311	$\frac{1}{1584}$	1.642	0.6464	$\frac{1}{1546}$	1.681	0.6418	$\frac{1}{1510}$	1.720	0.6771	$\frac{1}{1476}$	1.759	0.6925	$\frac{1}{1443}$	1.798	0.7078	$\frac{1}{1412}$
1.565	0.6161	$\frac{1}{1622}$	1.604	0.6314	$\frac{1}{1583}$	1.643	0.6468	$\frac{1}{1545}$	1.682	0.6421	$\frac{1}{1509}$	1.721	0.6775	$\frac{1}{1475}$	1.760	0.6929	$\frac{1}{1443}$	1.799	0.7082	$\frac{1}{1411}$
1.566	0.6165	$\frac{1}{1621}$	1.605	0.6318	$\frac{1}{1582}$	1.644	0.6472	$\frac{1}{1544}$	1.683	0.6425	$\frac{1}{1508}$	1.722	0.6779	$\frac{1}{1474}$	1.761	0.6933	$\frac{1}{1442}$	1.800	0.7086	$\frac{1}{1410}$
1.567	0.6169	$\frac{1}{1620}$	1.606	0.6322	$\frac{1}{1581}$	1.645	0.6476	$\frac{1}{1543}$	1.684	0.6429	$\frac{1}{1507}$	1.723	0.6783	$\frac{1}{1473}$	1.762	0.6936	$\frac{1}{1441}$	1.801	0.7090	$\frac{1}{1410}$
1.568	0.6173	$\frac{1}{1619}$	1.607	0.6326	$\frac{1}{1580}$	1.646	0.6480	$\frac{1}{1542}$	1.685	0.6433	$\frac{1}{1507}$	1.724	0.6787	$\frac{1}{1473}$	1.763	0.6940	$\frac{1}{1440}$	1.802	0.7094	$\frac{1}{1409}$
1.569	0.6177	$\frac{1}{1618}$	1.608	0.6330	$\frac{1}{1579}$	1.647	0.6484	$\frac{1}{1542}$	1.686	0.6437	$\frac{1}{1506}$	1.725	0.6791	$\frac{1}{1472}$	1.764	0.6944	$\frac{1}{1439}$	1.803	0.7098	$\frac{1}{1408}$
1.570	0.6181	$\frac{1}{1617}$	1.609	0.6334	$\frac{1}{1578}$	1.648	0.6488	$\frac{1}{1541}$	1.687	0.6441	$\frac{1}{1505}$	1.726	0.6795	$\frac{1}{1471}$	1.765	0.6948	$\frac{1}{1438}$	1.804	0.7102	$\frac{1}{1407}$
1.571	0.6185	$\frac{1}{1616}$	1.610	0.6338	$\frac{1}{1577}$	1.649	0.6492	$\frac{1}{1540}$	1.688	0.6445	$\frac{1}{1504}$	1.727	0.6799	$\frac{1}{1470}$	1.766	0.6952	$\frac{1}{1438}$	1.805	0.7106	$\frac{1}{1407}$
1.572	0.6188	$\frac{1}{1615}$	1.611	0.6342	$\frac{1}{1576}$	1.650	0.6496	$\frac{1}{1539}$	1.689	0.6449	$\frac{1}{1503}$	1.728	0.6803	$\frac{1}{1469}$	1.767	0.6956	$\frac{1}{1437}$	1.806	0.7110	$\frac{1}{1406}$
1.573	0.6192	$\frac{1}{1614}$	1.612	0.6346	$\frac{1}{1575}$	1.651	0.6499	$\frac{1}{1538}$	1.690	0.6453	$\frac{1}{1502}$	1.729	0.6807	$\frac{1}{1469}$	1.768	0.6960	$\frac{1}{1436}$	1.807	0.7114	$\frac{1}{1405}$
1.574	0.6196	$\frac{1}{1613}$	1.613	0.6350	$\frac{1}{1574}$	1.652	0.6503	$\frac{1}{1537}$	1.691	0.6457	$\frac{1}{1501}$	1.730	0.6811	$\frac{1}{1468}$	1.769	0.6964	$\frac{1}{1435}$	1.808	0.7118	$\frac{1}{1404}$
1.575	0.6200	$\frac{1}{1612}$	1.614	0.6354	$\frac{1}{1573}$	1.653	0.6507	$\frac{1}{1536}$	1.692	0.6461	$\frac{1}{1500}$	1.731	0.6814	$\frac{1}{1467}$	1.770	0.6968	$\frac{1}{1434}$	1.809	0.7122	$\frac{1}{1403}$
1.576	0.6204	$\frac{1}{1611}$	1.615	0.6358	$\frac{1}{1572}$	1.654	0.6511	$\frac{1}{1535}$	1.693	0.6465	$\frac{1}{1500}$	1.732	0.6818	$\frac{1}{1466}$	1.771	0.6972	$\frac{1}{1434}$	1.810	0.7125	$\frac{1}{1403}$
1.577	0.6208	$\frac{1}{1610}$	1.616	0.6362	$\frac{1}{1571}$	1.655	0.6515	$\frac{1}{1534}$	1.694	0.6469	$\frac{1}{1498}$	1.733	0.6822	$\frac{1}{1465}$	1.772	0.6976	$\frac{1}{1433}$	1.811	0.7129	$\frac{1}{1402}$
1.578	0.6212	$\frac{1}{1609}$	1.617	0.6366	$\frac{1}{1570}$	1.656	0.6519	$\frac{1}{1533}$	1.695	0.6473	$\frac{1}{1497}$	1.734	0.6826	$\frac{1}{1464}$	1.773	0.6980	$\frac{1}{1432}$	1.812	0.7133	$\frac{1}{1401}$
1.579	0.6216	$\frac{1}{1608}$	1.618	0.6370	$\frac{1}{1569}$	1.657	0.6523	$\frac{1}{1532}$	1.696	0.6477	$\frac{1}{1496}$	1.735	0.6830	$\frac{1}{1463}$	1.774	0.6984	$\frac{1}{1431}$	1.813	0.7137	$\frac{1}{1400}$
1.580	0.6220	$\frac{1}{1607}$	1.619	0.6374	$\frac{1}{1568}$	1.658	0.6527	$\frac{1}{1531}$	1.697	0.6481	$\frac{1}{1495}$	1.736	0.6834	$\frac{1}{1462}$	1.775	0.6988	$\frac{1}{1430}$	1.814	0.7141	$\frac{1}{1400}$
1.581	0.6224	$\frac{1}{1606}$	1.620	0.6377	$\frac{1}{1567}$	1.659	0.6531	$\frac{1}{1530}$	1.698	0.6485	$\frac{1}{1494}$	1.737	0.6838	$\frac{1}{1462}$	1.776	0.6992	$\frac{1}{1430}$	1.815	0.7145	$\frac{1}{1399}$
1.582	0.6228	$\frac{1}{1605}$	1.621	0.6381	$\frac{1}{1566}$	1.660	0.6535	$\frac{1}{1529}$	1.699	0.6488	$\frac{1}{1493}$	1.738	0.6842	$\frac{1}{1461}$	1.777	0.6996	$\frac{1}{1429}$	1.816	0.7149	$\frac{1}{1398}$
1.583	0.6232	$\frac{1}{1604}$	1.622	0.6385	$\frac{1}{1565}$	1.661	0.6539	$\frac{1}{1529}$	1.700	0.6492	$\frac{1}{1493}$	1.739	0.6846	$\frac{1}{1460}$	1.778	0.6999	$\frac{1}{1428}$	1.817	0.7153	$\frac{1}{1397}$
1.584	0.6236	$\frac{1}{1603}$	1.623	0.6389	$\frac{1}{1564}$	1.662	0.6543	$\frac{1}{1528}$	1.701	0.6496	$\frac{1}{1492}$	1.740	0.6850	$\frac{1}{1459}$	1.779	0.7003	$\frac{1}{1427}$	1.818	0.7157	$\frac{1}{1396}$



I.—Table for reduction of centimillimeters to fractions of an inch—Continued.

Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.
1.819	0.7161	$\frac{1}{1393}$	1.853	0.7314	$\frac{1}{1366}$	1.897	0.7468	$\frac{1}{1338}$	1.900	0.7623	$\frac{1}{1311}$	1.975	0.7775	$\frac{1}{1283}$	2.014	0.7929	$\frac{1}{1251}$
1.820	0.7165	$\frac{1}{1395}$	1.850	0.7318	$\frac{1}{1365}$	1.898	0.7472	$\frac{1}{1335}$	1.937	0.7625	$\frac{1}{1311}$	1.976	0.7779	$\frac{1}{1285}$	2.015	0.7933	$\frac{1}{1255}$
1.821	0.7169	$\frac{1}{1394}$	1.860	0.7322	$\frac{1}{1361}$	1.899	0.7476	$\frac{1}{1337}$	1.938	0.7629	$\frac{1}{1310}$	1.977	0.7783	$\frac{1}{1284}$	2.016	0.7936	$\frac{1}{1256}$
1.822	0.7173	$\frac{1}{1393}$	1.861	0.7326	$\frac{1}{1364}$	1.900	0.7480	$\frac{1}{1336}$	1.939	0.7633	$\frac{1}{1309}$	1.978	0.7787	$\frac{1}{1283}$	2.017	0.7940	$\frac{1}{1255}$
1.823	0.7177	$\frac{1}{1390}$	1.862	0.7330	$\frac{1}{1363}$	1.901	0.7484	$\frac{1}{1335}$	1.940	0.7637	$\frac{1}{1309}$	1.979	0.7791	$\frac{1}{1283}$	2.018	0.7944	$\frac{1}{1258}$
1.824	0.7181	$\frac{1}{1392}$	1.863	0.7334	$\frac{1}{1363}$	1.902	0.7488	$\frac{1}{1335}$	1.941	0.7641	$\frac{1}{1308}$	1.980	0.7795	$\frac{1}{1282}$	2.019	0.7948	$\frac{1}{1257}$
1.825	0.7185	$\frac{1}{1392}$	1.864	0.7338	$\frac{1}{1362}$	1.903	0.7492	$\frac{1}{1334}$	1.942	0.7645	$\frac{1}{1307}$	1.981	0.7799	$\frac{1}{1282}$	2.020	0.7952	$\frac{1}{1257}$
1.826	0.7189	$\frac{1}{1391}$	1.865	0.7342	$\frac{1}{1361}$	1.904	0.7496	$\frac{1}{1333}$	1.943	0.7649	$\frac{1}{1307}$	1.982	0.7803	$\frac{1}{1281}$	2.021	0.7956	$\frac{1}{1256}$
1.827	0.7192	$\frac{1}{1390}$	1.866	0.7346	$\frac{1}{1361}$	1.905	0.7499	$\frac{1}{1333}$	1.944	0.7653	$\frac{1}{1306}$	1.983	0.7807	$\frac{1}{1280}$	2.022	0.7960	$\frac{1}{1256}$
1.828	0.7196	$\frac{1}{1389}$	1.867	0.7350	$\frac{1}{1360}$	1.906	0.7503	$\frac{1}{1332}$	1.945	0.7657	$\frac{1}{1306}$	1.984	0.7811	$\frac{1}{1280}$	2.023	0.7964	$\frac{1}{1255}$
1.829	0.7200	$\frac{1}{1388}$	1.868	0.7354	$\frac{1}{1360}$	1.907	0.7507	$\frac{1}{1331}$	1.946	0.7661	$\frac{1}{1305}$	1.985	0.7814	$\frac{1}{1279}$	2.024	0.7968	$\frac{1}{1254}$
1.830	0.7204	$\frac{1}{1387}$	1.869	0.7358	$\frac{1}{1358}$	1.908	0.7511	$\frac{1}{1331}$	1.947	0.7665	$\frac{1}{1304}$	1.986	0.7818	$\frac{1}{1278}$	2.025	0.7972	$\frac{1}{1254}$
1.831	0.7208	$\frac{1}{1387}$	1.870	0.7363	$\frac{1}{1358}$	1.909	0.7515	$\frac{1}{1330}$	1.948	0.7669	$\frac{1}{1303}$	1.987	0.7822	$\frac{1}{1278}$	2.026	0.7976	$\frac{1}{1253}$
1.832	0.7212	$\frac{1}{1386}$	1.871	0.7366	$\frac{1}{1357}$	1.910	0.7519	$\frac{1}{1329}$	1.949	0.7673	$\frac{1}{1303}$	1.988	0.7826	$\frac{1}{1277}$	2.027	0.7980	$\frac{1}{1253}$
1.833	0.7216	$\frac{1}{1385}$	1.872	0.7370	$\frac{1}{1356}$	1.911	0.7523	$\frac{1}{1328}$	1.950	0.7677	$\frac{1}{1302}$	1.989	0.7830	$\frac{1}{1276}$	2.028	0.7984	$\frac{1}{1252}$
1.834	0.7220	$\frac{1}{1385}$	1.873	0.7374	$\frac{1}{1355}$	1.912	0.7527	$\frac{1}{1328}$	1.951	0.7681	$\frac{1}{1302}$	1.990	0.7834	$\frac{1}{1276}$	2.029	0.7988	$\frac{1}{1251}$
1.835	0.7224	$\frac{1}{1384}$	1.874	0.7377	$\frac{1}{1355}$	1.913	0.7531	$\frac{1}{1327}$	1.952	0.7685	$\frac{1}{1301}$	1.991	0.7838	$\frac{1}{1275}$	2.030	0.7992	$\frac{1}{1251}$
1.836	0.7228	$\frac{1}{1383}$	1.875	0.7380	$\frac{1}{1354}$	1.914	0.7535	$\frac{1}{1326}$	1.953	0.7689	$\frac{1}{1300}$	1.992	0.7842	$\frac{1}{1274}$	2.031	0.7996	$\frac{1}{1250}$
1.837	0.7232	$\frac{1}{1382}$	1.876	0.7385	$\frac{1}{1353}$	1.915	0.7539	$\frac{1}{1326}$	1.954	0.7693	$\frac{1}{1299}$	1.993	0.7846	$\frac{1}{1274}$	2.032	0.7999	$\frac{1}{1249}$
1.838	0.7236	$\frac{1}{1381}$	1.877	0.7389	$\frac{1}{1352}$	1.916	0.7543	$\frac{1}{1325}$	1.955	0.7696	$\frac{1}{1299}$	1.994	0.7850	$\frac{1}{1273}$	2.033	0.8003	$\frac{1}{1249}$
1.839	0.7240	$\frac{1}{1380}$	1.878	0.7393	$\frac{1}{1352}$	1.917	0.7547	$\frac{1}{1324}$	1.956	0.7700	$\frac{1}{1298}$	1.995	0.7854	$\frac{1}{1273}$	2.034	0.8007	$\frac{1}{1248}$
1.840	0.7244	$\frac{1}{1380}$	1.879	0.7397	$\frac{1}{1351}$	1.918	0.7551	$\frac{1}{1324}$	1.957	0.7704	$\frac{1}{1297}$	1.996	0.7858	$\frac{1}{1272}$	2.035	0.8011	$\frac{1}{1248}$
1.841	0.7248	$\frac{1}{1379}$	1.880	0.7401	$\frac{1}{1350}$	1.919	0.7555	$\frac{1}{1323}$	1.958	0.7708	$\frac{1}{1297}$	1.997	0.7862	$\frac{1}{1271}$	2.036	0.8015	$\frac{1}{1247}$
1.842	0.7251	$\frac{1}{1378}$	1.881	0.7405	$\frac{1}{1350}$	1.920	0.7559	$\frac{1}{1322}$	1.959	0.7712	$\frac{1}{1296}$	1.998	0.7866	$\frac{1}{1271}$	2.037	0.8019	$\frac{1}{1246}$
1.843	0.7255	$\frac{1}{1378}$	1.882	0.7409	$\frac{1}{1349}$	1.921	0.7563	$\frac{1}{1322}$	1.960	0.7716	$\frac{1}{1295}$	1.999	0.7870	$\frac{1}{1270}$	2.038	0.8023	$\frac{1}{1246}$
1.844	0.7259	$\frac{1}{1377}$	1.883	0.7413	$\frac{1}{1349}$	1.922	0.7567	$\frac{1}{1321}$	1.961	0.7720	$\frac{1}{1295}$	2.000	0.7874	$\frac{1}{1269}$	2.039	0.8027	$\frac{1}{1245}$
1.845	0.7263	$\frac{1}{1376}$	1.884	0.7417	$\frac{1}{1348}$	1.923	0.7570	$\frac{1}{1320}$	1.962	0.7724	$\frac{1}{1294}$	2.001	0.7878	$\frac{1}{1269}$	2.040	0.8031	$\frac{1}{1244}$
1.846	0.7267	$\frac{1}{1375}$	1.885	0.7421	$\frac{1}{1347}$	1.924	0.7574	$\frac{1}{1320}$	1.963	0.7728	$\frac{1}{1293}$	2.002	0.7882	$\frac{1}{1268}$	2.041	0.8035	$\frac{1}{1244}$
1.847	0.7271	$\frac{1}{1374}$	1.886	0.7425	$\frac{1}{1346}$	1.925	0.7578	$\frac{1}{1319}$	1.964	0.7732	$\frac{1}{1293}$	2.003	0.7886	$\frac{1}{1267}$	2.042	0.8039	$\frac{1}{1243}$
1.848	0.7275	$\frac{1}{1374}$	1.887	0.7429	$\frac{1}{1345}$	1.926	0.7582	$\frac{1}{1318}$	1.965	0.7736	$\frac{1}{1292}$	2.004	0.7890	$\frac{1}{1267}$	2.043	0.8043	$\frac{1}{1243}$
1.849	0.7279	$\frac{1}{1373}$	1.888	0.7433	$\frac{1}{1345}$	1.927	0.7586	$\frac{1}{1317}$	1.966	0.7740	$\frac{1}{1291}$	2.005	0.7894	$\frac{1}{1266}$	2.044	0.8047	$\frac{1}{1243}$
1.850	0.7283	$\frac{1}{1372}$	1.889	0.7437	$\frac{1}{1344}$	1.928	0.7590	$\frac{1}{1317}$	1.967	0.7744	$\frac{1}{1291}$	2.006	0.7898	$\frac{1}{1266}$	2.045	0.8051	$\frac{1}{1241}$
1.851	0.7287	$\frac{1}{1371}$	1.890	0.7440	$\frac{1}{1343}$	1.929	0.7594	$\frac{1}{1316}$	1.968	0.7748	$\frac{1}{1290}$	2.007	0.7902	$\frac{1}{1265}$	2.046	0.8055	$\frac{1}{1241}$
1.852	0.7291	$\frac{1}{1371}$	1.891	0.7444	$\frac{1}{1343}$	1.930	0.7598	$\frac{1}{1315}$	1.969	0.7752	$\frac{1}{1289}$	2.008	0.7906	$\frac{1}{1264}$	2.047	0.8059	$\frac{1}{1240}$
1.853	0.7295	$\frac{1}{1370}$	1.892	0.7448	$\frac{1}{1343}$	1.931	0.7602	$\frac{1}{1315}$	1.970	0.7756	$\frac{1}{1289}$	2.009	0.7910	$\frac{1}{1264}$	2.048	0.8063	$\frac{1}{1240}$
1.854	0.7299	$\frac{1}{1369}$	1.893	0.7452	$\frac{1}{1341}$	1.932	0.7606	$\frac{1}{1314}$	1.971	0.7760	$\frac{1}{1288}$	2.010	0.7914	$\frac{1}{1263}$	2.049	0.8067	$\frac{1}{1239}$
1.855	0.7303	$\frac{1}{1369}$	1.894	0.7456	$\frac{1}{1340}$	1.933	0.7610	$\frac{1}{1313}$	1.972	0.7764	$\frac{1}{1287}$	2.011	0.7918	$\frac{1}{1263}$	2.050	0.8071	$\frac{1}{1238}$
1.856	0.7307	$\frac{1}{1368}$	1.895	0.7460	$\frac{1}{1339}$	1.934	0.7614	$\frac{1}{1313}$	1.973	0.7768	$\frac{1}{1287}$	2.012	0.7922	$\frac{1}{1262}$	2.051	0.8075	$\frac{1}{1238}$
1.857	0.7311	$\frac{1}{1367}$	1.896	0.7464	$\frac{1}{1339}$	1.935	0.7618	$\frac{1}{1312}$	1.974	0.7772	$\frac{1}{1286}$	2.013	0.7926	$\frac{1}{1261}$	2.052	0.8079	$\frac{1}{1237}$



I.—Table for reduction of centimillimeters to fractions of an inch—Continued.

Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.
2.092	0.8236	$\frac{1}{1213}$	2.181	0.8389	$\frac{1}{1191}$	2.170	0.8543	$\frac{1}{1179}$	2.209	0.8696	$\frac{1}{1149}$	2.248	0.8850	$\frac{1}{1129}$	2.287	0.9003	$\frac{1}{1110}$	2.326	0.9157	$\frac{1}{1091}$
2.093	0.8249	$\frac{1}{1213}$	2.182	0.8398	$\frac{1}{1191}$	2.171	0.8547	$\frac{1}{1169}$	2.210	0.8700	$\frac{1}{1149}$	2.249	0.8854	$\frac{1}{1129}$	2.288	0.9007	$\frac{1}{1110}$	2.327	0.9161	$\frac{1}{1091}$
2.094	0.8244	$\frac{1}{1212}$	2.183	0.8397	$\frac{1}{1190}$	2.172	0.8551	$\frac{1}{1169}$	2.211	0.8704	$\frac{1}{1148}$	2.250	0.8858	$\frac{1}{1128}$	2.289	0.9011	$\frac{1}{1100}$	2.428	0.9165	$\frac{1}{1090}$
2.095	0.8248	$\frac{1}{1212}$	2.184	0.8491	$\frac{1}{1190}$	2.173	0.8555	$\frac{1}{1168}$	2.212	0.8798	$\frac{1}{1148}$	2.251	0.8862	$\frac{1}{1128}$	2.290	0.9015	$\frac{1}{1109}$	2.329	0.9169	$\frac{1}{1090}$
2.096	0.8251	$\frac{1}{1211}$	2.185	0.8495	$\frac{1}{1189}$	2.174	0.8559	$\frac{1}{1168}$	2.213	0.8712	$\frac{1}{1147}$	2.252	0.8866	$\frac{1}{1127}$	2.291	0.9019	$\frac{1}{1108}$	2.330	0.9173	$\frac{1}{1089}$
2.097	0.8255	$\frac{1}{1211}$	2.186	0.8499	$\frac{1}{1188}$	2.175	0.8562	$\frac{1}{1167}$	2.214	0.8716	$\frac{1}{1147}$	2.253	0.8870	$\frac{1}{1127}$	2.292	0.9023	$\frac{1}{1108}$	2.331	0.9177	$\frac{1}{1089}$
2.098	0.8259	$\frac{1}{1210}$	2.187	0.8413	$\frac{1}{1188}$	2.176	0.8566	$\frac{1}{1167}$	2.215	0.8720	$\frac{1}{1146}$	2.254	0.8873	$\frac{1}{1126}$	2.293	0.9027	$\frac{1}{1107}$	2.332	0.9181	$\frac{1}{1089}$
2.099	0.8263	$\frac{1}{1209}$	2.188	0.8417	$\frac{1}{1187}$	2.177	0.8570	$\frac{1}{1186}$	2.216	0.8724	$\frac{1}{1146}$	2.255	0.8877	$\frac{1}{1126}$	2.294	0.9031	$\frac{1}{1107}$	2.333	0.9185	$\frac{1}{1088}$
2.100	0.8267	$\frac{1}{1209}$	2.189	0.8421	$\frac{1}{1187}$	2.178	0.8574	$\frac{1}{1166}$	2.217	0.8728	$\frac{1}{1145}$	2.256	0.8881	$\frac{1}{1125}$	2.295	0.9035	$\frac{1}{1106}$	2.334	0.9188	$\frac{1}{1088}$
2.101	0.8271	$\frac{1}{1208}$	2.190	0.8425	$\frac{1}{1186}$	2.179	0.8578	$\frac{1}{1165}$	2.218	0.8732	$\frac{1}{1145}$	2.257	0.8885	$\frac{1}{1125}$	2.296	0.9039	$\frac{1}{1106}$	2.335	0.9192	$\frac{1}{1087}$
2.102	0.8275	$\frac{1}{1208}$	2.191	0.8429	$\frac{1}{1186}$	2.180	0.8582	$\frac{1}{1164}$	2.219	0.8736	$\frac{1}{1144}$	2.258	0.8889	$\frac{1}{1124}$	2.297	0.9043	$\frac{1}{1105}$	2.336	0.9196	$\frac{1}{1087}$
2.103	0.8279	$\frac{1}{1207}$	2.192	0.8433	$\frac{1}{1187}$	2.181	0.8586	$\frac{1}{1164}$	2.220	0.8740	$\frac{1}{1144}$	2.259	0.8893	$\frac{1}{1124}$	2.298	0.9046	$\frac{1}{1105}$	2.337	0.9200	$\frac{1}{1086}$
2.104	0.8283	$\frac{1}{1207}$	2.193	0.8436	$\frac{1}{1185}$	2.182	0.8590	$\frac{1}{1163}$	2.221	0.8744	$\frac{1}{1143}$	2.260	0.8897	$\frac{1}{1123}$	2.299	0.9051	$\frac{1}{1104}$	2.338	0.9204	$\frac{1}{1086}$
2.105	0.8287	$\frac{1}{1206}$	2.194	0.8440	$\frac{1}{1184}$	2.183	0.8594	$\frac{1}{1163}$	2.222	0.8748	$\frac{1}{1142}$	2.261	0.8901	$\frac{1}{1123}$	2.300	0.9055	$\frac{1}{1104}$	2.339	0.9208	$\frac{1}{1085}$
2.106	0.8291	$\frac{1}{1205}$	2.195	0.8444	$\frac{1}{1184}$	2.184	0.8598	$\frac{1}{1162}$	2.223	0.8751	$\frac{1}{1142}$	2.262	0.8905	$\frac{1}{1122}$	2.301	0.9059	$\frac{1}{1103}$	2.340	0.9212	$\frac{1}{1085}$
2.107	0.8295	$\frac{1}{1205}$	2.196	0.8448	$\frac{1}{1183}$	2.185	0.8602	$\frac{1}{1162}$	2.224	0.8755	$\frac{1}{1141}$	2.263	0.8909	$\frac{1}{1122}$	2.302	0.9062	$\frac{1}{1103}$	2.341	0.9216	$\frac{1}{1084}$
2.108	0.8299	$\frac{1}{1204}$	2.197	0.8452	$\frac{1}{1182}$	2.186	0.8606	$\frac{1}{1161}$	2.225	0.8759	$\frac{1}{1141}$	2.264	0.8913	$\frac{1}{1121}$	2.303	0.9066	$\frac{1}{1102}$	2.342	0.9220	$\frac{1}{1084}$
2.109	0.8303	$\frac{1}{1204}$	2.198	0.8456	$\frac{1}{1182}$	2.187	0.8610	$\frac{1}{1161}$	2.226	0.8763	$\frac{1}{1140}$	2.265	0.8917	$\frac{1}{1121}$	2.304	0.9070	$\frac{1}{1102}$	2.343	0.9224	$\frac{1}{1083}$
2.110	0.8307	$\frac{1}{1203}$	2.199	0.8460	$\frac{1}{1181}$	2.188	0.8614	$\frac{1}{1160}$	2.227	0.8767	$\frac{1}{1140}$	2.266	0.8921	$\frac{1}{1120}$	2.305	0.9074	$\frac{1}{1101}$	2.344	0.9228	$\frac{1}{1083}$
2.111	0.8311	$\frac{1}{1203}$	2.200	0.8464	$\frac{1}{1181}$	2.189	0.8618	$\frac{1}{1160}$	2.228	0.8771	$\frac{1}{1139}$	2.267	0.8925	$\frac{1}{1120}$	2.306	0.9078	$\frac{1}{1101}$	2.345	0.9232	$\frac{1}{1082}$
2.112	0.8314	$\frac{1}{1202}$	2.201	0.8468	$\frac{1}{1180}$	2.190	0.8622	$\frac{1}{1159}$	2.229	0.8775	$\frac{1}{1139}$	2.268	0.8929	$\frac{1}{1119}$	2.307	0.9082	$\frac{1}{1100}$	2.346	0.9236	$\frac{1}{1082}$
2.113	0.8318	$\frac{1}{1201}$	2.202	0.8472	$\frac{1}{1180}$	2.191	0.8625	$\frac{1}{1159}$	2.230	0.8779	$\frac{1}{1138}$	2.269	0.8933	$\frac{1}{1119}$	2.308	0.9086	$\frac{1}{1100}$	2.347	0.9240	$\frac{1}{1082}$
2.114	0.8322	$\frac{1}{1201}$	2.203	0.8476	$\frac{1}{1179}$	2.192	0.8629	$\frac{1}{1158}$	2.231	0.8783	$\frac{1}{1138}$	2.270	0.8936	$\frac{1}{1118}$	2.309	0.9090	$\frac{1}{1099}$	2.348	0.9244	$\frac{1}{1081}$
2.115	0.8326	$\frac{1}{1200}$	2.204	0.8480	$\frac{1}{1178}$	2.193	0.8633	$\frac{1}{1158}$	2.232	0.8787	$\frac{1}{1137}$	2.271	0.8940	$\frac{1}{1118}$	2.310	0.9094	$\frac{1}{1099}$	2.349	0.9248	$\frac{1}{1081}$
2.116	0.8330	$\frac{1}{1200}$	2.205	0.8484	$\frac{1}{1178}$	2.194	0.8637	$\frac{1}{1157}$	2.233	0.8791	$\frac{1}{1137}$	2.272	0.8944	$\frac{1}{1117}$	2.311	0.9098	$\frac{1}{1098}$	2.350	0.9251	$\frac{1}{1080}$
2.117	0.8334	$\frac{1}{1199}$	2.206	0.8488	$\frac{1}{1177}$	2.195	0.8641	$\frac{1}{1157}$	2.234	0.8795	$\frac{1}{1136}$	2.273	0.8948	$\frac{1}{1117}$	2.312	0.9102	$\frac{1}{1098}$	2.351	0.9255	$\frac{1}{1080}$
2.118	0.8338	$\frac{1}{1199}$	2.207	0.8492	$\frac{1}{1177}$	2.196	0.8645	$\frac{1}{1156}$	2.235	0.8799	$\frac{1}{1136}$	2.274	0.8952	$\frac{1}{1116}$	2.313	0.9106	$\frac{1}{1098}$	2.352	0.9259	$\frac{1}{1079}$
2.119	0.8342	$\frac{1}{1198}$	2.208	0.8496	$\frac{1}{1176}$	2.197	0.8649	$\frac{1}{1155}$	2.236	0.8803	$\frac{1}{1135}$	2.275	0.8956	$\frac{1}{1116}$	2.314	0.9110	$\frac{1}{1097}$	2.353	0.9263	$\frac{1}{1079}$
2.120	0.8346	$\frac{1}{1197}$	2.209	0.8499	$\frac{1}{1176}$	2.198	0.8653	$\frac{1}{1155}$	2.237	0.8807	$\frac{1}{1135}$	2.276	0.8960	$\frac{1}{1115}$	2.315	0.9114	$\frac{1}{1097}$	2.354	0.9267	$\frac{1}{1078}$
2.121	0.8350	$\frac{1}{1197}$	2.210	0.8503	$\frac{1}{1175}$	2.199	0.8657	$\frac{1}{1154}$	2.238	0.8811	$\frac{1}{1134}$	2.277	0.8964	$\frac{1}{1115}$	2.316	0.9118	$\frac{1}{1096}$	2.355	0.9271	$\frac{1}{1078}$
2.122	0.8354	$\frac{1}{1196}$	2.211	0.8507	$\frac{1}{1175}$	2.200	0.8661	$\frac{1}{1154}$	2.239	0.8815	$\frac{1}{1134}$	2.278	0.8968	$\frac{1}{1114}$	2.317	0.9122	$\frac{1}{1096}$	2.356	0.9275	$\frac{1}{1077}$
2.123	0.8358	$\frac{1}{1196}$	2.212	0.8511	$\frac{1}{1174}$	2.201	0.8665	$\frac{1}{1153}$	2.240	0.8818	$\frac{1}{1133}$	2.279	0.8972	$\frac{1}{1114}$	2.318	0.9125	$\frac{1}{1095}$	2.357	0.9279	$\frac{1}{1077}$
2.124	0.8362	$\frac{1}{1195}$	2.213	0.8515	$\frac{1}{1174}$	2.202	0.8669	$\frac{1}{1153}$	2.241	0.8822	$\frac{1}{1133}$	2.280	0.8976	$\frac{1}{1113}$	2.319	0.9129	$\frac{1}{1095}$	2.358	0.9283	$\frac{1}{1077}$
2.125	0.8366	$\frac{1}{1195}$	2.214	0.8519	$\frac{1}{1173}$	2.203	0.8673	$\frac{1}{1152}$	2.242	0.8826	$\frac{1}{1132}$	2.281	0.8980	$\frac{1}{1113}$	2.320	0.9133	$\frac{1}{1094}$	2.359	0.9287	$\frac{1}{1076}$
2.126	0.8370	$\frac{1}{1194}$	2.215	0.8523	$\frac{1}{1173}$	2.204	0.8677	$\frac{1}{1152}$	2.243	0.8830	$\frac{1}{1132}$	2.282	0.8984	$\frac{1}{1112}$	2.321	0.9137	$\frac{1}{1094}$	2.360	0.9291	$\frac{1}{1076}$
2.127	0.8374	$\frac{1}{1194}$	2.216	0.8527	$\frac{1}{1172}$	2.205	0.8681	$\frac{1}{1151}$	2.244	0.8834	$\frac{1}{1131}$	2.283	0.8988	$\frac{1}{1112}$	2.322	0.9141	$\frac{1}{1093}$	2.361	0.9295	$\frac{1}{1075}$
2.128	0.8378	$\frac{1}{1193}$	2.217	0.8531	$\frac{1}{1171}$	2.206	0.8685	$\frac{1}{1151}$	2.245	0.8838	$\frac{1}{1131}$	2.284	0.8992	$\frac{1}{1111}$	2.323	0.9145	$\frac{1}{1093}$	2.362	0.9299	$\frac{1}{1075}$
2.129	0.8381	$\frac{1}{1192}$	2.218	0.8535	$\frac{1}{1171}$	2.207	0.8688	$\frac{1}{1150}$	2.246	0.8842	$\frac{1}{1130}$	2.285	0.8996	$\frac{1}{1111}$	2.324	0.9149	$\frac{1}{1092}$	2.363	0.9303	$\frac{1}{1074}$
2.130	0.8385	$\frac{1}{1192}$	2.219	0.8539	$\frac{1}{1170}$	2.208	0.8692	$\frac{1}{1150}$	2.247	0.8846	$\frac{1}{1130}$	2.286	0.8999	$\frac{1}{1110}$	2.325	0.9153	$\frac{1}{1092}$	2.364	0.9307	$\frac{1}{1074}$



I.—Table for reduction of centimillimeters to fractions of an inch—Continued.

Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.			
2.365	0.9311	$\frac{1}{1073}$	2.404	0.9104	$\frac{1}{1050}$	2.443	0.9018	$\frac{1}{1039}$	2.482	0.9771	$\frac{1}{1023}$	2.521	0.9925	$\frac{1}{1007}$	2.560	1.0078	$\frac{1}{991}$	2.599	1.0232	$\frac{1}{977}$
2.366	0.9314	$\frac{1}{1073}$	2.405	0.9168	$\frac{1}{1056}$	2.444	0.9022	$\frac{1}{1039}$	2.483	0.9775	$\frac{1}{1022}$	2.522	0.9929	$\frac{1}{1007}$	2.561	1.0082	$\frac{1}{991}$	2.600	1.0236	$\frac{1}{976}$
2.367	0.9318	$\frac{1}{1072}$	2.406	0.9472	$\frac{1}{1055}$	2.445	0.9025	$\frac{1}{1038}$	2.484	0.9779	$\frac{1}{1022}$	2.523	0.9933	$\frac{1}{1006}$	2.562	1.0086	$\frac{1}{991}$	2.601	1.0240	$\frac{1}{976}$
2.368	0.9322	$\frac{1}{1072}$	2.407	0.9476	$\frac{1}{1055}$	2.446	0.9029	$\frac{1}{1038}$	2.485	0.9783	$\frac{1}{1021}$	2.524	0.9936	$\frac{1}{1006}$	2.563	1.0090	$\frac{1}{990}$	2.602	1.0244	$\frac{1}{976}$
2.369	0.9326	$\frac{1}{1072}$	2.408	0.9480	$\frac{1}{1054}$	2.447	0.9033	$\frac{1}{1037}$	2.486	0.9787	$\frac{1}{1021}$	2.525	0.9940	$\frac{1}{1005}$	2.564	1.0094	$\frac{1}{990}$	2.603	1.0248	$\frac{1}{975}$
2.370	0.9330	$\frac{1}{1071}$	2.409	0.9484	$\frac{1}{1054}$	2.448	0.9037	$\frac{1}{1037}$	2.487	0.9791	$\frac{1}{1021}$	2.526	0.9944	$\frac{1}{1005}$	2.565	1.0098	$\frac{1}{990}$	2.604	1.0251	$\frac{1}{975}$
2.371	0.9334	$\frac{1}{1071}$	2.410	0.9488	$\frac{1}{1053}$	2.449	0.9041	$\frac{1}{1037}$	2.488	0.9795	$\frac{1}{1020}$	2.527	0.9948	$\frac{1}{1005}$	2.566	1.0102	$\frac{1}{989}$	2.605	1.0255	$\frac{1}{974}$
2.372	0.9338	$\frac{1}{1070}$	2.411	0.9492	$\frac{1}{1053}$	2.450	0.9045	$\frac{1}{1036}$	2.489	0.9799	$\frac{1}{1020}$	2.528	0.9952	$\frac{1}{1004}$	2.567	1.0106	$\frac{1}{989}$	2.606	1.0259	$\frac{1}{974}$
2.373	0.9342	$\frac{1}{1070}$	2.412	0.9496	$\frac{1}{1052}$	2.451	0.9049	$\frac{1}{1036}$	2.490	0.9803	$\frac{1}{1019}$	2.529	0.9956	$\frac{1}{1004}$	2.568	1.0110	$\frac{1}{988}$	2.607	1.0263	$\frac{1}{974}$
2.374	0.9346	$\frac{1}{1069}$	2.413	0.9499	$\frac{1}{1052}$	2.452	0.9053	$\frac{1}{1035}$	2.491	0.9807	$\frac{1}{1019}$	2.530	0.9960	$\frac{1}{1003}$	2.569	1.0114	$\frac{1}{988}$	2.608	1.0267	$\frac{1}{973}$
2.375	0.9350	$\frac{1}{1069}$	2.414	0.9503	$\frac{1}{1052}$	2.453	0.9057	$\frac{1}{1035}$	2.492	0.9811	$\frac{1}{1019}$	2.531	0.9964	$\frac{1}{1003}$	2.570	1.0118	$\frac{1}{988}$	2.609	1.0271	$\frac{1}{973}$
2.376	0.9354	$\frac{1}{1069}$	2.415	0.9507	$\frac{1}{1051}$	2.454	0.9061	$\frac{1}{1034}$	2.493	0.9814	$\frac{1}{1018}$	2.532	0.9968	$\frac{1}{1002}$	2.571	1.0122	$\frac{1}{987}$	2.610	1.0275	$\frac{1}{973}$
2.377	0.9358	$\frac{1}{1068}$	2.416	0.9511	$\frac{1}{1051}$	2.455	0.9065	$\frac{1}{1034}$	2.494	0.9818	$\frac{1}{1018}$	2.533	0.9972	$\frac{1}{1002}$	2.572	1.0125	$\frac{1}{987}$	2.611	1.0279	$\frac{1}{972}$
2.378	0.9362	$\frac{1}{1068}$	2.417	0.9514	$\frac{1}{1050}$	2.456	0.9069	$\frac{1}{1034}$	2.495	0.9822	$\frac{1}{1017}$	2.534	0.9976	$\frac{1}{1002}$	2.573	1.0129	$\frac{1}{987}$	2.612	1.0283	$\frac{1}{972}$
2.379	0.9366	$\frac{1}{1067}$	2.418	0.9519	$\frac{1}{1050}$	2.457	0.9073	$\frac{1}{1033}$	2.496	0.9826	$\frac{1}{1017}$	2.535	0.9980	$\frac{1}{1001}$	2.574	1.0133	$\frac{1}{986}$	2.613	1.0287	$\frac{1}{971}$
2.380	0.9370	$\frac{1}{1067}$	2.419	0.9523	$\frac{1}{1049}$	2.458	0.9077	$\frac{1}{1033}$	2.497	0.9830	$\frac{1}{1017}$	2.536	0.9984	$\frac{1}{1001}$	2.575	1.0137	$\frac{1}{986}$	2.614	1.0291	$\frac{1}{971}$
2.381	0.9373	$\frac{1}{1066}$	2.420	0.9527	$\frac{1}{1049}$	2.459	0.9081	$\frac{1}{1032}$	2.498	0.9834	$\frac{1}{1016}$	2.537	0.9988	$\frac{1}{1001}$	2.576	1.0141	$\frac{1}{985}$	2.615	1.0295	$\frac{1}{971}$
2.382	0.9377	$\frac{1}{1066}$	2.421	0.9531	$\frac{1}{1049}$	2.460	0.9085	$\frac{1}{1032}$	2.499	0.9838	$\frac{1}{1016}$	2.538	0.9992	$\frac{1}{1000}$	2.577	1.0145	$\frac{1}{985}$	2.616	1.0299	$\frac{1}{970}$
2.383	0.9381	$\frac{1}{1065}$	2.422	0.9535	$\frac{1}{1048}$	2.461	0.9088	$\frac{1}{1031}$	2.500	0.9842	$\frac{1}{1015}$	2.539	0.9996	$\frac{1}{1000}$	2.578	1.0149	$\frac{1}{985}$	2.617	1.0303	$\frac{1}{970}$
2.384	0.9385	$\frac{1}{1065}$	2.423	0.9539	$\frac{1}{1048}$	2.462	0.9092	$\frac{1}{1031}$	2.501	0.9846	$\frac{1}{1015}$	2.540	0.9999	$\frac{1}{999}$	2.579	1.0153	$\frac{1}{984}$	2.618	1.0307	$\frac{1}{970}$
2.385	0.9389	$\frac{1}{1064}$	2.424	0.9543	$\frac{1}{1047}$	2.463	0.9096	$\frac{1}{1031}$	2.502	0.9849	$\frac{1}{1015}$	2.541	1.0003	$\frac{1}{999}$	2.580	1.0157	$\frac{1}{984}$	2.619	1.0311	$\frac{1}{969}$
2.386	0.9393	$\frac{1}{1064}$	2.425	0.9547	$\frac{1}{1047}$	2.464	0.9700	$\frac{1}{1030}$	2.503	0.9854	$\frac{1}{1014}$	2.542	1.0007	$\frac{1}{999}$	2.581	1.0161	$\frac{1}{983}$	2.620	1.0314	$\frac{1}{969}$
2.387	0.9397	$\frac{1}{1063}$	2.426	0.9551	$\frac{1}{1046}$	2.465	0.9704	$\frac{1}{1030}$	2.504	0.9858	$\frac{1}{1014}$	2.543	1.0011	$\frac{1}{998}$	2.582	1.0165	$\frac{1}{983}$	2.621	1.0318	$\frac{1}{968}$
2.388	0.9401	$\frac{1}{1063}$	2.427	0.9555	$\frac{1}{1046}$	2.466	0.9708	$\frac{1}{1029}$	2.505	0.9862	$\frac{1}{1013}$	2.544	1.0015	$\frac{1}{998}$	2.583	1.0169	$\frac{1}{983}$	2.622	1.0322	$\frac{1}{968}$
2.389	0.9405	$\frac{1}{1063}$	2.428	0.9559	$\frac{1}{1045}$	2.467	0.9712	$\frac{1}{1029}$	2.506	0.9866	$\frac{1}{1013}$	2.545	1.0019	$\frac{1}{997}$	2.584	1.0173	$\frac{1}{982}$	2.623	1.0326	$\frac{1}{968}$
2.390	0.9409	$\frac{1}{1062}$	2.429	0.9562	$\frac{1}{1045}$	2.468	0.9716	$\frac{1}{1029}$	2.507	0.9870	$\frac{1}{1013}$	2.546	1.0023	$\frac{1}{997}$	2.585	1.0177	$\frac{1}{982}$	2.624	1.0330	$\frac{1}{967}$
2.391	0.9413	$\frac{1}{1062}$	2.430	0.9566	$\frac{1}{1045}$	2.469	0.9720	$\frac{1}{1028}$	2.508	0.9873	$\frac{1}{1012}$	2.547	1.0027	$\frac{1}{997}$	2.586	1.0181	$\frac{1}{982}$	2.625	1.0334	$\frac{1}{967}$
2.392	0.9417	$\frac{1}{1061}$	2.431	0.9570	$\frac{1}{1044}$	2.470	0.9724	$\frac{1}{1028}$	2.509	0.9877	$\frac{1}{1012}$	2.548	1.0031	$\frac{1}{996}$	2.587	1.0185	$\frac{1}{981}$	2.626	1.0338	$\frac{1}{967}$
2.393	0.9421	$\frac{1}{1061}$	2.432	0.9574	$\frac{1}{1044}$	2.471	0.9728	$\frac{1}{1027}$	2.510	0.9881	$\frac{1}{1011}$	2.549	1.0035	$\frac{1}{996}$	2.588	1.0189	$\frac{1}{981}$	2.627	1.0342	$\frac{1}{966}$
2.394	0.9425	$\frac{1}{1060}$	2.433	0.9578	$\frac{1}{1043}$	2.472	0.9732	$\frac{1}{1027}$	2.511	0.9886	$\frac{1}{1011}$	2.550	1.0039	$\frac{1}{995}$	2.589	1.0192	$\frac{1}{980}$	2.628	1.0346	$\frac{1}{966}$
2.395	0.9429	$\frac{1}{1060}$	2.434	0.9582	$\frac{1}{1043}$	2.473	0.9736	$\frac{1}{1026}$	2.512	0.9889	$\frac{1}{1011}$	2.551	1.0043	$\frac{1}{995}$	2.590	1.0196	$\frac{1}{980}$	2.629	1.0350	$\frac{1}{965}$
2.396	0.9433	$\frac{1}{1059}$	2.435	0.9586	$\frac{1}{1042}$	2.474	0.9740	$\frac{1}{1026}$	2.513	0.9893	$\frac{1}{1010}$	2.552	1.0047	$\frac{1}{995}$	2.591	1.0200	$\frac{1}{980}$	2.630	1.0354	$\frac{1}{965}$
2.397	0.9436	$\frac{1}{1059}$	2.436	0.9590	$\frac{1}{1042}$	2.475	0.9744	$\frac{1}{1026}$	2.514	0.9897	$\frac{1}{1010}$	2.553	1.0051	$\frac{1}{994}$	2.592	1.0204	$\frac{1}{979}$	2.631	1.0358	$\frac{1}{965}$
2.398	0.9440	$\frac{1}{1059}$	2.437	0.9594	$\frac{1}{1042}$	2.476	0.9748	$\frac{1}{1025}$	2.515	0.9901	$\frac{1}{1009}$	2.554	1.0055	$\frac{1}{994}$	2.593	1.0208	$\frac{1}{979}$	2.632	1.0362	$\frac{1}{964}$
2.399	0.9444	$\frac{1}{1059}$	2.438	0.9598	$\frac{1}{1041}$	2.477	0.9751	$\frac{1}{1025}$	2.516	0.9905	$\frac{1}{1009}$	2.555	1.0059	$\frac{1}{994}$	2.594	1.0212	$\frac{1}{979}$	2.633	1.0366	$\frac{1}{964}$
2.400	0.9448	$\frac{1}{1058}$	2.439	0.9602	$\frac{1}{1041}$	2.478	0.9755	$\frac{1}{1024}$	2.517	0.9909	$\frac{1}{1009}$	2.556	1.0062	$\frac{1}{993}$	2.595	1.0216	$\frac{1}{978}$	2.634	1.0370	$\frac{1}{964}$
2.401	0.9452	$\frac{1}{1057}$	2.440	0.9606	$\frac{1}{1040}$	2.479	0.9759	$\frac{1}{1024}$	2.518	0.9913	$\frac{1}{1008}$	2.557	1.0066	$\frac{1}{993}$	2.596	1.0220	$\frac{1}{978}$	2.635	1.0374	$\frac{1}{963}$
2.402	0.9456	$\frac{1}{1057}$	2.441	0.9610	$\frac{1}{1040}$	2.480	0.9763	$\frac{1}{1024}$	2.519	0.9917	$\frac{1}{1008}$	2.558	1.0070	$\frac{1}{992}$	2.597	1.0224	$\frac{1}{977}$	2.636	1.0378	$\frac{1}{963}$
2.403	0.9460	$\frac{1}{1056}$	2.442	0.9614	$\frac{1}{1040}$	2.481	0.9767	$\frac{1}{1023}$	2.520	0.9921	$\frac{1}{1007}$	2.559	1.0074	$\frac{1}{992}$	2.598	1.0228	$\frac{1}{977}$	2.637	1.0382	$\frac{1}{963}$



I.—Table for reduction of centimillimeters to fractions of an inch—Continued.

Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.
2.638	1.0385	$\frac{1}{962}$	2.677	1.0529	$\frac{1}{943}$	2.716	1.0692	$\frac{1}{935}$	2.755	1.0846	$\frac{1}{921}$	2.794	1.0990	$\frac{1}{908}$	2.833	1.1153	$\frac{1}{898}$	2.872	1.1307	$\frac{1}{884}$
2.639	1.0389	$\frac{1}{962}$	2.678	1.0543	$\frac{1}{948}$	2.717	1.0696	$\frac{1}{934}$	2.756	1.0850	$\frac{1}{921}$	2.795	1.1002	$\frac{1}{908}$	2.834	1.1157	$\frac{1}{896}$	2.873	1.1311	$\frac{1}{883}$
2.640	1.0393	$\frac{1}{962}$	2.675	1.0547	$\frac{1}{947}$	2.718	1.0700	$\frac{1}{934}$	2.757	1.0854	$\frac{1}{921}$	2.796	1.1007	$\frac{1}{908}$	2.835	1.1161	$\frac{1}{895}$	2.874	1.1314	$\frac{1}{883}$
2.641	1.0397	$\frac{1}{961}$	2.680	1.0551	$\frac{1}{947}$	2.719	1.0704	$\frac{1}{934}$	2.758	1.0858	$\frac{1}{920}$	2.797	1.1011	$\frac{1}{908}$	2.836	1.1165	$\frac{1}{895}$	2.875	1.1318	$\frac{1}{883}$
2.642	1.0401	$\frac{1}{961}$	2.681	1.0555	$\frac{1}{947}$	2.720	1.0708	$\frac{1}{933}$	2.759	1.0862	$\frac{1}{920}$	2.798	1.1015	$\frac{1}{907}$	2.837	1.1169	$\frac{1}{895}$	2.876	1.1322	$\frac{1}{883}$
2.643	1.0405	$\frac{1}{961}$	2.682	1.0559	$\frac{1}{946}$	2.721	1.0712	$\frac{1}{933}$	2.760	1.0866	$\frac{1}{920}$	2.799	1.1019	$\frac{1}{907}$	2.838	1.1173	$\frac{1}{894}$	2.877	1.1326	$\frac{1}{882}$
2.644	1.0409	$\frac{1}{960}$	2.683	1.0562	$\frac{1}{946}$	2.722	1.0716	$\frac{1}{933}$	2.761	1.0870	$\frac{1}{919}$	2.800	1.1023	$\frac{1}{907}$	2.839	1.1177	$\frac{1}{894}$	2.878	1.1330	$\frac{1}{882}$
2.645	1.0413	$\frac{1}{960}$	2.684	1.0566	$\frac{1}{946}$	2.723	1.0720	$\frac{1}{932}$	2.762	1.0873	$\frac{1}{919}$	2.801	1.1027	$\frac{1}{906}$	2.840	1.1181	$\frac{1}{894}$	2.879	1.1334	$\frac{1}{882}$
2.646	1.0417	$\frac{1}{959}$	2.685	1.0570	$\frac{1}{945}$	2.724	1.0724	$\frac{1}{932}$	2.763	1.0877	$\frac{1}{919}$	2.802	1.1031	$\frac{1}{906}$	2.841	1.1185	$\frac{1}{893}$	2.880	1.1338	$\frac{1}{881}$
2.647	1.0421	$\frac{1}{959}$	2.686	1.0574	$\frac{1}{945}$	2.725	1.0728	$\frac{1}{931}$	2.764	1.0881	$\frac{1}{918}$	2.803	1.1035	$\frac{1}{906}$	2.842	1.1188	$\frac{1}{893}$	2.881	1.1342	$\frac{1}{881}$
2.648	1.0425	$\frac{1}{959}$	2.687	1.0578	$\frac{1}{945}$	2.726	1.0732	$\frac{1}{931}$	2.765	1.0885	$\frac{1}{918}$	2.804	1.1039	$\frac{1}{905}$	2.843	1.1192	$\frac{1}{893}$	2.882	1.1346	$\frac{1}{881}$
2.649	1.0429	$\frac{1}{958}$	2.688	1.0582	$\frac{1}{944}$	2.727	1.0736	$\frac{1}{931}$	2.766	1.0889	$\frac{1}{918}$	2.805	1.1043	$\frac{1}{905}$	2.844	1.1196	$\frac{1}{892}$	2.883	1.1350	$\frac{1}{880}$
2.650	1.0433	$\frac{1}{958}$	2.689	1.0586	$\frac{1}{944}$	2.728	1.0740	$\frac{1}{930}$	2.767	1.0893	$\frac{1}{917}$	2.806	1.1047	$\frac{1}{905}$	2.845	1.1200	$\frac{1}{892}$	2.884	1.1354	$\frac{1}{880}$
2.651	1.0436	$\frac{1}{958}$	2.690	1.0590	$\frac{1}{944}$	2.729	1.0744	$\frac{1}{930}$	2.768	1.0897	$\frac{1}{917}$	2.807	1.1051	$\frac{1}{904}$	2.846	1.1204	$\frac{1}{892}$	2.885	1.1358	$\frac{1}{880}$
2.652	1.0440	$\frac{1}{957}$	2.691	1.0594	$\frac{1}{943}$	2.730	1.0748	$\frac{1}{930}$	2.769	1.0901	$\frac{1}{917}$	2.808	1.1055	$\frac{1}{904}$	2.847	1.1208	$\frac{1}{892}$	2.886	1.1362	$\frac{1}{880}$
2.653	1.0444	$\frac{1}{957}$	2.692	1.0598	$\frac{1}{943}$	2.731	1.0751	$\frac{1}{929}$	2.770	1.0905	$\frac{1}{916}$	2.809	1.1059	$\frac{1}{904}$	2.848	1.1212	$\frac{1}{891}$	2.887	1.1366	$\frac{1}{879}$
2.654	1.0448	$\frac{1}{950}$	2.693	1.0602	$\frac{1}{943}$	2.732	1.0755	$\frac{1}{929}$	2.771	1.0909	$\frac{1}{916}$	2.810	1.1062	$\frac{1}{903}$	2.849	1.1216	$\frac{1}{891}$	2.888	1.1370	$\frac{1}{879}$
2.655	1.0452	$\frac{1}{950}$	2.694	1.0606	$\frac{1}{942}$	2.733	1.0759	$\frac{1}{929}$	2.772	1.0913	$\frac{1}{916}$	2.811	1.1066	$\frac{1}{903}$	2.850	1.1220	$\frac{1}{891}$	2.889	1.1374	$\frac{1}{879}$
2.656	1.0456	$\frac{1}{956}$	2.695	1.0610	$\frac{1}{942}$	2.734	1.0763	$\frac{1}{928}$	2.773	1.0917	$\frac{1}{915}$	2.812	1.1070	$\frac{1}{903}$	2.851	1.1224	$\frac{1}{890}$	2.890	1.1377	$\frac{1}{878}$
2.657	1.0460	$\frac{1}{955}$	2.696	1.0614	$\frac{1}{942}$	2.735	1.0767	$\frac{1}{928}$	2.774	1.0921	$\frac{1}{915}$	2.813	1.1074	$\frac{1}{902}$	2.852	1.1228	$\frac{1}{890}$	2.891	1.1381	$\frac{1}{878}$
2.658	1.0464	$\frac{1}{955}$	2.697	1.0618	$\frac{1}{941}$	2.736	1.0771	$\frac{1}{928}$	2.775	1.0925	$\frac{1}{915}$	2.814	1.1078	$\frac{1}{902}$	2.853	1.1232	$\frac{1}{890}$	2.892	1.1385	$\frac{1}{878}$
2.659	1.0468	$\frac{1}{955}$	2.698	1.0622	$\frac{1}{941}$	2.737	1.0775	$\frac{1}{927}$	2.776	1.0929	$\frac{1}{914}$	2.815	1.1082	$\frac{1}{902}$	2.854	1.1236	$\frac{1}{889}$	2.893	1.1389	$\frac{1}{877}$
2.660	1.0472	$\frac{1}{954}$	2.699	1.0625	$\frac{1}{940}$	2.738	1.0779	$\frac{1}{927}$	2.777	1.0933	$\frac{1}{914}$	2.816	1.1086	$\frac{1}{901}$	2.855	1.1240	$\frac{1}{889}$	2.894	1.1392	$\frac{1}{877}$
2.661	1.0476	$\frac{1}{954}$	2.700	1.0629	$\frac{1}{940}$	2.739	1.0783	$\frac{1}{927}$	2.778	1.0936	$\frac{1}{914}$	2.817	1.1090	$\frac{1}{901}$	2.856	1.1244	$\frac{1}{889}$	2.895	1.1397	$\frac{1}{877}$
2.662	1.0480	$\frac{1}{954}$	2.701	1.0633	$\frac{1}{940}$	2.740	1.0787	$\frac{1}{926}$	2.779	1.0940	$\frac{1}{913}$	2.818	1.1194	$\frac{1}{901}$	2.857	1.1248	$\frac{1}{888}$	2.896	1.1401	$\frac{1}{876}$
2.663	1.0484	$\frac{1}{953}$	2.702	1.0637	$\frac{1}{939}$	2.741	1.0791	$\frac{1}{926}$	2.780	1.0944	$\frac{1}{913}$	2.819	1.1198	$\frac{1}{900}$	2.858	1.1251	$\frac{1}{888}$	2.897	1.1405	$\frac{1}{876}$
2.664	1.0488	$\frac{1}{953}$	2.703	1.0641	$\frac{1}{939}$	2.742	1.0795	$\frac{1}{925}$	2.781	1.0948	$\frac{1}{913}$	2.820	1.1202	$\frac{1}{900}$	2.859	1.1255	$\frac{1}{888}$	2.898	1.1409	$\frac{1}{876}$
2.665	1.0492	$\frac{1}{958}$	2.704	1.0645	$\frac{1}{939}$	2.743	1.0799	$\frac{1}{925}$	2.782	1.0952	$\frac{1}{912}$	2.821	1.1206	$\frac{1}{900}$	2.860	1.1259	$\frac{1}{888}$	2.899	1.1413	$\frac{1}{876}$
2.666	1.0496	$\frac{1}{952}$	2.705	1.0649	$\frac{1}{938}$	2.744	1.0803	$\frac{1}{925}$	2.783	1.0956	$\frac{1}{912}$	2.822	1.1210	$\frac{1}{899}$	2.861	1.1263	$\frac{1}{887}$	2.900	1.1417	$\frac{1}{875}$
2.667	1.0499	$\frac{1}{952}$	2.706	1.0653	$\frac{1}{938}$	2.745	1.0807	$\frac{1}{925}$	2.784	1.0960	$\frac{1}{912}$	2.823	1.1214	$\frac{1}{899}$	2.862	1.1267	$\frac{1}{887}$	2.901	1.1421	$\frac{1}{875}$
2.668	1.0503	$\frac{1}{951}$	2.707	1.0657	$\frac{1}{938}$	2.746	1.0811	$\frac{1}{924}$	2.785	1.0964	$\frac{1}{911}$	2.824	1.1218	$\frac{1}{899}$	2.863	1.1271	$\frac{1}{887}$	2.902	1.1425	$\frac{1}{875}$
2.669	1.0507	$\frac{1}{951}$	2.708	1.0651	$\frac{1}{937}$	2.747	1.0814	$\frac{1}{924}$	2.786	1.0968	$\frac{1}{911}$	2.825	1.1222	$\frac{1}{899}$	2.864	1.1275	$\frac{1}{886}$	2.903	1.1429	$\frac{1}{874}$
2.670	1.0511	$\frac{1}{950}$	2.709	1.0665	$\frac{1}{937}$	2.748	1.0818	$\frac{1}{924}$	2.787	1.0972	$\frac{1}{911}$	2.826	1.1225	$\frac{1}{898}$	2.865	1.1279	$\frac{1}{886}$	2.904	1.1433	$\frac{1}{874}$
2.671	1.0515	$\frac{1}{950}$	2.710	1.0669	$\frac{1}{937}$	2.749	1.0822	$\frac{1}{923}$	2.788	1.0976	$\frac{1}{910}$	2.827	1.1229	$\frac{1}{898}$	2.866	1.1283	$\frac{1}{886}$	2.905	1.1436	$\frac{1}{874}$
2.672	1.0519	$\frac{1}{950}$	2.711	1.0673	$\frac{1}{936}$	2.750	1.0826	$\frac{1}{923}$	2.789	1.0980	$\frac{1}{910}$	2.828	1.1233	$\frac{1}{898}$	2.867	1.1287	$\frac{1}{885}$	2.906	1.1440	$\frac{1}{873}$
2.673	1.0523	$\frac{1}{950}$	2.712	1.0677	$\frac{1}{936}$	2.751	1.0830	$\frac{1}{922}$	2.790	1.0984	$\frac{1}{910}$	2.829	1.1237	$\frac{1}{897}$	2.868	1.1291	$\frac{1}{885}$	2.907	1.1444	$\frac{1}{873}$
2.674	1.0527	$\frac{1}{949}$	2.713	1.0681	$\frac{1}{936}$	2.752	1.0834	$\frac{1}{922}$	2.791	1.0988	$\frac{1}{909}$	2.830	1.1241	$\frac{1}{897}$	2.869	1.1295	$\frac{1}{885}$	2.908	1.1448	$\frac{1}{872}$
2.675	1.0531	$\frac{1}{949}$	2.714	1.0685	$\frac{1}{935}$	2.753	1.0838	$\frac{1}{922}$	2.792	1.0992	$\frac{1}{909}$	2.831	1.1245	$\frac{1}{897}$	2.870	1.1299	$\frac{1}{884}$	2.909	1.1452	$\frac{1}{872}$
2.676	1.0535	$\frac{1}{949}$	2.715	1.0688	$\frac{1}{935}$	2.754	1.0842	$\frac{1}{922}$	2.793	1.0996	$\frac{1}{909}$	2.832	1.1249	$\frac{1}{896}$	2.871	1.1303	$\frac{1}{884}$	2.910	1.1456	$\frac{1}{872}$



I.—Table for reduction of centimeters to fractions of an inch—Continued.

Centimeters.	Thousandths of an inch.	Fractions of an inch.	Centimeters.	Thousandths of an inch.	Fractions of an inch.	Centimeters.	Thousandths of an inch.	Fractions of an inch.	Centimeters.	Thousandths of an inch.	Fractions of an inch.	Centimeters.	Thousandths of an inch.	Fractions of an inch.	Centimeters.	Thousandths of an inch.	Fractions of an inch.	Centimeters.	Thousandths of an inch.	Fractions of an inch.
2.011	1.1490	$\frac{1}{872}$	2.950	1.1614	$\frac{1}{860}$	2.989	1.1767	$\frac{1}{849}$	3.028	1.1921	$\frac{1}{838}$	3.067	1.2074	$\frac{1}{828}$	3.106	1.2228	$\frac{1}{817}$	3.145	1.2381	$\frac{1}{807}$
2.912	1.1461	$\frac{1}{871}$	2.951	1.1618	$\frac{1}{860}$	2.990	1.1771	$\frac{1}{849}$	3.029	1.1925	$\frac{1}{838}$	3.068	1.2079	$\frac{1}{827}$	3.107	1.2232	$\frac{1}{817}$	3.146	1.2385	$\frac{1}{807}$
2.913	1.1468	$\frac{1}{871}$	2.952	1.1622	$\frac{1}{860}$	2.991	1.1775	$\frac{1}{849}$	3.030	1.1929	$\frac{1}{838}$	3.069	1.2083	$\frac{1}{827}$	3.108	1.2236	$\frac{1}{817}$	3.147	1.2389	$\frac{1}{807}$
2.914	1.1472	$\frac{1}{871}$	2.953	1.1625	$\frac{1}{860}$	2.992	1.1779	$\frac{1}{849}$	3.031	1.1933	$\frac{1}{837}$	3.070	1.2086	$\frac{1}{827}$	3.109	1.2240	$\frac{1}{816}$	3.148	1.2393	$\frac{1}{806}$
2.915	1.1476	$\frac{1}{871}$	2.954	1.1629	$\frac{1}{860}$	2.993	1.1783	$\frac{1}{848}$	3.032	1.1936	$\frac{1}{837}$	3.071	1.2090	$\frac{1}{826}$	3.110	1.2244	$\frac{1}{816}$	3.149	1.2397	$\frac{1}{806}$
2.916	1.1480	$\frac{1}{870}$	2.955	1.1633	$\frac{1}{859}$	2.994	1.1787	$\frac{1}{848}$	3.033	1.1940	$\frac{1}{837}$	3.072	1.2094	$\frac{1}{826}$	3.111	1.2248	$\frac{1}{816}$	3.150	1.2401	$\frac{1}{806}$
2.917	1.1484	$\frac{1}{870}$	2.956	1.1637	$\frac{1}{859}$	2.995	1.1791	$\frac{1}{848}$	3.034	1.1944	$\frac{1}{836}$	3.073	1.2098	$\frac{1}{826}$	3.112	1.2251	$\frac{1}{815}$	3.151	1.2405	$\frac{1}{805}$
2.918	1.1488	$\frac{1}{870}$	2.957	1.1641	$\frac{1}{858}$	2.996	1.1795	$\frac{1}{847}$	3.035	1.1948	$\frac{1}{836}$	3.074	1.2102	$\frac{1}{825}$	3.113	1.2255	$\frac{1}{815}$	3.152	1.2409	$\frac{1}{805}$
2.919	1.1192	$\frac{1}{869}$	2.958	1.1645	$\frac{1}{858}$	2.997	1.1799	$\frac{1}{847}$	3.036	1.1952	$\frac{1}{836}$	3.075	1.2106	$\frac{1}{825}$	3.114	1.2259	$\frac{1}{815}$	3.153	1.2413	$\frac{1}{805}$
2.920	1.1496	$\frac{1}{869}$	2.959	1.1649	$\frac{1}{858}$	2.998	1.1803	$\frac{1}{847}$	3.037	1.1956	$\frac{1}{836}$	3.076	1.2110	$\frac{1}{825}$	3.115	1.2263	$\frac{1}{815}$	3.154	1.2417	$\frac{1}{805}$
2.921	1.1499	$\frac{1}{869}$	2.960	1.1653	$\frac{1}{858}$	2.999	1.1807	$\frac{1}{846}$	3.038	1.1960	$\frac{1}{835}$	3.077	1.2114	$\frac{1}{825}$	3.116	1.2267	$\frac{1}{815}$	3.155	1.2421	$\frac{1}{804}$
2.922	1.1503	$\frac{1}{869}$	2.961	1.1657	$\frac{1}{858}$	3.000	1.1811	$\frac{1}{846}$	3.039	1.1964	$\frac{1}{835}$	3.078	1.2118	$\frac{1}{825}$	3.117	1.2271	$\frac{1}{814}$	3.156	1.2425	$\frac{1}{804}$
2.923	1.1507	$\frac{1}{868}$	2.962	1.1661	$\frac{1}{857}$	3.001	1.1814	$\frac{1}{846}$	3.040	1.1968	$\frac{1}{835}$	3.079	1.2122	$\frac{1}{824}$	3.118	1.2275	$\frac{1}{814}$	3.157	1.2429	$\frac{1}{804}$
2.924	1.1511	$\frac{1}{868}$	2.963	1.1665	$\frac{1}{857}$	3.002	1.1818	$\frac{1}{845}$	3.041	1.1972	$\frac{1}{835}$	3.080	1.2126	$\frac{1}{824}$	3.119	1.2279	$\frac{1}{814}$	3.158	1.2433	$\frac{1}{804}$
2.925	1.1515	$\frac{1}{868}$	2.964	1.1669	$\frac{1}{856}$	3.003	1.1822	$\frac{1}{845}$	3.042	1.1976	$\frac{1}{834}$	3.081	1.2129	$\frac{1}{824}$	3.120	1.2283	$\frac{1}{814}$	3.159	1.2436	$\frac{1}{803}$
2.926	1.1519	$\frac{1}{867}$	2.965	1.1673	$\frac{1}{856}$	3.004	1.1826	$\frac{1}{845}$	3.043	1.1980	$\frac{1}{834}$	3.082	1.2133	$\frac{1}{824}$	3.121	1.2287	$\frac{1}{813}$	3.160	1.2440	$\frac{1}{803}$
2.927	1.1523	$\frac{1}{867}$	2.966	1.1677	$\frac{1}{856}$	3.005	1.1830	$\frac{1}{845}$	3.044	1.1984	$\frac{1}{834}$	3.083	1.2137	$\frac{1}{823}$	3.122	1.2291	$\frac{1}{813}$	3.161	1.2444	$\frac{1}{803}$
2.928	1.1527	$\frac{1}{867}$	2.967	1.1681	$\frac{1}{855}$	3.006	1.1834	$\frac{1}{844}$	3.045	1.1988	$\frac{1}{834}$	3.084	1.2141	$\frac{1}{823}$	3.123	1.2295	$\frac{1}{813}$	3.162	1.2448	$\frac{1}{803}$
2.929	1.1531	$\frac{1}{867}$	2.968	1.1685	$\frac{1}{855}$	3.007	1.1838	$\frac{1}{844}$	3.046	1.1992	$\frac{1}{833}$	3.085	1.2145	$\frac{1}{823}$	3.124	1.2299	$\frac{1}{813}$	3.163	1.2452	$\frac{1}{802}$
2.930	1.1535	$\frac{1}{866}$	2.969	1.1688	$\frac{1}{855}$	3.008	1.1842	$\frac{1}{844}$	3.047	1.1996	$\frac{1}{833}$	3.086	1.2149	$\frac{1}{823}$	3.125	1.2303	$\frac{1}{813}$	3.164	1.2456	$\frac{1}{802}$
2.931	1.1539	$\frac{1}{866}$	2.970	1.1692	$\frac{1}{855}$	3.009	1.1846	$\frac{1}{844}$	3.048	1.1999	$\frac{1}{833}$	3.087	1.2153	$\frac{1}{822}$	3.126	1.2307	$\frac{1}{812}$	3.165	1.2460	$\frac{1}{802}$
2.932	1.1543	$\frac{1}{866}$	2.971	1.1696	$\frac{1}{854}$	3.010	1.1850	$\frac{1}{843}$	3.049	1.2003	$\frac{1}{832}$	3.088	1.2157	$\frac{1}{822}$	3.127	1.2310	$\frac{1}{812}$	3.166	1.2464	$\frac{1}{802}$
2.933	1.1547	$\frac{1}{865}$	2.972	1.1700	$\frac{1}{854}$	3.011	1.1854	$\frac{1}{843}$	3.050	1.2007	$\frac{1}{832}$	3.089	1.2161	$\frac{1}{822}$	3.128	1.2314	$\frac{1}{811}$	3.167	1.2468	$\frac{1}{801}$
2.934	1.1551	$\frac{1}{865}$	2.973	1.1704	$\frac{1}{854}$	3.012	1.1858	$\frac{1}{843}$	3.051	1.2011	$\frac{1}{832}$	3.090	1.2165	$\frac{1}{821}$	3.129	1.2318	$\frac{1}{811}$	3.168	1.2473	$\frac{1}{801}$
2.935	1.1555	$\frac{1}{865}$	2.974	1.1708	$\frac{1}{853}$	3.013	1.1862	$\frac{1}{842}$	3.052	1.2015	$\frac{1}{832}$	3.091	1.2169	$\frac{1}{821}$	3.130	1.2322	$\frac{1}{811}$	3.169	1.2476	$\frac{1}{801}$
2.936	1.1559	$\frac{1}{865}$	2.975	1.1712	$\frac{1}{853}$	3.014	1.1866	$\frac{1}{842}$	3.053	1.2019	$\frac{1}{831}$	3.092	1.2173	$\frac{1}{821}$	3.131	1.2326	$\frac{1}{811}$	3.170	1.2480	$\frac{1}{801}$
2.937	1.1562	$\frac{1}{864}$	2.976	1.1716	$\frac{1}{853}$	3.015	1.1870	$\frac{1}{842}$	3.054	1.2023	$\frac{1}{831}$	3.093	1.2177	$\frac{1}{821}$	3.132	1.2330	$\frac{1}{810}$	3.171	1.2484	$\frac{1}{800}$
2.938	1.1566	$\frac{1}{864}$	2.977	1.1720	$\frac{1}{853}$	3.016	1.1874	$\frac{1}{842}$	3.055	1.2027	$\frac{1}{831}$	3.094	1.2181	$\frac{1}{820}$	3.133	1.2334	$\frac{1}{810}$	3.172	1.2488	$\frac{1}{800}$
2.939	1.1570	$\frac{1}{864}$	2.978	1.1724	$\frac{1}{852}$	3.017	1.1877	$\frac{1}{841}$	3.056	1.2031	$\frac{1}{831}$	3.095	1.2185	$\frac{1}{820}$	3.134	1.2338	$\frac{1}{810}$	3.173	1.2492	$\frac{1}{800}$
2.940	1.1574	$\frac{1}{863}$	2.979	1.1728	$\frac{1}{852}$	3.018	1.1881	$\frac{1}{841}$	3.057	1.2035	$\frac{1}{830}$	3.096	1.2189	$\frac{1}{820}$	3.135	1.2342	$\frac{1}{810}$	3.174	1.2496	$\frac{1}{800}$
2.941	1.1578	$\frac{1}{863}$	2.980	1.1732	$\frac{1}{852}$	3.019	1.1885	$\frac{1}{841}$	3.058	1.2039	$\frac{1}{830}$	3.097	1.2193	$\frac{1}{820}$	3.136	1.2346	$\frac{1}{809}$	3.175	1.2499	$\frac{1}{799}$
2.942	1.1583	$\frac{1}{863}$	2.981	1.1736	$\frac{1}{851}$	3.020	1.1889	$\frac{1}{840}$	3.059	1.2043	$\frac{1}{830}$	3.098	1.2197	$\frac{1}{819}$	3.137	1.2350	$\frac{1}{809}$	3.176	1.2503	$\frac{1}{799}$
2.943	1.1586	$\frac{1}{862}$	2.982	1.1740	$\frac{1}{851}$	3.021	1.1893	$\frac{1}{840}$	3.060	1.2047	$\frac{1}{829}$	3.099	1.2200	$\frac{1}{819}$	3.138	1.2354	$\frac{1}{809}$	3.177	1.2507	$\frac{1}{799}$
2.944	1.1590	$\frac{1}{862}$	2.983	1.1744	$\frac{1}{851}$	3.022	1.1897	$\frac{1}{840}$	3.061	1.2051	$\frac{1}{829}$	3.100	1.2204	$\frac{1}{819}$	3.139	1.2358	$\frac{1}{809}$	3.178	1.2511	$\frac{1}{798}$
2.945	1.1594	$\frac{1}{861}$	2.984	1.1748	$\frac{1}{851}$	3.023	1.1901	$\frac{1}{840}$	3.062	1.2055	$\frac{1}{829}$	3.101	1.2208	$\frac{1}{818}$	3.140	1.2362	$\frac{1}{808}$	3.179	1.2515	$\frac{1}{798}$
2.946	1.1598	$\frac{1}{861}$	2.985	1.1751	$\frac{1}{850}$	3.024	1.1905	$\frac{1}{839}$	3.063	1.2059	$\frac{1}{829}$	3.102	1.2212	$\frac{1}{818}$	3.141	1.2366	$\frac{1}{808}$	3.180	1.2519	$\frac{1}{798}$
2.947	1.1602	$\frac{1}{861}$	2.986	1.1755	$\frac{1}{850}$	3.025	1.1909	$\frac{1}{839}$	3.064	1.2063	$\frac{1}{828}$	3.103	1.2216	$\frac{1}{818}$	3.142	1.2370	$\frac{1}{808}$	3.181	1.2523	$\frac{1}{798}$
2.948	1.1606	$\frac{1}{861}$	2.987	1.1759	$\frac{1}{850}$	3.026	1.1913	$\frac{1}{839}$	3.065	1.2067	$\frac{1}{828}$	3.104	1.2220	$\frac{1}{818}$	3.143	1.2374	$\frac{1}{807}$	3.182	1.2527	$\frac{1}{798}$
2.949	1.1610	$\frac{1}{861}$	2.988	1.1763	$\frac{1}{849}$	3.027	1.1917	$\frac{1}{839}$	3.066	1.2070	$\frac{1}{828}$	3.105	1.2224	$\frac{1}{817}$	3.144	1.2377	$\frac{1}{807}$	3.183	1.2531	$\frac{1}{797}$



I.—Table for reduction of centimillimeters to fractions of an inch—Continued.

Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.
3.184	1.2535	$\frac{1}{797}$	3.223	1.2688	$\frac{1}{787}$	3.262	1.2842	$\frac{1}{778}$	3.301	1.2996	$\frac{1}{769}$	3.340	1.3149	$\frac{1}{760}$	3.379	1.3303	$\frac{1}{751}$	3.418	1.3456	$\frac{1}{743}$
3.185	1.2539	$\frac{1}{797}$	3.224	1.2692	$\frac{1}{787}$	3.263	1.2846	$\frac{1}{778}$	3.302	1.2999	$\frac{1}{769}$	3.341	1.3153	$\frac{1}{760}$	3.380	1.3307	$\frac{1}{751}$	3.419	1.3460	$\frac{1}{742}$
3.186	1.2543	$\frac{1}{796}$	3.225	1.2696	$\frac{1}{887}$	3.264	1.2850	$\frac{1}{778}$	3.303	1.3003	$\frac{1}{768}$	3.342	1.3157	$\frac{1}{759}$	3.381	1.3310	$\frac{1}{751}$	3.420	1.3464	$\frac{1}{742}$
3.187	1.2547	$\frac{1}{796}$	3.226	1.2700	$\frac{1}{787}$	3.265	1.2854	$\frac{1}{777}$	3.304	1.3007	$\frac{1}{768}$	3.343	1.3161	$\frac{1}{759}$	3.382	1.3314	$\frac{1}{750}$	3.421	1.3468	$\frac{1}{742}$
3.188	1.2551	$\frac{1}{796}$	3.227	1.2704	$\frac{1}{787}$	3.266	1.2858	$\frac{1}{777}$	3.305	1.3011	$\frac{1}{768}$	3.344	1.3165	$\frac{1}{759}$	3.383	1.3318	$\frac{1}{750}$	3.422	1.3472	$\frac{1}{742}$
3.189	1.2555	$\frac{1}{796}$	3.228	1.2708	$\frac{1}{786}$	3.267	1.2862	$\frac{1}{777}$	3.306	1.3015	$\frac{1}{768}$	3.345	1.3169	$\frac{1}{759}$	3.384	1.3322	$\frac{1}{750}$	3.423	1.3476	$\frac{1}{741}$
3.190	1.2559	$\frac{1}{796}$	3.229	1.2712	$\frac{1}{786}$	3.268	1.2866	$\frac{1}{777}$	3.307	1.3019	$\frac{1}{767}$	3.346	1.3173	$\frac{1}{759}$	3.385	1.3326	$\frac{1}{750}$	3.424	1.3480	$\frac{1}{741}$
3.191	1.2562	$\frac{1}{795}$	3.230	1.2716	$\frac{1}{786}$	3.269	1.2870	$\frac{1}{776}$	3.308	1.3023	$\frac{1}{767}$	3.347	1.3177	$\frac{1}{758}$	3.386	1.3330	$\frac{1}{750}$	3.425	1.3484	$\frac{1}{741}$
3.192	1.2566	$\frac{1}{795}$	3.231	1.2720	$\frac{1}{786}$	3.270	1.2873	$\frac{1}{776}$	3.309	1.3027	$\frac{1}{767}$	3.348	1.3181	$\frac{1}{758}$	3.387	1.3334	$\frac{1}{749}$	3.426	1.3488	$\frac{1}{741}$
3.193	1.2570	$\frac{1}{795}$	3.232	1.2724	$\frac{1}{785}$	3.271	1.2877	$\frac{1}{776}$	3.310	1.3031	$\frac{1}{767}$	3.349	1.3185	$\frac{1}{758}$	3.388	1.3338	$\frac{1}{749}$	3.427	1.3492	$\frac{1}{741}$
3.194	1.2574	$\frac{1}{795}$	3.233	1.2728	$\frac{1}{785}$	3.272	1.2881	$\frac{1}{776}$	3.311	1.3035	$\frac{1}{767}$	3.350	1.3188	$\frac{1}{758}$	3.389	1.3342	$\frac{1}{749}$	3.428	1.3496	$\frac{1}{740}$
3.195	1.2578	$\frac{1}{794}$	3.234	1.2732	$\frac{1}{785}$	3.273	1.2885	$\frac{1}{775}$	3.312	1.3039	$\frac{1}{766}$	3.351	1.3192	$\frac{1}{757}$	3.390	1.3346	$\frac{1}{749}$	3.429	1.3499	$\frac{1}{740}$
3.196	1.2582	$\frac{1}{794}$	3.235	1.2736	$\frac{1}{785}$	3.274	1.2889	$\frac{1}{775}$	3.313	1.3043	$\frac{1}{766}$	3.352	1.3196	$\frac{1}{757}$	3.391	1.3350	$\frac{1}{748}$	3.430	1.3503	$\frac{1}{740}$
3.197	1.2586	$\frac{1}{794}$	3.236	1.2740	$\frac{1}{784}$	3.275	1.2893	$\frac{1}{775}$	3.314	1.3047	$\frac{1}{766}$	3.353	1.3200	$\frac{1}{757}$	3.392	1.3354	$\frac{1}{748}$	3.431	1.3507	$\frac{1}{740}$
3.198	1.2590	$\frac{1}{794}$	3.237	1.2744	$\frac{1}{784}$	3.276	1.2897	$\frac{1}{775}$	3.315	1.3051	$\frac{1}{766}$	3.354	1.3204	$\frac{1}{757}$	3.393	1.3358	$\frac{1}{748}$	3.432	1.3511	$\frac{1}{740}$
3.199	1.2594	$\frac{1}{793}$	3.238	1.2748	$\frac{1}{784}$	3.277	1.2901	$\frac{1}{775}$	3.316	1.3055	$\frac{1}{765}$	3.355	1.3208	$\frac{1}{756}$	3.394	1.3362	$\frac{1}{748}$	3.433	1.3515	$\frac{1}{739}$
3.200	1.2598	$\frac{1}{793}$	3.239	1.2751	$\frac{1}{784}$	3.278	1.2905	$\frac{1}{774}$	3.317	1.3059	$\frac{1}{765}$	3.356	1.3212	$\frac{1}{756}$	3.395	1.3366	$\frac{1}{747}$	3.434	1.3519	$\frac{1}{739}$
3.201	1.2602	$\frac{1}{793}$	3.240	1.2755	$\frac{1}{783}$	3.279	1.2909	$\frac{1}{774}$	3.318	1.3062	$\frac{1}{765}$	3.357	1.3216	$\frac{1}{756}$	3.396	1.3370	$\frac{1}{747}$	3.435	1.3523	$\frac{1}{739}$
3.202	1.2606	$\frac{1}{793}$	3.241	1.2759	$\frac{1}{783}$	3.280	1.2913	$\frac{1}{774}$	3.319	1.3066	$\frac{1}{765}$	3.358	1.3220	$\frac{1}{756}$	3.397	1.3373	$\frac{1}{747}$	3.436	1.3527	$\frac{1}{739}$
3.203	1.2610	$\frac{1}{792}$	3.242	1.2763	$\frac{1}{783}$	3.281	1.2917	$\frac{1}{774}$	3.320	1.3070	$\frac{1}{764}$	3.359	1.3224	$\frac{1}{756}$	3.398	1.3377	$\frac{1}{747}$	3.437	1.3531	$\frac{1}{738}$
3.204	1.2614	$\frac{1}{792}$	3.243	1.2767	$\frac{1}{783}$	3.282	1.2921	$\frac{1}{773}$	3.321	1.3074	$\frac{1}{764}$	3.360	1.3228	$\frac{1}{755}$	3.399	1.3381	$\frac{1}{747}$	3.438	1.3535	$\frac{1}{738}$
3.205	1.2618	$\frac{1}{792}$	3.244	1.2771	$\frac{1}{783}$	3.283	1.2925	$\frac{1}{773}$	3.322	1.3078	$\frac{1}{764}$	3.361	1.3232	$\frac{1}{755}$	3.400	1.3385	$\frac{1}{746}$	3.439	1.3539	$\frac{1}{738}$
3.206	1.2622	$\frac{1}{792}$	3.245	1.2775	$\frac{1}{782}$	3.284	1.2929	$\frac{1}{773}$	3.323	1.3082	$\frac{1}{764}$	3.362	1.3236	$\frac{1}{755}$	3.401	1.3389	$\frac{1}{746}$	3.440	1.3543	$\frac{1}{738}$
3.207	1.2625	$\frac{1}{791}$	3.246	1.2779	$\frac{1}{782}$	3.285	1.2933	$\frac{1}{773}$	3.324	1.3086	$\frac{1}{764}$	3.363	1.3240	$\frac{1}{755}$	3.402	1.3393	$\frac{1}{746}$	3.441	1.3547	$\frac{1}{738}$
3.208	1.2629	$\frac{1}{791}$	3.247	1.2783	$\frac{1}{782}$	3.286	1.2936	$\frac{1}{772}$	3.325	1.3090	$\frac{1}{763}$	3.364	1.3244	$\frac{1}{754}$	3.403	1.3397	$\frac{1}{746}$	3.442	1.3551	$\frac{1}{737}$
3.209	1.2633	$\frac{1}{791}$	3.248	1.2787	$\frac{1}{781}$	3.287	1.2940	$\frac{1}{772}$	3.326	1.3094	$\frac{1}{763}$	3.365	1.3248	$\frac{1}{754}$	3.404	1.3401	$\frac{1}{746}$	3.443	1.3555	$\frac{1}{737}$
3.210	1.2637	$\frac{1}{791}$	3.249	1.2791	$\frac{1}{781}$	3.288	1.2944	$\frac{1}{772}$	3.327	1.3098	$\frac{1}{763}$	3.366	1.3251	$\frac{1}{754}$	3.405	1.3405	$\frac{1}{745}$	3.444	1.3559	$\frac{1}{737}$
3.211	1.2641	$\frac{1}{790}$	3.250	1.2795	$\frac{1}{781}$	3.289	1.2948	$\frac{1}{772}$	3.328	1.3102	$\frac{1}{763}$	3.367	1.3255	$\frac{1}{754}$	3.406	1.3409	$\frac{1}{745}$	3.445	1.3562	$\frac{1}{737}$
3.212	1.2645	$\frac{1}{790}$	3.251	1.2299	$\frac{1}{781}$	3.290	1.2952	$\frac{1}{771}$	3.329	1.3106	$\frac{1}{762}$	3.368	1.3259	$\frac{1}{754}$	3.407	1.3413	$\frac{1}{745}$	3.446	1.3566	$\frac{1}{736}$
3.213	1.2649	$\frac{1}{790}$	3.252	1.2803	$\frac{1}{780}$	3.291	1.2956	$\frac{1}{771}$	3.330	1.3110	$\frac{1}{762}$	3.369	1.3263	$\frac{1}{753}$	3.408	1.3417	$\frac{1}{745}$	3.447	1.3570	$\frac{1}{736}$
3.214	1.2653	$\frac{1}{790}$	3.253	1.2807	$\frac{1}{780}$	3.292	1.2960	$\frac{1}{771}$	3.331	1.3114	$\frac{1}{762}$	3.370	1.3267	$\frac{1}{753}$	3.409	1.3421	$\frac{1}{744}$	3.448	1.3574	$\frac{1}{736}$
3.215	1.2657	$\frac{1}{789}$	3.254	1.2810	$\frac{1}{780}$	3.293	1.2964	$\frac{1}{771}$	3.332	1.3118	$\frac{1}{762}$	3.371	1.3271	$\frac{1}{753}$	3.410	1.3425	$\frac{1}{744}$	3.449	1.3578	$\frac{1}{736}$
3.216	1.2661	$\frac{1}{789}$	3.255	1.2814	$\frac{1}{780}$	3.294	1.2968	$\frac{1}{771}$	3.333	1.3122	$\frac{1}{761}$	3.372	1.3275	$\frac{1}{753}$	3.411	1.3429	$\frac{1}{744}$	3.450	1.3582	$\frac{1}{736}$
3.217	1.2665	$\frac{1}{789}$	3.256	1.2818	$\frac{1}{779}$	3.295	1.2972	$\frac{1}{770}$	3.334	1.3125	$\frac{1}{761}$	3.373	1.3279	$\frac{1}{752}$	3.412	1.3433	$\frac{1}{744}$	3.451	1.3586	$\frac{1}{735}$
3.218	1.2669	$\frac{1}{789}$	3.257	1.2822	$\frac{1}{779}$	3.296	1.2976	$\frac{1}{770}$	3.335	1.3129	$\frac{1}{761}$	3.374	1.3283	$\frac{1}{752}$	3.413	1.3436	$\frac{1}{744}$	3.452	1.3590	$\frac{1}{735}$
3.219	1.2673	$\frac{1}{788}$	3.258	1.2826	$\frac{1}{779}$	3.297	1.2980	$\frac{1}{769}$	3.336	1.3133	$\frac{1}{761}$	3.375	1.3287	$\frac{1}{752}$	3.414	1.3440	$\frac{1}{743}$	3.453	1.3594	$\frac{1}{735}$
3.220	1.2677	$\frac{1}{788}$	3.259	1.2830	$\frac{1}{779}$	3.298	1.2984	$\frac{1}{769}$	3.337	1.3137	$\frac{1}{761}$	3.376	1.3291	$\frac{1}{752}$	3.415	1.3444	$\frac{1}{743}$	3.454	1.3598	$\frac{1}{735}$
3.221	1.2681	$\frac{1}{788}$	3.260	1.2834	$\frac{1}{779}$	3.299	1.2988	$\frac{1}{769}$	3.338	1.3141	$\frac{1}{760}$	3.377	1.3295	$\frac{1}{752}$	3.416	1.3448	$\frac{1}{743}$	3.455	1.3602	$\frac{1}{735}$
3.222	1.2685	$\frac{1}{788}$	3.261	1.2838	$\frac{1}{778}$	3.300	1.2992	$\frac{1}{769}$	3.339	1.3145	$\frac{1}{760}$	3.378	1.3299	$\frac{1}{751}$	3.417	1.3452	$\frac{1}{743}$	3.456	1.3606	$\frac{1}{734}$



I.—Table for reduction of centimillimeters to fractions of an inch—Continued.

Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.
3.457	1.3010	$\frac{1}{731}$	3.496	1.3763	$\frac{1}{726}$	3.535	1.3917	$\frac{1}{718}$	3.574	1.4070	$\frac{1}{710}$	3.613	1.4224	$\frac{1}{702}$	3.652	1.4377	$\frac{1}{695}$	3.691	1.4531	$\frac{1}{688}$
3.458	1.3614	$\frac{1}{734}$	3.497	1.3767	$\frac{1}{726}$	3.536	1.3921	$\frac{1}{718}$	3.575	1.4074	$\frac{1}{710}$	3.614	1.4228	$\frac{1}{702}$	3.653	1.4381	$\frac{1}{695}$	3.692	1.4535	$\frac{1}{687}$
3.459	1.3618	$\frac{1}{734}$	3.498	1.3771	$\frac{1}{726}$	3.537	1.3925	$\frac{1}{718}$	3.576	1.4078	$\frac{1}{710}$	3.615	1.4232	$\frac{1}{702}$	3.654	1.4385	$\frac{1}{695}$	3.693	1.4539	$\frac{1}{687}$
3.460	1.3622	$\frac{1}{734}$	3.499	1.3775	$\frac{1}{725}$	3.538	1.3929	$\frac{1}{717}$	3.577	1.4082	$\frac{1}{710}$	3.616	1.4236	$\frac{1}{702}$	3.655	1.4389	$\frac{1}{694}$	3.694	1.4543	$\frac{1}{687}$
3.461	1.3625	$\frac{1}{733}$	3.500	1.3779	$\frac{1}{725}$	3.539	1.3933	$\frac{1}{717}$	3.578	1.4086	$\frac{1}{709}$	3.617	1.4240	$\frac{1}{703}$	3.656	1.4393	$\frac{1}{694}$	3.695	1.4547	$\frac{1}{687}$
3.462	1.3629	$\frac{1}{733}$	3.501	1.3783	$\frac{1}{725}$	3.540	1.3937	$\frac{1}{717}$	3.579	1.4090	$\frac{1}{709}$	3.618	1.4244	$\frac{1}{701}$	3.657	1.4397	$\frac{1}{694}$	3.696	1.4551	$\frac{1}{687}$
3.463	1.3633	$\frac{1}{733}$	3.502	1.3787	$\frac{1}{725}$	3.541	1.3940	$\frac{1}{717}$	3.580	1.4094	$\frac{1}{709}$	3.619	1.4248	$\frac{1}{701}$	3.658	1.4401	$\frac{1}{694}$	3.697	1.4555	$\frac{1}{686}$
3.464	1.3637	$\frac{1}{733}$	3.503	1.3791	$\frac{1}{725}$	3.542	1.3944	$\frac{1}{717}$	3.581	1.4098	$\frac{1}{709}$	3.620	1.4251	$\frac{1}{701}$	3.659	1.4405	$\frac{1}{694}$	3.698	1.4559	$\frac{1}{686}$
3.465	1.3641	$\frac{1}{732}$	3.504	1.3795	$\frac{1}{724}$	3.543	1.3948	$\frac{1}{716}$	3.582	1.4102	$\frac{1}{709}$	3.621	1.4255	$\frac{1}{701}$	3.660	1.4409	$\frac{1}{693}$	3.699	1.4563	$\frac{1}{686}$
3.466	1.3645	$\frac{1}{733}$	3.505	1.3799	$\frac{1}{724}$	3.544	1.3952	$\frac{1}{716}$	3.583	1.4106	$\frac{1}{708}$	3.622	1.4259	$\frac{1}{701}$	3.661	1.4413	$\frac{1}{693}$	3.700	1.4567	$\frac{1}{686}$
3.467	1.3649	$\frac{1}{732}$	3.506	1.3803	$\frac{1}{724}$	3.545	1.3956	$\frac{1}{716}$	3.584	1.4110	$\frac{1}{708}$	3.623	1.4263	$\frac{1}{700}$	3.662	1.4417	$\frac{1}{693}$	3.701	1.4571	$\frac{1}{686}$
3.468	1.3653	$\frac{1}{732}$	3.507	1.3807	$\frac{1}{724}$	3.546	1.3960	$\frac{1}{716}$	3.585	1.4114	$\frac{1}{708}$	3.624	1.4267	$\frac{1}{700}$	3.663	1.4421	$\frac{1}{693}$	3.702	1.4575	$\frac{1}{686}$
3.469	1.3657	$\frac{1}{732}$	3.508	1.3810	$\frac{1}{723}$	3.547	1.3964	$\frac{1}{716}$	3.586	1.4118	$\frac{1}{706}$	3.625	1.4271	$\frac{1}{700}$	3.664	1.4425	$\frac{1}{693}$	3.703	1.4579	$\frac{1}{685}$
3.470	1.3661	$\frac{1}{731}$	3.509	1.3814	$\frac{1}{723}$	3.548	1.3968	$\frac{1}{715}$	3.587	1.4122	$\frac{1}{708}$	3.626	1.4275	$\frac{1}{700}$	3.665	1.4429	$\frac{1}{693}$	3.704	1.4583	$\frac{1}{685}$
3.471	1.3665	$\frac{1}{731}$	3.510	1.3818	$\frac{1}{723}$	3.549	1.3972	$\frac{1}{715}$	3.588	1.4125	$\frac{1}{707}$	3.627	1.4279	$\frac{1}{700}$	3.666	1.4433	$\frac{1}{692}$	3.705	1.4587	$\frac{1}{685}$
3.472	1.3669	$\frac{1}{731}$	3.511	1.3822	$\frac{1}{723}$	3.550	1.3976	$\frac{1}{715}$	3.589	1.4129	$\frac{1}{707}$	3.628	1.4283	$\frac{1}{700}$	3.667	1.4437	$\frac{1}{692}$	3.706	1.4591	$\frac{1}{685}$
3.473	1.3673	$\frac{1}{731}$	3.512	1.3826	$\frac{1}{723}$	3.551	1.3980	$\frac{1}{715}$	3.590	1.4133	$\frac{1}{707}$	3.629	1.4287	$\frac{1}{699}$	3.668	1.4441	$\frac{1}{692}$	3.707	1.4595	$\frac{1}{685}$
3.474	1.3677	$\frac{1}{731}$	3.513	1.3830	$\frac{1}{722}$	3.552	1.3984	$\frac{1}{715}$	3.591	1.4137	$\frac{1}{707}$	3.630	1.4291	$\frac{1}{699}$	3.669	1.4445	$\frac{1}{692}$	3.708	1.4599	$\frac{1}{684}$
3.475	1.3681	$\frac{1}{730}$	3.514	1.3834	$\frac{1}{723}$	3.553	1.3988	$\frac{1}{714}$	3.592	1.4141	$\frac{1}{707}$	3.631	1.4295	$\frac{1}{699}$	3.670	1.4449	$\frac{1}{692}$	3.709	1.4603	$\frac{1}{684}$
3.476	1.3685	$\frac{1}{730}$	3.515	1.3838	$\frac{1}{723}$	3.554	1.3992	$\frac{1}{714}$	3.593	1.4145	$\frac{1}{706}$	3.632	1.4299	$\frac{1}{699}$	3.671	1.4453	$\frac{1}{691}$	3.710	1.4607	$\frac{1}{684}$
3.477	1.3689	$\frac{1}{730}$	3.516	1.3842	$\frac{1}{722}$	3.555	1.3996	$\frac{1}{714}$	3.594	1.4149	$\frac{1}{706}$	3.633	1.4303	$\frac{1}{699}$	3.672	1.4457	$\frac{1}{691}$	3.711	1.4611	$\frac{1}{684}$
3.478	1.3692	$\frac{1}{730}$	3.517	1.3846	$\frac{1}{722}$	3.556	1.3999	$\frac{1}{714}$	3.595	1.4153	$\frac{1}{706}$	3.634	1.4307	$\frac{1}{698}$	3.673	1.4461	$\frac{1}{691}$	3.712	1.4615	$\frac{1}{684}$
3.479	1.3696	$\frac{1}{730}$	3.518	1.3850	$\frac{1}{721}$	3.557	1.4003	$\frac{1}{713}$	3.596	1.4157	$\frac{1}{706}$	3.635	1.4310	$\frac{1}{698}$	3.674	1.4465	$\frac{1}{691}$	3.713	1.4619	$\frac{1}{683}$
3.480	1.3700	$\frac{1}{729}$	3.519	1.3854	$\frac{1}{721}$	3.558	1.4007	$\frac{1}{713}$	3.597	1.4161	$\frac{1}{706}$	3.636	1.4314	$\frac{1}{698}$	3.675	1.4469	$\frac{1}{691}$	3.714	1.4623	$\frac{1}{683}$
3.481	1.3704	$\frac{1}{729}$	3.520	1.3858	$\frac{1}{721}$	3.559	1.4011	$\frac{1}{713}$	3.598	1.4165	$\frac{1}{705}$	3.637	1.4318	$\frac{1}{698}$	3.676	1.4473	$\frac{1}{691}$	3.715	1.4627	$\frac{1}{683}$
3.482	1.3708	$\frac{1}{729}$	3.521	1.3862	$\frac{1}{721}$	3.560	1.4015	$\frac{1}{713}$	3.599	1.4169	$\frac{1}{705}$	3.638	1.4322	$\frac{1}{698}$	3.677	1.4477	$\frac{1}{690}$	3.716	1.4631	$\frac{1}{683}$
3.483	1.3712	$\frac{1}{729}$	3.522	1.3866	$\frac{1}{721}$	3.561	1.4019	$\frac{1}{713}$	3.600	1.4173	$\frac{1}{705}$	3.639	1.4326	$\frac{1}{697}$	3.678	1.4481	$\frac{1}{690}$	3.717	1.4635	$\frac{1}{683}$
3.484	1.3716	$\frac{1}{728}$	3.523	1.3870	$\frac{1}{720}$	3.562	1.4023	$\frac{1}{712}$	3.601	1.4177	$\frac{1}{705}$	3.640	1.4330	$\frac{1}{697}$	3.679	1.4485	$\frac{1}{690}$	3.718	1.4639	$\frac{1}{682}$
3.485	1.3720	$\frac{1}{728}$	3.524	1.3874	$\frac{1}{720}$	3.563	1.4027	$\frac{1}{712}$	3.602	1.4181	$\frac{1}{705}$	3.641	1.4334	$\frac{1}{697}$	3.680	1.4489	$\frac{1}{690}$	3.719	1.4643	$\frac{1}{683}$
3.486	1.3724	$\frac{1}{728}$	3.525	1.3877	$\frac{1}{720}$	3.564	1.4031	$\frac{1}{712}$	3.603	1.4185	$\frac{1}{704}$	3.642	1.4338	$\frac{1}{697}$	3.681	1.4493	$\frac{1}{690}$	3.720	1.4647	$\frac{1}{683}$
3.487	1.3728	$\frac{1}{728}$	3.526	1.3881	$\frac{1}{720}$	3.565	1.4035	$\frac{1}{712}$	3.604	1.4189	$\frac{1}{704}$	3.643	1.4342	$\frac{1}{697}$	3.682	1.4497	$\frac{1}{690}$	3.721	1.4651	$\frac{1}{683}$
3.488	1.3732	$\frac{1}{728}$	3.527	1.3885	$\frac{1}{720}$	3.566	1.4039	$\frac{1}{712}$	3.605	1.4192	$\frac{1}{704}$	3.644	1.4346	$\frac{1}{697}$	3.683	1.4501	$\frac{1}{690}$	3.722	1.4655	$\frac{1}{683}$
3.489	1.3736	$\frac{1}{727}$	3.528	1.3889	$\frac{1}{719}$	3.567	1.4043	$\frac{1}{711}$	3.606	1.4196	$\frac{1}{704}$	3.645	1.4350	$\frac{1}{696}$	3.684	1.4505	$\frac{1}{690}$	3.723	1.4659	$\frac{1}{682}$
3.490	1.3740	$\frac{1}{727}$	3.529	1.3893	$\frac{1}{719}$	3.568	1.4047	$\frac{1}{711}$	3.607	1.4200	$\frac{1}{704}$	3.646	1.4354	$\frac{1}{696}$	3.685	1.4509	$\frac{1}{690}$	3.724	1.4663	$\frac{1}{681}$
3.491	1.3744	$\frac{1}{727}$	3.530	1.3897	$\frac{1}{719}$	3.569	1.4051	$\frac{1}{711}$	3.608	1.4204	$\frac{1}{703}$	3.647	1.4358	$\frac{1}{696}$	3.686	1.4513	$\frac{1}{690}$	3.725	1.4667	$\frac{1}{681}$
3.492	1.3748	$\frac{1}{727}$	3.531	1.3901	$\frac{1}{719}$	3.570	1.4055	$\frac{1}{711}$	3.609	1.4208	$\frac{1}{703}$	3.648	1.4362	$\frac{1}{696}$	3.687	1.4517	$\frac{1}{690}$	3.726	1.4671	$\frac{1}{681}$
3.493	1.3751	$\frac{1}{727}$	3.532	1.3905	$\frac{1}{719}$	3.571	1.4059	$\frac{1}{711}$	3.610	1.4212	$\frac{1}{703}$	3.649	1.4366	$\frac{1}{696}$	3.688	1.4521	$\frac{1}{690}$	3.727	1.4675	$\frac{1}{681}$
3.494	1.3755	$\frac{1}{726}$	3.533	1.3909	$\frac{1}{718}$	3.572	1.4062	$\frac{1}{710}$	3.611	1.4216	$\frac{1}{703}$	3.650	1.4370	$\frac{1}{695}$	3.689	1.4525	$\frac{1}{690}$	3.728	1.4679	$\frac{1}{681}$
3.495	1.3759	$\frac{1}{726}$	3.534	1.3913	$\frac{1}{718}$	3.573	1.4066	$\frac{1}{710}$	3.612	1.4220	$\frac{1}{703}$	3.651	1.4374	$\frac{1}{695}$	3.690	1.4529	$\frac{1}{690}$	3.729	1.4683	$\frac{1}{681}$



I.—Table for reduction of centimillimeters to fractions of an inch—Continued.

Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.
3.730	1.4685	$\frac{1}{680}$	3.760	1.4838	$\frac{1}{673}$	3.808	1.4992	$\frac{1}{666}$	3.847	1.5145	$\frac{1}{660}$	3.896	1.5299	$\frac{1}{653}$	3.925	1.5452	$\frac{1}{647}$	3.964	1.5606	$\frac{1}{640}$
3.781	1.4688	$\frac{1}{680}$	3.770	1.4842	$\frac{1}{673}$	3.809	1.4996	$\frac{1}{666}$	3.848	1.5149	$\frac{1}{660}$	3.887	1.5303	$\frac{1}{653}$	3.926	1.5456	$\frac{1}{646}$	3.965	1.5610	$\frac{1}{640}$
3.732	1.4692	$\frac{1}{680}$	3.771	1.4846	$\frac{1}{673}$	3.810	1.4999	$\frac{1}{666}$	3.849	1.5153	$\frac{1}{660}$	3.888	1.5307	$\frac{1}{653}$	3.927	1.5460	$\frac{1}{646}$	3.966	1.5614	$\frac{1}{640}$
3.733	1.4696	$\frac{1}{680}$	3.772	1.4850	$\frac{1}{673}$	3.811	1.5003	$\frac{1}{666}$	3.850	1.5157	$\frac{1}{660}$	3.889	1.5310	$\frac{1}{653}$	3.928	1.5464	$\frac{1}{646}$	3.967	1.5618	$\frac{1}{640}$
3.734	1.4700	$\frac{1}{680}$	3.773	1.4854	$\frac{1}{673}$	3.812	1.5007	$\frac{1}{666}$	3.851	1.5161	$\frac{1}{660}$	3.890	1.5314	$\frac{1}{653}$	3.929	1.5468	$\frac{1}{646}$	3.968	1.5622	$\frac{1}{640}$
3.735	1.4704	$\frac{1}{679}$	3.774	1.4858	$\frac{1}{672}$	3.813	1.5011	$\frac{1}{666}$	3.852	1.5165	$\frac{1}{659}$	3.891	1.5318	$\frac{1}{652}$	3.930	1.5472	$\frac{1}{646}$	3.969	1.5626	$\frac{1}{639}$
3.736	1.4708	$\frac{1}{679}$	3.775	1.4862	$\frac{1}{672}$	3.814	1.5015	$\frac{1}{665}$	3.853	1.5169	$\frac{1}{659}$	3.892	1.5322	$\frac{1}{652}$	3.931	1.5476	$\frac{1}{646}$	3.970	1.5630	$\frac{1}{639}$
3.737	1.4712	$\frac{1}{679}$	3.776	1.4866	$\frac{1}{672}$	3.815	1.5019	$\frac{1}{665}$	3.854	1.5173	$\frac{1}{659}$	3.893	1.5326	$\frac{1}{652}$	3.932	1.5480	$\frac{1}{645}$	3.971	1.5634	$\frac{1}{639}$
3.738	1.4716	$\frac{1}{679}$	3.777	1.4870	$\frac{1}{672}$	3.816	1.5023	$\frac{1}{665}$	3.855	1.5177	$\frac{1}{658}$	3.894	1.5330	$\frac{1}{652}$	3.933	1.5484	$\frac{1}{645}$	3.972	1.5638	$\frac{1}{639}$
3.739	1.4720	$\frac{1}{679}$	3.778	1.4874	$\frac{1}{672}$	3.817	1.5027	$\frac{1}{665}$	3.856	1.5181	$\frac{1}{658}$	3.895	1.5334	$\frac{1}{651}$	3.934	1.5488	$\frac{1}{645}$	3.973	1.5642	$\frac{1}{639}$
3.740	1.4724	$\frac{1}{679}$	3.779	1.4878	$\frac{1}{672}$	3.818	1.5031	$\frac{1}{665}$	3.857	1.5185	$\frac{1}{658}$	3.896	1.5338	$\frac{1}{651}$	3.935	1.5492	$\frac{1}{645}$	3.974	1.5646	$\frac{1}{639}$
3.741	1.4728	$\frac{1}{678}$	3.780	1.4881	$\frac{1}{671}$	3.819	1.5035	$\frac{1}{665}$	3.858	1.5189	$\frac{1}{658}$	3.897	1.5342	$\frac{1}{651}$	3.936	1.5496	$\frac{1}{645}$	3.975	1.5650	$\frac{1}{638}$
3.742	1.4732	$\frac{1}{678}$	3.781	1.4885	$\frac{1}{671}$	3.820	1.5039	$\frac{1}{664}$	3.859	1.5193	$\frac{1}{658}$	3.898	1.5346	$\frac{1}{651}$	3.937	1.5499	$\frac{1}{645}$	3.976	1.5654	$\frac{1}{638}$
3.743	1.4736	$\frac{1}{678}$	3.782	1.4889	$\frac{1}{671}$	3.821	1.5043	$\frac{1}{664}$	3.860	1.5197	$\frac{1}{658}$	3.899	1.5350	$\frac{1}{651}$	3.938	1.5503	$\frac{1}{644}$	3.977	1.5658	$\frac{1}{638}$
3.744	1.4740	$\frac{1}{678}$	3.783	1.4893	$\frac{1}{671}$	3.822	1.5047	$\frac{1}{664}$	3.861	1.5201	$\frac{1}{657}$	3.900	1.5354	$\frac{1}{651}$	3.939	1.5507	$\frac{1}{644}$	3.978	1.5662	$\frac{1}{638}$
3.745	1.4744	$\frac{1}{678}$	3.784	1.4897	$\frac{1}{671}$	3.823	1.5051	$\frac{1}{664}$	3.862	1.5205	$\frac{1}{657}$	3.901	1.5358	$\frac{1}{651}$	3.940	1.5511	$\frac{1}{614}$	3.979	1.5666	$\frac{1}{638}$
3.746	1.4748	$\frac{1}{678}$	3.785	1.4901	$\frac{1}{670}$	3.824	1.5055	$\frac{1}{664}$	3.863	1.5209	$\frac{1}{657}$	3.902	1.5362	$\frac{1}{650}$	3.941	1.5515	$\frac{1}{614}$	3.980	1.5670	$\frac{1}{638}$
3.747	1.4751	$\frac{1}{677}$	3.786	1.4905	$\frac{1}{670}$	3.825	1.5059	$\frac{1}{663}$	3.864	1.5213	$\frac{1}{657}$	3.903	1.5366	$\frac{1}{650}$	3.942	1.5519	$\frac{1}{614}$	3.981	1.5674	$\frac{1}{637}$
3.748	1.4755	$\frac{1}{677}$	3.787	1.4909	$\frac{1}{670}$	3.826	1.5063	$\frac{1}{663}$	3.865	1.5217	$\frac{1}{657}$	3.904	1.5370	$\frac{1}{650}$	3.943	1.5523	$\frac{1}{614}$	3.982	1.5678	$\frac{1}{637}$
3.749	1.4759	$\frac{1}{677}$	3.788	1.4913	$\frac{1}{670}$	3.827	1.5067	$\frac{1}{663}$	3.866	1.5221	$\frac{1}{656}$	3.905	1.5374	$\frac{1}{650}$	3.944	1.5527	$\frac{1}{614}$	3.983	1.5682	$\frac{1}{637}$
3.750	1.4763	$\frac{1}{677}$	3.789	1.4917	$\frac{1}{670}$	3.828	1.5071	$\frac{1}{663}$	3.867	1.5225	$\frac{1}{656}$	3.906	1.5378	$\frac{1}{650}$	3.945	1.5531	$\frac{1}{613}$	3.984	1.5686	$\frac{1}{637}$
3.751	1.4767	$\frac{1}{677}$	3.790	1.4921	$\frac{1}{669}$	3.829	1.5075	$\frac{1}{663}$	3.868	1.5229	$\frac{1}{656}$	3.907	1.5382	$\frac{1}{650}$	3.946	1.5535	$\frac{1}{613}$	3.985	1.5690	$\frac{1}{637}$
3.752	1.4771	$\frac{1}{676}$	3.791	1.4925	$\frac{1}{669}$	3.830	1.5079	$\frac{1}{663}$	3.869	1.5233	$\frac{1}{656}$	3.908	1.5386	$\frac{1}{649}$	3.947	1.5539	$\frac{1}{613}$	3.986	1.5694	$\frac{1}{637}$
3.753	1.4775	$\frac{1}{676}$	3.792	1.4929	$\frac{1}{669}$	3.831	1.5083	$\frac{1}{662}$	3.870	1.5237	$\frac{1}{656}$	3.909	1.5390	$\frac{1}{649}$	3.948	1.5543	$\frac{1}{613}$	3.987	1.5698	$\frac{1}{636}$
3.754	1.4779	$\frac{1}{676}$	3.793	1.4933	$\frac{1}{669}$	3.832	1.5087	$\frac{1}{662}$	3.871	1.5241	$\frac{1}{656}$	3.910	1.5394	$\frac{1}{649}$	3.949	1.5547	$\frac{1}{613}$	3.988	1.5702	$\frac{1}{636}$
3.755	1.4783	$\frac{1}{676}$	3.794	1.4937	$\frac{1}{669}$	3.833	1.5091	$\frac{1}{662}$	3.872	1.5245	$\frac{1}{655}$	3.911	1.5398	$\frac{1}{649}$	3.950	1.5551	$\frac{1}{612}$	3.989	1.5706	$\frac{1}{636}$
3.756	1.4787	$\frac{1}{676}$	3.795	1.4941	$\frac{1}{669}$	3.834	1.5095	$\frac{1}{662}$	3.873	1.5249	$\frac{1}{655}$	3.912	1.5402	$\frac{1}{649}$	3.951	1.5555	$\frac{1}{612}$	3.990	1.5710	$\frac{1}{636}$
3.757	1.4791	$\frac{1}{675}$	3.796	1.4945	$\frac{1}{669}$	3.835	1.5099	$\frac{1}{662}$	3.874	1.5253	$\frac{1}{655}$	3.913	1.5406	$\frac{1}{649}$	3.952	1.5559	$\frac{1}{612}$	3.991	1.5714	$\frac{1}{636}$
3.758	1.4795	$\frac{1}{675}$	3.797	1.4949	$\frac{1}{668}$	3.836	1.5103	$\frac{1}{962}$	3.875	1.5257	$\frac{1}{655}$	3.914	1.5410	$\frac{1}{648}$	3.953	1.5563	$\frac{1}{612}$	3.992	1.5718	$\frac{1}{636}$
3.759	1.4799	$\frac{1}{675}$	3.798	1.4953	$\frac{1}{668}$	3.837	1.5107	$\frac{1}{661}$	3.876	1.5261	$\frac{1}{655}$	3.915	1.5414	$\frac{1}{648}$	3.954	1.5567	$\frac{1}{612}$	3.993	1.5722	$\frac{1}{636}$
3.760	1.4803	$\frac{1}{675}$	3.799	1.4957	$\frac{1}{668}$	3.838	1.5111	$\frac{1}{661}$	3.877	1.5265	$\frac{1}{655}$	3.916	1.5418	$\frac{1}{648}$	3.955	1.5571	$\frac{1}{612}$	3.994	1.5726	$\frac{1}{635}$
3.761	1.4807	$\frac{1}{675}$	3.800	1.4961	$\frac{1}{668}$	3.839	1.5115	$\frac{1}{661}$	3.878	1.5269	$\frac{1}{655}$	3.917	1.5422	$\frac{1}{648}$	3.956	1.5575	$\frac{1}{611}$	3.995	1.5730	$\frac{1}{635}$
3.762	1.4811	$\frac{1}{675}$	3.801	1.4965	$\frac{1}{668}$	3.840	1.5119	$\frac{1}{661}$	3.879	1.5273	$\frac{1}{654}$	3.918	1.5426	$\frac{1}{648}$	3.957	1.5579	$\frac{1}{611}$	3.996	1.5734	$\frac{1}{635}$
3.763	1.4815	$\frac{1}{674}$	3.802	1.4969	$\frac{1}{667}$	3.841	1.5123	$\frac{1}{661}$	3.880	1.5277	$\frac{1}{654}$	3.919	1.5430	$\frac{1}{648}$	3.958	1.5583	$\frac{1}{611}$	3.997	1.5738	$\frac{1}{635}$
3.764	1.4819	$\frac{1}{674}$	3.803	1.4973	$\frac{1}{667}$	3.842	1.5127	$\frac{1}{661}$	3.881	1.5281	$\frac{1}{654}$	3.920	1.5434	$\frac{1}{647}$	3.959	1.5587	$\frac{1}{611}$	3.998	1.5742	$\frac{1}{635}$
3.765	1.4823	$\frac{1}{674}$	3.804	1.4977	$\frac{1}{667}$	3.843	1.5131	$\frac{1}{660}$	3.882	1.5285	$\frac{1}{654}$	3.921	1.5438	$\frac{1}{647}$	3.960	1.5591	$\frac{1}{611}$	3.999	1.5746	$\frac{1}{635}$
3.766	1.4827	$\frac{1}{674}$	3.805	1.4981	$\frac{1}{667}$	3.844	1.5135	$\frac{1}{660}$	3.883	1.5289	$\frac{1}{654}$	3.922	1.5442	$\frac{1}{647}$	3.961	1.5595	$\frac{1}{611}$	4.000	1.5750	$\frac{1}{634}$
3.767	1.4831	$\frac{1}{674}$	3.806	1.4985	$\frac{1}{667}$	3.845	1.5139	$\frac{1}{660}$	3.884	1.5293	$\frac{1}{653}$	3.923	1.5446	$\frac{1}{647}$	3.962	1.5599	$\frac{1}{610}$	4.001	1.5754	$\frac{1}{634}$
3.768	1.4835	$\frac{1}{674}$	3.807	1.4989	$\frac{1}{667}$	3.846	1.5143	$\frac{1}{660}$	3.885	1.5297	$\frac{1}{653}$	3.924	1.5450	$\frac{1}{647}$	3.963	1.5603	$\frac{1}{610}$	4.002	1.5758	$\frac{1}{634}$



I.—Table for reduction of centimillimeters to fractions of an inch—Continued.

Centimillimeters.	Thousands of an inch.	Fractions of an inch.	Centimillimeters.	Thousands of an inch.	Fractions of an inch.	Centimillimeters.	Thousands of an inch.	Fractions of an inch.	Centimillimeters.	Thousands of an inch.	Fractions of an inch.	Centimillimeters.	Thousands of an inch.	Fractions of an inch.	Centimillimeters.	Thousands of an inch.	Fractions of an inch.	Centimillimeters.	Thousands of an inch.	Fractions of an inch.
4.003	1.5750	$\frac{1}{634}$	4.042	1.5013	$\frac{1}{628}$	4.081	1.0000	$\frac{1}{622}$	4.120	1.0220	$\frac{1}{616}$	4.159	1.0373	$\frac{1}{610}$	4.198	1.0527	$\frac{1}{604}$	4.237	1.0681	$\frac{1}{598}$
4.004	1.5763	$\frac{1}{634}$	4.043	1.5017	$\frac{1}{628}$	4.082	1.0070	$\frac{1}{622}$	4.121	1.0224	$\frac{1}{616}$	4.160	1.0377	$\frac{1}{610}$	4.199	1.0531	$\frac{1}{604}$	4.238	1.0685	$\frac{1}{598}$
4.005	1.5767	$\frac{1}{634}$	4.044	1.5021	$\frac{1}{628}$	4.083	1.0074	$\frac{1}{622}$	4.122	1.0228	$\frac{1}{616}$	4.161	1.0381	$\frac{1}{610}$	4.200	1.0535	$\frac{1}{604}$	4.239	1.0689	$\frac{1}{598}$
4.006	1.5771	$\frac{1}{633}$	4.045	1.5025	$\frac{1}{623}$	4.084	1.0078	$\frac{1}{621}$	4.123	1.0232	$\frac{1}{615}$	4.162	1.0385	$\frac{1}{610}$	4.201	1.0539	$\frac{1}{604}$	4.240	1.0692	$\frac{1}{598}$
4.007	1.5775	$\frac{1}{633}$	4.046	1.5029	$\frac{1}{627}$	4.085	1.0082	$\frac{1}{621}$	4.124	1.0236	$\frac{1}{615}$	4.163	1.0389	$\frac{1}{610}$	4.202	1.0543	$\frac{1}{604}$	4.241	1.0696	$\frac{1}{598}$
4.008	1.5779	$\frac{1}{633}$	4.047	1.5033	$\frac{1}{627}$	4.086	1.0086	$\frac{1}{621}$	4.125	1.0240	$\frac{1}{615}$	4.164	1.0393	$\frac{1}{609}$	4.203	1.0547	$\frac{1}{604}$	4.242	1.0700	$\frac{1}{598}$
4.009	1.5783	$\frac{1}{633}$	4.048	1.5036	$\frac{1}{627}$	4.087	1.0090	$\frac{1}{621}$	4.126	1.0244	$\frac{1}{615}$	4.165	1.0397	$\frac{1}{609}$	4.204	1.0551	$\frac{1}{604}$	4.243	1.0704	$\frac{1}{598}$
4.010	1.5787	$\frac{1}{633}$	4.049	1.5040	$\frac{1}{627}$	4.088	1.0094	$\frac{1}{621}$	4.127	1.0247	$\frac{1}{615}$	4.166	1.0401	$\frac{1}{609}$	4.205	1.0555	$\frac{1}{603}$	4.244	1.0708	$\frac{1}{598}$
4.011	1.5791	$\frac{1}{633}$	4.050	1.5044	$\frac{1}{627}$	4.089	1.0098	$\frac{1}{621}$	4.128	1.0251	$\frac{1}{615}$	4.167	1.0405	$\frac{1}{609}$	4.206	1.0559	$\frac{1}{603}$	4.245	1.0712	$\frac{1}{598}$
4.012	1.5795	$\frac{1}{633}$	4.051	1.5048	$\frac{1}{627}$	4.090	1.0102	$\frac{1}{620}$	4.129	1.0255	$\frac{1}{615}$	4.168	1.0409	$\frac{1}{609}$	4.207	1.0563	$\frac{1}{603}$	4.246	1.0716	$\frac{1}{598}$
4.013	1.5799	$\frac{1}{633}$	4.052	1.5052	$\frac{1}{626}$	4.091	1.0106	$\frac{1}{620}$	4.130	1.0259	$\frac{1}{614}$	4.169	1.0413	$\frac{1}{609}$	4.208	1.0567	$\frac{1}{603}$	4.247	1.0720	$\frac{1}{597}$
4.014	1.5803	$\frac{1}{632}$	4.053	1.5056	$\frac{1}{626}$	4.092	1.0110	$\frac{1}{620}$	4.131	1.0263	$\frac{1}{614}$	4.170	1.0417	$\frac{1}{609}$	4.209	1.0571	$\frac{1}{603}$	4.248	1.0724	$\frac{1}{597}$
4.015	1.5807	$\frac{1}{632}$	4.054	1.5060	$\frac{1}{626}$	4.093	1.0114	$\frac{1}{620}$	4.132	1.0267	$\frac{1}{614}$	4.171	1.0421	$\frac{1}{608}$	4.210	1.0575	$\frac{1}{603}$	4.249	1.0728	$\frac{1}{597}$
4.016	1.5811	$\frac{1}{632}$	4.055	1.5064	$\frac{1}{626}$	4.094	1.0118	$\frac{1}{620}$	4.133	1.0271	$\frac{1}{614}$	4.172	1.0425	$\frac{1}{608}$	4.211	1.0579	$\frac{1}{603}$	4.250	1.0732	$\frac{1}{597}$
4.017	1.5815	$\frac{1}{632}$	4.056	1.5068	$\frac{1}{626}$	4.095	1.0122	$\frac{1}{620}$	4.134	1.0275	$\frac{1}{614}$	4.173	1.0429	$\frac{1}{608}$	4.212	1.0583	$\frac{1}{603}$	4.251	1.0736	$\frac{1}{597}$
4.018	1.5819	$\frac{1}{632}$	4.057	1.5072	$\frac{1}{625}$	4.096	1.0126	$\frac{1}{620}$	4.135	1.0279	$\frac{1}{614}$	4.174	1.0433	$\frac{1}{608}$	4.213	1.0587	$\frac{1}{602}$	4.252	1.0740	$\frac{1}{597}$
4.019	1.5823	$\frac{1}{632}$	4.058	1.5076	$\frac{1}{625}$	4.097	1.0130	$\frac{1}{619}$	4.136	1.0283	$\frac{1}{614}$	4.175	1.0437	$\frac{1}{608}$	4.214	1.0591	$\frac{1}{603}$	4.253	1.0744	$\frac{1}{597}$
4.020	1.5826	$\frac{1}{631}$	4.059	1.5080	$\frac{1}{625}$	4.098	1.0134	$\frac{1}{619}$	4.137	1.0287	$\frac{1}{613}$	4.176	1.0441	$\frac{1}{608}$	4.215	1.0595	$\frac{1}{602}$	4.254	1.0747	$\frac{1}{596}$
4.021	1.5830	$\frac{1}{631}$	4.060	1.5084	$\frac{1}{625}$	4.099	1.0137	$\frac{1}{619}$	4.138	1.0291	$\frac{1}{613}$	4.177	1.0445	$\frac{1}{608}$	4.216	1.0599	$\frac{1}{602}$	4.255	1.0751	$\frac{1}{596}$
4.022	1.5834	$\frac{1}{631}$	4.061	1.5088	$\frac{1}{625}$	4.100	1.0141	$\frac{1}{619}$	4.139	1.0295	$\frac{1}{613}$	4.178	1.0449	$\frac{1}{607}$	4.217	1.0603	$\frac{1}{602}$	4.256	1.0755	$\frac{1}{596}$
4.023	1.5838	$\frac{1}{631}$	4.062	1.5092	$\frac{1}{625}$	4.101	1.0145	$\frac{1}{619}$	4.140	1.0299	$\frac{1}{613}$	4.179	1.0453	$\frac{1}{607}$	4.218	1.0607	$\frac{1}{602}$	4.257	1.0759	$\frac{1}{596}$
4.024	1.5842	$\frac{1}{631}$	4.063	1.5096	$\frac{1}{625}$	4.102	1.0149	$\frac{1}{619}$	4.141	1.0303	$\frac{1}{613}$	4.180	1.0457	$\frac{1}{607}$	4.219	1.0611	$\frac{1}{601}$	4.258	1.0763	$\frac{1}{596}$
4.025	1.5846	$\frac{1}{630}$	4.064	1.5100	$\frac{1}{624}$	4.103	1.0153	$\frac{1}{618}$	4.142	1.0307	$\frac{1}{613}$	4.181	1.0461	$\frac{1}{607}$	4.220	1.0615	$\frac{1}{601}$	4.259	1.0767	$\frac{1}{596}$
4.026	1.5850	$\frac{1}{630}$	4.065	1.5104	$\frac{1}{624}$	4.104	1.0157	$\frac{1}{618}$	4.143	1.0311	$\frac{1}{613}$	4.182	1.0465	$\frac{1}{607}$	4.221	1.0619	$\frac{1}{601}$	4.260	1.0771	$\frac{1}{596}$
4.027	1.5854	$\frac{1}{630}$	4.066	1.5107	$\frac{1}{624}$	4.105	1.0161	$\frac{1}{618}$	4.144	1.0315	$\frac{1}{612}$	4.183	1.0469	$\frac{1}{607}$	4.222	1.0623	$\frac{1}{601}$	4.261	1.0775	$\frac{1}{596}$
4.028	1.5858	$\frac{1}{630}$	4.067	1.0011	$\frac{1}{624}$	4.106	1.0165	$\frac{1}{618}$	4.145	1.0319	$\frac{1}{612}$	4.184	1.0473	$\frac{1}{606}$	4.223	1.0627	$\frac{1}{601}$	4.262	1.0779	$\frac{1}{595}$
4.029	1.5862	$\frac{1}{630}$	4.068	1.0015	$\frac{1}{621}$	4.107	1.0169	$\frac{1}{618}$	4.146	1.0323	$\frac{1}{612}$	4.185	1.0477	$\frac{1}{606}$	4.224	1.0631	$\frac{1}{601}$	4.263	1.0783	$\frac{1}{595}$
4.030	1.5866	$\frac{1}{630}$	4.069	1.0019	$\frac{1}{624}$	4.108	1.0173	$\frac{1}{618}$	4.147	1.0327	$\frac{1}{612}$	4.186	1.0481	$\frac{1}{606}$	4.225	1.0635	$\frac{1}{601}$	4.264	1.0787	$\frac{1}{595}$
4.031	1.5870	$\frac{1}{630}$	4.070	1.0023	$\frac{1}{624}$	4.109	1.0177	$\frac{1}{618}$	4.148	1.0331	$\frac{1}{612}$	4.187	1.0485	$\frac{1}{606}$	4.226	1.0639	$\frac{1}{600}$	4.265	1.0791	$\frac{1}{595}$
4.032	1.5873	$\frac{1}{629}$	4.071	1.0027	$\frac{1}{623}$	4.110	1.0181	$\frac{1}{617}$	4.149	1.0335	$\frac{1}{612}$	4.188	1.0489	$\frac{1}{606}$	4.227	1.0643	$\frac{1}{600}$	4.266	1.0795	$\frac{1}{595}$
4.033	1.5877	$\frac{1}{629}$	4.072	1.0031	$\frac{1}{623}$	4.111	1.0185	$\frac{1}{617}$	4.150	1.0339	$\frac{1}{611}$	4.189	1.0493	$\frac{1}{606}$	4.228	1.0647	$\frac{1}{600}$	4.267	1.0799	$\frac{1}{595}$
4.034	1.5881	$\frac{1}{629}$	4.073	1.0035	$\frac{1}{623}$	4.112	1.0189	$\frac{1}{617}$	4.151	1.0343	$\frac{1}{611}$	4.190	1.0497	$\frac{1}{606}$	4.229	1.0651	$\frac{1}{600}$	4.268	1.0803	$\frac{1}{595}$
4.035	1.5885	$\frac{1}{629}$	4.074	1.0039	$\frac{1}{623}$	4.113	1.0193	$\frac{1}{617}$	4.152	1.0347	$\frac{1}{611}$	4.191	1.0501	$\frac{1}{606}$	4.230	1.0655	$\frac{1}{600}$	4.269	1.0807	$\frac{1}{594}$
4.036	1.5889	$\frac{1}{629}$	4.075	1.0043	$\frac{1}{623}$	4.114	1.0197	$\frac{1}{617}$	4.153	1.0351	$\frac{1}{611}$	4.192	1.0505	$\frac{1}{606}$	4.231	1.0659	$\frac{1}{600}$	4.270	1.0811	$\frac{1}{594}$
4.037	1.5893	$\frac{1}{629}$	4.076	1.0047	$\frac{1}{623}$	4.115	1.0201	$\frac{1}{617}$	4.154	1.0355	$\frac{1}{611}$	4.193	1.0509	$\frac{1}{606}$	4.232	1.0663	$\frac{1}{600}$	4.271	1.0815	$\frac{1}{594}$
4.038	1.5897	$\frac{1}{628}$	4.077	1.0051	$\frac{1}{622}$	4.116	1.0205	$\frac{1}{617}$	4.155	1.0359	$\frac{1}{611}$	4.194	1.0513	$\frac{1}{606}$	4.233	1.0667	$\frac{1}{599}$	4.272	1.0819	$\frac{1}{594}$
4.039	1.5901	$\frac{1}{628}$	4.078	1.0055	$\frac{1}{622}$	4.117	1.0209	$\frac{1}{616}$	4.156	1.0363	$\frac{1}{611}$	4.195	1.0517	$\frac{1}{606}$	4.234	1.0671	$\frac{1}{599}$	4.273	1.0823	$\frac{1}{594}$
4.040	1.5905	$\frac{1}{628}$	4.079	1.0059	$\frac{1}{622}$	4.118	1.0213	$\frac{1}{616}$	4.157	1.0367	$\frac{1}{610}$	4.196	1.0521	$\frac{1}{606}$	4.235	1.0675	$\frac{1}{599}$	4.274	1.0827	$\frac{1}{594}$
4.041	1.5909	$\frac{1}{628}$	4.080	1.0063	$\frac{1}{622}$	4.119	1.0217	$\frac{1}{616}$	4.158	1.0371	$\frac{1}{610}$	4.197	1.0525	$\frac{1}{606}$	4.236	1.0679	$\frac{1}{599}$	4.275	1.0831	$\frac{1}{594}$



I.—Table for reduction of centimillimeters to fractions of an inch—Continued.

Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.
4.276	1.6834	$\frac{1}{593}$	4.316	1.6988	$\frac{1}{588}$	4.354	1.7141	$\frac{1}{583}$	4.393	1.7295	$\frac{1}{578}$	4.432	1.7448	$\frac{1}{573}$	4.471	1.7602	$\frac{1}{568}$	4.510	1.7755	$\frac{1}{563}$
4.277	1.6838	$\frac{1}{593}$	4.310	1.6992	$\frac{1}{588}$	4.355	1.7146	$\frac{1}{583}$	4.394	1.7299	$\frac{1}{577}$	4.433	1.7452	$\frac{1}{572}$	4.472	1.7604	$\frac{1}{567}$	4.511	1.7759	$\frac{1}{562}$
4.278	1.6842	$\frac{1}{593}$	4.317	1.6996	$\frac{1}{588}$	4.356	1.7149	$\frac{1}{583}$	4.395	1.7303	$\frac{1}{577}$	4.434	1.7456	$\frac{1}{572}$	4.473	1.7610	$\frac{1}{567}$	4.512	1.7763	$\frac{1}{562}$
4.279	1.6846	$\frac{1}{593}$	4.318	1.6999	$\frac{1}{588}$	4.357	1.7153	$\frac{1}{582}$	4.396	1.7307	$\frac{1}{577}$	4.435	1.7460	$\frac{1}{572}$	4.474	1.7614	$\frac{1}{567}$	4.513	1.7767	$\frac{1}{562}$
4.280	1.6850	$\frac{1}{593}$	4.319	1.7003	$\frac{1}{588}$	4.358	1.7157	$\frac{1}{582}$	4.397	1.7310	$\frac{1}{577}$	4.436	1.7464	$\frac{1}{572}$	4.475	1.7618	$\frac{1}{567}$	4.514	1.7771	$\frac{1}{562}$
4.281	1.6854	$\frac{1}{593}$	4.320	1.7007	$\frac{1}{587}$	4.359	1.7161	$\frac{1}{582}$	4.398	1.7314	$\frac{1}{577}$	4.437	1.7468	$\frac{1}{572}$	4.476	1.7622	$\frac{1}{567}$	4.515	1.7775	$\frac{1}{562}$
4.282	1.6858	$\frac{1}{593}$	4.321	1.7011	$\frac{1}{587}$	4.360	1.7165	$\frac{1}{582}$	4.399	1.7318	$\frac{1}{577}$	4.438	1.7472	$\frac{1}{572}$	4.477	1.7625	$\frac{1}{567}$	4.516	1.7779	$\frac{1}{562}$
4.283	1.6862	$\frac{1}{592}$	4.322	1.7015	$\frac{1}{587}$	4.361	1.7169	$\frac{1}{582}$	4.400	1.7322	$\frac{1}{577}$	4.439	1.7476	$\frac{1}{572}$	4.478	1.7629	$\frac{1}{567}$	4.517	1.7783	$\frac{1}{562}$
4.284	1.6866	$\frac{1}{592}$	4.323	1.7019	$\frac{1}{587}$	4.362	1.7173	$\frac{1}{582}$	4.401	1.7326	$\frac{1}{577}$	4.440	1.7480	$\frac{1}{572}$	4.479	1.7633	$\frac{1}{567}$	4.518	1.7787	$\frac{1}{562}$
4.285	1.6870	$\frac{1}{592}$	4.324	1.7023	$\frac{1}{587}$	4.363	1.7177	$\frac{1}{582}$	4.402	1.7330	$\frac{1}{576}$	4.441	1.7484	$\frac{1}{571}$	4.480	1.7637	$\frac{1}{566}$	4.519	1.7791	$\frac{1}{562}$
4.286	1.6873	$\frac{1}{592}$	4.325	1.7027	$\frac{1}{587}$	4.364	1.7181	$\frac{1}{581}$	4.403	1.7334	$\frac{1}{576}$	4.442	1.7488	$\frac{1}{571}$	4.481	1.7641	$\frac{1}{566}$	4.520	1.7795	$\frac{1}{561}$
4.287	1.6877	$\frac{1}{592}$	4.326	1.7031	$\frac{1}{587}$	4.365	1.7185	$\frac{1}{581}$	4.404	1.7338	$\frac{1}{576}$	4.443	1.7492	$\frac{1}{571}$	4.482	1.7645	$\frac{1}{566}$	4.521	1.7799	$\frac{1}{561}$
4.288	1.6881	$\frac{1}{592}$	4.327	1.7035	$\frac{1}{586}$	4.366	1.7188	$\frac{1}{581}$	4.405	1.7342	$\frac{1}{576}$	4.444	1.7496	$\frac{1}{571}$	4.483	1.7649	$\frac{1}{566}$	4.522	1.7803	$\frac{1}{561}$
4.289	1.6885	$\frac{1}{592}$	4.328	1.7039	$\frac{1}{586}$	4.367	1.7192	$\frac{1}{581}$	4.406	1.7346	$\frac{1}{576}$	4.445	1.7499	$\frac{1}{571}$	4.484	1.7653	$\frac{1}{566}$	4.523	1.7807	$\frac{1}{561}$
4.290	1.6889	$\frac{1}{592}$	4.329	1.7043	$\frac{1}{586}$	4.368	1.7196	$\frac{1}{581}$	4.407	1.7350	$\frac{1}{570}$	4.446	1.7503	$\frac{1}{571}$	4.485	1.7657	$\frac{1}{566}$	4.524	1.7810	$\frac{1}{561}$
4.291	1.6893	$\frac{1}{591}$	4.330	1.7047	$\frac{1}{586}$	4.369	1.7200	$\frac{1}{581}$	4.408	1.7354	$\frac{1}{576}$	4.447	1.7507	$\frac{1}{571}$	4.486	1.7661	$\frac{1}{566}$	4.525	1.7814	$\frac{1}{561}$
4.292	1.6897	$\frac{1}{591}$	4.331	1.7051	$\frac{1}{586}$	4.370	1.7202	$\frac{1}{581}$	4.409	1.7358	$\frac{1}{576}$	4.448	1.7511	$\frac{1}{570}$	4.487	1.7665	$\frac{1}{566}$	4.526	1.7818	$\frac{1}{561}$
4.293	1.6901	$\frac{1}{591}$	4.332	1.7055	$\frac{1}{586}$	4.371	1.7208	$\frac{1}{581}$	4.410	1.7362	$\frac{1}{575}$	4.449	1.7515	$\frac{1}{570}$	4.488	1.7669	$\frac{1}{565}$	4.527	1.7822	$\frac{1}{561}$
4.294	1.6905	$\frac{1}{591}$	4.333	1.7059	$\frac{1}{586}$	4.372	1.7212	$\frac{1}{580}$	4.411	1.7366	$\frac{1}{575}$	4.450	1.7519	$\frac{1}{570}$	4.489	1.7673	$\frac{1}{565}$	4.528	1.7826	$\frac{1}{560}$
4.295	1.6909	$\frac{1}{591}$	4.334	1.7062	$\frac{1}{585}$	4.373	1.7216	$\frac{1}{580}$	4.412	1.7370	$\frac{1}{575}$	4.451	1.7523	$\frac{1}{570}$	4.490	1.7677	$\frac{1}{565}$	4.529	1.7830	$\frac{1}{560}$
4.296	1.6913	$\frac{1}{591}$	4.335	1.7066	$\frac{1}{585}$	4.374	1.7220	$\frac{1}{580}$	4.413	1.7373	$\frac{1}{575}$	4.452	1.7527	$\frac{1}{570}$	4.491	1.7681	$\frac{1}{565}$	4.530	1.7834	$\frac{1}{560}$
4.297	1.6917	$\frac{1}{591}$	4.336	1.7070	$\frac{1}{585}$	4.375	1.7224	$\frac{1}{580}$	4.414	1.7377	$\frac{1}{575}$	4.453	1.7531	$\frac{1}{570}$	4.492	1.7685	$\frac{1}{565}$	4.531	1.7838	$\frac{1}{560}$
4.298	1.6921	$\frac{1}{590}$	4.337	1.7074	$\frac{1}{585}$	4.376	1.7228	$\frac{1}{580}$	4.415	1.7381	$\frac{1}{575}$	4.454	1.7535	$\frac{1}{570}$	4.493	1.7688	$\frac{1}{565}$	4.532	1.7842	$\frac{1}{560}$
4.299	1.6925	$\frac{1}{590}$	4.338	1.7078	$\frac{1}{585}$	4.377	1.7232	$\frac{1}{580}$	4.416	1.7385	$\frac{1}{575}$	4.455	1.7539	$\frac{1}{569}$	4.494	1.7692	$\frac{1}{565}$	4.533	1.7846	$\frac{1}{560}$
4.300	1.6929	$\frac{1}{590}$	4.339	1.7082	$\frac{1}{585}$	4.378	1.7236	$\frac{1}{580}$	4.417	1.7389	$\frac{1}{574}$	4.456	1.7543	$\frac{1}{569}$	4.495	1.7696	$\frac{1}{565}$	4.534	1.7850	$\frac{1}{560}$
4.301	1.6933	$\frac{1}{590}$	4.340	1.7086	$\frac{1}{585}$	4.379	1.7240	$\frac{1}{579}$	4.418	1.7393	$\frac{1}{574}$	4.457	1.7547	$\frac{1}{569}$	4.496	1.7700	$\frac{1}{564}$	4.535	1.7854	$\frac{1}{560}$
4.302	1.6936	$\frac{1}{590}$	4.341	1.7090	$\frac{1}{585}$	4.380	1.7244	$\frac{1}{579}$	4.419	1.7397	$\frac{1}{574}$	4.458	1.7551	$\frac{1}{569}$	4.497	1.7704	$\frac{1}{564}$	4.536	1.7858	$\frac{1}{559}$
4.303	1.6940	$\frac{1}{590}$	4.342	1.7094	$\frac{1}{584}$	4.381	1.7247	$\frac{1}{579}$	4.420	1.7401	$\frac{1}{574}$	4.459	1.7555	$\frac{1}{569}$	4.498	1.7708	$\frac{1}{564}$	4.537	1.7862	$\frac{1}{559}$
4.304	1.6944	$\frac{1}{590}$	4.343	1.7098	$\frac{1}{584}$	4.382	1.7251	$\frac{1}{579}$	4.421	1.7405	$\frac{1}{574}$	4.460	1.7559	$\frac{1}{569}$	4.499	1.7712	$\frac{1}{564}$	4.538	1.7866	$\frac{1}{559}$
4.305	1.6948	$\frac{1}{589}$	4.344	1.7102	$\frac{1}{584}$	4.383	1.7255	$\frac{1}{579}$	4.422	1.7409	$\frac{1}{574}$	4.461	1.7562	$\frac{1}{569}$	4.500	1.7716	$\frac{1}{564}$	4.539	1.7870	$\frac{1}{559}$
4.306	1.6952	$\frac{1}{589}$	4.345	1.7106	$\frac{1}{584}$	4.384	1.7259	$\frac{1}{579}$	4.423	1.7413	$\frac{1}{574}$	4.462	1.7566	$\frac{1}{569}$	4.501	1.7720	$\frac{1}{564}$	4.540	1.7873	$\frac{1}{559}$
4.307	1.6956	$\frac{1}{589}$	4.346	1.7110	$\frac{1}{584}$	4.385	1.7263	$\frac{1}{579}$	4.424	1.7417	$\frac{1}{574}$	4.463	1.7570	$\frac{1}{569}$	4.502	1.7724	$\frac{1}{564}$	4.541	1.7877	$\frac{1}{559}$
4.308	1.6960	$\frac{1}{589}$	4.347	1.7114	$\frac{1}{584}$	4.386	1.7267	$\frac{1}{579}$	4.425	1.7421	$\frac{1}{573}$	4.464	1.7574	$\frac{1}{568}$	4.503	1.7728	$\frac{1}{563}$	4.542	1.7881	$\frac{1}{559}$
4.309	1.6964	$\frac{1}{589}$	4.348	1.7118	$\frac{1}{584}$	4.387	1.7271	$\frac{1}{578}$	4.426	1.7425	$\frac{1}{573}$	4.465	1.7578	$\frac{1}{568}$	4.504	1.7732	$\frac{1}{563}$	4.543	1.7885	$\frac{1}{559}$
4.310	1.6968	$\frac{1}{589}$	4.349	1.7122	$\frac{1}{583}$	4.388	1.7275	$\frac{1}{578}$	4.427	1.7429	$\frac{1}{573}$	4.466	1.7582	$\frac{1}{568}$	4.505	1.7736	$\frac{1}{563}$	4.544	1.7889	$\frac{1}{558}$
4.311	1.6972	$\frac{1}{589}$	4.350	1.7125	$\frac{1}{583}$	4.389	1.7279	$\frac{1}{578}$	4.428	1.7433	$\frac{1}{573}$	4.467	1.7586	$\frac{1}{568}$	4.506	1.7740	$\frac{1}{563}$	4.545	1.7893	$\frac{1}{558}$
4.312	1.6976	$\frac{1}{588}$	4.351	1.7129	$\frac{1}{583}$	4.390	1.7283	$\frac{1}{578}$	4.429	1.7437	$\frac{1}{573}$	4.468	1.7590	$\frac{1}{568}$	4.507	1.7744	$\frac{1}{563}$	4.546	1.7897	$\frac{1}{558}$
4.313	1.6980	$\frac{1}{588}$	4.352	1.7133	$\frac{1}{583}$	4.391	1.7287	$\frac{1}{578}$	4.430	1.7440	$\frac{1}{573}$	4.469	1.7594	$\frac{1}{568}$	4.508	1.7747	$\frac{1}{563}$	4.547	1.7901	$\frac{1}{558}$
4.314	1.6984	$\frac{1}{588}$	4.353	1.7137	$\frac{1}{583}$	4.392	1.7291	$\frac{1}{578}$	4.431	1.7444	$\frac{1}{573}$	4.470	1.7598	$\frac{1}{568}$	4.509	1.7751	$\frac{1}{563}$	4.548	1.7905	$\frac{1}{558}$



I.—Table for reduction of centimillimeters to fractions of an inch—Continued.

Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.
4.549	1.7009	$\frac{1}{558}$	4.588	1.8062	$\frac{1}{553}$	4.627	1.8216	$\frac{1}{548}$	4.666	1.8370	$\frac{1}{544}$	4.705	1.8523	$\frac{1}{539}$	4.744	1.8677	$\frac{1}{535}$
4.550	1.7013	$\frac{1}{558}$	4.589	1.8066	$\frac{1}{553}$	4.628	1.8220	$\frac{1}{548}$	4.667	1.8373	$\frac{1}{544}$	4.706	1.8527	$\frac{1}{539}$	4.745	1.8681	$\frac{1}{535}$
4.551	1.7017	$\frac{1}{558}$	4.590	1.8070	$\frac{1}{553}$	4.629	1.8224	$\frac{1}{548}$	4.668	1.8377	$\frac{1}{544}$	4.707	1.8531	$\frac{1}{539}$	4.746	1.8685	$\frac{1}{535}$
4.552	1.7021	$\frac{1}{557}$	4.591	1.8074	$\frac{1}{553}$	4.630	1.8228	$\frac{1}{548}$	4.669	1.8381	$\frac{1}{543}$	4.708	1.8535	$\frac{1}{539}$	4.747	1.8688	$\frac{1}{535}$
4.553	1.7025	$\frac{1}{557}$	4.592	1.8078	$\frac{1}{553}$	4.631	1.8232	$\frac{1}{548}$	4.670	1.8385	$\frac{1}{543}$	4.709	1.8539	$\frac{1}{539}$	4.748	1.8692	$\frac{1}{534}$
4.554	1.7029	$\frac{1}{557}$	4.593	1.8082	$\frac{1}{552}$	4.632	1.8236	$\frac{1}{548}$	4.671	1.8389	$\frac{1}{543}$	4.710	1.8543	$\frac{1}{539}$	4.749	1.8696	$\frac{1}{534}$
4.555	1.7033	$\frac{1}{557}$	4.594	1.8086	$\frac{1}{552}$	4.633	1.8240	$\frac{1}{548}$	4.672	1.8393	$\frac{1}{543}$	4.711	1.8547	$\frac{1}{539}$	4.750	1.8700	$\frac{1}{534}$
4.556	1.7036	$\frac{1}{557}$	4.595	1.8090	$\frac{1}{552}$	4.634	1.8244	$\frac{1}{548}$	4.673	1.8397	$\frac{1}{543}$	4.712	1.8551	$\frac{1}{538}$	4.751	1.8704	$\frac{1}{534}$
4.557	1.7040	$\frac{1}{557}$	4.596	1.8094	$\frac{1}{552}$	4.635	1.8247	$\frac{1}{547}$	4.674	1.8401	$\frac{1}{543}$	4.713	1.8555	$\frac{1}{538}$	4.752	1.8708	$\frac{1}{534}$
4.558	1.7044	$\frac{1}{557}$	4.597	1.8098	$\frac{1}{552}$	4.636	1.8251	$\frac{1}{547}$	4.675	1.8405	$\frac{1}{543}$	4.714	1.8559	$\frac{1}{538}$	4.753	1.8712	$\frac{1}{534}$
4.559	1.7048	$\frac{1}{557}$	4.598	1.8102	$\frac{1}{552}$	4.637	1.8255	$\frac{1}{547}$	4.676	1.8409	$\frac{1}{543}$	4.715	1.8562	$\frac{1}{538}$	4.754	1.8716	$\frac{1}{534}$
4.560	1.7052	$\frac{1}{556}$	4.599	1.8106	$\frac{1}{552}$	4.638	1.8259	$\frac{1}{547}$	4.677	1.8413	$\frac{1}{543}$	4.716	1.8566	$\frac{1}{538}$	4.755	1.8720	$\frac{1}{534}$
4.561	1.7056	$\frac{1}{556}$	4.600	1.8110	$\frac{1}{552}$	4.639	1.8263	$\frac{1}{547}$	4.678	1.8417	$\frac{1}{542}$	4.717	1.8570	$\frac{1}{538}$	4.756	1.8724	$\frac{1}{533}$
4.562	1.7060	$\frac{1}{556}$	4.601	1.8114	$\frac{1}{551}$	4.640	1.8267	$\frac{1}{547}$	4.679	1.8421	$\frac{1}{542}$	4.718	1.8574	$\frac{1}{538}$	4.757	1.8728	$\frac{1}{533}$
4.563	1.7064	$\frac{1}{556}$	4.602	1.8118	$\frac{1}{551}$	4.641	1.8271	$\frac{1}{547}$	4.680	1.8425	$\frac{1}{542}$	4.719	1.8578	$\frac{1}{538}$	4.758	1.8732	$\frac{1}{533}$
4.564	1.7068	$\frac{1}{556}$	4.603	1.8122	$\frac{1}{551}$	4.642	1.8275	$\frac{1}{546}$	4.681	1.8429	$\frac{1}{542}$	4.720	1.8582	$\frac{1}{538}$	4.759	1.8736	$\frac{1}{533}$
4.565	1.7072	$\frac{1}{556}$	4.604	1.8126	$\frac{1}{551}$	4.643	1.8279	$\frac{1}{546}$	4.682	1.8433	$\frac{1}{542}$	4.721	1.8586	$\frac{1}{537}$	4.760	1.8740	$\frac{1}{533}$
4.566	1.7076	$\frac{1}{556}$	4.605	1.8129	$\frac{1}{551}$	4.644	1.8283	$\frac{1}{546}$	4.683	1.8436	$\frac{1}{542}$	4.722	1.8590	$\frac{1}{537}$	4.761	1.8744	$\frac{1}{533}$
4.567	1.7080	$\frac{1}{556}$	4.606	1.8133	$\frac{1}{551}$	4.645	1.8287	$\frac{1}{546}$	4.684	1.8440	$\frac{1}{542}$	4.723	1.8594	$\frac{1}{537}$	4.762	1.8747	$\frac{1}{533}$
4.568	1.7084	$\frac{1}{556}$	4.607	1.8137	$\frac{1}{551}$	4.646	1.8291	$\frac{1}{546}$	4.685	1.8444	$\frac{1}{542}$	4.724	1.8598	$\frac{1}{537}$	4.763	1.8751	$\frac{1}{533}$
4.569	1.7088	$\frac{1}{556}$	4.608	1.8141	$\frac{1}{551}$	4.647	1.8295	$\frac{1}{546}$	4.686	1.8448	$\frac{1}{541}$	4.725	1.8602	$\frac{1}{537}$	4.764	1.8755	$\frac{1}{532}$
4.570	1.7092	$\frac{1}{556}$	4.609	1.8145	$\frac{1}{551}$	4.648	1.8299	$\frac{1}{546}$	4.687	1.8452	$\frac{1}{541}$	4.726	1.8606	$\frac{1}{537}$	4.765	1.8759	$\frac{1}{532}$
4.571	1.7096	$\frac{1}{555}$	4.610	1.8149	$\frac{1}{550}$	4.649	1.8303	$\frac{1}{546}$	4.688	1.8456	$\frac{1}{541}$	4.727	1.8610	$\frac{1}{537}$	4.766	1.8763	$\frac{1}{532}$
4.572	1.7099	$\frac{1}{555}$	4.611	1.8153	$\frac{1}{550}$	4.650	1.8307	$\frac{1}{546}$	4.689	1.8460	$\frac{1}{541}$	4.728	1.8614	$\frac{1}{537}$	4.767	1.8767	$\frac{1}{532}$
4.573	1.8003	$\frac{1}{555}$	4.612	1.8157	$\frac{1}{550}$	4.651	1.8310	$\frac{1}{546}$	4.690	1.8464	$\frac{1}{541}$	4.729	1.8618	$\frac{1}{537}$	4.768	1.8771	$\frac{1}{532}$
4.574	1.8007	$\frac{1}{555}$	4.613	1.8161	$\frac{1}{550}$	4.652	1.8314	$\frac{1}{545}$	4.691	1.8468	$\frac{1}{541}$	4.730	1.8622	$\frac{1}{536}$	4.769	1.8775	$\frac{1}{532}$
4.575	1.8011	$\frac{1}{555}$	4.614	1.8165	$\frac{1}{550}$	4.653	1.8318	$\frac{1}{545}$	4.692	1.8472	$\frac{1}{541}$	4.731	1.8626	$\frac{1}{536}$	4.770	1.8779	$\frac{1}{532}$
4.576	1.8015	$\frac{1}{555}$	4.615	1.8169	$\frac{1}{550}$	4.654	1.8322	$\frac{1}{545}$	4.693	1.8476	$\frac{1}{541}$	4.732	1.8630	$\frac{1}{536}$	4.771	1.8783	$\frac{1}{532}$
4.577	1.8019	$\frac{1}{554}$	4.616	1.8173	$\frac{1}{550}$	4.655	1.8326	$\frac{1}{545}$	4.694	1.8480	$\frac{1}{541}$	4.733	1.8634	$\frac{1}{536}$	4.772	1.8787	$\frac{1}{532}$
4.578	1.8023	$\frac{1}{554}$	4.617	1.8177	$\frac{1}{550}$	4.656	1.8330	$\frac{1}{545}$	4.695	1.8484	$\frac{1}{540}$	4.734	1.8638	$\frac{1}{536}$	4.773	1.8791	$\frac{1}{532}$
4.579	1.8027	$\frac{1}{554}$	4.618	1.8181	$\frac{1}{549}$	4.657	1.8334	$\frac{1}{545}$	4.696	1.8488	$\frac{1}{540}$	4.735	1.8642	$\frac{1}{536}$	4.774	1.8795	$\frac{1}{531}$
4.580	1.8031	$\frac{1}{554}$	4.619	1.8185	$\frac{1}{549}$	4.658	1.8338	$\frac{1}{545}$	4.697	1.8492	$\frac{1}{540}$	4.736	1.8646	$\frac{1}{536}$	4.775	1.8799	$\frac{1}{531}$
4.581	1.8035	$\frac{1}{554}$	4.620	1.8189	$\frac{1}{549}$	4.659	1.8342	$\frac{1}{545}$	4.698	1.8496	$\frac{1}{540}$	4.737	1.8650	$\frac{1}{536}$	4.776	1.8803	$\frac{1}{531}$
4.582	1.8039	$\frac{1}{554}$	4.621	1.8192	$\frac{1}{549}$	4.660	1.8346	$\frac{1}{544}$	4.699	1.8499	$\frac{1}{540}$	4.738	1.8654	$\frac{1}{536}$	4.777	1.8807	$\frac{1}{531}$
4.583	1.8043	$\frac{1}{554}$	4.622	1.8196	$\frac{1}{549}$	4.661	1.8350	$\frac{1}{544}$	4.700	1.8503	$\frac{1}{540}$	4.739	1.8658	$\frac{1}{535}$	4.778	1.8810	$\frac{1}{531}$
4.584	1.8047	$\frac{1}{555}$	4.623	1.8200	$\frac{1}{549}$	4.662	1.8354	$\frac{1}{544}$	4.701	1.8507	$\frac{1}{540}$	4.740	1.8662	$\frac{1}{535}$	4.779	1.8814	$\frac{1}{531}$
4.585	1.8051	$\frac{1}{555}$	4.624	1.8204	$\frac{1}{549}$	4.663	1.8358	$\frac{1}{544}$	4.702	1.8511	$\frac{1}{540}$	4.741	1.8666	$\frac{1}{535}$	4.780	1.8818	$\frac{1}{531}$
4.586	1.8055	$\frac{1}{553}$	4.625	1.8208	$\frac{1}{549}$	4.664	1.8362	$\frac{1}{544}$	4.703	1.8515	$\frac{1}{540}$	4.742	1.8670	$\frac{1}{535}$	4.781	1.8822	$\frac{1}{531}$
4.587	1.8059	$\frac{1}{553}$	4.626	1.8212	$\frac{1}{549}$	4.665	1.8366	$\frac{1}{544}$	4.704	1.8519	$\frac{1}{539}$	4.743	1.8674	$\frac{1}{535}$	4.782	1.8826	$\frac{1}{531}$



I.—Table for reduction of centimillimeters to fractions of an inch—Continued.

Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.
4.822	1.8964	$\frac{1}{520}$	4.861	1.9137	$\frac{1}{522}$	4.900	1.9291	$\frac{1}{518}$	4.939	1.9444	$\frac{1}{514}$	4.978	1.9598	$\frac{1}{510}$	5.017	1.9751	$\frac{1}{506}$	5.056	1.9905	$\frac{1}{502}$
4.823	1.8968	$\frac{1}{520}$	4.862	1.9141	$\frac{1}{522}$	4.961	1.9295	$\frac{1}{518}$	4.940	1.9448	$\frac{1}{514}$	4.979	1.9602	$\frac{1}{510}$	5.018	1.9755	$\frac{1}{506}$	5.057	1.9909	$\frac{1}{502}$
4.824	1.8992	$\frac{1}{526}$	4.863	1.9145	$\frac{1}{522}$	4.902	1.9299	$\frac{1}{518}$	4.941	1.9452	$\frac{1}{514}$	4.980	1.9606	$\frac{1}{509}$	5.019	1.9759	$\frac{1}{506}$	5.058	1.9913	$\frac{1}{502}$
4.825	1.8996	$\frac{1}{526}$	4.864	1.9149	$\frac{1}{522}$	4.903	1.9303	$\frac{1}{517}$	4.942	1.9456	$\frac{1}{513}$	4.981	1.9610	$\frac{1}{509}$	5.020	1.9763	$\frac{1}{505}$	5.059	1.9917	$\frac{1}{502}$
4.826	1.8999	$\frac{1}{526}$	4.865	1.9153	$\frac{1}{522}$	4.904	1.9307	$\frac{1}{517}$	4.943	1.9460	$\frac{1}{513}$	4.982	1.9614	$\frac{1}{509}$	5.021	1.9767	$\frac{1}{505}$	5.060	1.9921	$\frac{1}{501}$
4.827	1.9003	$\frac{1}{526}$	4.866	1.9157	$\frac{1}{521}$	4.905	1.9310	$\frac{1}{517}$	4.944	1.9464	$\frac{1}{513}$	4.983	1.9618	$\frac{1}{509}$	5.022	1.9771	$\frac{1}{505}$	5.061	1.9925	$\frac{1}{501}$
4.828	1.9007	$\frac{1}{526}$	4.867	1.9161	$\frac{1}{521}$	4.906	1.9314	$\frac{1}{517}$	4.945	1.9468	$\frac{1}{513}$	4.984	1.9622	$\frac{1}{509}$	5.023	1.9775	$\frac{1}{505}$	5.062	1.9929	$\frac{1}{501}$
4.829	1.9011	$\frac{1}{525}$	4.868	1.9165	$\frac{1}{521}$	4.907	1.9318	$\frac{1}{517}$	4.946	1.9472	$\frac{1}{513}$	4.985	1.9625	$\frac{1}{509}$	5.024	1.9779	$\frac{1}{505}$	5.063	1.9933	$\frac{1}{501}$
4.830	1.9015	$\frac{1}{525}$	4.869	1.9169	$\frac{1}{521}$	4.908	1.9322	$\frac{1}{517}$	4.947	1.9476	$\frac{1}{513}$	4.986	1.9629	$\frac{1}{509}$	5.025	1.9783	$\frac{1}{505}$	5.064	1.9936	$\frac{1}{501}$
4.831	1.9019	$\frac{1}{525}$	4.870	1.9173	$\frac{1}{521}$	4.909	1.9326	$\frac{1}{517}$	4.948	1.9480	$\frac{1}{513}$	4.987	1.9633	$\frac{1}{509}$	5.026	1.9787	$\frac{1}{505}$	5.065	1.9940	$\frac{1}{501}$
4.832	1.9023	$\frac{1}{525}$	4.871	1.9177	$\frac{1}{521}$	4.910	1.9330	$\frac{1}{517}$	4.949	1.9484	$\frac{1}{513}$	4.988	1.9637	$\frac{1}{509}$	5.027	1.9791	$\frac{1}{505}$	5.066	1.9944	$\frac{1}{501}$
4.833	1.9027	$\frac{1}{525}$	4.872	1.9181	$\frac{1}{521}$	4.911	1.9334	$\frac{1}{517}$	4.950	1.9488	$\frac{1}{513}$	4.989	1.9641	$\frac{1}{509}$	5.028	1.9795	$\frac{1}{505}$	5.067	1.9948	$\frac{1}{501}$
4.834	1.9031	$\frac{1}{525}$	4.873	1.9185	$\frac{1}{521}$	4.912	1.9338	$\frac{1}{517}$	4.951	1.9492	$\frac{1}{512}$	4.990	1.9645	$\frac{1}{508}$	5.029	1.9799	$\frac{1}{505}$	5.068	1.9952	$\frac{1}{501}$
4.835	1.9035	$\frac{1}{525}$	4.874	1.9188	$\frac{1}{521}$	4.913	1.9342	$\frac{1}{516}$	4.952	1.9496	$\frac{1}{512}$	4.991	1.9649	$\frac{1}{508}$	5.030	1.9803	$\frac{1}{504}$	5.069	1.9956	$\frac{1}{501}$
4.836	1.9039	$\frac{1}{525}$	4.875	1.4192	$\frac{1}{520}$	4.914	1.9346	$\frac{1}{516}$	4.953	1.9499	$\frac{1}{512}$	4.992	1.9653	$\frac{1}{508}$	5.031	1.9807	$\frac{1}{504}$	5.070	1.9960	$\frac{1}{500}$
4.837	1.9043	$\frac{1}{525}$	4.876	1.9196	$\frac{1}{520}$	4.915	1.9356	$\frac{1}{516}$	4.954	1.9503	$\frac{1}{512}$	4.993	1.9657	$\frac{1}{508}$	5.032	1.9810	$\frac{1}{504}$	5.071	1.9464	$\frac{1}{500}$
4.838	1.9047	$\frac{1}{524}$	4.877	1.9200	$\frac{1}{520}$	4.916	1.9354	$\frac{1}{516}$	4.955	1.9507	$\frac{1}{512}$	4.994	1.9661	$\frac{1}{508}$	5.033	1.9814	$\frac{1}{504}$	5.072	1.9968	$\frac{1}{500}$
4.839	1.9051	$\frac{1}{524}$	4.878	1.9204	$\frac{1}{520}$	4.917	1.9358	$\frac{1}{516}$	4.956	1.9511	$\frac{1}{512}$	4.995	1.9665	$\frac{1}{508}$	5.034	1.9818	$\frac{1}{504}$	5.073	1.9972	$\frac{1}{500}$
4.840	1.9055	$\frac{1}{524}$	4.879	1.9208	$\frac{1}{520}$	4.918	1.9362	$\frac{1}{516}$	4.957	1.9515	$\frac{1}{512}$	4.996	1.9669	$\frac{1}{508}$	5.035	1.9822	$\frac{1}{504}$	5.074	1.9976	$\frac{1}{500}$
4.841	1.9059	$\frac{1}{524}$	4.880	1.9212	$\frac{1}{520}$	4.919	1.9366	$\frac{1}{516}$	4.958	1.9519	$\frac{1}{512}$	4.997	1.9673	$\frac{1}{508}$	5.036	1.9826	$\frac{1}{504}$	5.075	1.9980	$\frac{1}{500}$
4.842	1.9062	$\frac{1}{524}$	4.881	1.9216	$\frac{1}{520}$	4.920	1.9370	$\frac{1}{516}$	4.959	1.9523	$\frac{1}{512}$	4.998	1.9677	$\frac{1}{508}$	5.037	1.9830	$\frac{1}{504}$	5.076	1.9984	$\frac{1}{500}$
4.843	1.9066	$\frac{1}{524}$	4.882	1.9220	$\frac{1}{520}$	4.921	1.9373	$\frac{1}{516}$	4.960	1.9527	$\frac{1}{512}$	4.999	1.9681	$\frac{1}{508}$	5.038	1.9834	$\frac{1}{504}$	5.077	1.9988	$\frac{1}{500}$
4.844	1.9070	$\frac{1}{524}$	4.883	1.9224	$\frac{1}{520}$	4.922	1.9377	$\frac{1}{516}$	4.961	1.9531	$\frac{1}{511}$	5.000	1.9685	$\frac{1}{507}$	5.039	1.9838	$\frac{1}{504}$	5.078	1.9992	$\frac{1}{500}$
4.845	1.9074	$\frac{1}{524}$	4.884	1.9228	$\frac{1}{520}$	4.923	1.9381	$\frac{1}{515}$	4.962	1.9535	$\frac{1}{511}$	5.001	1.9688	$\frac{1}{507}$	5.040	1.9842	$\frac{1}{503}$	5.079	1.9996	$\frac{1}{500}$
4.846	1.9078	$\frac{1}{524}$	4.885	1.9232	$\frac{1}{519}$	4.924	1.9385	$\frac{1}{515}$	4.963	1.9539	$\frac{1}{511}$	5.002	1.9692	$\frac{1}{507}$	5.041	1.9846	$\frac{1}{503}$	5.080	1.9999	$\frac{1}{499}$
4.847	1.9082	$\frac{1}{523}$	4.886	1.9236	$\frac{1}{519}$	4.925	1.9389	$\frac{1}{515}$	4.964	1.9543	$\frac{1}{511}$	5.003	1.9696	$\frac{1}{507}$	5.042	1.9850	$\frac{1}{503}$	5.081	2.0000	$\frac{1}{499}$
4.848	1.9086	$\frac{1}{523}$	4.887	1.9240	$\frac{1}{519}$	4.926	1.9393	$\frac{1}{515}$	4.965	1.9547	$\frac{1}{511}$	5.004	1.9700	$\frac{1}{507}$	5.043	1.9854	$\frac{1}{503}$	5.082	2.0007	$\frac{1}{499}$
4.849	1.9090	$\frac{1}{523}$	4.888	1.9244	$\frac{1}{519}$	4.927	1.9397	$\frac{1}{515}$	4.966	1.9551	$\frac{1}{511}$	5.005	1.9704	$\frac{1}{507}$	5.044	1.9858	$\frac{1}{503}$	5.083	2.0011	$\frac{1}{499}$
4.850	1.9094	$\frac{1}{523}$	4.889	1.9247	$\frac{1}{519}$	4.928	1.9401	$\frac{1}{515}$	4.967	1.9555	$\frac{1}{511}$	5.006	1.9708	$\frac{1}{507}$	5.045	1.9862	$\frac{1}{503}$	5.084	2.0015	$\frac{1}{499}$
4.851	1.9098	$\frac{1}{523}$	4.890	1.9251	$\frac{1}{519}$	4.929	1.9405	$\frac{1}{515}$	4.968	1.9559	$\frac{1}{511}$	5.007	1.9712	$\frac{1}{507}$	5.046	1.9866	$\frac{1}{503}$	5.085	2.0019	$\frac{1}{499}$
4.852	1.9102	$\frac{1}{523}$	4.891	1.9255	$\frac{1}{519}$	4.930	1.9409	$\frac{1}{515}$	4.969	1.9562	$\frac{1}{511}$	5.008	1.9716	$\frac{1}{507}$	5.047	1.9870	$\frac{1}{503}$	5.086	2.0023	$\frac{1}{499}$
4.853	1.9106	$\frac{1}{523}$	4.892	1.9259	$\frac{1}{519}$	4.931	1.9413	$\frac{1}{515}$	4.970	1.9566	$\frac{1}{511}$	5.009	1.9720	$\frac{1}{507}$	5.048	1.9873	$\frac{1}{503}$	5.087	2.0027	$\frac{1}{499}$
4.854	1.9110	$\frac{1}{523}$	4.893	1.9263	$\frac{1}{519}$	4.932	1.9417	$\frac{1}{514}$	4.971	1.9570	$\frac{1}{510}$	5.010	1.9724	$\frac{1}{506}$	5.049	1.9877	$\frac{1}{503}$	5.088	2.0031	$\frac{1}{499}$
4.855	1.9114	$\frac{1}{523}$	4.894	1.9267	$\frac{1}{518}$	4.933	1.9421	$\frac{1}{514}$	4.972	1.9574	$\frac{1}{510}$	5.011	1.9728	$\frac{1}{506}$	5.050	1.9881	$\frac{1}{502}$	5.089	2.0035	$\frac{1}{499}$
4.856	1.9118	$\frac{1}{522}$	4.895	1.9271	$\frac{1}{518}$	4.934	1.9425	$\frac{1}{514}$	4.973	1.9578	$\frac{1}{510}$	5.012	1.9732	$\frac{1}{506}$	5.051	1.9885	$\frac{1}{502}$	5.090	2.0039	$\frac{1}{498}$
4.857	1.9121	$\frac{1}{522}$	4.896	1.9275	$\frac{1}{518}$	4.935	1.9429	$\frac{1}{514}$	4.974	1.9582	$\frac{1}{510}$	5.013	1.9736	$\frac{1}{506}$	5.052	1.9889	$\frac{1}{502}$	5.091	2.0043	$\frac{1}{498}$
4.858	1.9125	$\frac{1}{522}$	4.897	1.9279	$\frac{1}{518}$	4.936	1.9433	$\frac{1}{514}$	4.975	1.9586	$\frac{1}{510}$	5.014	1.9740	$\frac{1}{506}$	5.053	1.9893	$\frac{1}{502}$	5.092	2.0047	$\frac{1}{498}$
4.859	1.9129	$\frac{1}{522}$	4.898	1.9283	$\frac{1}{518}$	4.937	1.9437	$\frac{1}{514}$	4.976	1.9590	$\frac{1}{510}$	5.015	1.9744	$\frac{1}{506}$	5.054	1.9897	$\frac{1}{502}$	5.093	2.0051	$\frac{1}{498}$
4.860	1.9133	$\frac{1}{522}$	4.899	1.9287	$\frac{1}{518}$	4.938	1.9441	$\frac{1}{514}$	4.977	1.9594	$\frac{1}{510}$	5.016	1.9747	$\frac{1}{506}$	5.055	1.9901	$\frac{1}{502}$	5.094	2.0055	$\frac{1}{498}$



I.—Table for reduction of centimillimeters to fractions of an inch—Continued.

Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.
5.095	2.0050	$\frac{1}{493}$	5.104	2.0213	$\frac{1}{494}$	5.173	2.0366	$\frac{1}{490}$	5.212	2.0519	$\frac{1}{487}$	5.251	2.0673	$\frac{1}{483}$	5.290	2.0826	$\frac{1}{480}$	5.329	2.0980	$\frac{1}{476}$
5.096	2.0052	$\frac{1}{493}$	5.105	2.0216	$\frac{1}{494}$	5.174	2.0370	$\frac{1}{490}$	5.213	2.0523	$\frac{1}{487}$	5.253	2.0677	$\frac{1}{483}$	5.291	2.0830	$\frac{1}{480}$	5.330	2.0984	$\frac{1}{476}$
5.097	2.0054	$\frac{1}{493}$	5.106	2.0220	$\frac{1}{494}$	5.175	2.0373	$\frac{1}{490}$	5.214	2.0527	$\frac{1}{487}$	5.253	2.0681	$\frac{1}{483}$	5.293	2.0834	$\frac{1}{479}$	5.331	2.0988	$\frac{1}{476}$
5.098	2.0070	$\frac{1}{488}$	5.137	2.0224	$\frac{1}{491}$	5.170	2.0377	$\frac{1}{490}$	5.215	2.0531	$\frac{1}{486}$	5.254	2.0684	$\frac{1}{483}$	5.293	2.0838	$\frac{1}{479}$	5.332	2.0992	$\frac{1}{476}$
5.099	2.0074	$\frac{1}{488}$	5.138	2.0228	$\frac{1}{494}$	5.177	2.0381	$\frac{1}{490}$	5.216	2.0535	$\frac{1}{486}$	5.255	2.0688	$\frac{1}{483}$	5.294	2.0843	$\frac{1}{479}$	5.333	2.0996	$\frac{1}{476}$
5.100	2.0078	$\frac{1}{497}$	5.139	2.0232	$\frac{1}{494}$	5.178	2.0385	$\frac{1}{490}$	5.217	2.0539	$\frac{1}{486}$	5.256	2.0692	$\frac{1}{483}$	5.295	2.0846	$\frac{1}{479}$	5.334	2.0999	$\frac{1}{476}$
5.101	2.0083	$\frac{1}{497}$	5.140	2.0236	$\frac{1}{494}$	5.179	2.0389	$\frac{1}{490}$	5.218	2.0543	$\frac{1}{486}$	5.257	2.0696	$\frac{1}{483}$	5.296	2.0850	$\frac{1}{479}$	5.335	2.1003	$\frac{1}{476}$
5.102	2.0086	$\frac{1}{497}$	5.141	2.0240	$\frac{1}{493}$	5.180	2.0393	$\frac{1}{490}$	5.219	2.0547	$\frac{1}{486}$	5.258	2.0700	$\frac{1}{483}$	5.297	2.0854	$\frac{1}{479}$	5.336	2.1007	$\frac{1}{475}$
5.103	2.0090	$\frac{1}{497}$	5.142	2.0244	$\frac{1}{493}$	5.181	2.0407	$\frac{1}{490}$	5.220	2.0551	$\frac{1}{486}$	5.259	2.0704	$\frac{1}{482}$	5.298	2.0858	$\frac{1}{479}$	5.337	2.1011	$\frac{1}{476}$
5.104	2.0094	$\frac{1}{497}$	5.143	2.0247	$\frac{1}{493}$	5.182	2.0401	$\frac{1}{490}$	5.221	2.0555	$\frac{1}{486}$	5.260	2.0708	$\frac{1}{482}$	5.299	2.0862	$\frac{1}{479}$	5.338	2.1015	$\frac{1}{475}$
5.105	2.0098	$\frac{1}{497}$	5.144	2.0251	$\frac{1}{493}$	5.183	2.0405	$\frac{1}{490}$	5.222	2.0559	$\frac{1}{486}$	5.261	2.0712	$\frac{1}{483}$	5.300	2.0866	$\frac{1}{479}$	5.339	2.1019	$\frac{1}{475}$
5.106	2.0102	$\frac{1}{497}$	5.145	2.0255	$\frac{1}{493}$	5.184	2.0409	$\frac{1}{490}$	5.223	2.0562	$\frac{1}{486}$	5.262	2.0716	$\frac{1}{482}$	5.301	2.0870	$\frac{1}{479}$	5.340	2.1023	$\frac{1}{475}$
5.107	2.0106	$\frac{1}{497}$	5.146	2.0259	$\frac{1}{493}$	5.185	2.0413	$\frac{1}{489}$	5.224	2.0566	$\frac{1}{486}$	5.263	2.0724	$\frac{1}{481}$	5.302	2.0873	$\frac{1}{479}$	5.341	2.1027	$\frac{1}{475}$
5.108	2.0110	$\frac{1}{497}$	5.147	2.0263	$\frac{1}{493}$	5.186	2.0417	$\frac{1}{490}$	5.225	2.0570	$\frac{1}{486}$	5.264	2.0728	$\frac{1}{483}$	5.303	2.0877	$\frac{1}{478}$	5.342	2.1031	$\frac{1}{475}$
5.109	2.0114	$\frac{1}{497}$	5.148	2.0267	$\frac{1}{493}$	5.187	2.0421	$\frac{1}{490}$	5.226	2.0574	$\frac{1}{485}$	5.265	2.0728	$\frac{1}{482}$	5.304	2.0881	$\frac{1}{478}$	5.343	2.1035	$\frac{1}{475}$
5.110	2.0118	$\frac{1}{497}$	5.149	2.0271	$\frac{1}{493}$	5.188	2.0425	$\frac{1}{490}$	5.227	2.0578	$\frac{1}{485}$	5.266	2.0732	$\frac{1}{483}$	5.305	2.0885	$\frac{1}{478}$	5.344	2.1039	$\frac{1}{475}$
5.111	2.0122	$\frac{1}{496}$	5.150	2.0275	$\frac{1}{493}$	5.189	2.0429	$\frac{1}{489}$	5.228	2.0582	$\frac{1}{485}$	5.267	2.0736	$\frac{1}{483}$	5.306	2.0889	$\frac{1}{478}$	5.345	2.1043	$\frac{1}{475}$
5.112	2.0126	$\frac{1}{496}$	5.151	2.0279	$\frac{1}{493}$	5.190	2.0433	$\frac{1}{489}$	5.229	2.0586	$\frac{1}{485}$	5.268	2.0740	$\frac{1}{482}$	5.307	2.0893	$\frac{1}{478}$	5.346	2.1047	$\frac{1}{475}$
5.113	2.0130	$\frac{1}{496}$	5.152	2.0283	$\frac{1}{493}$	5.191	2.0436	$\frac{1}{489}$	5.230	2.0590	$\frac{1}{485}$	5.269	2.0744	$\frac{1}{482}$	5.308	2.0897	$\frac{1}{478}$	5.347	2.1051	$\frac{1}{474}$
5.114	2.0133	$\frac{1}{496}$	5.153	2.0287	$\frac{1}{492}$	5.192	2.0440	$\frac{1}{489}$	5.231	2.0594	$\frac{1}{485}$	5.270	2.0747	$\frac{1}{481}$	5.309	2.0901	$\frac{1}{478}$	5.348	2.1055	$\frac{1}{474}$
5.115	2.0137	$\frac{1}{496}$	5.154	2.0291	$\frac{1}{492}$	5.193	2.0444	$\frac{1}{489}$	5.232	2.0598	$\frac{1}{485}$	5.271	2.0751	$\frac{1}{481}$	5.310	2.0905	$\frac{1}{478}$	5.349	2.1059	$\frac{1}{474}$
5.116	2.0141	$\frac{1}{496}$	5.155	2.0295	$\frac{1}{492}$	5.194	2.0448	$\frac{1}{488}$	5.233	2.0602	$\frac{1}{485}$	5.272	2.0755	$\frac{1}{481}$	5.311	2.0909	$\frac{1}{478}$	5.350	2.1062	$\frac{1}{474}$
5.117	2.0145	$\frac{1}{496}$	5.156	2.0299	$\frac{1}{492}$	5.195	2.0452	$\frac{1}{488}$	5.234	2.0606	$\frac{1}{485}$	5.273	2.0759	$\frac{1}{481}$	5.312	2.0913	$\frac{1}{478}$	5.351	2.1066	$\frac{1}{474}$
5.118	2.0149	$\frac{1}{496}$	5.157	2.0303	$\frac{1}{492}$	5.196	2.0456	$\frac{1}{488}$	5.235	2.0610	$\frac{1}{485}$	5.274	2.0763	$\frac{1}{481}$	5.313	2.0917	$\frac{1}{478}$	5.352	2.1070	$\frac{1}{474}$
5.119	2.0153	$\frac{1}{496}$	5.158	2.0307	$\frac{1}{492}$	5.197	2.0460	$\frac{1}{488}$	5.236	2.0614	$\frac{1}{485}$	5.275	2.0767	$\frac{1}{481}$	5.314	2.0921	$\frac{1}{477}$	5.353	2.1074	$\frac{1}{474}$
5.120	2.0157	$\frac{1}{495}$	5.159	2.0311	$\frac{1}{492}$	5.198	2.0464	$\frac{1}{488}$	5.237	2.0618	$\frac{1}{484}$	5.276	2.0771	$\frac{1}{481}$	5.315	2.0925	$\frac{1}{477}$	5.354	2.1078	$\frac{1}{474}$
5.121	2.0161	$\frac{1}{495}$	5.160	2.0314	$\frac{1}{492}$	5.199	2.0468	$\frac{1}{488}$	5.238	2.0622	$\frac{1}{484}$	5.277	2.0775	$\frac{1}{481}$	5.316	2.0929	$\frac{1}{477}$	5.355	2.1082	$\frac{1}{474}$
5.122	2.0165	$\frac{1}{495}$	5.161	2.0318	$\frac{1}{492}$	5.200	2.0472	$\frac{1}{488}$	5.239	2.0626	$\frac{1}{484}$	5.278	2.0779	$\frac{1}{481}$	5.317	2.0933	$\frac{1}{477}$	5.356	2.1086	$\frac{1}{474}$
5.123	2.0169	$\frac{1}{495}$	5.162	2.0322	$\frac{1}{491}$	5.201	2.0476	$\frac{1}{488}$	5.240	2.0629	$\frac{1}{484}$	5.279	2.0783	$\frac{1}{481}$	5.318	2.0937	$\frac{1}{477}$	5.357	2.1090	$\frac{1}{474}$
5.124	2.0173	$\frac{1}{495}$	5.163	2.0326	$\frac{1}{491}$	5.202	2.0480	$\frac{1}{488}$	5.241	2.0633	$\frac{1}{484}$	5.280	2.0787	$\frac{1}{481}$	5.319	2.0940	$\frac{1}{477}$	5.358	2.1094	$\frac{1}{473}$
5.125	2.0177	$\frac{1}{495}$	5.164	2.0330	$\frac{1}{491}$	5.203	2.0484	$\frac{1}{488}$	5.242	2.0637	$\frac{1}{484}$	5.281	2.0791	$\frac{1}{480}$	5.320	2.0944	$\frac{1}{477}$	5.359	2.1098	$\frac{1}{473}$
5.126	2.0181	$\frac{1}{495}$	5.165	2.0334	$\frac{1}{491}$	5.204	2.0488	$\frac{1}{488}$	5.243	2.0641	$\frac{1}{484}$	5.282	2.0795	$\frac{1}{480}$	5.321	2.0948	$\frac{1}{477}$	5.360	2.1102	$\frac{1}{473}$
5.127	2.0184	$\frac{1}{495}$	5.166	2.0338	$\frac{1}{491}$	5.205	2.0492	$\frac{1}{487}$	5.244	2.0645	$\frac{1}{484}$	5.283	2.0799	$\frac{1}{480}$	5.322	2.0952	$\frac{1}{477}$	5.361	2.1106	$\frac{1}{473}$
5.128	2.0188	$\frac{1}{495}$	5.167	2.0343	$\frac{1}{491}$	5.206	2.0496	$\frac{1}{487}$	5.245	2.0649	$\frac{1}{484}$	5.284	2.0803	$\frac{1}{480}$	5.323	2.0956	$\frac{1}{477}$	5.362	2.1110	$\frac{1}{473}$
5.129	2.0192	$\frac{1}{495}$	5.168	2.0346	$\frac{1}{491}$	5.207	2.0499	$\frac{1}{487}$	5.246	2.0653	$\frac{1}{484}$	5.285	2.0807	$\frac{1}{480}$	5.324	2.0960	$\frac{1}{477}$	5.363	2.1114	$\frac{1}{473}$
5.130	2.0196	$\frac{1}{495}$	5.169	2.0350	$\frac{1}{491}$	5.208	2.0503	$\frac{1}{487}$	5.247	2.0657	$\frac{1}{484}$	5.286	2.0810	$\frac{1}{480}$	5.325	2.0964	$\frac{1}{476}$	5.364	2.1118	$\frac{1}{473}$
5.131	2.0200	$\frac{1}{494}$	5.170	2.0354	$\frac{1}{491}$	5.209	2.0507	$\frac{1}{487}$	5.248	2.0661	$\frac{1}{483}$	5.287	2.0814	$\frac{1}{480}$	5.326	2.0968	$\frac{1}{476}$	5.365	2.1122	$\frac{1}{473}$
5.132	2.0204	$\frac{1}{494}$	5.171	2.0358	$\frac{1}{491}$	5.210	2.0511	$\frac{1}{487}$	5.249	2.0665	$\frac{1}{483}$	5.288	2.0818	$\frac{1}{480}$	5.327	2.0972	$\frac{1}{476}$	5.366	2.1126	$\frac{1}{473}$
5.133	2.0208	$\frac{1}{494}$	5.172	2.0362	$\frac{1}{491}$	5.211	2.0515	$\frac{1}{487}$	5.250	2.0669	$\frac{1}{483}$	5.289	2.0822	$\frac{1}{480}$	5.328	2.0976	$\frac{1}{476}$	5.367	2.1129	$\frac{1}{473}$



I.—Table for reduction of centimillimeters to fractions of an inch—Continued.

Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.
5.368	2.1133	$\frac{1}{473}$	5.407	2.1287	$\frac{1}{469}$	5.446	2.1440	$\frac{1}{466}$	5.485	2.1594	$\frac{1}{463}$	5.524	2.1747	$\frac{1}{459}$	5.563	2.1901	$\frac{1}{456}$	5.602	2.2055	$\frac{1}{453}$
5.369	2.1137	$\frac{1}{473}$	5.408	2.1291	$\frac{1}{469}$	5.447	2.1444	$\frac{1}{466}$	5.486	2.1598	$\frac{1}{462}$	5.525	2.1751	$\frac{1}{459}$	5.564	2.1905	$\frac{1}{456}$	5.603	2.2059	$\frac{1}{453}$
5.370	2.1141	$\frac{1}{472}$	5.409	2.1295	$\frac{1}{469}$	5.448	2.1448	$\frac{1}{466}$	5.487	2.1602	$\frac{1}{462}$	5.526	2.1755	$\frac{1}{459}$	5.565	2.1909	$\frac{1}{456}$	5.604	2.2062	$\frac{1}{453}$
5.371	2.1145	$\frac{1}{472}$	5.410	2.1299	$\frac{1}{469}$	5.449	2.1452	$\frac{1}{466}$	5.488	2.1606	$\frac{1}{462}$	5.527	2.1759	$\frac{1}{459}$	5.566	2.1913	$\frac{1}{456}$	5.605	2.2066	$\frac{1}{453}$
5.372	2.1149	$\frac{1}{472}$	6.411	2.1303	$\frac{1}{469}$	5.450	2.1456	$\frac{1}{465}$	5.489	2.1610	$\frac{1}{462}$	5.528	2.1763	$\frac{1}{459}$	5.567	2.1917	$\frac{1}{456}$	5.606	2.2070	$\frac{1}{453}$
5.373	2.1153	$\frac{1}{472}$	5.412	2.1307	$\frac{1}{469}$	5.451	2.1460	$\frac{1}{465}$	5.490	2.1614	$\frac{1}{462}$	5.529	2.1767	$\frac{1}{459}$	5.568	2.1921	$\frac{1}{456}$	5.607	2.2074	$\frac{1}{452}$
5.374	2.1157	$\frac{1}{472}$	5.413	2.1310	$\frac{1}{469}$	5.452	2.1464	$\frac{1}{465}$	5.491	2.1618	$\frac{1}{462}$	5.530	2.1771	$\frac{1}{459}$	5.569	2.1925	$\frac{1}{456}$	5.608	2.2078	$\frac{1}{452}$
5.375	2.1161	$\frac{1}{472}$	5.414	2.1314	$\frac{1}{469}$	5.453	2.1468	$\frac{1}{465}$	5.492	2.1622	$\frac{1}{462}$	5.531	2.1775	$\frac{1}{459}$	5.570	2.1929	$\frac{1}{455}$	5.609	2.2082	$\frac{1}{452}$
5.376	2.1165	$\frac{1}{472}$	5.415	2.1318	$\frac{1}{469}$	5.454	2.1472	$\frac{1}{465}$	5.493	2.1625	$\frac{1}{462}$	5.532	2.1779	$\frac{1}{459}$	5.571	2.1933	$\frac{1}{455}$	5.610	2.2086	$\frac{1}{452}$
5.377	2.1169	$\frac{1}{472}$	6.416	2.1322	$\frac{1}{468}$	5.455	2.1476	$\frac{1}{465}$	5.494	2.1629	$\frac{1}{462}$	5.533	2.1783	$\frac{1}{459}$	5.572	2.1936	$\frac{1}{455}$	5.611	2.2090	$\frac{1}{452}$
5.378	2.1173	$\frac{1}{472}$	5.417	2.1326	$\frac{1}{468}$	5.456	2.1480	$\frac{1}{465}$	5.495	2.1633	$\frac{1}{462}$	6.534	2.1787	$\frac{1}{458}$	5.573	2.1940	$\frac{1}{455}$	5.612	2.2094	$\frac{1}{452}$
5.379	2.1177	$\frac{1}{472}$	5.418	2.1330	$\frac{1}{468}$	5.457	2.1484	$\frac{1}{465}$	5.496	2.1637	$\frac{1}{462}$	5.535	2.1791	$\frac{1}{458}$	5.574	2.1944	$\frac{1}{455}$	5.613	2.2098	$\frac{1}{452}$
5.380	2.1181	$\frac{1}{472}$	5.419	2.1334	$\frac{1}{468}$	5.458	2.1488	$\frac{1}{465}$	5.497	2.1641	$\frac{1}{462}$	5.536	2.1795	$\frac{1}{458}$	5.575	2.1948	$\frac{1}{455}$	5.614	2.2102	$\frac{1}{452}$
5.381	2.1185	$\frac{1}{471}$	6.420	2.1338	$\frac{1}{468}$	5.459	2.1492	$\frac{1}{465}$	5.498	2.1645	$\frac{1}{461}$	5.537	2.1799	$\frac{1}{458}$	5.576	2.1952	$\frac{1}{455}$	5.615	2.2106	$\frac{1}{452}$
5.382	2.1189	$\frac{1}{471}$	5.421	2.1342	$\frac{1}{468}$	5.460	2.1496	$\frac{1}{465}$	5.499	2.1649	$\frac{1}{461}$	5.538	2.1803	$\frac{1}{458}$	5.577	2.1956	$\frac{1}{455}$	5.616	2.2110	$\frac{1}{452}$
5.383	2.1192	$\frac{1}{471}$	5.422	2.1346	$\frac{1}{468}$	5.461	2.1499	$\frac{1}{465}$	5.500	2.1653	$\frac{1}{461}$	5.539	2.1807	$\frac{1}{458}$	5.578	2.1960	$\frac{1}{455}$	5.617	2.2114	$\frac{1}{452}$
5.384	2.1196	$\frac{1}{471}$	6.423	2.1350	$\frac{1}{468}$	5.462	2.1503	$\frac{1}{464}$	6.501	2.1657	$\frac{1}{461}$	5.510	2.1810	$\frac{1}{458}$	5.579	2.1964	$\frac{1}{455}$	5.618	2.2118	$\frac{1}{452}$
5.385	2.1200	$\frac{1}{471}$	6.424	2.1354	$\frac{1}{468}$	6.463	2.1507	$\frac{1}{464}$	5.502	2.1661	$\frac{1}{461}$	5.511	2.1814	$\frac{1}{458}$	5.580	2.1968	$\frac{1}{455}$	5.619	2.2122	$\frac{1}{451}$
5.386	2.1204	$\frac{1}{471}$	5.425	2.1358	$\frac{1}{468}$	5.464	2.1511	$\frac{1}{464}$	5.503	2.1665	$\frac{1}{461}$	5.542	2.1818	$\frac{1}{458}$	5.581	2.1972	$\frac{1}{455}$	5.620	2.2125	$\frac{1}{451}$
5.387	2.1208	$\frac{1}{471}$	5.426	2.1362	$\frac{1}{468}$	5.465	2.1515	$\frac{1}{464}$	5.504	2.1669	$\frac{1}{461}$	5.543	2.1822	$\frac{1}{458}$	5.582	2.1976	$\frac{1}{454}$	5.621	2.2129	$\frac{1}{451}$
5.388	2.1212	$\frac{1}{471}$	6.427	2.1366	$\frac{1}{467}$	5.466	2.1519	$\frac{1}{464}$	5.505	2.1673	$\frac{1}{461}$	5.544	2.1826	$\frac{1}{458}$	5.583	2.1980	$\frac{1}{454}$	5.622	2.2133	$\frac{1}{451}$
5.389	2.1216	$\frac{1}{471}$	5.428	2.1370	$\frac{1}{467}$	5.467	2.1523	$\frac{1}{464}$	5.506	2.1677	$\frac{1}{461}$	5.545	2.1830	$\frac{1}{458}$	5.584	2.1984	$\frac{1}{454}$	5.623	2.2137	$\frac{1}{451}$
5.390	2.1220	$\frac{1}{471}$	5.429	2.1374	$\frac{1}{467}$	5.468	2.1527	$\frac{1}{464}$	5.507	2.1681	$\frac{1}{461}$	5.546	2.1834	$\frac{1}{457}$	5.585	2.1988	$\frac{1}{454}$	5.624	2.2141	$\frac{1}{451}$
5.391	2.1224	$\frac{1}{471}$	5.430	2.1377	$\frac{1}{467}$	5.469	2.1531	$\frac{1}{464}$	5.508	2.1684	$\frac{1}{461}$	5.547	2.1838	$\frac{1}{457}$	5.586	2.1992	$\frac{1}{454}$	5.625	2.2145	$\frac{1}{451}$
5.392	2.1228	$\frac{1}{471}$	5.431	2.1381	$\frac{1}{467}$	5.470	2.1535	$\frac{1}{464}$	5.509	2.1688	$\frac{1}{461}$	6.548	2.1842	$\frac{1}{457}$	6.587	2.1996	$\frac{1}{454}$	5.626	2.2149	$\frac{1}{451}$
5.393	2.1232	$\frac{1}{470}$	5.432	2.1385	$\frac{1}{467}$	5.471	2.1539	$\frac{1}{464}$	5.510	2.1692	$\frac{1}{460}$	5.549	2.1846	$\frac{1}{457}$	5.588	2.1999	$\frac{1}{454}$	6.627	2.2153	$\frac{1}{451}$
5.394	2.1236	$\frac{1}{470}$	6.433	2.1389	$\frac{1}{467}$	5.472	2.1543	$\frac{1}{464}$	6.511	2.1696	$\frac{1}{460}$	6.550	2.1850	$\frac{1}{457}$	5.589	2.2003	$\frac{1}{454}$	5.628	2.2157	$\frac{1}{451}$
5.395	2.1240	$\frac{1}{470}$	6.434	2.1393	$\frac{1}{467}$	5.473	2.1547	$\frac{1}{464}$	5.512	2.1700	$\frac{1}{460}$	6.551	2.1854	$\frac{1}{457}$	5.590	2.2007	$\frac{1}{454}$	5.629	2.2161	$\frac{1}{451}$
5.396	2.1244	$\frac{1}{470}$	5.435	2.1397	$\frac{1}{467}$	5.474	2.1551	$\frac{1}{463}$	5.513	2.1704	$\frac{1}{460}$	5.552	2.1858	$\frac{1}{457}$	5.591	2.2011	$\frac{1}{454}$	5.630	2.2165	$\frac{1}{451}$
5.397	2.1247	$\frac{1}{470}$	5.436	2.1401	$\frac{1}{467}$	5.475	2.1555	$\frac{1}{463}$	5.514	2.1708	$\frac{1}{460}$	5.553	2.1862	$\frac{1}{457}$	5.592	2.2015	$\frac{1}{454}$	5.631	2.2169	$\frac{1}{451}$
5.398	2.1251	$\frac{1}{470}$	6.437	2.1405	$\frac{1}{467}$	5.476	2.1559	$\frac{1}{463}$	5.515	2.1712	$\frac{1}{460}$	5.554	2.1866	$\frac{1}{457}$	5.593	2.2019	$\frac{1}{454}$	5.632	2.2173	$\frac{1}{450}$
5.399	2.1255	$\frac{1}{470}$	5.438	2.1409	$\frac{1}{467}$	6.477	2.1562	$\frac{1}{463}$	6.516	2.1716	$\frac{1}{460}$	5.555	2.1870	$\frac{1}{457}$	5.594	2.2023	$\frac{1}{454}$	5.633	2.2177	$\frac{1}{450}$
5.400	2.1259	$\frac{1}{470}$	5.439	2.1413	$\frac{1}{466}$	5.478	2.1566	$\frac{1}{463}$	5.517	2.1720	$\frac{1}{460}$	6.556	2.1874	$\frac{1}{457}$	5.595	2.2027	$\frac{1}{453}$	5.634	2.2181	$\frac{1}{450}$
5.401	2.1263	$\frac{1}{470}$	5.440	2.1417	$\frac{1}{466}$	5.479	2.1570	$\frac{1}{463}$	5.518	2.1724	$\frac{1}{460}$	5.557	2.1877	$\frac{1}{457}$	5.596	2.2031	$\frac{1}{453}$	5.635	2.2184	$\frac{1}{450}$
5.402	2.1267	$\frac{1}{470}$	6.441	2.1421	$\frac{1}{466}$	5.480	2.1574	$\frac{1}{463}$	5.519	2.1728	$\frac{1}{460}$	5.558	2.1881	$\frac{1}{456}$	5.597	2.2035	$\frac{1}{453}$	5.636	2.2188	$\frac{1}{450}$
5.403	2.1271	$\frac{1}{470}$	5.442	2.1425	$\frac{1}{466}$	5.481	2.1578	$\frac{1}{463}$	6.520	2.1732	$\frac{1}{460}$	5.559	2.1885	$\frac{1}{456}$	6.698	2.2039	$\frac{1}{453}$	6.737	2.2192	$\frac{1}{450}$
5.404	2.1275	$\frac{1}{469}$	5.443	2.1429	$\frac{1}{466}$	5.482	2.1582	$\frac{1}{463}$	5.521	2.1736	$\frac{1}{460}$	6.560	2.1889	$\frac{1}{456}$	5.599	2.2043	$\frac{1}{453}$	5.638	2.2196	$\frac{1}{450}$
5.405	2.1279	$\frac{1}{469}$	6.444	2.1433	$\frac{1}{466}$	5.483	2.1586	$\frac{1}{463}$	5.522	2.1740	$\frac{1}{459}$	5.561	2.1893	$\frac{1}{456}$	5.600	2.2047	$\frac{1}{453}$	5.639	2.2200	$\frac{1}{450}$
5.406	2.1283	$\frac{1}{469}$	5.445	2.1436	$\frac{1}{466}$	5.484	2.1590	$\frac{1}{463}$	5.523	2.1744	$\frac{1}{459}$	5.562	2.1897	$\frac{1}{456}$	5.601	2.2051	$\frac{1}{453}$	6.640	2.2204	$\frac{1}{450}$



I.—Table for reduction of centimillimeters to fractions of an inch—Continued.

Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.			
5.641	2.2308	$\frac{1}{450}$	5.680	2.2362	$\frac{1}{447}$	5.719	2.2515	$\frac{1}{444}$	5.758	2.2669	$\frac{1}{441}$	5.797	2.2822	$\frac{1}{438}$	5.836	2.2976	$\frac{1}{435}$	5.875	2.3129	$\frac{1}{432}$
5.642	2.2312	$\frac{1}{450}$	5.681	2.2366	$\frac{1}{447}$	5.720	2.2519	$\frac{1}{441}$	5.759	2.2673	$\frac{1}{440}$	5.798	2.2826	$\frac{1}{438}$	5.837	2.2980	$\frac{1}{435}$	5.876	2.3133	$\frac{1}{432}$
5.643	2.2316	$\frac{1}{450}$	5.682	2.2370	$\frac{1}{446}$	5.721	2.2523	$\frac{1}{443}$	5.760	2.2677	$\frac{1}{440}$	5.799	2.2830	$\frac{1}{437}$	5.838	2.2984	$\frac{1}{435}$	5.877	2.3137	$\frac{1}{432}$
5.644	2.2320	$\frac{1}{449}$	5.683	2.2373	$\frac{1}{446}$	5.722	2.2527	$\frac{1}{443}$	5.761	2.2681	$\frac{1}{440}$	5.800	2.2834	$\frac{1}{437}$	5.839	2.2988	$\frac{1}{434}$	5.878	2.3141	$\frac{1}{432}$
5.645	2.2324	$\frac{1}{449}$	5.684	2.2377	$\frac{1}{446}$	5.723	2.2531	$\frac{1}{443}$	5.762	2.2684	$\frac{1}{440}$	5.801	2.2838	$\frac{1}{437}$	5.840	2.2992	$\frac{1}{434}$	5.879	2.3145	$\frac{1}{431}$
5.646	2.2328	$\frac{1}{449}$	5.685	2.2381	$\frac{1}{446}$	5.724	2.2535	$\frac{1}{443}$	5.763	2.2688	$\frac{1}{440}$	5.802	2.2843	$\frac{1}{437}$	5.811	2.2996	$\frac{1}{434}$	5.880	2.3149	$\frac{1}{431}$
5.647	2.2332	$\frac{1}{449}$	5.686	2.2385	$\frac{1}{446}$	5.725	2.2539	$\frac{1}{443}$	5.764	2.2692	$\frac{1}{440}$	5.803	2.2846	$\frac{1}{437}$	5.812	2.2999	$\frac{1}{439}$	5.881	2.3153	$\frac{1}{431}$
5.648	2.2336	$\frac{1}{449}$	5.687	2.2389	$\frac{1}{446}$	5.726	2.2543	$\frac{1}{443}$	5.765	2.2696	$\frac{1}{440}$	5.804	2.2850	$\frac{1}{437}$	5.813	2.3003	$\frac{1}{434}$	5.882	2.3157	$\frac{1}{431}$
5.649	2.2340	$\frac{1}{449}$	5.688	2.2393	$\frac{1}{446}$	5.727	2.2547	$\frac{1}{443}$	5.766	2.2700	$\frac{1}{440}$	5.805	2.2854	$\frac{1}{437}$	5.814	2.3007	$\frac{1}{434}$	5.883	2.3161	$\frac{1}{431}$
5.650	2.2344	$\frac{1}{449}$	5.689	2.2397	$\frac{1}{446}$	5.728	2.2551	$\frac{1}{443}$	5.767	2.2704	$\frac{1}{440}$	5.806	2.2858	$\frac{1}{437}$	5.815	2.3011	$\frac{1}{434}$	5.884	2.3165	$\frac{1}{431}$
5.651	2.2347	$\frac{1}{449}$	5.690	2.2401	$\frac{1}{446}$	5.729	2.2555	$\frac{1}{443}$	5.768	2.2708	$\frac{1}{440}$	5.807	2.2863	$\frac{1}{437}$	5.816	2.3015	$\frac{1}{434}$	5.885	2.3169	$\frac{1}{431}$
5.652	2.2351	$\frac{1}{449}$	5.691	2.2405	$\frac{1}{446}$	5.730	2.2559	$\frac{1}{443}$	5.769	2.2712	$\frac{1}{440}$	5.808	2.2866	$\frac{1}{437}$	5.817	2.3019	$\frac{1}{434}$	5.886	2.3173	$\frac{1}{431}$
5.653	2.2355	$\frac{1}{449}$	5.692	2.2409	$\frac{1}{446}$	5.731	2.2562	$\frac{1}{443}$	5.770	2.2716	$\frac{1}{440}$	5.809	2.2870	$\frac{1}{437}$	5.818	2.3023	$\frac{1}{434}$	5.887	2.3177	$\frac{1}{431}$
5.654	2.2359	$\frac{1}{449}$	5.693	2.2413	$\frac{1}{446}$	5.732	2.2566	$\frac{1}{443}$	5.771	2.2720	$\frac{1}{439}$	5.810	2.2873	$\frac{1}{437}$	5.819	2.3027	$\frac{1}{434}$	5.888	2.3181	$\frac{1}{431}$
5.655	2.2363	$\frac{1}{449}$	5.694	2.2417	$\frac{1}{446}$	5.733	2.2570	$\frac{1}{442}$	5.772	2.2724	$\frac{1}{439}$	5.811	2.2877	$\frac{1}{437}$	5.820	2.3031	$\frac{1}{434}$	5.889	2.3184	$\frac{1}{431}$
5.656	2.2367	$\frac{1}{449}$	5.695	2.2421	$\frac{1}{445}$	5.734	2.2574	$\frac{1}{442}$	5.773	2.2728	$\frac{1}{439}$	5.812	2.2881	$\frac{1}{436}$	5.821	2.3035	$\frac{1}{434}$	5.890	2.3188	$\frac{1}{431}$
5.657	2.2371	$\frac{1}{448}$	5.696	2.2425	$\frac{1}{445}$	5.735	2.2578	$\frac{1}{442}$	5.774	2.2732	$\frac{1}{439}$	5.813	2.2885	$\frac{1}{436}$	5.822	2.3039	$\frac{1}{433}$	5.891	2.3192	$\frac{1}{431}$
5.658	2.2375	$\frac{1}{448}$	5.697	2.2429	$\frac{1}{445}$	5.736	2.2582	$\frac{1}{442}$	5.775	2.2736	$\frac{1}{439}$	5.814	2.2889	$\frac{1}{436}$	5.823	2.3043	$\frac{1}{433}$	5.892	2.3196	$\frac{1}{431}$
5.659	2.2379	$\frac{1}{448}$	5.698	2.2433	$\frac{1}{445}$	5.737	2.2586	$\frac{1}{442}$	5.776	2.2740	$\frac{1}{439}$	5.815	2.2893	$\frac{1}{436}$	5.824	2.3047	$\frac{1}{433}$	5.893	2.3200	$\frac{1}{430}$
5.660	2.2383	$\frac{1}{448}$	5.699	2.2437	$\frac{1}{445}$	5.738	2.2590	$\frac{1}{442}$	5.777	2.2744	$\frac{1}{439}$	5.816	2.2897	$\frac{1}{436}$	5.825	2.3051	$\frac{1}{433}$	5.894	2.3204	$\frac{1}{430}$
5.661	2.2387	$\frac{1}{448}$	5.700	2.2441	$\frac{1}{445}$	5.739	2.2594	$\frac{1}{442}$	5.778	2.2747	$\frac{1}{439}$	5.817	2.2901	$\frac{1}{436}$	5.826	2.3055	$\frac{1}{433}$	5.895	2.3208	$\frac{1}{430}$
5.662	2.2391	$\frac{1}{448}$	5.701	2.2444	$\frac{1}{445}$	5.740	2.2598	$\frac{1}{443}$	5.779	2.2751	$\frac{1}{439}$	5.818	2.2905	$\frac{1}{436}$	5.827	2.3059	$\frac{1}{433}$	5.896	2.3212	$\frac{1}{430}$
5.663	2.2395	$\frac{1}{448}$	5.702	2.2448	$\frac{1}{445}$	5.741	2.2602	$\frac{1}{442}$	5.780	2.2755	$\frac{1}{439}$	5.819	2.2909	$\frac{1}{436}$	5.828	2.3062	$\frac{1}{433}$	5.897	2.3216	$\frac{1}{430}$
5.664	2.2399	$\frac{1}{448}$	5.703	2.2452	$\frac{1}{445}$	5.742	2.2606	$\frac{1}{442}$	5.781	2.2759	$\frac{1}{439}$	5.820	2.2913	$\frac{1}{436}$	5.829	2.3066	$\frac{1}{433}$	5.898	2.3220	$\frac{1}{430}$
5.665	2.2403	$\frac{1}{448}$	5.704	2.2456	$\frac{1}{445}$	5.743	2.2610	$\frac{1}{442}$	5.782	2.2763	$\frac{1}{439}$	5.821	2.2917	$\frac{1}{436}$	5.830	2.3070	$\frac{1}{433}$	5.899	2.3224	$\frac{1}{430}$
5.666	2.2407	$\frac{1}{448}$	5.705	2.2460	$\frac{1}{445}$	5.744	2.2614	$\frac{1}{442}$	5.783	2.2767	$\frac{1}{439}$	5.822	2.2921	$\frac{1}{436}$	5.831	2.3074	$\frac{1}{433}$	5.900	2.3228	$\frac{1}{430}$
5.667	2.2411	$\frac{1}{448}$	5.706	2.2464	$\frac{1}{445}$	5.745	2.2618	$\frac{1}{442}$	5.784	2.2771	$\frac{1}{439}$	5.823	2.2925	$\frac{1}{436}$	5.832	2.3078	$\frac{1}{433}$	5.901	2.3232	$\frac{1}{430}$
5.668	2.2415	$\frac{1}{448}$	5.707	2.2468	$\frac{1}{445}$	5.746	2.2622	$\frac{1}{441}$	5.785	2.2775	$\frac{1}{439}$	5.824	2.2929	$\frac{1}{436}$	5.833	2.3082	$\frac{1}{433}$	5.902	2.3236	$\frac{1}{430}$
5.669	2.2419	$\frac{1}{447}$	5.708	2.2472	$\frac{1}{444}$	5.747	2.2626	$\frac{1}{441}$	5.786	2.2779	$\frac{1}{438}$	5.825	2.2932	$\frac{1}{435}$	5.834	2.3086	$\frac{1}{433}$	5.903	2.3240	$\frac{1}{430}$
5.670	2.2422	$\frac{1}{447}$	5.709	2.2476	$\frac{1}{444}$	5.748	2.2629	$\frac{1}{441}$	5.787	2.2783	$\frac{1}{438}$	5.826	2.2936	$\frac{1}{435}$	5.835	2.3090	$\frac{1}{433}$	5.904	2.3244	$\frac{1}{430}$
5.671	2.2426	$\frac{1}{447}$	5.710	2.2480	$\frac{1}{444}$	5.749	2.2633	$\frac{1}{441}$	5.788	2.2787	$\frac{1}{438}$	5.827	2.2940	$\frac{1}{435}$	5.836	2.3094	$\frac{1}{433}$	5.905	2.3247	$\frac{1}{430}$
5.672	2.2430	$\frac{1}{447}$	5.711	2.2484	$\frac{1}{444}$	5.750	2.2637	$\frac{1}{441}$	5.789	2.2791	$\frac{1}{438}$	5.828	2.2944	$\frac{1}{435}$	5.837	2.3098	$\frac{1}{433}$	5.906	2.3251	$\frac{1}{430}$
5.673	2.2434	$\frac{1}{447}$	5.712	2.2488	$\frac{1}{444}$	5.751	2.2641	$\frac{1}{441}$	5.790	2.2795	$\frac{1}{438}$	5.829	2.2948	$\frac{1}{435}$	5.838	2.3102	$\frac{1}{433}$	5.907	2.3255	$\frac{1}{430}$
5.674	2.2438	$\frac{1}{447}$	5.713	2.2492	$\frac{1}{444}$	5.752	2.2645	$\frac{1}{441}$	5.791	2.2799	$\frac{1}{438}$	5.830	2.2952	$\frac{1}{435}$	5.839	2.3106	$\frac{1}{433}$	5.908	2.3259	$\frac{1}{430}$
5.675	2.2442	$\frac{1}{447}$	5.714	2.2496	$\frac{1}{444}$	5.753	2.2649	$\frac{1}{441}$	5.792	2.2803	$\frac{1}{438}$	5.831	2.2956	$\frac{1}{435}$	5.840	2.3110	$\frac{1}{433}$	5.909	2.3263	$\frac{1}{430}$
5.676	2.2446	$\frac{1}{447}$	5.715	2.2499	$\frac{1}{444}$	5.754	2.2653	$\frac{1}{441}$	5.793	2.2807	$\frac{1}{438}$	5.832	2.2960	$\frac{1}{435}$	5.841	2.3114	$\frac{1}{433}$	5.910	2.3267	$\frac{1}{430}$
5.677	2.2450	$\frac{1}{447}$	5.716	2.2503	$\frac{1}{444}$	5.755	2.2657	$\frac{1}{441}$	5.794	2.2811	$\frac{1}{438}$	5.833	2.2964	$\frac{1}{435}$	5.842	2.3118	$\frac{1}{433}$	5.911	2.3271	$\frac{1}{430}$
5.678	2.2454	$\frac{1}{447}$	5.717	2.2507	$\frac{1}{444}$	5.756	2.2661	$\frac{1}{441}$	5.795	2.2814	$\frac{1}{438}$	5.834	2.2968	$\frac{1}{435}$	5.843	2.3122	$\frac{1}{433}$	5.912	2.3275	$\frac{1}{430}$
5.679	2.2458	$\frac{1}{447}$	5.718	2.2511	$\frac{1}{444}$	5.757	2.2665	$\frac{1}{441}$	5.796	2.2818	$\frac{1}{438}$	5.835	2.2972	$\frac{1}{435}$	5.844	2.3126	$\frac{1}{433}$	5.913	2.3279	$\frac{1}{430}$



I.—Table for reduction of centimillimeters to fractions of an inch—Continued.

Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.
5.914	2.3283	$\frac{1}{429}$	5.953	2.3436	$\frac{1}{426}$	5.992	2.3590	$\frac{1}{423}$	6.031	2.3744	$\frac{1}{421}$	6.070	2.3897	$\frac{1}{418}$	6.109	2.4051	$\frac{1}{415}$	6.148	2.4204	$\frac{1}{413}$
5.915	2.3287	$\frac{1}{429}$	5.954	2.3440	$\frac{1}{426}$	5.993	2.3594	$\frac{1}{423}$	6.032	2.3747	$\frac{1}{421}$	6.071	2.3901	$\frac{1}{418}$	6.110	2.4055	$\frac{1}{415}$	6.149	2.4208	$\frac{1}{413}$
5.916	2.3291	$\frac{1}{429}$	5.955	2.3444	$\frac{1}{426}$	5.994	2.3598	$\frac{1}{423}$	6.033	2.3751	$\frac{1}{420}$	6.072	2.3905	$\frac{1}{418}$	6.111	2.4059	$\frac{1}{415}$	6.150	2.4212	$\frac{1}{412}$
5.917	2.3295	$\frac{1}{429}$	5.956	2.3448	$\frac{1}{426}$	5.995	2.3602	$\frac{1}{423}$	6.034	2.3755	$\frac{1}{420}$	6.073	2.3909	$\frac{1}{418}$	6.112	2.4062	$\frac{1}{415}$	6.151	2.4216	$\frac{1}{412}$
5.918	2.3299	$\frac{1}{429}$	5.957	2.3452	$\frac{1}{426}$	5.996	2.3606	$\frac{1}{423}$	6.035	2.3759	$\frac{1}{420}$	6.074	2.3913	$\frac{1}{418}$	6.113	2.4066	$\frac{1}{415}$	6.152	2.4220	$\frac{1}{412}$
5.919	2.3303	$\frac{1}{429}$	5.958	2.3456	$\frac{1}{426}$	5.997	2.3610	$\frac{1}{423}$	6.036	2.3763	$\frac{1}{420}$	6.075	2.3917	$\frac{1}{418}$	6.114	2.4070	$\frac{1}{415}$	6.153	2.4224	$\frac{1}{412}$
5.920	2.3307	$\frac{1}{429}$	5.959	2.3460	$\frac{1}{426}$	5.998	2.3614	$\frac{1}{423}$	6.037	2.3767	$\frac{1}{420}$	6.076	2.3921	$\frac{1}{417}$	6.115	2.4074	$\frac{1}{415}$	6.154	2.4228	$\frac{1}{412}$
5.921	2.3310	$\frac{1}{428}$	5.960	2.3464	$\frac{1}{426}$	5.999	2.3618	$\frac{1}{423}$	6.038	2.3771	$\frac{1}{420}$	6.077	2.3925	$\frac{1}{417}$	6.116	2.4078	$\frac{1}{415}$	6.155	2.4232	$\frac{1}{412}$
5.922	2.3314	$\frac{1}{428}$	5.961	2.3468	$\frac{1}{426}$	6.000	2.3622	$\frac{1}{423}$	6.039	2.3775	$\frac{1}{420}$	6.078	2.3929	$\frac{1}{417}$	6.117	2.4082	$\frac{1}{415}$	6.156	2.4236	$\frac{1}{412}$
5.923	2.3318	$\frac{1}{428}$	5.962	2.3472	$\frac{1}{425}$	6.001	2.3625	$\frac{1}{423}$	6.040	2.3779	$\frac{1}{420}$	6.079	2.3933	$\frac{1}{417}$	6.118	2.4086	$\frac{1}{415}$	6.157	2.4240	$\frac{1}{412}$
5.924	2.3322	$\frac{1}{428}$	5.963	2.3476	$\frac{1}{425}$	6.002	2.3629	$\frac{1}{423}$	6.041	2.3783	$\frac{1}{420}$	6.080	2.3936	$\frac{1}{417}$	6.119	2.4090	$\frac{1}{415}$	6.158	2.4244	$\frac{1}{412}$
5.925	2.3326	$\frac{1}{428}$	5.964	2.3480	$\frac{1}{425}$	6.003	2.3633	$\frac{1}{423}$	6.042	2.3787	$\frac{1}{420}$	6.081	2.3940	$\frac{1}{417}$	6.120	2.4094	$\frac{1}{414}$	6.159	2.4247	$\frac{1}{412}$
5.926	2.3330	$\frac{1}{428}$	5.965	2.3484	$\frac{1}{425}$	6.004	2.3637	$\frac{1}{422}$	6.043	2.3791	$\frac{1}{420}$	6.082	2.3944	$\frac{1}{417}$	6.121	2.4098	$\frac{1}{414}$	6.160	2.4251	$\frac{1}{412}$
5.927	2.3334	$\frac{1}{428}$	5.966	2.3488	$\frac{1}{425}$	6.005	2.3641	$\frac{1}{422}$	6.044	2.3795	$\frac{1}{420}$	6.083	2.3948	$\frac{1}{417}$	6.122	2.4102	$\frac{1}{414}$	6.161	2.4255	$\frac{1}{412}$
5.928	2.3338	$\frac{1}{428}$	5.967	2.3492	$\frac{1}{425}$	6.006	2.3645	$\frac{1}{422}$	6.045	2.3799	$\frac{1}{420}$	6.084	2.3952	$\frac{1}{417}$	6.123	2.4106	$\frac{1}{414}$	6.162	2.4259	$\frac{1}{412}$
5.929	2.3342	$\frac{1}{428}$	5.968	2.3496	$\frac{1}{425}$	6.007	2.3649	$\frac{1}{422}$	6.046	2.3803	$\frac{1}{420}$	6.085	2.3956	$\frac{1}{417}$	6.124	2.4110	$\frac{1}{414}$	6.163	2.4263	$\frac{1}{412}$
5.930	2.3346	$\frac{1}{428}$	5.969	2.3499	$\frac{1}{425}$	6.008	2.3653	$\frac{1}{422}$	6.047	2.3807	$\frac{1}{419}$	6.086	2.3960	$\frac{1}{417}$	6.125	2.4114	$\frac{1}{414}$	6.164	2.4267	$\frac{1}{412}$
5.931	2.3350	$\frac{1}{428}$	5.970	2.3503	$\frac{1}{425}$	6.009	2.3657	$\frac{1}{422}$	6.048	2.3810	$\frac{1}{419}$	6.087	2.3964	$\frac{1}{417}$	6.126	2.4118	$\frac{1}{414}$	6.165	2.4271	$\frac{1}{411}$
5.932	2.3354	$\frac{1}{428}$	5.971	2.3507	$\frac{1}{425}$	6.010	2.3661	$\frac{1}{422}$	6.049	2.3814	$\frac{1}{419}$	6.088	2.3968	$\frac{1}{417}$	0.127	2.4121	$\frac{1}{414}$	6.166	2.4275	$\frac{1}{411}$
5.933	2.3358	$\frac{1}{428}$	5.972	2.3511	$\frac{1}{425}$	6.011	2.3665	$\frac{1}{422}$	6.050	2.3818	$\frac{1}{419}$	6.089	2.3972	$\frac{1}{417}$	6.128	2.4125	$\frac{1}{414}$	6.167	2.4279	$\frac{1}{411}$
5.934	2.3362	$\frac{1}{428}$	5.973	2.3515	$\frac{1}{425}$	6.012	2.3669	$\frac{1}{422}$	6.051	2.3822	$\frac{1}{419}$	6.090	2.3976	$\frac{1}{417}$	6.129	2.4129	$\frac{1}{414}$	6.168	2.4283	$\frac{1}{411}$
5.935	2.3366	$\frac{1}{427}$	5.974	2.3519	$\frac{1}{425}$	6.013	2.3673	$\frac{1}{422}$	6.052	2.3826	$\frac{1}{419}$	6.091	2.3980	$\frac{1}{416}$	6.130	2.4133	$\frac{1}{414}$	6.169	2.4287	$\frac{1}{411}$
5.936	2.3370	$\frac{1}{427}$	5.975	2.3523	$\frac{1}{425}$	6.014	2.3677	$\frac{1}{422}$	6.053	2.3830	$\frac{1}{419}$	6.092	2.3984	$\frac{1}{416}$	6.131	2.4137	$\frac{1}{414}$	6.170	2.4291	$\frac{1}{411}$
5.937	2.3373	$\frac{1}{427}$	5.976	2.3527	$\frac{1}{424}$	6.015	2.3681	$\frac{1}{422}$	6.054	2.3834	$\frac{1}{419}$	6.093	2.3988	$\frac{1}{416}$	6.132	2.4141	$\frac{1}{414}$	6.171	2.4295	$\frac{1}{411}$
5.938	2.3377	$\frac{1}{427}$	5.977	2.3531	$\frac{1}{424}$	6.016	2.3684	$\frac{1}{422}$	6.055	2.3838	$\frac{1}{419}$	6.094	2.3992	$\frac{1}{416}$	6.133	2.4145	$\frac{1}{414}$	6.172	2.4299	$\frac{1}{411}$
5.939	2.3381	$\frac{1}{427}$	5.978	2.3535	$\frac{1}{424}$	6.017	2.3688	$\frac{1}{422}$	6.056	2.3842	$\frac{1}{419}$	6.095	2.3996	$\frac{1}{416}$	6.134	2.4149	$\frac{1}{414}$	6.173	2.4303	$\frac{1}{411}$
5.940	2.3385	$\frac{1}{427}$	5.979	2.3539	$\frac{1}{424}$	6.018	2.3692	$\frac{1}{422}$	6.057	2.3846	$\frac{1}{419}$	6.096	2.3999	$\frac{1}{416}$	6.135	2.4153	$\frac{1}{413}$	6.174	2.4307	$\frac{1}{411}$
5.941	2.3389	$\frac{1}{427}$	5.980	2.3543	$\frac{1}{424}$	6.019	2.3696	$\frac{1}{421}$	6.058	2.3850	$\frac{1}{419}$	6.097	2.4003	$\frac{1}{416}$	6.136	2.4157	$\frac{1}{413}$	6.175	2.4311	$\frac{1}{411}$
5.942	2.3393	$\frac{1}{427}$	5.981	2.3547	$\frac{1}{424}$	6.020	2.3700	$\frac{1}{421}$	6.059	2.3854	$\frac{1}{419}$	6.098	2.4007	$\frac{1}{416}$	6.137	2.4161	$\frac{1}{413}$	6.176	2.4314	$\frac{1}{411}$
5.943	2.3397	$\frac{1}{427}$	5.982	2.3551	$\frac{1}{424}$	6.021	2.3704	$\frac{1}{421}$	6.060	2.3858	$\frac{1}{419}$	6.099	2.4011	$\frac{1}{416}$	6.138	2.4165	$\frac{1}{413}$	6.177	2.4318	$\frac{1}{411}$
5.944	2.3401	$\frac{1}{427}$	5.983	2.3555	$\frac{1}{424}$	6.022	2.3708	$\frac{1}{421}$	6.061	2.3862	$\frac{1}{419}$	6.100	2.4015	$\frac{1}{416}$	6.139	2.4169	$\frac{1}{413}$	6.178	2.4322	$\frac{1}{411}$
5.945	2.3405	$\frac{1}{427}$	5.984	2.3559	$\frac{1}{424}$	6.023	2.3712	$\frac{1}{421}$	6.062	2.3866	$\frac{1}{418}$	6.101	2.4019	$\frac{1}{416}$	6.140	2.4173	$\frac{1}{413}$	6.179	2.4326	$\frac{1}{411}$
5.946	2.3409	$\frac{1}{427}$	5.985	2.3562	$\frac{1}{424}$	6.024	2.3716	$\frac{1}{421}$	6.063	2.3870	$\frac{1}{418}$	6.102	2.4023	$\frac{1}{416}$	6.141	2.4177	$\frac{1}{413}$	6.180	2.4330	$\frac{1}{410}$
5.947	2.3413	$\frac{1}{427}$	5.986	2.3566	$\frac{1}{421}$	6.025	2.3720	$\frac{1}{421}$	6.064	2.3873	$\frac{1}{418}$	6.103	2.4027	$\frac{1}{416}$	6.142	2.4181	$\frac{1}{413}$	6.181	2.4334	$\frac{1}{410}$
5.948	2.3417	$\frac{1}{426}$	5.987	2.3570	$\frac{1}{424}$	6.026	2.3724	$\frac{1}{421}$	6.065	2.3877	$\frac{1}{418}$	6.104	2.4031	$\frac{1}{416}$	6.143	2.4184	$\frac{1}{413}$	6.182	2.4338	$\frac{1}{410}$
5.949	2.3421	$\frac{1}{426}$	5.988	2.3574	$\frac{1}{424}$	6.027	2.3728	$\frac{1}{421}$	6.066	2.3881	$\frac{1}{418}$	6.105	2.4035	$\frac{1}{416}$	6.144	2.4188	$\frac{1}{413}$	6.183	2.4342	$\frac{1}{410}$
5.950	2.3425	$\frac{1}{426}$	5.989	2.3578	$\frac{1}{424}$	6.028	2.3732	$\frac{1}{421}$	6.067	2.3885	$\frac{1}{418}$	6.106	2.4039	$\frac{1}{415}$	6.145	2.4192	$\frac{1}{413}$	6.184	2.4346	$\frac{1}{410}$
5.951	2.3429	$\frac{1}{426}$	5.990	2.3582	$\frac{1}{423}$	6.029	2.3736	$\frac{1}{421}$	6.068	2.3889	$\frac{1}{418}$	6.107	2.4043	$\frac{1}{415}$	6.146	2.4196	$\frac{1}{413}$	6.185	2.4350	$\frac{1}{410}$
5.952	2.3433	$\frac{1}{426}$	5.991	2.3586	$\frac{1}{423}$	6.030	2.3740	$\frac{1}{421}$	6.069	2.3893	$\frac{1}{418}$	6.108	2.4047	$\frac{1}{415}$	6.147	2.4200	$\frac{1}{413}$	6.186	2.4354	$\frac{1}{410}$



I.—Table for reduction of centimillimeters to fractions of an inch—Continued.

Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.
6.187	2.4358	$\frac{1}{410}$	6.226	2.4511	$\frac{1}{407}$	6.265	2.4665	$\frac{1}{405}$	6.304	2.4818	$\frac{1}{402}$	6.343	2.4972	$\frac{1}{400}$	6.382	2.5125	$\frac{1}{397}$	6.421	2.5279	$\frac{1}{395}$
6.188	2.4362	$\frac{1}{410}$	6.227	2.4515	$\frac{1}{407}$	6.266	2.4669	$\frac{1}{405}$	6.305	2.4822	$\frac{1}{402}$	6.344	2.4976	$\frac{1}{400}$	6.383	2.5129	$\frac{1}{397}$	6.422	2.5283	$\frac{1}{395}$
6.189	2.4366	$\frac{1}{410}$	6.228	2.4519	$\frac{1}{407}$	6.267	2.4673	$\frac{1}{405}$	6.306	2.4826	$\frac{1}{402}$	6.345	2.4980	$\frac{1}{400}$	6.384	2.5133	$\frac{1}{397}$	6.423	2.5287	$\frac{1}{395}$
6.190	2.4370	$\frac{1}{410}$	6.229	2.4523	$\frac{1}{407}$	6.268	2.4677	$\frac{1}{405}$	6.307	2.4830	$\frac{1}{402}$	6.346	2.4984	$\frac{1}{400}$	6.385	2.5137	$\frac{1}{397}$	6.424	2.5291	$\frac{1}{395}$
6.191	2.4373	$\frac{1}{410}$	6.230	2.4327	$\frac{1}{407}$	6.269	2.4681	$\frac{1}{405}$	6.308	2.4834	$\frac{1}{402}$	6.347	2.4988	$\frac{1}{400}$	6.386	2.5141	$\frac{1}{397}$	6.425	2.5295	$\frac{1}{395}$
6.192	2.4377	$\frac{1}{410}$	6.231	2.4531	$\frac{1}{407}$	6.270	2.4684	$\frac{1}{405}$	6.309	2.4838	$\frac{1}{402}$	6.348	2.4992	$\frac{1}{400}$	6.387	2.5145	$\frac{1}{397}$	6.426	2.5299	$\frac{1}{395}$
6.193	2.4381	$\frac{1}{410}$	6.232	2.4535	$\frac{1}{407}$	6.271	2.4688	$\frac{1}{404}$	6.310	2.4842	$\frac{1}{402}$	6.349	2.4996	$\frac{1}{400}$	6.388	2.5149	$\frac{1}{397}$	6.427	2.5303	$\frac{1}{395}$
6.194	2.4385	$\frac{1}{410}$	6.233	2.4539	$\frac{1}{407}$	6.272	2.4692	$\frac{1}{404}$	6.311	2.4846	$\frac{1}{402}$	6.350	2.4999	$\frac{1}{399}$	6.389	2.5153	$\frac{1}{397}$	6.428	2.5307	$\frac{1}{395}$
6.195	2.4389	$\frac{1}{409}$	6.234	2.4543	$\frac{1}{407}$	6.273	2.4696	$\frac{1}{404}$	6.312	2.4850	$\frac{1}{402}$	6.351	2.5003	$\frac{1}{399}$	6.390	2.5157	$\frac{1}{397}$	6.429	2.5310	$\frac{1}{395}$
6.196	2.4393	$\frac{1}{409}$	6.235	2.4547	$\frac{1}{407}$	6.274	2.4700	$\frac{1}{404}$	6.313	2.4854	$\frac{1}{402}$	6.352	2.5007	$\frac{1}{399}$	6.391	2.5161	$\frac{1}{397}$	6.430	2.5314	$\frac{1}{394}$
6.197	2.4397	$\frac{1}{409}$	6.236	2.4551	$\frac{1}{407}$	6.275	2.4704	$\frac{1}{404}$	6.314	2.4858	$\frac{1}{402}$	6.353	2.5011	$\frac{1}{399}$	6.392	2.5165	$\frac{1}{397}$	6.431	2.5318	$\frac{1}{394}$
6.198	2.4401	$\frac{1}{409}$	6.237	2.4555	$\frac{1}{407}$	6.276	2.4708	$\frac{1}{404}$	6.315	2.4862	$\frac{1}{402}$	6.354	2.5015	$\frac{1}{399}$	6.393	2.5169	$\frac{1}{397}$	6.432	2.5322	$\frac{1}{394}$
6.199	2.4405	$\frac{1}{409}$	6.238	2.4559	$\frac{1}{407}$	6.277	2.4712	$\frac{1}{404}$	6.316	2.4866	$\frac{1}{402}$	6.355	2.5019	$\frac{1}{399}$	6.394	2.5173	$\frac{1}{397}$	6.433	2.5326	$\frac{1}{394}$
6.200	2.4409	$\frac{1}{409}$	6.239	2.4562	$\frac{1}{407}$	6.278	2.4716	$\frac{1}{404}$	6.317	2.4870	$\frac{1}{402}$	6.356	2.5023	$\frac{1}{399}$	6.395	2.5177	$\frac{1}{397}$	6.434	2.5330	$\frac{1}{394}$
6.201	2.4413	$\frac{1}{409}$	6.240	2.4566	$\frac{1}{407}$	6.279	2.4720	$\frac{1}{404}$	6.318	2.4873	$\frac{1}{401}$	6.357	2.5027	$\frac{1}{399}$	6.396	2.5181	$\frac{1}{397}$	6.435	2.5334	$\frac{1}{394}$
6.202	2.4417	$\frac{1}{409}$	6.241	2.4570	$\frac{1}{406}$	6.280	2.4724	$\frac{1}{404}$	6.319	2.4877	$\frac{1}{401}$	6.358	2.5031	$\frac{1}{399}$	6.397	2.5184	$\frac{1}{397}$	6.436	2.5338	$\frac{1}{394}$
6.203	2.4421	$\frac{1}{409}$	6.242	2.4574	$\frac{1}{406}$	6.281	2.4728	$\frac{1}{404}$	6.220	2.4881	$\frac{1}{401}$	6.359	2.5035	$\frac{1}{399}$	6.398	2.5188	$\frac{1}{396}$	6.437	2.5342	$\frac{1}{394}$
6.204	2.4425	$\frac{1}{409}$	6.243	2.4578	$\frac{1}{406}$	6.282	2.4732	$\frac{1}{404}$	6.321	2.4885	$\frac{1}{401}$	6.360	2.5039	$\frac{1}{399}$	6.399	2.5192	$\frac{1}{396}$	6.438	2.5346	$\frac{1}{394}$
6.205	2.4429	$\frac{1}{409}$	6.244	2.4582	$\frac{1}{406}$	6.283	2.4736	$\frac{1}{404}$	6.322	2.4890	$\frac{1}{401}$	6.361	2.5043	$\frac{1}{399}$	6.400	2.5196	$\frac{1}{396}$	6.439	2.5350	$\frac{1}{394}$
6.206	2.4433	$\frac{1}{409}$	6.245	2.4586	$\frac{1}{406}$	6.284	2.4740	$\frac{1}{404}$	6.323	2.4893	$\frac{1}{401}$	6.362	2.5047	$\frac{1}{399}$	6.401	2.5200	$\frac{1}{396}$	6.440	2.5354	$\frac{1}{394}$
6.207	2.4436	$\frac{1}{409}$	6.246	2.4590	$\frac{1}{406}$	6.285	2.4744	$\frac{1}{404}$	6.324	2.4897	$\frac{1}{401}$	6.363	2.5051	$\frac{1}{399}$	6.402	2.5204	$\frac{1}{396}$	6.441	2.5358	$\frac{1}{394}$
6.208	2.4440	$\frac{1}{409}$	6.247	2.4594	$\frac{1}{406}$	6.286	2.4747	$\frac{1}{404}$	6.325	2.4901	$\frac{1}{401}$	6.364	2.5055	$\frac{1}{399}$	6.403	2.5208	$\frac{1}{396}$	6.442	2.5362	$\frac{1}{394}$
6.209	2.4444	$\frac{1}{409}$	6.248	2.4598	$\frac{1}{406}$	6.287	2.4751	$\frac{1}{403}$	6.326	2.4905	$\frac{1}{401}$	6.365	2.5059	$\frac{1}{399}$	6.404	2.5212	$\frac{1}{396}$	6.443	2.5366	$\frac{1}{394}$
6.210	2.4448	$\frac{1}{408}$	6.249	2.4602	$\frac{1}{406}$	6.288	2.4755	$\frac{1}{403}$	6.327	2.4909	$\frac{1}{401}$	6.366	2.5062	$\frac{1}{398}$	6.405	2.5216	$\frac{1}{396}$	6.444	2.5370	$\frac{1}{394}$
6.211	2.4452	$\frac{1}{408}$	6.250	2.4606	$\frac{1}{406}$	6.289	2.4759	$\frac{1}{403}$	6.328	2.4913	$\frac{1}{401}$	6.367	2.5066	$\frac{1}{398}$	6.406	2.5220	$\frac{1}{396}$	6.445	2.5373	$\frac{1}{394}$
6.212	2.4456	$\frac{1}{408}$	6.251	2.4610	$\frac{1}{406}$	6.290	2.4763	$\frac{1}{403}$	6.329	2.4917	$\frac{1}{401}$	6.368	2.5070	$\frac{1}{398}$	6.407	2.5224	$\frac{1}{396}$	6.446	2.5377	$\frac{1}{393}$
6.213	2.4460	$\frac{1}{408}$	6.252	2.4614	$\frac{1}{406}$	6.291	2.4767	$\frac{1}{403}$	6.330	2.4921	$\frac{1}{401}$	6.369	2.5074	$\frac{1}{398}$	6.408	2.5228	$\frac{1}{396}$	6.447	2.5381	$\frac{1}{393}$
6.214	2.4464	$\frac{1}{408}$	6.253	2.4618	$\frac{1}{406}$	6.292	2.4771	$\frac{1}{403}$	6.331	2.4925	$\frac{1}{401}$	6.370	2.5078	$\frac{1}{398}$	6.409	2.5232	$\frac{1}{396}$	6.448	2.5385	$\frac{1}{393}$
6.215	2.4468	$\frac{1}{408}$	6.254	2.4622	$\frac{1}{406}$	6.293	2.4775	$\frac{1}{403}$	6.332	2.4929	$\frac{1}{401}$	6.371	2.5082	$\frac{1}{398}$	6.410	2.5236	$\frac{1}{396}$	6.449	2.5389	$\frac{1}{393}$
6.216	2.4472	$\frac{1}{408}$	6.255	2.4625	$\frac{1}{406}$	6.294	2.4779	$\frac{1}{403}$	6.333	2.4933	$\frac{1}{401}$	6.372	2.5086	$\frac{1}{398}$	6.411	2.5240	$\frac{1}{396}$	6.450	2.5393	$\frac{1}{393}$
6.217	2.4476	$\frac{1}{408}$	6.256	2.4629	$\frac{1}{405}$	6.295	2.4783	$\frac{1}{403}$	6.334	2.4936	$\frac{1}{400}$	6.373	2.5090	$\frac{1}{398}$	6.412	2.5244	$\frac{1}{396}$	6.451	2.5397	$\frac{1}{393}$
6.218	2.4480	$\frac{1}{408}$	6.257	2.4633	$\frac{1}{405}$	6.296	2.4787	$\frac{1}{403}$	6.335	2.4940	$\frac{1}{400}$	6.374	2.5094	$\frac{1}{398}$	6.413	2.5247	$\frac{1}{396}$	6.452	2.5401	$\frac{1}{393}$
6.219	2.4484	$\frac{1}{408}$	6.258	2.4637	$\frac{1}{405}$	6.297	2.4791	$\frac{1}{403}$	6.336	2.4944	$\frac{1}{400}$	6.375	2.5098	$\frac{1}{398}$	6.414	2.5251	$\frac{1}{395}$	6.453	2.5405	$\frac{1}{393}$
6.220	2.4488	$\frac{1}{408}$	6.259	2.4641	$\frac{1}{405}$	6.298	2.4795	$\frac{1}{403}$	6.337	2.4948	$\frac{1}{400}$	6.376	2.5102	$\frac{1}{398}$	6.415	2.5255	$\frac{1}{395}$	6.454	2.5409	$\frac{1}{393}$
6.221	2.4492	$\frac{1}{408}$	6.260	2.4644	$\frac{1}{405}$	6.299	2.4799	$\frac{1}{403}$	6.338	2.4952	$\frac{1}{400}$	6.377	2.5106	$\frac{1}{398}$	6.416	2.5259	$\frac{1}{395}$	6.455	2.5413	$\frac{1}{393}$
6.222	2.4496	$\frac{1}{408}$	6.261	2.4648	$\frac{1}{405}$	6.300	2.4803	$\frac{1}{403}$	6.339	2.4956	$\frac{1}{400}$	6.378	2.5110	$\frac{1}{398}$	6.417	2.5263	$\frac{1}{395}$	6.456	2.5417	$\frac{1}{393}$
6.223	2.4500	$\frac{1}{408}$	6.262	2.4653	$\frac{1}{405}$	6.301	2.4807	$\frac{1}{403}$	6.340	2.4960	$\frac{1}{400}$	6.379	2.5114	$\frac{1}{398}$	6.418	2.5267	$\frac{1}{395}$	6.457	2.5421	$\frac{1}{393}$
6.224	2.4503	$\frac{1}{408}$	6.263	2.4657	$\frac{1}{405}$	6.302	2.4810	$\frac{1}{403}$	6.341	2.4964	$\frac{1}{400}$	6.380	2.5118	$\frac{1}{398}$	6.419	2.5271	$\frac{1}{395}$	6.458	2.5425	$\frac{1}{393}$
6.225	2.4507	$\frac{1}{407}$	6.264	2.4661	$\frac{1}{405}$	6.303	2.4814	$\frac{1}{403}$	6.342	2.4968	$\frac{1}{400}$	6.381	2.5121	$\frac{1}{398}$	6.420	2.5275	$\frac{1}{395}$	6.459	2.5429	$\frac{1}{393}$



I.—Table for reduction of centimillimeters to fractions of an inch—Continued.

Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.
6.460	2.5438	$\frac{1}{399}$	6.499	2.5586	$\frac{1}{390}$	6.538	2.5740	$\frac{1}{388}$	6.577	2.5893	$\frac{1}{386}$	6.616	2.6047	$\frac{1}{383}$	6.655	2.6200	$\frac{1}{381}$	6.694	2.6354	$\frac{1}{379}$
6.461	2.5436	$\frac{1}{393}$	6.500	2.5590	$\frac{1}{390}$	6.539	2.5744	$\frac{1}{388}$	6.578	2.5897	$\frac{1}{386}$	6.617	2.6051	$\frac{1}{383}$	6.656	2.6204	$\frac{1}{381}$	6.695	2.6358	$\frac{1}{379}$
6.462	2.5440	$\frac{1}{393}$	6.501	2.5594	$\frac{1}{389}$	6.540	2.5747	$\frac{1}{388}$	6.579	2.5901	$\frac{1}{386}$	6.618	2.6055	$\frac{1}{383}$	6.657	2.6208	$\frac{1}{381}$	6.696	2.6362	$\frac{1}{379}$
6.463	2.5444	$\frac{1}{392}$	6.502	2.5598	$\frac{1}{390}$	6.541	2.5751	$\frac{1}{388}$	6.580	2.5905	$\frac{1}{385}$	6.619	2.6059	$\frac{1}{383}$	6.658	2.6212	$\frac{1}{381}$	6.697	2.6366	$\frac{1}{379}$
6.464	2.5448	$\frac{1}{392}$	6.503	2.5602	$\frac{1}{390}$	6.542	2.5755	$\frac{1}{388}$	6.581	2.5909	$\frac{1}{385}$	6.620	2.6062	$\frac{1}{383}$	6.659	2.6216	$\frac{1}{381}$	6.698	2.6370	$\frac{1}{379}$
6.465	2.5452	$\frac{1}{392}$	6.504	2.5606	$\frac{1}{390}$	6.543	2.5759	$\frac{1}{388}$	6.582	2.5913	$\frac{1}{385}$	6.621	2.6066	$\frac{1}{383}$	6.660	2.6220	$\frac{1}{381}$	6.699	2.6374	$\frac{1}{379}$
6.466	2.5456	$\frac{1}{392}$	6.505	2.5610	$\frac{1}{390}$	6.544	2.5763	$\frac{1}{388}$	6.583	2.5917	$\frac{1}{385}$	6.622	2.6070	$\frac{1}{383}$	6.661	2.6224	$\frac{1}{381}$	6.700	2.6377	$\frac{1}{379}$
6.467	2.5460	$\frac{1}{392}$	6.506	2.5614	$\frac{1}{390}$	6.545	2.5767	$\frac{1}{388}$	6.584	2.5921	$\frac{1}{385}$	6.623	2.6074	$\frac{1}{383}$	6.662	2.6228	$\frac{1}{381}$	6.701	2.6381	$\frac{1}{379}$
6.468	2.5464	$\frac{1}{392}$	6.507	2.5618	$\frac{1}{390}$	6.546	2.5771	$\frac{1}{387}$	6.585	2.5925	$\frac{1}{385}$	6.624	2.6078	$\frac{1}{383}$	6.663	2.6232	$\frac{1}{381}$	6.702	2.6385	$\frac{1}{378}$
6.469	2.5468	$\frac{1}{392}$	6.508	2.5621	$\frac{1}{390}$	6.547	2.5775	$\frac{1}{387}$	6.586	2.5929	$\frac{1}{385}$	6.625	2.6082	$\frac{1}{383}$	6.664	2.6236	$\frac{1}{381}$	6.703	2.6389	$\frac{1}{378}$
6.470	2.5472	$\frac{1}{392}$	6.509	2.5625	$\frac{1}{390}$	6.548	2.5779	$\frac{1}{387}$	6.587	2.5933	$\frac{1}{385}$	6.626	2.6086	$\frac{1}{383}$	6.665	2.6240	$\frac{1}{381}$	6.704	2.6393	$\frac{1}{378}$
6.471	2.5476	$\frac{1}{392}$	6.510	2.5629	$\frac{1}{390}$	6.549	2.5783	$\frac{1}{387}$	6.588	2.5936	$\frac{1}{385}$	6.627	2.6090	$\frac{1}{383}$	6.666	2.6244	$\frac{1}{380}$	6.705	2.6397	$\frac{1}{378}$
6.472	2.5480	$\frac{1}{392}$	6.511	2.5633	$\frac{1}{390}$	6.550	2.5787	$\frac{1}{387}$	6.589	2.5940	$\frac{1}{385}$	6.628	2.6094	$\frac{1}{383}$	6.667	2.6247	$\frac{1}{380}$	6.706	2.6401	$\frac{1}{378}$
6.473	2.5484	$\frac{1}{392}$	6.512	2.5637	$\frac{1}{390}$	6.551	2.5791	$\frac{1}{387}$	6.590	2.5944	$\frac{1}{385}$	6.629	2.6098	$\frac{1}{383}$	6.668	2.6251	$\frac{1}{380}$	6.707	2.6405	$\frac{1}{378}$
6.474	2.5488	$\frac{1}{392}$	6.513	2.5641	$\frac{1}{389}$	6.552	2.5795	$\frac{1}{387}$	6.591	2.5948	$\frac{1}{385}$	6.630	2.6102	$\frac{1}{383}$	6.669	2.6255	$\frac{1}{380}$	6.708	2.6409	$\frac{1}{378}$
6.475	2.5492	$\frac{1}{392}$	6.514	2.5645	$\frac{1}{389}$	6.553	2.5799	$\frac{1}{387}$	6.592	2.5952	$\frac{1}{385}$	6.631	2.6106	$\frac{1}{383}$	6.670	2.6259	$\frac{1}{380}$	6.709	2.6413	$\frac{1}{378}$
6.476	2.5496	$\frac{1}{392}$	6.515	2.5649	$\frac{1}{389}$	6.554	2.5803	$\frac{1}{387}$	6.593	2.5956	$\frac{1}{385}$	6.632	2.6110	$\frac{1}{382}$	6.671	2.6263	$\frac{1}{380}$	6.710	2.6417	$\frac{1}{378}$
6.477	2.5490	$\frac{1}{392}$	6.516	2.5653	$\frac{1}{389}$	6.555	2.5807	$\frac{1}{387}$	6.594	2.5960	$\frac{1}{385}$	6.633	2.6114	$\frac{1}{382}$	6.672	2.6267	$\frac{1}{380}$	6.711	2.6421	$\frac{1}{378}$
6.478	2.5503	$\frac{1}{392}$	6.517	2.5657	$\frac{1}{389}$	6.556	2.5810	$\frac{1}{387}$	6.595	2.5964	$\frac{1}{385}$	6.634	2.6118	$\frac{1}{382}$	6.673	2.6271	$\frac{1}{380}$	6.712	2.6425	$\frac{1}{378}$
6.479	2.5507	$\frac{1}{391}$	6.518	2.5661	$\frac{1}{389}$	6.557	2.5814	$\frac{1}{387}$	6.596	2.5968	$\frac{1}{385}$	6.635	2.6121	$\frac{1}{382}$	6.674	2.6275	$\frac{1}{380}$	6.713	2.6429	$\frac{1}{378}$
6.480	2.5511	$\frac{1}{391}$	6.519	2.5665	$\frac{1}{389}$	6.558	2.5818	$\frac{1}{387}$	6.597	2.5972	$\frac{1}{384}$	6.636	2.6125	$\frac{1}{382}$	6.675	2.6279	$\frac{1}{380}$	6.714	2.6433	$\frac{1}{378}$
6.481	2.5515	$\frac{1}{391}$	6.520	2.5669	$\frac{1}{389}$	6.559	2.5822	$\frac{1}{387}$	6.598	2.5976	$\frac{1}{384}$	6.637	2.6129	$\frac{1}{382}$	6.676	2.6283	$\frac{1}{380}$	6.715	2.6436	$\frac{1}{378}$
6.482	2.5519	$\frac{1}{391}$	6.521	2.5673	$\frac{1}{389}$	6.560	2.5826	$\frac{1}{387}$	6.599	2.5980	$\frac{1}{384}$	6.638	2.6133	$\frac{1}{382}$	6.677	2.6287	$\frac{1}{380}$	6.716	2.6440	$\frac{1}{378}$
6.483	2.5523	$\frac{1}{391}$	6.522	2.5677	$\frac{1}{389}$	6.561	2.5830	$\frac{1}{387}$	6.600	2.5984	$\frac{1}{384}$	6.639	2.6137	$\frac{1}{382}$	6.678	2.6291	$\frac{1}{380}$	6.717	2.6444	$\frac{1}{378}$
6.484	2.5527	$\frac{1}{391}$	6.523	2.5681	$\frac{1}{389}$	6.562	2.5834	$\frac{1}{387}$	6.601	2.5988	$\frac{1}{384}$	6.640	2.6141	$\frac{1}{382}$	6.679	2.6295	$\frac{1}{380}$	6.718	2.6448	$\frac{1}{378}$
6.485	2.5531	$\frac{1}{391}$	6.524	2.5684	$\frac{1}{389}$	6.563	2.5838	$\frac{1}{386}$	6.602	2.5992	$\frac{1}{384}$	6.641	2.6145	$\frac{1}{382}$	6.680	2.6299	$\frac{1}{380}$	6.719	2.6452	$\frac{1}{377}$
6.486	2.5535	$\frac{1}{391}$	6.525	2.5688	$\frac{1}{389}$	6.564	2.5842	$\frac{1}{386}$	6.603	2.5996	$\frac{1}{384}$	6.642	2.6149	$\frac{1}{382}$	6.681	2.6303	$\frac{1}{380}$	6.720	2.6456	$\frac{1}{377}$
6.487	2.5539	$\frac{1}{391}$	6.526	2.5692	$\frac{1}{389}$	6.565	2.5846	$\frac{1}{386}$	6.604	2.5999	$\frac{1}{384}$	6.643	2.6153	$\frac{1}{382}$	6.682	2.6307	$\frac{1}{380}$	6.721	2.6460	$\frac{1}{377}$
6.488	2.5543	$\frac{1}{391}$	6.527	2.5696	$\frac{1}{389}$	6.566	2.5850	$\frac{1}{386}$	6.605	2.6003	$\frac{1}{384}$	6.644	2.6157	$\frac{1}{382}$	6.683	2.6310	$\frac{1}{380}$	6.722	2.6464	$\frac{1}{377}$
6.489	2.5547	$\frac{1}{391}$	6.528	2.5700	$\frac{1}{389}$	6.567	2.5854	$\frac{1}{386}$	6.606	2.6007	$\frac{1}{384}$	6.645	2.6161	$\frac{1}{382}$	6.684	2.6314	$\frac{1}{379}$	6.723	2.6468	$\frac{1}{377}$
6.490	2.5551	$\frac{1}{391}$	6.529	2.5704	$\frac{1}{388}$	6.568	2.5858	$\frac{1}{386}$	6.607	2.6011	$\frac{1}{384}$	6.646	2.6165	$\frac{1}{382}$	6.685	2.6318	$\frac{1}{379}$	6.724	2.6472	$\frac{1}{377}$
6.491	2.5555	$\frac{1}{391}$	6.530	2.5708	$\frac{1}{388}$	6.569	2.5862	$\frac{1}{386}$	6.608	2.6015	$\frac{1}{384}$	6.647	2.6169	$\frac{1}{382}$	6.686	2.6322	$\frac{1}{379}$	6.725	2.6476	$\frac{1}{377}$
6.492	2.5559	$\frac{1}{391}$	6.531	2.5712	$\frac{1}{388}$	6.570	2.5866	$\frac{1}{386}$	6.609	2.6019	$\frac{1}{384}$	6.648	2.6173	$\frac{1}{382}$	6.687	2.6326	$\frac{1}{379}$	6.726	2.6480	$\frac{1}{377}$
6.493	2.5562	$\frac{1}{391}$	6.532	2.5716	$\frac{1}{388}$	6.571	2.5870	$\frac{1}{386}$	6.610	2.6023	$\frac{1}{384}$	6.649	2.6177	$\frac{1}{381}$	6.688	2.6330	$\frac{1}{379}$	6.727	2.6484	$\frac{1}{377}$
6.494	2.5566	$\frac{1}{391}$	6.533	2.5720	$\frac{1}{388}$	6.572	2.5873	$\frac{1}{386}$	6.611	2.6027	$\frac{1}{384}$	6.650	2.6181	$\frac{1}{381}$	6.689	2.6334	$\frac{1}{379}$	6.728	2.6488	$\frac{1}{377}$
6.495	2.5570	$\frac{1}{391}$	6.534	2.5724	$\frac{1}{388}$	6.573	2.5877	$\frac{1}{386}$	6.612	2.6031	$\frac{1}{384}$	6.651	2.6184	$\frac{1}{381}$	6.690	2.6338	$\frac{1}{379}$	6.729	2.6492	$\frac{1}{377}$
6.496	2.5574	$\frac{1}{390}$	6.535	2.5728	$\frac{1}{388}$	6.574	2.5881	$\frac{1}{386}$	6.613	2.6035	$\frac{1}{384}$	6.652	2.6188	$\frac{1}{381}$	6.691	2.6342	$\frac{1}{379}$	6.730	2.6496	$\frac{1}{377}$
6.497	2.5578	$\frac{1}{390}$	6.536	2.5732	$\frac{1}{388}$	6.575	2.5885	$\frac{1}{386}$	6.614	2.6039	$\frac{1}{384}$	6.653	2.6192	$\frac{1}{381}$	6.692	2.6346	$\frac{1}{379}$	6.731	2.6499	$\frac{1}{377}$
6.498	2.5582	$\frac{1}{390}$	6.537	2.5736	$\frac{1}{388}$	6.576	2.5889	$\frac{1}{388}$	6.615	2.6043	$\frac{1}{383}$	6.654	2.6196	$\frac{1}{381}$	6.693	2.6350	$\frac{1}{379}$	6.732	2.6503	$\frac{1}{377}$



I.—Table for reduction of centimillimeters to fractions of an inch—Continued.

Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.			
6.733	2.6507	$\frac{1}{377}$	6.772	2.6601	$\frac{1}{375}$	6.811	2.6814	$\frac{1}{373}$	6.850	2.6968	$\frac{1}{370}$	6.889	2.7121	$\frac{1}{368}$	6.928	2.7275	$\frac{1}{366}$	6.967	2.7429	$\frac{1}{364}$
6.734	2.6511	$\frac{1}{377}$	6.773	2.6605	$\frac{1}{374}$	6.812	2.6818	$\frac{1}{372}$	6.851	2.6972	$\frac{1}{370}$	6.890	2.7125	$\frac{1}{368}$	6.929	2.7279	$\frac{1}{366}$	6.968	2.7433	$\frac{1}{364}$
6.735	2.6515	$\frac{1}{377}$	6.774	2.6609	$\frac{1}{374}$	6.813	2.6822	$\frac{1}{372}$	6.852	2.6976	$\frac{1}{370}$	6.891	2.7129	$\frac{1}{368}$	6.930	2.7283	$\frac{1}{366}$	6.969	2.7436	$\frac{1}{364}$
6.736	2.6519	$\frac{1}{377}$	6.775	2.6673	$\frac{1}{374}$	6.814	2.6826	$\frac{1}{372}$	6.853	2.6980	$\frac{1}{370}$	6.892	2.7133	$\frac{1}{368}$	6.931	2.7287	$\frac{1}{366}$	6.970	2.7440	$\frac{1}{364}$
6.737	2.6523	$\frac{1}{376}$	6.776	2.6677	$\frac{1}{374}$	6.815	2.6830	$\frac{1}{372}$	6.854	2.6984	$\frac{1}{370}$	6.893	2.7137	$\frac{1}{368}$	6.932	2.7291	$\frac{1}{366}$	6.971	2.7444	$\frac{1}{364}$
6.738	2.6527	$\frac{1}{376}$	6.777	2.6681	$\frac{1}{374}$	6.816	2.6834	$\frac{1}{372}$	6.855	2.6988	$\frac{1}{370}$	6.894	2.7141	$\frac{1}{368}$	6.933	2.7295	$\frac{1}{366}$	6.972	2.7448	$\frac{1}{364}$
6.739	2.6531	$\frac{1}{376}$	6.778	2.6684	$\frac{1}{374}$	6.817	2.6838	$\frac{1}{372}$	6.856	2.6992	$\frac{1}{370}$	6.895	2.7145	$\frac{1}{368}$	6.934	2.7299	$\frac{1}{366}$	6.973	2.7452	$\frac{1}{364}$
6.740	2.6535	$\frac{1}{376}$	6.779	2.6688	$\frac{1}{374}$	6.818	2.6842	$\frac{1}{372}$	6.857	2.6996	$\frac{1}{370}$	6.896	2.7149	$\frac{1}{368}$	6.935	2.7303	$\frac{1}{366}$	6.974	2.7456	$\frac{1}{364}$
6.741	2.6539	$\frac{1}{376}$	6.780	2.6692	$\frac{1}{374}$	6.819	2.6846	$\frac{1}{372}$	6.858	2.6999	$\frac{1}{370}$	6.897	2.7153	$\frac{1}{368}$	6.936	2.7307	$\frac{1}{366}$	6.975	2.7460	$\frac{1}{364}$
6.742	2.6543	$\frac{1}{376}$	6.781	2.6696	$\frac{1}{374}$	6.820	2.6850	$\frac{1}{372}$	6.859	2.7003	$\frac{1}{370}$	6.898	2.7157	$\frac{1}{368}$	6.937	2.7311	$\frac{1}{366}$	6.976	2.7464	$\frac{1}{364}$
6.743	2.6547	$\frac{1}{376}$	6.782	2.6700	$\frac{1}{374}$	6.821	2.6854	$\frac{1}{372}$	6.860	2.7007	$\frac{1}{370}$	6.899	2.7161	$\frac{1}{368}$	6.938	2.7314	$\frac{1}{366}$	6.977	2.7468	$\frac{1}{364}$
6.744	2.6551	$\frac{1}{376}$	6.783	2.6704	$\frac{1}{374}$	6.822	2.6858	$\frac{1}{372}$	6.861	2.7011	$\frac{1}{370}$	6.900	2.7165	$\frac{1}{368}$	6.939	2.7318	$\frac{1}{366}$	6.978	2.7472	$\frac{1}{364}$
6.745	2.6555	$\frac{1}{376}$	6.784	2.6708	$\frac{1}{374}$	6.823	2.6862	$\frac{1}{372}$	6.862	2.7015	$\frac{1}{370}$	6.901	2.7169	$\frac{1}{368}$	6.940	2.7322	$\frac{1}{365}$	6.979	2.7476	$\frac{1}{363}$
6.746	2.6559	$\frac{1}{376}$	6.785	2.6712	$\frac{1}{374}$	6.824	2.6866	$\frac{1}{372}$	6.863	2.7019	$\frac{1}{370}$	6.902	2.7173	$\frac{1}{367}$	6.941	2.7326	$\frac{1}{365}$	6.980	2.7480	$\frac{1}{363}$
6.747	2.6562	$\frac{1}{376}$	6.786	2.6716	$\frac{1}{374}$	6.825	2.6870	$\frac{1}{372}$	6.864	2.7023	$\frac{1}{370}$	6.903	2.7177	$\frac{1}{367}$	6.942	2.7330	$\frac{1}{365}$	6.981	2.7484	$\frac{1}{363}$
6.748	2.6566	$\frac{1}{376}$	6.787	2.6720	$\frac{1}{374}$	6.826	2.6873	$\frac{1}{372}$	6.865	2.7027	$\frac{1}{369}$	6.904	2.7181	$\frac{1}{367}$	6.943	2.7334	$\frac{1}{365}$	6.982	2.7488	$\frac{1}{363}$
6.749	2.6570	$\frac{1}{376}$	6.788	2.6724	$\frac{1}{374}$	6.827	2.6877	$\frac{1}{372}$	6.866	2.7031	$\frac{1}{369}$	6.905	2.7184	$\frac{1}{367}$	6.944	2.7338	$\frac{1}{365}$	6.983	2.7492	$\frac{1}{363}$
6.750	2.6574	$\frac{1}{376}$	6.789	2.6728	$\frac{1}{374}$	6.828	2.6881	$\frac{1}{371}$	6.867	2.7035	$\frac{1}{369}$	6.906	2.7188	$\frac{1}{367}$	6.945	2.7342	$\frac{1}{365}$	6.984	2.7496	$\frac{1}{363}$
6.751	2.6578	$\frac{1}{376}$	6.790	2.6732	$\frac{1}{374}$	6.829	2.6885	$\frac{1}{371}$	6.868	2.7039	$\frac{1}{369}$	6.907	2.7192	$\frac{1}{367}$	6.946	2.7346	$\frac{1}{365}$	6.985	2.7499	$\frac{1}{363}$
6.752	2.6582	$\frac{1}{376}$	6.791	2.6736	$\frac{1}{373}$	6.830	2.6889	$\frac{1}{371}$	6.869	2.7043	$\frac{1}{369}$	6.908	2.7196	$\frac{1}{367}$	6.947	2.7350	$\frac{1}{365}$	6.986	2.7503	$\frac{1}{363}$
6.753	2.6586	$\frac{1}{376}$	6.792	2.6740	$\frac{1}{373}$	6.831	2.6893	$\frac{1}{371}$	6.870	2.7047	$\frac{1}{369}$	6.909	2.7200	$\frac{1}{367}$	6.948	2.7354	$\frac{1}{365}$	6.987	2.7507	$\frac{1}{363}$
6.754	2.6590	$\frac{1}{376}$	6.793	2.6744	$\frac{1}{373}$	6.832	2.6897	$\frac{1}{371}$	6.871	2.7051	$\frac{1}{369}$	6.910	2.7204	$\frac{1}{367}$	6.949	2.7358	$\frac{1}{365}$	6.988	2.7511	$\frac{1}{363}$
6.755	2.6594	$\frac{1}{375}$	6.794	2.6747	$\frac{1}{373}$	6.833	2.6901	$\frac{1}{371}$	6.872	2.7055	$\frac{1}{369}$	6.911	2.7208	$\frac{1}{367}$	6.950	2.7362	$\frac{1}{365}$	6.989	2.7515	$\frac{1}{363}$
6.756	2.6598	$\frac{1}{375}$	6.795	2.6751	$\frac{1}{373}$	6.834	2.6905	$\frac{1}{371}$	6.873	2.7059	$\frac{1}{369}$	6.912	2.7212	$\frac{1}{367}$	6.951	2.7366	$\frac{1}{365}$	6.990	2.7519	$\frac{1}{363}$
6.757	2.6602	$\frac{1}{375}$	6.796	2.6755	$\frac{1}{373}$	6.835	2.6909	$\frac{1}{371}$	6.874	2.7062	$\frac{1}{369}$	6.913	2.7216	$\frac{1}{367}$	6.952	2.7370	$\frac{1}{365}$	6.991	2.7523	$\frac{1}{363}$
6.758	2.6606	$\frac{1}{375}$	6.797	2.6759	$\frac{1}{373}$	6.836	2.6913	$\frac{1}{371}$	6.875	2.7066	$\frac{1}{369}$	6.914	2.7220	$\frac{1}{367}$	6.953	2.7374	$\frac{1}{365}$	6.992	2.7527	$\frac{1}{363}$
6.759	2.6610	$\frac{1}{375}$	6.798	2.6763	$\frac{1}{373}$	6.837	2.6917	$\frac{1}{371}$	6.876	2.7070	$\frac{1}{369}$	6.915	2.7224	$\frac{1}{367}$	6.954	2.7377	$\frac{1}{365}$	6.993	2.7531	$\frac{1}{363}$
6.760	2.6614	$\frac{1}{375}$	6.799	2.6767	$\frac{1}{373}$	6.838	2.6921	$\frac{1}{371}$	6.877	2.7074	$\frac{1}{369}$	6.916	2.7228	$\frac{1}{367}$	6.955	2.7381	$\frac{1}{365}$	6.994	2.7535	$\frac{1}{363}$
6.761	2.6618	$\frac{1}{375}$	6.800	2.6771	$\frac{1}{373}$	6.839	2.6925	$\frac{1}{371}$	6.878	2.7078	$\frac{1}{369}$	6.917	2.7232	$\frac{1}{367}$	6.956	2.7385	$\frac{1}{365}$	6.995	2.7539	$\frac{1}{363}$
6.762	2.6622	$\frac{1}{375}$	6.801	2.6775	$\frac{1}{373}$	6.840	2.6929	$\frac{1}{371}$	6.879	2.7082	$\frac{1}{369}$	6.918	2.7236	$\frac{1}{367}$	6.957	2.7389	$\frac{1}{365}$	6.996	2.7543	$\frac{1}{363}$
6.763	2.6625	$\frac{1}{375}$	6.802	2.6779	$\frac{1}{373}$	6.841	2.6933	$\frac{1}{371}$	6.880	2.7086	$\frac{1}{369}$	6.919	2.7240	$\frac{1}{367}$	6.958	2.7393	$\frac{1}{365}$	6.997	2.7547	$\frac{1}{363}$
6.764	2.6629	$\frac{1}{375}$	6.803	2.6783	$\frac{1}{373}$	6.842	2.6937	$\frac{1}{371}$	6.881	2.7090	$\frac{1}{369}$	6.920	2.7244	$\frac{1}{367}$	6.959	2.7397	$\frac{1}{364}$	6.998	2.7551	$\frac{1}{362}$
6.765	2.6633	$\frac{1}{375}$	6.804	2.6787	$\frac{1}{373}$	6.843	2.6940	$\frac{1}{371}$	6.882	2.7094	$\frac{1}{369}$	6.921	2.7247	$\frac{1}{366}$	6.960	2.7401	$\frac{1}{364}$	6.999	2.7555	$\frac{1}{362}$
6.766	2.6637	$\frac{1}{375}$	6.805	2.6791	$\frac{1}{373}$	6.844	2.6944	$\frac{1}{371}$	6.883	2.7098	$\frac{1}{368}$	6.922	2.7251	$\frac{1}{366}$	6.961	2.7405	$\frac{1}{364}$	7.000	2.7559	$\frac{1}{362}$
6.767	2.6641	$\frac{1}{375}$	6.806	2.6795	$\frac{1}{373}$	6.845	2.6948	$\frac{1}{371}$	6.884	2.7102	$\frac{1}{368}$	6.923	2.7255	$\frac{1}{366}$	6.962	2.7409	$\frac{1}{364}$	7.001	2.7563	$\frac{1}{362}$
6.768	2.6645	$\frac{1}{375}$	6.807	2.6799	$\frac{1}{373}$	6.846	2.6952	$\frac{1}{370}$	6.885	2.7106	$\frac{1}{369}$	6.924	2.7259	$\frac{1}{366}$	6.963	2.7413	$\frac{1}{364}$	7.002	2.7566	$\frac{1}{362}$
6.769	2.6649	$\frac{1}{375}$	6.808	2.6803	$\frac{1}{373}$	6.847	2.6956	$\frac{1}{370}$	6.886	2.7110	$\frac{1}{368}$	6.925	2.7263	$\frac{1}{366}$	6.964	2.7417	$\frac{1}{364}$	7.003	2.7570	$\frac{1}{362}$
6.770	2.6653	$\frac{1}{375}$	6.809	2.6807	$\frac{1}{372}$	6.848	2.6960	$\frac{1}{370}$	6.887	2.7114	$\frac{1}{368}$	6.926	2.7267	$\frac{1}{366}$	6.965	2.7421	$\frac{1}{364}$	7.004	2.7574	$\frac{1}{362}$
6.771	2.6657	$\frac{1}{375}$	6.810	2.6810	$\frac{1}{372}$	6.849	2.6964	$\frac{1}{370}$	6.888	2.7118	$\frac{1}{368}$	6.927	2.7271	$\frac{1}{366}$	6.966	2.7425	$\frac{1}{364}$	7.005	2.7578	$\frac{1}{362}$



I.—Table for reduction of centimillimeters to fractions of an inch—Continued.

Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.
7.006	2.7582	$\frac{1}{362}$	7.045	2.7736	$\frac{1}{360}$	7.084	2.7889	$\frac{1}{358}$	7.123	2.8043	$\frac{1}{356}$	7.162	2.8196	$\frac{1}{354}$	7.201	2.8350	$\frac{1}{352}$	7.240	2.8503	$\frac{1}{350}$
7.007	2.7586	$\frac{1}{362}$	7.046	2.7740	$\frac{1}{360}$	7.085	2.7893	$\frac{1}{358}$	7.124	2.8047	$\frac{1}{356}$	7.163	2.8200	$\frac{1}{354}$	7.202	2.8354	$\frac{1}{352}$	7.241	2.8507	$\frac{1}{350}$
7.008	2.7590	$\frac{1}{362}$	7.047	2.7744	$\frac{1}{360}$	7.086	2.7897	$\frac{1}{358}$	7.125	2.8051	$\frac{1}{356}$	7.164	2.8204	$\frac{1}{354}$	7.203	2.8358	$\frac{1}{352}$	7.242	2.8511	$\frac{1}{350}$
7.009	2.7594	$\frac{1}{362}$	7.048	2.7747	$\frac{1}{360}$	7.087	2.7901	$\frac{1}{358}$	7.126	2.8055	$\frac{1}{356}$	7.165	2.8208	$\frac{1}{354}$	7.204	2.8362	$\frac{1}{352}$	7.243	2.8515	$\frac{1}{350}$
7.010	2.7598	$\frac{1}{362}$	7.049	2.7751	$\frac{1}{360}$	7.088	2.7905	$\frac{1}{358}$	7.127	2.8058	$\frac{1}{356}$	7.166	2.8212	$\frac{1}{354}$	7.205	2.8366	$\frac{1}{352}$	7.244	2.8519	$\frac{1}{350}$
7.011	2.7602	$\frac{1}{362}$	7.050	2.7755	$\frac{1}{360}$	7.089	2.7909	$\frac{1}{358}$	7.128	2.8062	$\frac{1}{356}$	7.167	2.8216	$\frac{1}{354}$	7.206	2.8370	$\frac{1}{352}$	7.245	2.8523	$\frac{1}{350}$
7.012	2.7606	$\frac{1}{362}$	7.051	2.7759	$\frac{1}{360}$	7.090	2.7913	$\frac{1}{358}$	7.129	2.8066	$\frac{1}{356}$	7.168	2.8220	$\frac{1}{354}$	7.207	2.8373	$\frac{1}{352}$	7.246	2.8527	$\frac{1}{350}$
7.013	2.7610	$\frac{1}{362}$	7.052	2.7763	$\frac{1}{360}$	7.091	2.7917	$\frac{1}{358}$	7.130	2.8070	$\frac{1}{356}$	7.169	2.8224	$\frac{1}{354}$	7.208	2.8377	$\frac{1}{352}$	7.247	2.8531	$\frac{1}{350}$
7.014	2.7614	$\frac{1}{362}$	7.053	2.7767	$\frac{1}{360}$	7.092	2.7921	$\frac{1}{358}$	7.131	2.8074	$\frac{1}{356}$	7.170	2.8228	$\frac{1}{354}$	7.209	2.8381	$\frac{1}{352}$	7.248	2.8535	$\frac{1}{350}$
7.015	2.7618	$\frac{1}{362}$	7.054	2.7771	$\frac{1}{360}$	7.093	2.7925	$\frac{1}{358}$	7.132	2.8078	$\frac{1}{356}$	7.171	2.8232	$\frac{1}{354}$	7.210	2.8385	$\frac{1}{352}$	7.249	2.8539	$\frac{1}{350}$
7.016	2.7621	$\frac{1}{361}$	7.055	2.7775	$\frac{1}{359}$	7.094	2.7929	$\frac{1}{358}$	7.133	2.8082	$\frac{1}{356}$	7.172	2.8236	$\frac{1}{354}$	7.211	2.8389	$\frac{1}{352}$	7.250	2.8543	$\frac{1}{350}$
7.017	2.7625	$\frac{1}{361}$	7.056	2.7779	$\frac{1}{359}$	7.095	2.7933	$\frac{1}{357}$	7.134	2.8086	$\frac{1}{355}$	7.173	2.8240	$\frac{1}{354}$	7.212	2.8393	$\frac{1}{352}$	7.251	2.8547	$\frac{1}{350}$
7.018	2.7629	$\frac{1}{361}$	7.057	2.7783	$\frac{1}{359}$	7.096	2.7936	$\frac{1}{357}$	7.135	2.8090	$\frac{1}{355}$	7.174	2.8244	$\frac{1}{354}$	7.213	2.8397	$\frac{1}{352}$	7.252	2.8551	$\frac{1}{350}$
7.019	2.7633	$\frac{1}{361}$	7.058	2.7787	$\frac{1}{359}$	7.097	2.7940	$\frac{1}{357}$	7.136	2.8094	$\frac{1}{355}$	7.175	2.8247	$\frac{1}{353}$	7.214	2.8401	$\frac{1}{352}$	7.253	2.8555	$\frac{1}{350}$
7.020	2.7637	$\frac{1}{361}$	7.059	2.7791	$\frac{1}{359}$	7.098	2.7944	$\frac{1}{357}$	7.137	2.8098	$\frac{1}{355}$	7.176	2.8251	$\frac{1}{353}$	7.215	2.8405	$\frac{1}{351}$	7.254	2.8558	$\frac{1}{350}$
7.021	2.7641	$\frac{1}{361}$	7.060	2.7795	$\frac{1}{359}$	7.099	2.7948	$\frac{1}{357}$	7.138	2.8102	$\frac{1}{355}$	7.177	2.8255	$\frac{1}{353}$	7.216	2.8409	$\frac{1}{351}$	7.255	2.8562	$\frac{1}{350}$
7.022	2.7645	$\frac{1}{361}$	7.061	2.7799	$\frac{1}{359}$	7.100	2.7952	$\frac{1}{357}$	7.139	2.8106	$\frac{1}{355}$	7.178	2.8259	$\frac{1}{353}$	7.217	2.8413	$\frac{1}{351}$	7.256	2.8566	$\frac{1}{350}$
7.023	2.7649	$\frac{1}{361}$	7.062	2.7803	$\frac{1}{359}$	7.101	2.7956	$\frac{1}{357}$	7.140	2.8110	$\frac{1}{355}$	7.179	2.8263	$\frac{1}{353}$	7.218	2.8417	$\frac{1}{351}$	7.257	2.8570	$\frac{1}{349}$
7.024	2.7653	$\frac{1}{361}$	7.063	2.7807	$\frac{1}{359}$	7.102	2.7960	$\frac{1}{357}$	7.141	2.8114	$\frac{1}{355}$	7.180	2.8267	$\frac{1}{353}$	7.219	2.8421	$\frac{1}{351}$	7.258	2.8574	$\frac{1}{349}$
7.025	2.7657	$\frac{1}{361}$	7.064	2.7810	$\frac{1}{359}$	7.103	2.7964	$\frac{1}{357}$	7.142	2.8118	$\frac{1}{355}$	7.181	2.8271	$\frac{1}{353}$	7.220	2.8425	$\frac{1}{351}$	7.259	2.8578	$\frac{1}{349}$
7.026	2.7661	$\frac{1}{361}$	7.065	2.7814	$\frac{1}{359}$	7.104	2.7968	$\frac{1}{357}$	7.143	2.8121	$\frac{1}{355}$	7.182	2.8275	$\frac{1}{353}$	7.221	2.8429	$\frac{1}{351}$	7.260	2.8582	$\frac{1}{349}$
7.027	2.7665	$\frac{1}{361}$	7.066	2.7818	$\frac{1}{359}$	7.105	2.7972	$\frac{1}{357}$	7.144	2.8125	$\frac{1}{355}$	7.183	2.8279	$\frac{1}{353}$	7.222	2.8433	$\frac{1}{351}$	7.261	2.8586	$\frac{1}{349}$
7.028	2.7669	$\frac{1}{361}$	7.067	2.7822	$\frac{1}{359}$	7.106	2.7976	$\frac{1}{357}$	7.145	2.8129	$\frac{1}{355}$	7.184	2.8283	$\frac{1}{353}$	7.223	2.8436	$\frac{1}{351}$	7.262	2.8590	$\frac{1}{349}$
7.029	2.7673	$\frac{1}{361}$	7.068	2.7826	$\frac{1}{359}$	7.107	2.7980	$\frac{1}{357}$	7.146	2.8133	$\frac{1}{355}$	7.185	2.8287	$\frac{1}{353}$	7.224	2.8440	$\frac{1}{351}$	7.263	2.8594	$\frac{1}{349}$
7.030	2.7677	$\frac{1}{361}$	7.069	2.7830	$\frac{1}{359}$	7.108	2.7984	$\frac{1}{357}$	7.147	2.8137	$\frac{1}{355}$	7.186	2.8291	$\frac{1}{353}$	7.225	2.8444	$\frac{1}{351}$	7.264	2.8598	$\frac{1}{349}$
7.031	2.7681	$\frac{1}{361}$	7.070	2.7834	$\frac{1}{359}$	7.109	2.7988	$\frac{1}{357}$	7.148	2.8141	$\frac{1}{355}$	7.187	2.8295	$\frac{1}{353}$	7.226	2.8448	$\frac{1}{351}$	7.265	2.8602	$\frac{1}{349}$
7.032	2.7684	$\frac{1}{361}$	7.071	2.7838	$\frac{1}{359}$	7.110	2.7992	$\frac{1}{357}$	7.149	2.8145	$\frac{1}{355}$	7.188	2.8299	$\frac{1}{353}$	7.227	2.8452	$\frac{1}{351}$	7.266	2.8606	$\frac{1}{349}$
7.033	2.7688	$\frac{1}{361}$	7.072	2.7842	$\frac{1}{359}$	7.111	2.7996	$\frac{1}{357}$	7.150	2.8149	$\frac{1}{355}$	7.189	2.8303	$\frac{1}{353}$	7.228	2.8456	$\frac{1}{351}$	7.267	2.8610	$\frac{1}{349}$
7.034	2.7692	$\frac{1}{361}$	7.073	2.7846	$\frac{1}{359}$	7.112	2.7999	$\frac{1}{357}$	7.151	2.8153	$\frac{1}{355}$	7.190	2.8307	$\frac{1}{353}$	7.229	2.8460	$\frac{1}{351}$	7.268	2.8614	$\frac{1}{349}$
7.035	2.7696	$\frac{1}{361}$	7.074	2.7850	$\frac{1}{359}$	7.113	2.8003	$\frac{1}{357}$	7.152	2.8157	$\frac{1}{355}$	7.191	2.8310	$\frac{1}{353}$	7.230	2.8464	$\frac{1}{351}$	7.269	2.8618	$\frac{1}{349}$
7.036	2.7700	$\frac{1}{360}$	7.075	2.7854	$\frac{1}{358}$	7.114	2.8007	$\frac{1}{356}$	7.153	2.8161	$\frac{1}{355}$	7.192	2.8314	$\frac{1}{353}$	7.231	2.8468	$\frac{1}{351}$	7.270	2.8621	$\frac{1}{349}$
7.037	2.7704	$\frac{1}{360}$	7.076	2.7858	$\frac{1}{358}$	7.115	2.8011	$\frac{1}{356}$	7.154	2.8165	$\frac{1}{355}$	7.193	2.8318	$\frac{1}{353}$	7.232	2.8472	$\frac{1}{351}$	7.271	2.8625	$\frac{1}{349}$
7.038	2.7708	$\frac{1}{360}$	7.077	2.7862	$\frac{1}{358}$	7.116	2.8015	$\frac{1}{356}$	7.155	2.8169	$\frac{1}{355}$	7.194	2.8322	$\frac{1}{353}$	7.233	2.8476	$\frac{1}{351}$	7.272	2.8629	$\frac{1}{349}$
7.039	2.7712	$\frac{1}{360}$	7.078	2.7866	$\frac{1}{358}$	7.117	2.8019	$\frac{1}{356}$	7.156	2.8173	$\frac{1}{355}$	7.195	2.8326	$\frac{1}{353}$	7.234	2.8480	$\frac{1}{351}$	7.273	2.8633	$\frac{1}{349}$
7.040	2.7716	$\frac{1}{360}$	7.079	2.7870	$\frac{1}{358}$	7.118	2.8023	$\frac{1}{356}$	7.157	2.8177	$\frac{1}{355}$	7.196	2.8330	$\frac{1}{353}$	7.235	2.8484	$\frac{1}{351}$	7.274	2.8637	$\frac{1}{349}$
7.041	2.7720	$\frac{1}{360}$	7.080	2.7873	$\frac{1}{358}$	7.119	2.8027	$\frac{1}{356}$	7.158	2.8181	$\frac{1}{355}$	7.197	2.8334	$\frac{1}{353}$	7.236	2.8488	$\frac{1}{351}$	7.275	2.8641	$\frac{1}{349}$
7.042	2.7724	$\frac{1}{360}$	7.081	2.7877	$\frac{1}{358}$	7.120	2.8031	$\frac{1}{356}$	7.159	2.8184	$\frac{1}{355}$	7.198	2.8338	$\frac{1}{353}$	7.237	2.8492	$\frac{1}{351}$	7.276	2.8645	$\frac{1}{349}$
7.043	2.7728	$\frac{1}{360}$	7.082	2.7881	$\frac{1}{358}$	7.121	2.8035	$\frac{1}{356}$	7.160	2.8188	$\frac{1}{355}$	7.199	2.8342	$\frac{1}{353}$	7.238	2.8496	$\frac{1}{351}$	7.277	2.8649	$\frac{1}{349}$
7.044	2.7732	$\frac{1}{360}$	7.083	2.7885	$\frac{1}{358}$	7.122	2.8039	$\frac{1}{356}$	7.161	2.8192	$\frac{1}{355}$	7.200	2.8346	$\frac{1}{353}$	7.239	2.8499	$\frac{1}{351}$	7.278	2.8653	$\frac{1}{349}$



I.—Table for reduction of centimillimeters to fractions of an inch—Continued.

Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.
7.279	2.8657	$\frac{1}{340}$	7.318	2.8810	$\frac{1}{347}$	7.357	2.8964	$\frac{1}{345}$	7.396	2.9118	$\frac{1}{343}$	7.435	2.9271	$\frac{1}{341}$	7.474	2.9425	$\frac{1}{339}$	7.513	2.9578	$\frac{1}{338}$
7.280	2.8661	$\frac{1}{348}$	7.319	2.8814	$\frac{1}{340}$	7.358	2.8968	$\frac{1}{345}$	7.397	2.9121	$\frac{1}{343}$	7.436	2.9275	$\frac{1}{341}$	7.475	2.9429	$\frac{1}{339}$	7.514	2.9582	$\frac{1}{337}$
7.281	2.8665	$\frac{1}{348}$	7.320	2.8818	$\frac{1}{346}$	7.359	2.8972	$\frac{1}{345}$	7.398	2.9125	$\frac{1}{343}$	7.437	2.9279	$\frac{1}{341}$	7.476	2.9433	$\frac{1}{339}$	7.515	2.9586	$\frac{1}{337}$
7.282	2.8669	$\frac{1}{348}$	7.321	2.8822	$\frac{1}{340}$	7.360	2.8976	$\frac{1}{345}$	7.399	2.9129	$\frac{1}{343}$	7.438	2.9283	$\frac{1}{341}$	7.477	2.9437	$\frac{1}{339}$	7.516	2.9590	$\frac{1}{337}$
7.283	2.8673	$\frac{1}{348}$	7.322	2.8826	$\frac{1}{340}$	7.361	2.8980	$\frac{1}{345}$	7.400	2.9133	$\frac{1}{343}$	7.439	2.9287	$\frac{1}{341}$	7.478	2.9441	$\frac{1}{339}$	7.517	2.9594	$\frac{1}{337}$
7.284	2.8677	$\frac{1}{348}$	7.323	2.8830	$\frac{1}{340}$	7.362	2.8984	$\frac{1}{344}$	7.401	2.9137	$\frac{1}{343}$	7.440	2.9291	$\frac{1}{341}$	7.479	2.9444	$\frac{1}{339}$	7.518	2.9598	$\frac{1}{337}$
7.285	2.8681	$\frac{1}{348}$	7.324	2.8834	$\frac{1}{340}$	7.363	2.8988	$\frac{1}{344}$	7.402	2.9141	$\frac{1}{343}$	7.441	2.9295	$\frac{1}{341}$	7.480	2.9448	$\frac{1}{339}$	7.519	2.9602	$\frac{1}{337}$
7.286	2.8684	$\frac{1}{348}$	7.325	2.8838	$\frac{1}{340}$	7.364	2.8992	$\frac{1}{344}$	7.403	2.9145	$\frac{1}{343}$	7.442	2.9299	$\frac{1}{341}$	7.481	2.9452	$\frac{1}{339}$	7.520	2.9606	$\frac{1}{337}$
7.287	2.8688	$\frac{1}{348}$	7.326	2.8842	$\frac{1}{340}$	7.365	2.8996	$\frac{1}{344}$	7.404	2.9149	$\frac{1}{343}$	7.443	2.9303	$\frac{1}{341}$	7.482	2.9456	$\frac{1}{339}$	7.521	2.9610	$\frac{1}{337}$
7.288	2.8693	$\frac{1}{348}$	7.327	2.8846	$\frac{1}{340}$	7.366	2.8999	$\frac{1}{344}$	7.405	2.9153	$\frac{1}{343}$	7.444	2.9307	$\frac{1}{341}$	7.483	2.9460	$\frac{1}{339}$	7.522	2.9614	$\frac{1}{337}$
7.289	2.8696	$\frac{1}{348}$	7.328	2.8850	$\frac{1}{340}$	7.367	2.9003	$\frac{1}{344}$	7.406	2.9157	$\frac{1}{343}$	7.445	2.9311	$\frac{1}{341}$	7.484	2.9464	$\frac{1}{339}$	7.523	2.9618	$\frac{1}{337}$
7.290	2.8700	$\frac{1}{348}$	7.329	2.8854	$\frac{1}{340}$	7.368	2.9007	$\frac{1}{344}$	7.407	2.9161	$\frac{1}{343}$	7.446	2.9314	$\frac{1}{341}$	7.485	2.9468	$\frac{1}{339}$	7.524	2.9622	$\frac{1}{337}$
7.291	2.8704	$\frac{1}{348}$	7.330	2.8858	$\frac{1}{340}$	7.369	2.9011	$\frac{1}{344}$	7.408	2.9165	$\frac{1}{343}$	7.447	2.9318	$\frac{1}{341}$	7.486	2.9473	$\frac{1}{339}$	7.525	2.9625	$\frac{1}{337}$
7.292	2.8708	$\frac{1}{348}$	7.331	2.8862	$\frac{1}{340}$	7.370	2.9015	$\frac{1}{344}$	7.409	2.9169	$\frac{1}{343}$	7.448	2.9322	$\frac{1}{341}$	7.487	2.9476	$\frac{1}{339}$	7.526	2.9629	$\frac{1}{337}$
7.293	2.8712	$\frac{1}{348}$	7.332	2.8866	$\frac{1}{340}$	7.371	2.9019	$\frac{1}{344}$	7.410	2.9173	$\frac{1}{343}$	7.449	2.9326	$\frac{1}{341}$	7.488	2.9480	$\frac{1}{339}$	7.527	2.9633	$\frac{1}{337}$
7.294	2.8716	$\frac{1}{348}$	7.333	2.8870	$\frac{1}{340}$	7.372	2.9023	$\frac{1}{344}$	7.411	2.9177	$\frac{1}{343}$	7.450	2.9330	$\frac{1}{341}$	7.489	2.9484	$\frac{1}{339}$	7.528	2.9637	$\frac{1}{337}$
7.295	2.8720	$\frac{1}{348}$	7.334	2.8873	$\frac{1}{346}$	7.373	2.9027	$\frac{1}{344}$	7.412	2.9181	$\frac{1}{343}$	7.451	2.9334	$\frac{1}{341}$	7.490	2.9488	$\frac{1}{339}$	7.529	2.9641	$\frac{1}{337}$
7.296	2.8724	$\frac{1}{348}$	7.335	2.8877	$\frac{1}{340}$	7.374	2.9031	$\frac{1}{344}$	7.413	2.9184	$\frac{1}{343}$	7.452	2.9338	$\frac{1}{341}$	7.491	2.9492	$\frac{1}{339}$	7.530	2.9645	$\frac{1}{337}$
7.297	2.8728	$\frac{1}{348}$	7.336	2.8881	$\frac{1}{340}$	7.375	2.9035	$\frac{1}{344}$	7.414	2.9188	$\frac{1}{343}$	7.453	2.9342	$\frac{1}{341}$	7.492	2.9496	$\frac{1}{339}$	7.531	2.9649	$\frac{1}{337}$
7.298	2.8732	$\frac{1}{347}$	7.337	2.8885	$\frac{1}{346}$	7.376	2.9039	$\frac{1}{344}$	7.415	2.9192	$\frac{1}{343}$	7.454	2.9346	$\frac{1}{341}$	7.493	2.9499	$\frac{1}{338}$	7.532	2.9653	$\frac{1}{337}$
7.299	2.8736	$\frac{1}{347}$	7.338	2.8889	$\frac{1}{340}$	7.377	2.9043	$\frac{1}{344}$	7.416	2.9196	$\frac{1}{343}$	7.455	2.9350	$\frac{1}{341}$	7.494	2.9503	$\frac{1}{338}$	7.533	2.9657	$\frac{1}{337}$
7.300	2.8740	$\frac{1}{347}$	7.339	2.8893	$\frac{1}{346}$	7.378	2.9047	$\frac{1}{344}$	7.417	2.9200	$\frac{1}{343}$	7.456	2.9354	$\frac{1}{341}$	7.495	2.9507	$\frac{1}{338}$	7.534	2.9661	$\frac{1}{337}$
7.301	2.8743	$\frac{1}{347}$	7.340	2.8897	$\frac{1}{346}$	7.379	2.9051	$\frac{1}{344}$	7.418	2.9204	$\frac{1}{343}$	7.457	2.9358	$\frac{1}{341}$	7.496	2.9511	$\frac{1}{338}$	7.535	2.9665	$\frac{1}{337}$
7.302	2.8747	$\frac{1}{347}$	7.341	2.8901	$\frac{1}{345}$	7.380	2.9055	$\frac{1}{344}$	7.419	2.9208	$\frac{1}{343}$	7.458	2.9362	$\frac{1}{341}$	7.497	2.9515	$\frac{1}{338}$	7.536	2.9669	$\frac{1}{337}$
7.303	2.8751	$\frac{1}{347}$	7.342	2.8905	$\frac{1}{345}$	7.381	2.9058	$\frac{1}{344}$	7.420	2.9212	$\frac{1}{343}$	7.459	2.9366	$\frac{1}{341}$	7.498	2.9519	$\frac{1}{338}$	7.537	2.9673	$\frac{1}{337}$
7.304	2.8755	$\frac{1}{347}$	7.343	2.8909	$\frac{1}{345}$	7.382	2.9063	$\frac{1}{344}$	7.421	2.9216	$\frac{1}{343}$	7.460	2.9370	$\frac{1}{341}$	7.499	2.9523	$\frac{1}{338}$	7.538	2.9677	$\frac{1}{336}$
7.305	2.8759	$\frac{1}{347}$	7.344	2.8913	$\frac{1}{345}$	7.383	2.9068	$\frac{1}{343}$	7.422	2.9220	$\frac{1}{343}$	7.461	2.9373	$\frac{1}{340}$	7.500	2.9527	$\frac{1}{338}$	7.539	2.9681	$\frac{1}{336}$
7.306	2.8763	$\frac{1}{347}$	7.345	2.8917	$\frac{1}{345}$	7.384	2.9070	$\frac{1}{343}$	7.423	2.9224	$\frac{1}{342}$	7.462	2.9377	$\frac{1}{340}$	7.501	2.9531	$\frac{1}{338}$	7.540	2.9684	$\frac{1}{336}$
7.307	2.8767	$\frac{1}{347}$	7.346	2.8921	$\frac{1}{345}$	7.385	2.9074	$\frac{1}{343}$	7.424	2.9228	$\frac{1}{342}$	7.463	2.9381	$\frac{1}{340}$	7.502	2.9535	$\frac{1}{338}$	7.541	2.9688	$\frac{1}{336}$
7.308	2.8771	$\frac{1}{347}$	7.347	2.8925	$\frac{1}{345}$	7.386	2.9078	$\frac{1}{343}$	7.425	2.9232	$\frac{1}{342}$	7.464	2.9385	$\frac{1}{340}$	7.503	2.9539	$\frac{1}{338}$	7.542	2.9692	$\frac{1}{336}$
7.309	2.8775	$\frac{1}{347}$	7.348	2.8929	$\frac{1}{345}$	7.387	2.9082	$\frac{1}{343}$	7.426	2.9236	$\frac{1}{341}$	7.465	2.9389	$\frac{1}{340}$	7.504	2.9543	$\frac{1}{338}$	7.543	2.9696	$\frac{1}{336}$
7.310	2.8779	$\frac{1}{347}$	7.349	2.8933	$\frac{1}{345}$	7.388	2.9086	$\frac{1}{343}$	7.427	2.9240	$\frac{1}{341}$	7.466	2.9393	$\frac{1}{340}$	7.505	2.9547	$\frac{1}{338}$	7.544	2.9700	$\frac{1}{336}$
7.311	2.8783	$\frac{1}{347}$	7.350	2.8936	$\frac{1}{345}$	7.389	2.9090	$\frac{1}{343}$	7.428	2.9244	$\frac{1}{341}$	7.467	2.9397	$\frac{1}{340}$	7.506	2.9551	$\frac{1}{338}$	7.545	2.9704	$\frac{1}{336}$
7.312	2.8787	$\frac{1}{347}$	7.351	2.8940	$\frac{1}{345}$	7.390	2.9094	$\frac{1}{343}$	7.429	2.9247	$\frac{1}{341}$	7.468	2.9401	$\frac{1}{340}$	7.507	2.9555	$\frac{1}{338}$	7.546	2.9708	$\frac{1}{336}$
7.313	2.8791	$\frac{1}{347}$	7.352	2.8944	$\frac{1}{345}$	7.391	2.9098	$\frac{1}{343}$	7.430	2.9251	$\frac{1}{341}$	7.469	2.9405	$\frac{1}{340}$	7.508	2.9559	$\frac{1}{338}$	7.547	2.9712	$\frac{1}{336}$
7.314	2.8795	$\frac{1}{347}$	7.353	2.8948	$\frac{1}{345}$	7.392	2.9102	$\frac{1}{343}$	7.431	2.9255	$\frac{1}{341}$	7.470	2.9409	$\frac{1}{340}$	7.509	2.9563	$\frac{1}{338}$	7.548	2.9716	$\frac{1}{336}$
7.315	2.8799	$\frac{1}{347}$	7.354	2.8952	$\frac{1}{345}$	7.393	2.9106	$\frac{1}{343}$	7.432	2.9259	$\frac{1}{341}$	7.471	2.9413	$\frac{1}{340}$	7.510	2.9567	$\frac{1}{338}$	7.549	2.9720	$\frac{1}{336}$
7.316	2.8803	$\frac{1}{347}$	7.355	2.8956	$\frac{1}{345}$	7.394	2.9110	$\frac{1}{343}$	7.433	2.9263	$\frac{1}{341}$	7.472	2.9417	$\frac{1}{340}$	7.511	2.9571	$\frac{1}{338}$	7.550	2.9724	$\frac{1}{336}$
7.317	2.8807	$\frac{1}{347}$	7.356	2.8960	$\frac{1}{345}$	7.395	2.9114	$\frac{1}{343}$	7.434	2.9267	$\frac{1}{341}$	7.473	2.9421	$\frac{1}{340}$	7.512	2.9574	$\frac{1}{338}$	7.551	2.9728	$\frac{1}{336}$



I.—Table for reduction of centimillimeters to fractions of an inch—Continued.

Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.
7.552	2.9732	$\frac{1}{330}$	7.591	2.9885	$\frac{1}{334}$	7.630	3.0039	$\frac{1}{332}$	7.669	3.0192	$\frac{1}{331}$	7.708	3.0346	$\frac{1}{329}$	7.747	3.0499	$\frac{1}{327}$	7.786	3.0653	$\frac{1}{326}$
7.553	2.9736	$\frac{1}{336}$	7.592	2.9889	$\frac{1}{334}$	7.631	3.0043	$\frac{1}{332}$	7.670	3.0196	$\frac{1}{331}$	7.709	3.0350	$\frac{1}{329}$	7.748	3.0503	$\frac{1}{327}$	7.787	3.0657	$\frac{1}{326}$
7.554	2.9740	$\frac{1}{336}$	7.593	2.9893	$\frac{1}{334}$	7.632	3.0047	$\frac{1}{332}$	7.671	3.0200	$\frac{1}{331}$	7.710	3.0354	$\frac{1}{329}$	7.749	3.0507	$\frac{1}{327}$	7.788	3.0661	$\frac{1}{326}$
7.555	2.9744	$\frac{1}{336}$	7.594	2.9897	$\frac{1}{334}$	7.633	3.0051	$\frac{1}{332}$	7.672	3.0204	$\frac{1}{331}$	7.711	3.0358	$\frac{1}{329}$	7.750	3.0511	$\frac{1}{327}$	7.789	3.0665	$\frac{1}{325}$
7.556	2.9747	$\frac{1}{336}$	7.595	2.9901	$\frac{1}{334}$	7.634	3.0055	$\frac{1}{332}$	7.673	3.0208	$\frac{1}{330}$	7.712	3.0362	$\frac{1}{329}$	7.751	3.0515	$\frac{1}{327}$	7.790	3.0669	$\frac{1}{325}$
7.557	2.9751	$\frac{1}{336}$	7.596	2.9905	$\frac{1}{334}$	7.635	3.0059	$\frac{1}{332}$	7.674	3.0212	$\frac{1}{330}$	7.713	3.0366	$\frac{1}{329}$	7.752	3.0519	$\frac{1}{327}$	7.791	3.0673	$\frac{1}{325}$
7.558	2.9755	$\frac{1}{336}$	7.597	2.9909	$\frac{1}{334}$	7.636	3.0062	$\frac{1}{332}$	7.675	3.0216	$\frac{1}{330}$	7.714	2.0370	$\frac{1}{329}$	7.753	3.0523	$\frac{1}{327}$	7.792	3.0677	$\frac{1}{325}$
7.559	2.9759	$\frac{1}{336}$	7.598	2.9913	$\frac{1}{334}$	7.637	3.0066	$\frac{1}{332}$	7.676	3.0220	$\frac{1}{330}$	7.715	3.0373	$\frac{1}{329}$	7.754	3.0527	$\frac{1}{327}$	7.793	3.0681	$\frac{1}{325}$
7.560	2.9763	$\frac{1}{335}$	7.599	2.9917	$\frac{1}{334}$	7.638	3.0070	$\frac{1}{332}$	7.677	3.0224	$\frac{1}{330}$	7.716	3.0377	$\frac{1}{329}$	7.755	3.0531	$\frac{1}{327}$	7.794	3.0684	$\frac{1}{325}$
7.561	2.9767	$\frac{1}{335}$	7.600	2.9921	$\frac{1}{334}$	7.639	3.0074	$\frac{1}{332}$	7.678	3.0228	$\frac{1}{330}$	7.717	3.0381	$\frac{1}{329}$	7.756	3.0535	$\frac{1}{327}$	7.795	3.0688	$\frac{1}{325}$
7.562	2.9771	$\frac{1}{335}$	7.601	2.9925	$\frac{1}{334}$	7.640	3.0078	$\frac{1}{332}$	7.679	3.0232	$\frac{1}{330}$	7.718	3.0385	$\frac{1}{329}$	7.757	3.0539	$\frac{1}{327}$	7.796	3.0692	$\frac{1}{325}$
7.563	2.9775	$\frac{1}{335}$	7.602	2.9929	$\frac{1}{334}$	7.641	3.0082	$\frac{1}{332}$	7.680	3.0236	$\frac{1}{330}$	7.719	3.0389	$\frac{1}{329}$	7.758	3.0543	$\frac{1}{327}$	7.797	3.0696	$\frac{1}{325}$
7.564	2.9779	$\frac{1}{335}$	7.603	2.9933	$\frac{1}{333}$	7.642	3.0086	$\frac{1}{332}$	7.681	3.0240	$\frac{1}{330}$	7.720	3.0393	$\frac{1}{328}$	7.759	3.0547	$\frac{1}{327}$	7.798	3.0700	$\frac{1}{325}$
7.565	2.9783	$\frac{1}{335}$	7.604	2.9937	$\frac{1}{333}$	7.643	3.0090	$\frac{1}{332}$	7.682	3.0244	$\frac{1}{330}$	7.721	3.0397	$\frac{1}{328}$	7.760	3.0551	$\frac{1}{327}$	7.799	3.0704	$\frac{1}{325}$
7.566	2.9787	$\frac{1}{335}$	7.605	2.9941	$\frac{1}{333}$	7.644	3.0094	$\frac{1}{332}$	7.683	3.0247	$\frac{1}{330}$	7.722	3.0401	$\frac{1}{328}$	7.761	3.0555	$\frac{1}{327}$	7.800	3.0708	$\frac{1}{325}$
7.567	2.9791	$\frac{1}{335}$	7.606	2.9945	$\frac{1}{333}$	7.645	3.0098	$\frac{1}{332}$	7.684	3.0251	$\frac{1}{330}$	7.723	3.0405	$\frac{1}{328}$	7.762	3.0559	$\frac{1}{327}$	7.801	3.0712	$\frac{1}{325}$
7.568	2.9795	$\frac{1}{335}$	7.607	2.9949	$\frac{1}{333}$	7.646	3.0102	$\frac{1}{332}$	7.685	3.0255	$\frac{1}{330}$	7.724	3.0409	$\frac{1}{328}$	7.763	3.0562	$\frac{1}{327}$	7.802	3.0716	$\frac{1}{325}$
7.569	2.9799	$\frac{1}{335}$	7.608	2.9953	$\frac{1}{333}$	7.647	3.0106	$\frac{1}{332}$	7.686	3.0259	$\frac{1}{330}$	7.725	3.0413	$\frac{1}{328}$	7.764	3.0566	$\frac{1}{327}$	7.803	3.0720	$\frac{1}{325}$
7.570	2.9803	$\frac{1}{335}$	7.609	2.9957	$\frac{1}{333}$	7.648	3.0110	$\frac{1}{332}$	7.687	3.0263	$\frac{1}{330}$	7.726	3.0417	$\frac{1}{328}$	7.765	3.0570	$\frac{1}{327}$	7.804	3.0724	$\frac{1}{325}$
7.571	2.9807	$\frac{1}{335}$	7.610	2.9961	$\frac{1}{333}$	7.649	3.0114	$\frac{1}{332}$	7.688	3.0267	$\frac{1}{330}$	7.727	3.0421	$\frac{1}{328}$	7.766	3.0574	$\frac{1}{327}$	7.805	3.0728	$\frac{1}{325}$
7.572	2.9811	$\frac{1}{335}$	7.611	2.9965	$\frac{1}{333}$	7.650	3.0118	$\frac{1}{331}$	7.689	3.0271	$\frac{1}{330}$	7.728	3.0425	$\frac{1}{328}$	7.767	3.0578	$\frac{1}{326}$	7.806	3.0732	$\frac{1}{325}$
7.573	2.9814	$\frac{1}{335}$	7.612	2.9968	$\frac{1}{333}$	7.651	3.0121	$\frac{1}{331}$	7.690	3.0275	$\frac{1}{330}$	7.729	3.0429	$\frac{1}{328}$	7.768	3.0582	$\frac{1}{326}$	7.807	3.0736	$\frac{1}{325}$
7.574	2.9818	$\frac{1}{335}$	7.613	2.9972	$\frac{1}{333}$	7.652	3.0125	$\frac{1}{331}$	7.691	3.0279	$\frac{1}{330}$	7.730	3.0433	$\frac{1}{328}$	7.769	3.0586	$\frac{1}{326}$	7.808	3.0740	$\frac{1}{325}$
7.575	2.9822	$\frac{1}{335}$	7.614	2.9976	$\frac{1}{333}$	7.653	3.0129	$\frac{1}{331}$	7.692	3.0283	$\frac{1}{330}$	7.731	3.0437	$\frac{1}{328}$	7.770	3.0590	$\frac{1}{326}$	7.809	3.0744	$\frac{1}{325}$
7.576	2.9826	$\frac{1}{335}$	7.615	2.9980	$\frac{1}{333}$	7.654	3.0133	$\frac{1}{331}$	7.693	3.0287	$\frac{1}{330}$	7.732	3.0441	$\frac{1}{328}$	7.771	3.0594	$\frac{1}{326}$	7.810	3.0747	$\frac{1}{325}$
7.577	2.9830	$\frac{1}{335}$	7.616	2.9984	$\frac{1}{333}$	7.655	3.0137	$\frac{1}{331}$	7.694	2.0291	$\frac{1}{330}$	7.733	3.0444	$\frac{1}{328}$	7.772	3.0598	$\frac{1}{326}$	7.811	3.0751	$\frac{1}{325}$
7.578	2.9834	$\frac{1}{335}$	7.617	2.9988	$\frac{1}{333}$	7.656	3.0141	$\frac{1}{331}$	7.695	3.0295	$\frac{1}{330}$	7.734	3.0448	$\frac{1}{328}$	7.773	3.0602	$\frac{1}{326}$	7.812	3.0755	$\frac{1}{325}$
7.579	2.9838	$\frac{1}{335}$	7.618	2.9992	$\frac{1}{333}$	7.657	3.0145	$\frac{1}{331}$	7.696	3.0299	$\frac{1}{330}$	7.735	3.0452	$\frac{1}{328}$	7.774	3.0606	$\frac{1}{326}$	7.813	3.0759	$\frac{1}{325}$
7.580	2.9842	$\frac{1}{335}$	7.619	2.9996	$\frac{1}{333}$	7.658	3.0149	$\frac{1}{331}$	7.697	3.0303	$\frac{1}{329}$	7.736	3.0456	$\frac{1}{328}$	7.775	3.0610	$\frac{1}{326}$	7.814	3.0763	$\frac{1}{325}$
7.581	2.9846	$\frac{1}{334}$	7.620	2.9999	$\frac{1}{333}$	7.659	3.0153	$\frac{1}{331}$	7.698	3.0307	$\frac{1}{329}$	7.737	3.0460	$\frac{1}{328}$	7.776	3.0614	$\frac{1}{326}$	7.815	3.0767	$\frac{1}{324}$
7.582	2.9850	$\frac{1}{334}$	7.621	3.0003	$\frac{1}{333}$	7.660	3.0157	$\frac{1}{331}$	7.699	3.0311	$\frac{1}{329}$	7.738	3.0464	$\frac{1}{328}$	7.777	3.0618	$\frac{1}{326}$	7.816	3.0771	$\frac{1}{324}$
7.583	2.9854	$\frac{1}{334}$	7.622	3.0007	$\frac{1}{333}$	7.661	3.0161	$\frac{1}{331}$	7.700	3.0314	$\frac{1}{329}$	7.739	3.0468	$\frac{1}{328}$	7.778	3.0621	$\frac{1}{326}$	7.817	3.0775	$\frac{1}{324}$
7.584	2.9858	$\frac{1}{334}$	7.623	3.0011	$\frac{1}{333}$	7.662	3.0165	$\frac{1}{331}$	7.701	3.0318	$\frac{1}{329}$	7.740	3.0472	$\frac{1}{328}$	7.779	3.0625	$\frac{1}{326}$	7.818	3.0779	$\frac{1}{324}$
7.585	2.9862	$\frac{1}{334}$	7.624	3.0015	$\frac{1}{333}$	7.663	3.0169	$\frac{1}{331}$	7.702	3.0322	$\frac{1}{329}$	7.741	3.0476	$\frac{1}{328}$	7.780	3.0629	$\frac{1}{326}$	7.819	3.0783	$\frac{1}{324}$
7.586	2.9866	$\frac{1}{334}$	7.625	3.0019	$\frac{1}{333}$	7.664	3.0173	$\frac{1}{331}$	7.703	3.0326	$\frac{1}{329}$	7.742	3.0480	$\frac{1}{328}$	7.781	3.0633	$\frac{1}{326}$	7.820	3.0787	$\frac{1}{324}$
7.587	2.9870	$\frac{1}{334}$	7.626	3.0023	$\frac{1}{333}$	7.665	3.0177	$\frac{1}{331}$	7.704	3.0330	$\frac{1}{329}$	7.743	3.0484	$\frac{1}{327}$	7.782	3.0637	$\frac{1}{326}$	7.821	3.0791	$\frac{1}{324}$
7.588	2.9873	$\frac{1}{334}$	7.627	3.0027	$\frac{1}{332}$	7.666	3.0181	$\frac{1}{331}$	7.705	3.0334	$\frac{1}{329}$	7.744	3.0488	$\frac{1}{327}$	7.783	3.0641	$\frac{1}{326}$	7.822	3.0795	$\frac{1}{324}$
7.589	2.9877	$\frac{1}{334}$	7.628	3.0031	$\frac{1}{332}$	7.667	3.0184	$\frac{1}{331}$	7.706	3.0338	$\frac{1}{329}$	7.745	3.0492	$\frac{1}{327}$	7.784	3.0645	$\frac{1}{326}$	7.823	3.0799	$\frac{1}{324}$
7.590	2.9881	$\frac{1}{334}$	7.629	3.0035	$\frac{1}{332}$	7.668	3.0188	$\frac{1}{331}$	7.707	3.0342	$\frac{1}{329}$	7.746	3.0496	$\frac{1}{327}$	7.785	3.0649	$\frac{1}{326}$	7.824	3.0803	$\frac{1}{324}$



I.—Table for reduction of centimillimeters to fractions of an inch—Continued.

Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.
7.825	3.0807	$\frac{1}{324}$	7.864	3.0900	$\frac{1}{322}$	7.909	3.1114	$\frac{1}{321}$	7.942	3.1207	$\frac{1}{319}$	7.981	3.1421	$\frac{1}{318}$	8.020	3.1574	$\frac{1}{316}$	8.059	3.1728	$\frac{1}{315}$
7.826	3.0810	$\frac{1}{324}$	7.865	3.0904	$\frac{1}{322}$	7.904	3.1118	$\frac{1}{321}$	7.943	3.1211	$\frac{1}{319}$	7.982	3.1425	$\frac{1}{318}$	8.021	3.1578	$\frac{1}{316}$	8.060	3.1732	$\frac{1}{315}$
7.827	3.0814	$\frac{1}{324}$	7.866	3.0908	$\frac{1}{322}$	7.905	3.1121	$\frac{1}{321}$	7.944	3.1215	$\frac{1}{319}$	7.983	3.1429	$\frac{1}{318}$	8.022	3.1582	$\frac{1}{316}$	8.061	3.1736	$\frac{1}{315}$
7.828	3.0818	$\frac{1}{324}$	7.867	3.0912	$\frac{1}{322}$	7.906	3.1125	$\frac{1}{321}$	7.945	3.1219	$\frac{1}{319}$	7.984	3.1433	$\frac{1}{318}$	8.023	3.1586	$\frac{1}{316}$	8.062	3.1740	$\frac{1}{315}$
7.829	3.0822	$\frac{1}{324}$	7.868	3.0916	$\frac{1}{322}$	7.907	3.1129	$\frac{1}{321}$	7.946	3.1223	$\frac{1}{319}$	7.985	3.1436	$\frac{1}{318}$	8.024	3.1590	$\frac{1}{316}$	8.063	3.1744	$\frac{1}{315}$
7.830	3.0826	$\frac{1}{324}$	7.869	3.0920	$\frac{1}{322}$	7.908	3.1133	$\frac{1}{321}$	7.947	3.1227	$\frac{1}{319}$	7.986	3.1440	$\frac{1}{318}$	8.025	3.1594	$\frac{1}{316}$	8.064	3.1747	$\frac{1}{315}$
7.831	3.0830	$\frac{1}{324}$	7.870	3.0924	$\frac{1}{322}$	7.909	3.1137	$\frac{1}{321}$	7.948	3.1231	$\frac{1}{319}$	7.987	3.1444	$\frac{1}{317}$	8.026	3.1598	$\frac{1}{316}$	8.065	3.1751	$\frac{1}{314}$
7.832	3.0834	$\frac{1}{324}$	7.871	3.0928	$\frac{1}{322}$	7.910	3.1141	$\frac{1}{321}$	7.949	3.1235	$\frac{1}{319}$	7.988	3.1448	$\frac{1}{317}$	8.027	3.1602	$\frac{1}{316}$	8.066	3.1755	$\frac{1}{314}$
7.833	3.0838	$\frac{1}{324}$	7.872	3.0932	$\frac{1}{322}$	7.911	3.1145	$\frac{1}{321}$	7.950	3.1239	$\frac{1}{319}$	7.989	3.1452	$\frac{1}{317}$	8.028	3.1606	$\frac{1}{316}$	8.067	3.1759	$\frac{1}{314}$
7.834	3.0842	$\frac{1}{324}$	7.873	3.0936	$\frac{1}{322}$	7.912	3.1149	$\frac{1}{320}$	7.951	3.1243	$\frac{1}{319}$	7.990	3.1456	$\frac{1}{317}$	8.029	3.1610	$\frac{1}{316}$	8.068	3.1763	$\frac{1}{314}$
7.835	3.0846	$\frac{1}{324}$	7.874	3.0940	$\frac{1}{322}$	7.913	3.1153	$\frac{1}{320}$	7.952	3.1247	$\frac{1}{319}$	7.991	3.1460	$\frac{1}{317}$	8.030	3.1614	$\frac{1}{316}$	8.069	3.1767	$\frac{1}{314}$
7.836	3.0850	$\frac{1}{324}$	7.875	3.1000	$\frac{1}{322}$	7.914	3.1157	$\frac{1}{320}$	7.953	3.1251	$\frac{1}{319}$	7.992	3.1464	$\frac{1}{317}$	8.031	3.1618	$\frac{1}{316}$	8.070	3.1771	$\frac{1}{314}$
7.837	3.0854	$\frac{1}{324}$	7.876	3.1007	$\frac{1}{322}$	7.915	3.1161	$\frac{1}{320}$	7.954	3.1255	$\frac{1}{319}$	7.993	3.1468	$\frac{1}{317}$	8.032	3.1622	$\frac{1}{316}$	8.071	3.1775	$\frac{1}{314}$
7.838	3.0858	$\frac{1}{344}$	7.877	3.1011	$\frac{1}{322}$	7.916	3.1165	$\frac{1}{320}$	7.955	3.1259	$\frac{1}{319}$	7.994	3.1472	$\frac{1}{317}$	8.033	3.1625	$\frac{1}{316}$	8.072	3.1779	$\frac{1}{314}$
7.839	3.0862	$\frac{1}{323}$	7.878	3.1015	$\frac{1}{322}$	7.917	3.1169	$\frac{1}{320}$	7.956	3.1263	$\frac{1}{319}$	7.995	3.1476	$\frac{1}{317}$	8.034	3.1629	$\frac{1}{316}$	8.073	3.1783	$\frac{1}{314}$
7.840	3.0866	$\frac{1}{323}$	7.879	3.1019	$\frac{1}{322}$	7.918	3.1173	$\frac{1}{320}$	7.957	3.1267	$\frac{1}{319}$	7.996	3.1480	$\frac{1}{317}$	8.035	3.1633	$\frac{1}{316}$	8.074	3.1787	$\frac{1}{314}$
7.841	3.0870	$\frac{1}{323}$	7.880	3.1023	$\frac{1}{322}$	7.919	3.1177	$\frac{1}{320}$	7.958	3.1271	$\frac{1}{319}$	7.997	3.1484	$\frac{1}{317}$	8.036	3.1637	$\frac{1}{316}$	8.075	3.1791	$\frac{1}{314}$
7.842	3.0873	$\frac{1}{323}$	7.881	3.1027	$\frac{1}{322}$	7.920	3.1181	$\frac{1}{320}$	7.959	3.1275	$\frac{1}{319}$	7.998	3.1488	$\frac{1}{317}$	8.037	3.1641	$\frac{1}{316}$	8.076	3.1795	$\frac{1}{314}$
7.843	3.0877	$\frac{1}{323}$	7.882	3.1031	$\frac{1}{322}$	7.921	3.1184	$\frac{1}{320}$	7.960	3.1279	$\frac{1}{319}$	7.999	3.1492	$\frac{1}{317}$	8.038	3.1645	$\frac{1}{316}$	8.077	3.1799	$\frac{1}{314}$
7.844	3.0881	$\frac{1}{323}$	7.883	3.1035	$\frac{1}{322}$	7.922	3.1188	$\frac{1}{320}$	7.961	3.1283	$\frac{1}{319}$	8.000	3.1496	$\frac{1}{317}$	8.039	3.1649	$\frac{1}{316}$	8.078	3.1803	$\frac{1}{314}$
7.845	3.0885	$\frac{1}{323}$	7.884	3.1039	$\frac{1}{322}$	7.923	3.1192	$\frac{1}{320}$	7.962	3.1287	$\frac{1}{318}$	8.001	3.1499	$\frac{1}{317}$	8.040	3.1653	$\frac{1}{316}$	8.079	3.1807	$\frac{1}{314}$
7.846	3.0889	$\frac{1}{323}$	7.885	3.1043	$\frac{1}{322}$	7.924	3.1196	$\frac{1}{320}$	7.963	3.1291	$\frac{1}{318}$	8.002	3.1503	$\frac{1}{317}$	8.041	3.1657	$\frac{1}{316}$	8.080	3.1811	$\frac{1}{314}$
7.847	3.0893	$\frac{1}{323}$	7.886	3.1047	$\frac{1}{322}$	7.925	3.1200	$\frac{1}{320}$	7.964	3.1295	$\frac{1}{318}$	8.003	3.1507	$\frac{1}{317}$	8.042	3.1661	$\frac{1}{316}$	8.081	3.1814	$\frac{1}{314}$
7.848	3.0897	$\frac{1}{323}$	7.887	3.1051	$\frac{1}{322}$	7.926	3.1204	$\frac{1}{320}$	7.965	3.1299	$\frac{1}{318}$	8.004	3.1511	$\frac{1}{317}$	8.043	3.1665	$\frac{1}{316}$	8.082	3.1818	$\frac{1}{314}$
7.849	3.0901	$\frac{1}{323}$	7.888	3.1055	$\frac{1}{321}$	7.927	3.1208	$\frac{1}{320}$	7.966	3.1303	$\frac{1}{318}$	8.005	3.1515	$\frac{1}{317}$	8.044	3.1669	$\frac{1}{316}$	8.083	3.1822	$\frac{1}{314}$
7.850	3.0905	$\frac{1}{323}$	7.889	3.1058	$\frac{1}{321}$	7.928	3.1212	$\frac{1}{320}$	7.967	3.1306	$\frac{1}{318}$	8.006	3.1519	$\frac{1}{317}$	8.045	3.1673	$\frac{1}{316}$	8.084	3.1826	$\frac{1}{314}$
7.851	3.0909	$\frac{1}{323}$	7.890	3.1062	$\frac{1}{321}$	7.929	3.1216	$\frac{1}{320}$	7.968	3.1310	$\frac{1}{318}$	8.007	3.1523	$\frac{1}{317}$	8.046	3.1677	$\frac{1}{316}$	8.085	3.1830	$\frac{1}{314}$
7.852	3.0913	$\frac{1}{323}$	7.891	3.1066	$\frac{1}{321}$	7.930	3.1220	$\frac{1}{320}$	7.969	3.1313	$\frac{1}{318}$	8.008	3.1527	$\frac{1}{317}$	8.047	3.1681	$\frac{1}{316}$	8.086	3.1834	$\frac{1}{314}$
7.853	3.0917	$\frac{1}{323}$	7.892	3.1070	$\frac{1}{321}$	7.931	3.1224	$\frac{1}{320}$	7.970	3.1317	$\frac{1}{318}$	8.009	3.1531	$\frac{1}{317}$	8.048	3.1684	$\frac{1}{316}$	8.087	3.1838	$\frac{1}{314}$
7.854	3.0921	$\frac{1}{323}$	7.893	3.1074	$\frac{1}{321}$	7.932	3.1228	$\frac{1}{320}$	7.971	3.1321	$\frac{1}{318}$	8.010	3.1535	$\frac{1}{317}$	8.049	3.1688	$\frac{1}{316}$	8.088	3.1842	$\frac{1}{314}$
7.855	3.0925	$\frac{1}{323}$	7.894	3.1078	$\frac{1}{321}$	7.933	3.1232	$\frac{1}{320}$	7.972	3.1325	$\frac{1}{318}$	8.011	3.1539	$\frac{1}{317}$	8.050	3.1692	$\frac{1}{316}$	8.089	3.1846	$\frac{1}{314}$
7.856	3.0929	$\frac{1}{323}$	7.895	3.1082	$\frac{1}{321}$	7.934	3.1236	$\frac{1}{320}$	7.973	3.1329	$\frac{1}{318}$	8.012	3.1543	$\frac{1}{316}$	8.051	3.1696	$\frac{1}{316}$	8.090	3.1850	$\frac{1}{314}$
7.857	3.0933	$\frac{1}{323}$	7.896	3.1086	$\frac{1}{321}$	7.935	3.1240	$\frac{1}{320}$	7.974	3.1333	$\frac{1}{318}$	8.013	3.1547	$\frac{1}{316}$	8.052	3.1700	$\frac{1}{316}$	8.091	3.1854	$\frac{1}{314}$
7.858	3.0936	$\frac{1}{323}$	7.897	3.1090	$\frac{1}{321}$	7.936	3.1244	$\frac{1}{320}$	7.975	3.1337	$\frac{1}{318}$	8.014	3.1551	$\frac{1}{316}$	8.053	3.1704	$\frac{1}{316}$	8.092	3.1858	$\frac{1}{314}$
7.859	3.0940	$\frac{1}{323}$	7.898	3.1094	$\frac{1}{321}$	7.937	3.1247	$\frac{1}{319}$	7.976	3.1401	$\frac{1}{318}$	8.015	3.1555	$\frac{1}{316}$	8.054	3.1708	$\frac{1}{316}$	8.093	3.1862	$\frac{1}{314}$
7.860	3.0944	$\frac{1}{323}$	7.899	3.1098	$\frac{1}{321}$	7.938	3.1251	$\frac{1}{319}$	7.977	3.1405	$\frac{1}{318}$	8.016	3.1559	$\frac{1}{316}$	8.055	3.1712	$\frac{1}{316}$	8.094	3.1866	$\frac{1}{314}$
7.861	3.0948	$\frac{1}{323}$	7.900	3.1102	$\frac{1}{321}$	7.939	3.1255	$\frac{1}{319}$	7.978	3.1409	$\frac{1}{318}$	8.017	3.1563	$\frac{1}{316}$	8.056	3.1716	$\frac{1}{316}$	8.095	3.1870	$\frac{1}{314}$
7.862	3.0952	$\frac{1}{323}$	7.901	3.1106	$\frac{1}{321}$	7.940	3.1259	$\frac{1}{319}$	7.979	3.1413	$\frac{1}{318}$	8.018	3.1567	$\frac{1}{316}$	8.057	3.1720	$\frac{1}{316}$	8.096	3.1874	$\frac{1}{314}$
7.863	3.0956	$\frac{1}{322}$	7.902	3.1110	$\frac{1}{321}$	7.941	3.1263	$\frac{1}{319}$	7.980	3.1417	$\frac{1}{318}$	8.019	3.1571	$\frac{1}{316}$	8.058	3.1724	$\frac{1}{316}$	8.097	3.1878	$\frac{1}{314}$



I.—Table for reduction of centimillimeters to fractions of an inch—Continued.

Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.
8.098	3.1881	$\frac{1}{313}$	8.137	3.2035	$\frac{1}{312}$	8.176	3.2188	$\frac{1}{310}$	8.215	3.2342	$\frac{1}{309}$	8.254	3.2495	$\frac{1}{307}$	8.293	3.2649	$\frac{1}{306}$	8.332	3.2803	$\frac{1}{304}$
8.099	3.1885	$\frac{1}{313}$	8.138	3.2039	$\frac{1}{312}$	8.177	3.2192	$\frac{1}{310}$	8.216	3.2346	$\frac{1}{309}$	8.255	3.2499	$\frac{1}{307}$	8.294	3.2653	$\frac{1}{306}$	8.333	3.2807	$\frac{1}{304}$
8.100	3.1899	$\frac{1}{313}$	8.139	3.2043	$\frac{1}{312}$	8.178	3.2196	$\frac{1}{310}$	8.217	3.2350	$\frac{1}{309}$	8.256	3.2503	$\frac{1}{307}$	8.295	3.2657	$\frac{1}{306}$	8.334	3.2810	$\frac{1}{304}$
8.101	3.1898	$\frac{1}{313}$	8.140	3.2047	$\frac{1}{312}$	8.179	3.2200	$\frac{1}{310}$	8.218	3.2354	$\frac{1}{309}$	8.257	3.2507	$\frac{1}{307}$	8.296	3.2661	$\frac{1}{306}$	8.335	3.2814	$\frac{1}{304}$
8.102	3.1897	$\frac{1}{313}$	8.141	3.2051	$\frac{1}{311}$	8.180	3.2204	$\frac{1}{310}$	8.219	3.2358	$\frac{1}{309}$	8.258	3.2511	$\frac{1}{307}$	8.297	3.2665	$\frac{1}{306}$	8.336	3.2818	$\frac{1}{304}$
8.103	3.1901	$\frac{1}{313}$	8.142	3.2055	$\frac{1}{311}$	8.181	3.2208	$\frac{1}{310}$	8.220	3.2362	$\frac{1}{308}$	8.259	3.2515	$\frac{1}{307}$	8.298	3.2669	$\frac{1}{306}$	8.337	3.2822	$\frac{1}{304}$
8.104	3.1905	$\frac{1}{313}$	8.143	3.2058	$\frac{1}{311}$	8.182	3.2212	$\frac{1}{310}$	8.221	3.2366	$\frac{1}{308}$	8.260	3.2519	$\frac{1}{307}$	8.299	3.2673	$\frac{1}{306}$	8.338	3.2826	$\frac{1}{304}$
8.105	3.1909	$\frac{1}{313}$	8.144	3.2062	$\frac{1}{311}$	8.183	3.2216	$\frac{1}{310}$	8.222	3.2370	$\frac{1}{308}$	8.261	3.2523	$\frac{1}{307}$	8.300	3.2677	$\frac{1}{305}$	8.339	3.2830	$\frac{1}{304}$
8.106	2.1913	$\frac{1}{313}$	8.145	3.2066	$\frac{1}{311}$	8.184	3.2220	$\frac{1}{310}$	8.223	3.2373	$\frac{1}{308}$	8.262	3.2527	$\frac{1}{307}$	8.301	3.2681	$\frac{1}{305}$	8.340	3.2834	$\frac{1}{304}$
8.107	3.1917	$\frac{1}{313}$	8.146	3.2070	$\frac{1}{311}$	8.185	3.2224	$\frac{1}{310}$	8.224	3.2377	$\frac{1}{308}$	8.263	3.2531	$\frac{1}{307}$	8.302	3.2684	$\frac{1}{305}$	8.341	3.2838	$\frac{1}{304}$
8.108	3.1921	$\frac{1}{313}$	8.147	3.2074	$\frac{1}{311}$	8.186	3.2228	$\frac{1}{310}$	8.225	3.2381	$\frac{1}{308}$	8.264	3.2535	$\frac{1}{307}$	8.303	3.2688	$\frac{1}{305}$	8.342	3.2842	$\frac{1}{304}$
8.109	3.1925	$\frac{1}{313}$	8.148	3.2078	$\frac{1}{311}$	8.187	3.2232	$\frac{1}{310}$	8.226	3.2385	$\frac{1}{308}$	8.265	3.2539	$\frac{1}{307}$	8.304	3.2692	$\frac{1}{305}$	8.343	3.2846	$\frac{1}{304}$
8.110	3.1929	$\frac{1}{313}$	8.149	3.2082	$\frac{1}{311}$	8.188	3.2236	$\frac{1}{310}$	8.227	3.2389	$\frac{1}{308}$	8.266	3.2543	$\frac{1}{307}$	8.305	3.2696	$\frac{1}{305}$	8.344	3.2850	$\frac{1}{304}$
8.111	3.1933	$\frac{1}{313}$	8.150	3.2086	$\frac{1}{311}$	8.189	3.2240	$\frac{1}{310}$	8.228	3.2393	$\frac{1}{308}$	8.267	3.2547	$\frac{1}{307}$	8.306	3.2700	$\frac{1}{305}$	8.345	3.2854	$\frac{1}{304}$
8.112	3.1937	$\frac{1}{313}$	8.151	3.2090	$\frac{1}{311}$	8.190	3.2244	$\frac{1}{310}$	8.229	3.2397	$\frac{1}{308}$	8.268	3.2551	$\frac{1}{307}$	8.307	3.2704	$\frac{1}{305}$	8.346	3.2858	$\frac{1}{304}$
8.113	3.1941	$\frac{1}{313}$	8.152	3.2094	$\frac{1}{311}$	8.191	3.2247	$\frac{1}{310}$	8.230	3.2401	$\frac{1}{308}$	8.269	3.2555	$\frac{1}{307}$	8.308	3.2708	$\frac{1}{305}$	8.347	3.2862	$\frac{1}{304}$
8.114	3.1944	$\frac{1}{312}$	8.153	3.2098	$\frac{1}{311}$	8.192	3.2251	$\frac{1}{310}$	8.231	3.2405	$\frac{1}{308}$	8.270	3.2559	$\frac{1}{307}$	8.309	3.2712	$\frac{1}{305}$	8.348	3.2866	$\frac{1}{304}$
8.115	3.1948	$\frac{1}{312}$	8.154	3.2102	$\frac{1}{311}$	8.193	3.2255	$\frac{1}{309}$	8.232	3.2409	$\frac{1}{308}$	8.271	3.2562	$\frac{1}{307}$	8.310	3.2716	$\frac{1}{305}$	8.349	3.2870	$\frac{1}{304}$
8.116	3.1952	$\frac{1}{312}$	8.155	3.2106	$\frac{1}{311}$	8.194	3.2259	$\frac{1}{309}$	8.233	3.2413	$\frac{1}{308}$	8.272	3.2566	$\frac{1}{307}$	8.311	3.2720	$\frac{1}{305}$	8.350	3.2873	$\frac{1}{304}$
8.117	3.1956	$\frac{1}{312}$	8.156	3.2110	$\frac{1}{311}$	8.195	3.2263	$\frac{1}{309}$	8.234	3.2417	$\frac{1}{308}$	8.273	3.2570	$\frac{1}{306}$	8.312	3.2724	$\frac{1}{305}$	8.351	3.2877	$\frac{1}{304}$
8.118	3.1960	$\frac{1}{312}$	8.157	3.2114	$\frac{1}{311}$	8.196	3.2267	$\frac{1}{309}$	8.235	3.2421	$\frac{1}{308}$	8.274	3.2574	$\frac{1}{306}$	8.313	3.2728	$\frac{1}{305}$	8.352	3.2881	$\frac{1}{304}$
8.119	3.1964	$\frac{1}{312}$	8.158	3.2118	$\frac{1}{311}$	8.197	3.2271	$\frac{1}{309}$	8.236	3.2425	$\frac{1}{308}$	8.275	3.2578	$\frac{1}{306}$	8.314	3.2732	$\frac{1}{305}$	8.353	3.2885	$\frac{1}{304}$
8.120	3.1968	$\frac{1}{312}$	8.159	3.2122	$\frac{1}{311}$	8.198	3.2275	$\frac{1}{309}$	8.237	3.2429	$\frac{1}{308}$	8.276	3.2582	$\frac{1}{301}$	8.315	3.2736	$\frac{1}{305}$	8.354	3.2889	$\frac{1}{304}$
8.121	3.1972	$\frac{1}{312}$	8.160	3.2125	$\frac{1}{311}$	8.199	3.2279	$\frac{1}{309}$	8.238	3.2433	$\frac{1}{308}$	8.277	3.2586	$\frac{1}{306}$	8.316	3.2740	$\frac{1}{305}$	8.355	3.2893	$\frac{1}{303}$
8.122	3.1976	$\frac{1}{312}$	8.161	3.2129	$\frac{1}{311}$	8.200	3.2283	$\frac{1}{309}$	8.239	3.2436	$\frac{1}{308}$	8.278	3.2590	$\frac{1}{306}$	8.317	3.2744	$\frac{1}{305}$	8.356	3.2897	$\frac{1}{303}$
8.123	3.1980	$\frac{1}{312}$	8.162	3.2133	$\frac{1}{311}$	8.201	3.2287	$\frac{1}{309}$	8.240	3.2440	$\frac{1}{308}$	8.279	3.2594	$\frac{1}{306}$	8.318	3.2747	$\frac{1}{305}$	8.357	3.2901	$\frac{1}{303}$
8.124	3.1984	$\frac{1}{312}$	8.163	3.2137	$\frac{1}{311}$	8.202	3.2291	$\frac{1}{309}$	8.241	3.2444	$\frac{1}{308}$	8.280	3.2598	$\frac{1}{306}$	8.319	3.2751	$\frac{1}{305}$	8.358	3.2905	$\frac{1}{303}$
8.125	3.1988	$\frac{1}{312}$	8.164	3.2141	$\frac{1}{311}$	8.203	3.2295	$\frac{1}{309}$	8.242	3.2448	$\frac{1}{308}$	8.281	3.2602	$\frac{1}{306}$	8.320	3.2755	$\frac{1}{305}$	8.359	3.2909	$\frac{1}{303}$
8.126	3.1992	$\frac{1}{312}$	8.165	3.2145	$\frac{1}{311}$	8.204	3.2299	$\frac{1}{309}$	8.243	3.2452	$\frac{1}{308}$	8.282	3.2606	$\frac{1}{306}$	8.321	3.2759	$\frac{1}{305}$	8.360	3.2913	$\frac{1}{303}$
8.127	3.1995	$\frac{1}{312}$	8.166	3.2149	$\frac{1}{311}$	8.205	3.2303	$\frac{1}{309}$	8.244	3.2456	$\frac{1}{308}$	8.283	3.2610	$\frac{1}{306}$	8.322	3.2763	$\frac{1}{305}$	8.361	3.2917	$\frac{1}{303}$
8.128	3.1999	$\frac{1}{312}$	8.167	3.2153	$\frac{1}{310}$	8.206	3.2307	$\frac{1}{309}$	8.245	3.2460	$\frac{1}{308}$	8.284	3.2614	$\frac{1}{306}$	8.323	3.2767	$\frac{1}{305}$	8.362	3.2921	$\frac{1}{303}$
8.129	3.2003	$\frac{1}{312}$	8.168	3.2157	$\frac{1}{310}$	8.207	3.2310	$\frac{1}{309}$	8.246	3.2464	$\frac{1}{307}$	8.285	3.2618	$\frac{1}{306}$	8.324	3.2771	$\frac{1}{305}$	8.363	3.2925	$\frac{1}{303}$
8.130	3.2007	$\frac{1}{312}$	8.169	3.2161	$\frac{1}{310}$	8.208	3.2314	$\frac{1}{309}$	8.247	3.2468	$\frac{1}{307}$	8.286	3.2622	$\frac{1}{306}$	8.325	3.2775	$\frac{1}{305}$	8.364	3.2929	$\frac{1}{303}$
8.131	3.2011	$\frac{1}{312}$	8.170	3.2165	$\frac{1}{310}$	8.209	3.2318	$\frac{1}{309}$	8.248	3.2472	$\frac{1}{307}$	8.287	3.2625	$\frac{1}{306}$	8.326	3.2779	$\frac{1}{305}$	8.365	3.2933	$\frac{1}{303}$
8.132	3.2015	$\frac{1}{312}$	8.171	3.2169	$\frac{1}{310}$	8.210	3.2322	$\frac{1}{309}$	8.249	3.2476	$\frac{1}{307}$	8.288	3.2629	$\frac{1}{306}$	8.327	3.2783	$\frac{1}{304}$	8.366	3.2936	$\frac{1}{303}$
8.133	3.2019	$\frac{1}{312}$	8.172	3.2173	$\frac{1}{310}$	8.211	3.2326	$\frac{1}{309}$	8.250	3.2480	$\frac{1}{307}$	8.289	3.2633	$\frac{1}{306}$	8.328	3.2787	$\frac{1}{304}$	8.367	3.2940	$\frac{1}{303}$
8.134	3.2023	$\frac{1}{312}$	8.173	3.2177	$\frac{1}{310}$	8.212	3.2330	$\frac{1}{309}$	8.251	3.2484	$\frac{1}{307}$	8.290	3.2637	$\frac{1}{306}$	8.329	3.2791	$\frac{1}{304}$	8.368	3.2944	$\frac{1}{303}$
8.135	3.2027	$\frac{1}{312}$	8.174	3.2181	$\frac{1}{310}$	8.213	3.2334	$\frac{1}{309}$	8.252	3.2488	$\frac{1}{307}$	8.291	3.2641	$\frac{1}{306}$	8.330	3.2795	$\frac{1}{304}$	8.369	3.2948	$\frac{1}{303}$
8.136	3.2031	$\frac{1}{312}$	8.175	3.2184	$\frac{1}{310}$	8.214	3.2338	$\frac{1}{309}$	8.253	3.2492	$\frac{1}{307}$	8.292	3.2645	$\frac{1}{306}$	8.331	3.2799	$\frac{1}{304}$	8.370	3.2952	$\frac{1}{303}$



I.—Table for reduction of centimillimeters to fractions of an inch—Continued.

Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.
8.371	3.2956	$\frac{1}{303}$	8.410	3.3110	$\frac{1}{301}$	8.449	3.3263	$\frac{1}{300}$	8.488	3.3417	$\frac{1}{299}$	8.527	3.3570	$\frac{1}{297}$	8.566	3.3724	$\frac{1}{296}$	8.605	3.3877	$\frac{1}{295}$
8.372	3.2960	$\frac{1}{303}$	8.411	3.3114	$\frac{1}{301}$	8.450	3.3267	$\frac{1}{300}$	8.489	3.3421	$\frac{1}{299}$	8.528	3.3574	$\frac{1}{297}$	8.567	3.3728	$\frac{1}{296}$	8.606	3.3881	$\frac{1}{295}$
8.373	3.2964	$\frac{1}{303}$	8.412	3.3118	$\frac{1}{301}$	8.451	3.3271	$\frac{1}{300}$	8.490	3.3425	$\frac{1}{299}$	8.529	3.3578	$\frac{1}{297}$	8.568	3.3732	$\frac{1}{296}$	8.607	3.3885	$\frac{1}{295}$
8.374	3.2968	$\frac{1}{303}$	8.413	3.3121	$\frac{1}{301}$	8.452	3.3275	$\frac{1}{300}$	8.491	3.3429	$\frac{1}{299}$	8.530	3.3582	$\frac{1}{297}$	8.569	3.3736	$\frac{1}{296}$	8.608	3.3889	$\frac{1}{295}$
8.375	3.2972	$\frac{1}{303}$	8.414	3.3125	$\frac{1}{301}$	8.453	3.3279	$\frac{1}{300}$	8.492	3.3433	$\frac{1}{299}$	8.531	3.3586	$\frac{1}{297}$	8.570	3.3740	$\frac{1}{296}$	8.609	3.3893	$\frac{1}{295}$
8.376	3.2976	$\frac{1}{303}$	8.415	3.3129	$\frac{1}{301}$	8.454	3.3283	$\frac{1}{300}$	8.493	3.3436	$\frac{1}{299}$	8.532	3.3590	$\frac{1}{297}$	8.571	3.3744	$\frac{1}{296}$	8.610	3.3897	$\frac{1}{295}$
8.377	3.2980	$\frac{1}{303}$	8.416	3.3133	$\frac{1}{301}$	8.455	3.3287	$\frac{1}{300}$	8.494	3.3440	$\frac{1}{299}$	8.533	3.3594	$\frac{1}{297}$	8.572	3.3747	$\frac{1}{296}$	8.611	3.3901	$\frac{1}{295}$
8.378	3.2984	$\frac{1}{303}$	8.417	3.3137	$\frac{1}{301}$	8.456	3.3291	$\frac{1}{300}$	8.495	3.3444	$\frac{1}{299}$	8.534	3.3598	$\frac{1}{297}$	8.573	3.3751	$\frac{1}{296}$	8.612	3.3905	$\frac{1}{295}$
8.379	3.2988	$\frac{1}{303}$	8.418	3.3141	$\frac{1}{301}$	8.457	3.3295	$\frac{1}{300}$	8.496	3.3448	$\frac{1}{299}$	8.535	3.3602	$\frac{1}{297}$	8.574	3.3755	$\frac{1}{296}$	8.613	3.3909	$\frac{1}{295}$
8.380	3.2992	$\frac{1}{303}$	8.419	3.3145	$\frac{1}{301}$	8.458	3.3299	$\frac{1}{300}$	8.497	3.3452	$\frac{1}{299}$	8.536	3.3606	$\frac{1}{297}$	8.575	3.3759	$\frac{1}{296}$	8.614	3.3913	$\frac{1}{295}$
8.381	3.2996	$\frac{1}{303}$	8.420	3.3149	$\frac{1}{301}$	8.459	3.3303	$\frac{1}{300}$	8.498	3.3456	$\frac{1}{299}$	8.537	3.3610	$\frac{1}{297}$	8.576	3.3763	$\frac{1}{296}$	8.615	3.3917	$\frac{1}{295}$
8.382	3.2999	$\frac{1}{303}$	8.421	3.3153	$\frac{1}{301}$	8.460	3.3307	$\frac{1}{300}$	8.499	3.3460	$\frac{1}{299}$	8.538	3.3614	$\frac{1}{297}$	8.577	3.3767	$\frac{1}{296}$	8.616	3.3921	$\frac{1}{295}$
8.383	3.3003	$\frac{1}{303}$	8.422	3.3157	$\frac{1}{301}$	8.461	3.3311	$\frac{1}{300}$	8.500	3.3464	$\frac{1}{299}$	8.539	3.3618	$\frac{1}{297}$	8.578	3.3771	$\frac{1}{296}$	8.617	3.3925	$\frac{1}{295}$
8.384	3.3007	$\frac{1}{303}$	8.423	3.3161	$\frac{1}{301}$	8.462	3.3314	$\frac{1}{300}$	8.501	3.3468	$\frac{1}{299}$	8.540	3.3621	$\frac{1}{297}$	8.579	3.3775	$\frac{1}{296}$	8.618	3.3929	$\frac{1}{295}$
8.385	3.3011	$\frac{1}{302}$	8.424	3.3165	$\frac{1}{301}$	8.463	3.3318	$\frac{1}{300}$	8.502	3.3472	$\frac{1}{299}$	8.541	3.3625	$\frac{1}{297}$	8.580	3.3779	$\frac{1}{296}$	8.619	3.3933	$\frac{1}{295}$
8.386	3.3015	$\frac{1}{302}$	8.425	3.3169	$\frac{1}{301}$	8.464	3.3322	$\frac{1}{300}$	8.503	3.3476	$\frac{1}{299}$	8.542	3.3629	$\frac{1}{297}$	8.581	3.3783	$\frac{1}{296}$	8.620	3.3937	$\frac{1}{295}$
8.387	3.3019	$\frac{1}{302}$	8.426	3.3173	$\frac{1}{301}$	8.465	3.3326	$\frac{1}{300}$	8.504	3.3480	$\frac{1}{299}$	8.543	3.3633	$\frac{1}{297}$	8.582	3.3787	$\frac{1}{296}$	8.621	3.3941	$\frac{1}{295}$
8.388	3.3023	$\frac{1}{302}$	8.427	3.3177	$\frac{1}{301}$	8.466	3.3330	$\frac{1}{300}$	8.505	3.3484	$\frac{1}{299}$	8.544	3.3637	$\frac{1}{297}$	8.583	3.3791	$\frac{1}{296}$	8.622	3.3945	$\frac{1}{295}$
8.389	3.3027	$\frac{1}{302}$	8.428	3.3181	$\frac{1}{301}$	8.467	3.3334	$\frac{1}{300}$	8.506	3.3488	$\frac{1}{299}$	8.545	3.3641	$\frac{1}{297}$	8.584	3.3795	$\frac{1}{296}$	8.623	3.3949	$\frac{1}{295}$
8.390	3.3031	$\frac{1}{302}$	8.429	3.3184	$\frac{1}{301}$	8.468	3.3338	$\frac{1}{300}$	8.507	3.3492	$\frac{1}{299}$	8.546	3.3645	$\frac{1}{297}$	8.585	3.3799	$\frac{1}{296}$	8.624	3.3953	$\frac{1}{295}$
8.391	3.3035	$\frac{1}{302}$	8.430	3.3188	$\frac{1}{301}$	8.469	3.3342	$\frac{1}{300}$	8.508	3.3496	$\frac{1}{299}$	8.547	3.3649	$\frac{1}{297}$	8.586	3.3803	$\frac{1}{296}$	8.625	3.3957	$\frac{1}{295}$
8.392	3.3039	$\frac{1}{302}$	8.431	3.3192	$\frac{1}{301}$	8.470	3.3346	$\frac{1}{300}$	8.509	3.3500	$\frac{1}{299}$	8.548	3.3653	$\frac{1}{297}$	8.587	3.3807	$\frac{1}{296}$	8.626	3.3961	$\frac{1}{295}$
8.393	3.3043	$\frac{1}{302}$	8.432	3.3196	$\frac{1}{301}$	8.471	3.3350	$\frac{1}{300}$	8.510	3.3504	$\frac{1}{299}$	8.549	3.3657	$\frac{1}{297}$	8.588	3.3811	$\frac{1}{296}$	8.627	3.3965	$\frac{1}{295}$
8.394	3.3047	$\frac{1}{302}$	8.433	3.3200	$\frac{1}{301}$	8.472	3.3354	$\frac{1}{300}$	8.511	3.3507	$\frac{1}{299}$	8.550	3.3661	$\frac{1}{297}$	8.589	3.3814	$\frac{1}{296}$	8.628	3.3969	$\frac{1}{295}$
8.395	3.3051	$\frac{1}{302}$	8.434	3.3204	$\frac{1}{301}$	8.473	3.3358	$\frac{1}{300}$	8.512	3.3511	$\frac{1}{299}$	8.551	3.3665	$\frac{1}{297}$	8.590	3.3818	$\frac{1}{296}$	8.629	3.3973	$\frac{1}{295}$
8.396	3.3055	$\frac{1}{302}$	8.435	3.3208	$\frac{1}{301}$	8.474	3.3362	$\frac{1}{300}$	8.513	3.3515	$\frac{1}{299}$	8.552	3.3669	$\frac{1}{297}$	8.591	3.3822	$\frac{1}{296}$	8.630	3.3977	$\frac{1}{295}$
8.397	3.3058	$\frac{1}{302}$	8.436	3.3213	$\frac{1}{301}$	8.475	3.3366	$\frac{1}{300}$	8.514	3.3519	$\frac{1}{299}$	8.553	3.3673	$\frac{1}{297}$	8.592	3.3826	$\frac{1}{296}$	8.631	3.3981	$\frac{1}{295}$
8.398	3.3062	$\frac{1}{302}$	8.437	3.3216	$\frac{1}{301}$	8.476	3.3370	$\frac{1}{300}$	8.515	3.3523	$\frac{1}{299}$	8.554	3.3677	$\frac{1}{297}$	8.593	3.3830	$\frac{1}{296}$	8.632	3.3985	$\frac{1}{295}$
8.399	3.3066	$\frac{1}{302}$	8.438	3.3220	$\frac{1}{300}$	8.477	3.3374	$\frac{1}{300}$	8.516	3.3527	$\frac{1}{299}$	8.555	3.3681	$\frac{1}{297}$	8.594	3.3834	$\frac{1}{296}$	8.633	3.3989	$\frac{1}{295}$
8.400	3.3070	$\frac{1}{302}$	8.439	3.3224	$\frac{1}{300}$	8.478	3.3377	$\frac{1}{299}$	8.517	3.3531	$\frac{1}{299}$	8.556	3.3684	$\frac{1}{297}$	8.595	3.3838	$\frac{1}{296}$	8.634	3.3993	$\frac{1}{295}$
8.401	3.3074	$\frac{1}{302}$	8.440	3.3228	$\frac{1}{300}$	8.479	3.3381	$\frac{1}{299}$	8.518	3.3535	$\frac{1}{299}$	8.557	3.3688	$\frac{1}{297}$	8.596	3.3842	$\frac{1}{296}$	8.635	3.3997	$\frac{1}{295}$
8.402	3.3078	$\frac{1}{302}$	8.441	3.3232	$\frac{1}{300}$	8.480	3.3385	$\frac{1}{299}$	8.519	3.3539	$\frac{1}{299}$	8.558	3.3692	$\frac{1}{297}$	8.597	3.3846	$\frac{1}{296}$	8.636	3.3999	$\frac{1}{295}$
8.403	3.3082	$\frac{1}{302}$	8.442	3.3236	$\frac{1}{300}$	8.481	3.3389	$\frac{1}{299}$	8.520	3.3543	$\frac{1}{299}$	8.559	3.3696	$\frac{1}{297}$	8.598	3.3850	$\frac{1}{296}$	8.637	3.4003	$\frac{1}{295}$
8.404	3.3086	$\frac{1}{302}$	8.443	3.3240	$\frac{1}{300}$	8.482	3.3393	$\frac{1}{299}$	8.521	3.3547	$\frac{1}{299}$	8.560	3.3700	$\frac{1}{297}$	8.599	3.3854	$\frac{1}{296}$	8.638	3.4007	$\frac{1}{295}$
8.405	3.3090	$\frac{1}{302}$	8.444	3.3244	$\frac{1}{300}$	8.483	3.3397	$\frac{1}{299}$	8.522	3.3551	$\frac{1}{299}$	8.561	3.3704	$\frac{1}{297}$	8.600	3.3858	$\frac{1}{296}$	8.639	3.4011	$\frac{1}{295}$
8.406	3.3094	$\frac{1}{302}$	8.445	3.3247	$\frac{1}{300}$	8.484	3.3401	$\frac{1}{299}$	8.523	3.3555	$\frac{1}{299}$	8.562	3.3708	$\frac{1}{297}$	8.601	3.3862	$\frac{1}{296}$	8.640	3.4015	$\frac{1}{295}$
8.407	3.3098	$\frac{1}{302}$	8.446	3.3251	$\frac{1}{300}$	8.485	3.3405	$\frac{1}{299}$	8.524	3.3558	$\frac{1}{299}$	8.563	3.3713	$\frac{1}{297}$	8.602	3.3866	$\frac{1}{296}$	8.641	3.4019	$\frac{1}{295}$
8.408	3.3102	$\frac{1}{302}$	8.447	3.3255	$\frac{1}{300}$	8.486	3.3409	$\frac{1}{299}$	8.525	3.3562	$\frac{1}{299}$	8.564	3.3716	$\frac{1}{297}$	8.603	3.3870	$\frac{1}{296}$	8.642	3.4023	$\frac{1}{295}$
8.409	3.3106	$\frac{1}{302}$	8.448	3.3259	$\frac{1}{300}$	8.487	3.3413	$\frac{1}{299}$	8.526	3.3566	$\frac{1}{299}$	8.565	3.3720	$\frac{1}{297}$	8.604	3.3874	$\frac{1}{296}$	8.643	3.4027	$\frac{1}{295}$



I.—Table for reduction of centimillimeters to fractions of an inch—Continued.

Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.
8.644	3.4030	$\frac{1}{203}$	8.633	3.4184	$\frac{1}{202}$	8.722	3.4338	$\frac{1}{201}$	8.781	3.4492	$\frac{1}{200}$	8.800	3.4645	$\frac{1}{200}$	8.839	3.4799	$\frac{1}{200}$	8.878	3.4952	$\frac{1}{200}$
8.645	3.4034	$\frac{1}{200}$	8.684	3.4188	$\frac{1}{202}$	8.723	3.4342	$\frac{1}{201}$	8.762	3.4495	$\frac{1}{200}$	8.801	3.4649	$\frac{1}{200}$	8.840	3.4803	$\frac{1}{200}$	8.879	3.4956	$\frac{1}{200}$
8.646	3.4038	$\frac{1}{200}$	8.685	3.4192	$\frac{1}{202}$	8.724	3.4346	$\frac{1}{201}$	8.763	3.4499	$\frac{1}{200}$	8.802	3.4653	$\frac{1}{200}$	8.841	3.4807	$\frac{1}{200}$	8.880	3.4960	$\frac{1}{200}$
8.647	3.4042	$\frac{1}{200}$	8.686	3.4196	$\frac{1}{202}$	8.725	3.4350	$\frac{1}{201}$	8.764	3.4503	$\frac{1}{200}$	8.803	3.4657	$\frac{1}{200}$	8.842	3.4810	$\frac{1}{200}$	8.881	3.4964	$\frac{1}{200}$
8.648	3.4046	$\frac{1}{200}$	8.687	3.4200	$\frac{1}{202}$	8.726	3.4354	$\frac{1}{201}$	8.765	3.4507	$\frac{1}{200}$	8.804	3.4661	$\frac{1}{200}$	8.843	3.4814	$\frac{1}{200}$	8.882	3.4968	$\frac{1}{200}$
8.649	3.4050	$\frac{1}{200}$	8.688	3.4204	$\frac{1}{202}$	8.727	3.4358	$\frac{1}{201}$	8.766	3.4511	$\frac{1}{200}$	8.805	3.4665	$\frac{1}{200}$	8.844	3.4818	$\frac{1}{200}$	8.883	3.4972	$\frac{1}{200}$
8.650	3.4054	$\frac{1}{200}$	8.689	3.4208	$\frac{1}{202}$	8.728	3.4362	$\frac{1}{200}$	8.767	3.4515	$\frac{1}{200}$	8.806	3.4669	$\frac{1}{200}$	8.845	3.4622	$\frac{1}{200}$	8.884	3.4976	$\frac{1}{200}$
8.651	3.4058	$\frac{1}{200}$	8.690	3.4212	$\frac{1}{202}$	8.729	3.4366	$\frac{1}{200}$	8.768	3.4519	$\frac{1}{200}$	8.807	3.4673	$\frac{1}{200}$	8.846	3.4826	$\frac{1}{200}$	8.885	3.4980	$\frac{1}{200}$
8.652	3.4062	$\frac{1}{200}$	8.691	3.4216	$\frac{1}{202}$	8.730	3.4370	$\frac{1}{200}$	8.769	3.4523	$\frac{1}{200}$	8.808	3.4677	$\frac{1}{200}$	8.847	3.4830	$\frac{1}{200}$	8.886	3.4984	$\frac{1}{200}$
8.653	3.4066	$\frac{1}{200}$	8.692	3.4220	$\frac{1}{202}$	8.731	3.4373	$\frac{1}{200}$	8.770	3.4527	$\frac{1}{200}$	8.809	3.4681	$\frac{1}{200}$	8.848	3.4834	$\frac{1}{200}$	8.887	3.4988	$\frac{1}{200}$
8.654	3.4070	$\frac{1}{200}$	8.693	3.4224	$\frac{1}{202}$	8.732	3.4377	$\frac{1}{200}$	8.771	3.4531	$\frac{1}{200}$	8.810	3.4684	$\frac{1}{200}$	8.849	3.4838	$\frac{1}{200}$	8.888	3.4992	$\frac{1}{200}$
8.655	3.4074	$\frac{1}{200}$	8.694	3.4228	$\frac{1}{202}$	8.733	3.4381	$\frac{1}{200}$	8.772	3.4535	$\frac{1}{200}$	8.811	3.4688	$\frac{1}{200}$	8.850	3.4842	$\frac{1}{200}$	8.889	3.4995	$\frac{1}{200}$
8.656	3.4078	$\frac{1}{200}$	8.695	3.4232	$\frac{1}{202}$	8.734	3.4385	$\frac{1}{200}$	8.773	3.4539	$\frac{1}{200}$	8.812	3.4692	$\frac{1}{200}$	8.851	3.4846	$\frac{1}{200}$	8.890	3.4999	$\frac{1}{200}$
8.657	3.4082	$\frac{1}{200}$	8.696	3.4236	$\frac{1}{202}$	8.735	3.4389	$\frac{1}{200}$	8.774	3.4543	$\frac{1}{200}$	8.813	3.4696	$\frac{1}{200}$	8.852	3.4850	$\frac{1}{200}$	8.891	3.5003	$\frac{1}{200}$
8.658	3.4086	$\frac{1}{200}$	8.697	3.4240	$\frac{1}{202}$	8.736	3.4393	$\frac{1}{200}$	8.775	3.4547	$\frac{1}{200}$	8.814	3.4700	$\frac{1}{200}$	8.853	3.4854	$\frac{1}{200}$	8.892	3.5007	$\frac{1}{200}$
8.659	3.4090	$\frac{1}{200}$	8.698	3.4244	$\frac{1}{201}$	8.737	3.4397	$\frac{1}{200}$	8.776	3.4551	$\frac{1}{200}$	8.815	3.4704	$\frac{1}{200}$	8.854	3.4858	$\frac{1}{200}$	8.893	3.5011	$\frac{1}{200}$
8.660	3.4094	$\frac{1}{200}$	8.699	3.4247	$\frac{1}{201}$	8.738	3.4401	$\frac{1}{200}$	8.777	3.4555	$\frac{1}{200}$	8.816	3.4708	$\frac{1}{200}$	8.855	3.4862	$\frac{1}{200}$	8.894	3.5015	$\frac{1}{200}$
8.661	3.4098	$\frac{1}{200}$	8.700	3.4251	$\frac{1}{201}$	8.739	3.4405	$\frac{1}{200}$	8.778	3.4558	$\frac{1}{200}$	8.817	3.4712	$\frac{1}{200}$	8.856	3.4866	$\frac{1}{200}$	8.895	3.5019	$\frac{1}{200}$
8.662	3.4102	$\frac{1}{200}$	8.701	3.4255	$\frac{1}{201}$	8.740	3.4409	$\frac{1}{200}$	8.779	3.4562	$\frac{1}{200}$	8.818	3.4716	$\frac{1}{200}$	8.857	3.4870	$\frac{1}{200}$	8.896	3.5023	$\frac{1}{200}$
8.663	3.4106	$\frac{1}{200}$	8.702	3.4259	$\frac{1}{201}$	8.741	3.4413	$\frac{1}{200}$	8.780	3.4566	$\frac{1}{200}$	8.819	3.4720	$\frac{1}{200}$	8.858	3.4874	$\frac{1}{200}$	8.897	3.5027	$\frac{1}{200}$
8.664	3.4110	$\frac{1}{200}$	8.703	3.4263	$\frac{1}{201}$	8.742	3.4417	$\frac{1}{200}$	8.781	3.4570	$\frac{1}{200}$	8.820	3.4724	$\frac{1}{200}$	8.859	3.4877	$\frac{1}{200}$	8.898	3.5031	$\frac{1}{200}$
8.665	3.4114	$\frac{1}{200}$	8.704	3.4267	$\frac{1}{201}$	8.743	3.4421	$\frac{1}{200}$	8.782	3.4574	$\frac{1}{200}$	8.821	3.4728	$\frac{1}{200}$	8.860	3.4881	$\frac{1}{200}$	8.899	3.5035	$\frac{1}{200}$
8.666	3.4118	$\frac{1}{200}$	8.705	3.4271	$\frac{1}{201}$	8.744	3.4425	$\frac{1}{200}$	8.783	3.4578	$\frac{1}{200}$	8.822	3.4732	$\frac{1}{200}$	8.861	3.4885	$\frac{1}{200}$	8.900	3.5039	$\frac{1}{200}$
8.667	3.4121	$\frac{1}{200}$	8.706	3.4275	$\frac{1}{201}$	8.745	3.4429	$\frac{1}{200}$	8.784	3.4582	$\frac{1}{200}$	8.823	3.4736	$\frac{1}{200}$	8.862	3.4889	$\frac{1}{200}$	8.901	3.5043	$\frac{1}{200}$
8.668	3.4125	$\frac{1}{202}$	8.707	3.4279	$\frac{1}{201}$	8.746	3.4433	$\frac{1}{200}$	8.785	3.4586	$\frac{1}{200}$	8.824	3.4740	$\frac{1}{200}$	8.863	3.4893	$\frac{1}{200}$	8.902	3.5047	$\frac{1}{200}$
8.669	3.4129	$\frac{1}{202}$	8.708	3.4283	$\frac{1}{201}$	8.747	3.4437	$\frac{1}{200}$	8.786	3.4590	$\frac{1}{200}$	8.825	3.4744	$\frac{1}{200}$	8.864	3.4897	$\frac{1}{200}$	8.903	3.5051	$\frac{1}{200}$
8.670	3.4133	$\frac{1}{202}$	8.709	3.4287	$\frac{1}{201}$	8.748	3.4441	$\frac{1}{200}$	8.787	3.4594	$\frac{1}{200}$	8.826	3.4747	$\frac{1}{200}$	8.865	3.4901	$\frac{1}{200}$	8.904	3.5055	$\frac{1}{200}$
8.671	3.4137	$\frac{1}{202}$	8.710	3.4291	$\frac{1}{201}$	8.749	3.4444	$\frac{1}{200}$	8.788	3.4598	$\frac{1}{200}$	8.827	3.4751	$\frac{1}{200}$	8.866	3.4905	$\frac{1}{200}$	8.905	3.5058	$\frac{1}{200}$
8.672	3.4141	$\frac{1}{202}$	8.711	3.4295	$\frac{1}{201}$	8.750	3.4448	$\frac{1}{200}$	8.789	3.4602	$\frac{1}{200}$	8.828	3.4755	$\frac{1}{200}$	8.867	3.4909	$\frac{1}{200}$	8.906	3.5062	$\frac{1}{200}$
8.673	3.4145	$\frac{1}{202}$	8.712	3.4299	$\frac{1}{201}$	8.751	3.4452	$\frac{1}{200}$	8.790	3.4606	$\frac{1}{200}$	8.829	3.4759	$\frac{1}{200}$	8.868	3.4913	$\frac{1}{200}$	8.907	3.5066	$\frac{1}{200}$
8.674	3.4149	$\frac{1}{202}$	8.713	3.4303	$\frac{1}{201}$	8.752	3.4456	$\frac{1}{200}$	8.791	3.4610	$\frac{1}{200}$	8.830	3.4763	$\frac{1}{200}$	8.869	3.4917	$\frac{1}{200}$	8.908	3.5070	$\frac{1}{200}$
8.675	3.4153	$\frac{1}{202}$	8.714	3.4307	$\frac{1}{201}$	8.753	3.4460	$\frac{1}{200}$	8.792	3.4614	$\frac{1}{200}$	8.831	3.4767	$\frac{1}{200}$	8.870	3.4921	$\frac{1}{200}$	8.909	3.5074	$\frac{1}{200}$
8.676	3.4157	$\frac{1}{202}$	8.715	3.4311	$\frac{1}{201}$	8.754	3.4464	$\frac{1}{200}$	8.793	3.4618	$\frac{1}{200}$	8.832	3.4771	$\frac{1}{200}$	8.871	3.4925	$\frac{1}{200}$	8.910	3.5078	$\frac{1}{200}$
8.677	3.4161	$\frac{1}{202}$	8.716	3.4314	$\frac{1}{201}$	8.755	3.4468	$\frac{1}{200}$	8.794	3.4621	$\frac{1}{200}$	8.833	3.4775	$\frac{1}{200}$	8.872	3.4929	$\frac{1}{200}$	8.911	3.5082	$\frac{1}{200}$
8.678	3.4165	$\frac{1}{202}$	8.717	3.4318	$\frac{1}{201}$	8.756	3.4472	$\frac{1}{200}$	8.795	3.4625	$\frac{1}{200}$	8.834	3.4779	$\frac{1}{200}$	8.873	3.4933	$\frac{1}{200}$	8.912	3.5086	$\frac{1}{200}$
8.679	3.4169	$\frac{1}{202}$	8.718	3.4322	$\frac{1}{201}$	8.757	3.4476	$\frac{1}{200}$	8.796	3.4629	$\frac{1}{200}$	8.835	3.4783	$\frac{1}{200}$	8.874	3.4937	$\frac{1}{200}$	8.913	3.5090	$\frac{1}{200}$
8.680	3.4173	$\frac{1}{202}$	8.719	3.4326	$\frac{1}{201}$	8.758	3.4480	$\frac{1}{200}$	8.797	3.4633	$\frac{1}{200}$	8.836	3.4787	$\frac{1}{200}$	8.875	3.4941	$\frac{1}{200}$	8.914	3.5094	$\frac{1}{200}$
8.681	3.4177	$\frac{1}{202}$	8.720	3.4330	$\frac{1}{201}$	8.759	3.4484	$\frac{1}{200}$	8.798	3.4637	$\frac{1}{200}$	8.837	3.4791	$\frac{1}{200}$	8.876	3.4945	$\frac{1}{200}$	8.915	3.5098	$\frac{1}{200}$
8.682	3.4181	$\frac{1}{202}$	8.721	3.4334	$\frac{1}{201}$	8.760	3.4488	$\frac{1}{200}$	8.799	3.4641	$\frac{1}{200}$	8.838	3.4795	$\frac{1}{200}$	8.877	3.4949	$\frac{1}{200}$	8.916	3.5102	$\frac{1}{200}$



I.—Table for reduction of centimillimeters to fractions of an inch—Continued.

Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.
8.917	3.5100	$\frac{1}{284}$	8.950	3.5259	$\frac{1}{283}$	8.905	3.5413	$\frac{1}{282}$	0.094	3.5360	$\frac{1}{281}$	0.073	3.5720	$\frac{1}{279}$	0.112	3.5673	$\frac{1}{278}$	0.151	3.6027	$\frac{1}{277}$
8.918	3.5110	$\frac{1}{284}$	8.957	3.5263	$\frac{1}{283}$	8.906	3.5417	$\frac{1}{282}$	0.095	3.5370	$\frac{1}{281}$	0.074	3.5724	$\frac{1}{279}$	0.113	3.5677	$\frac{1}{278}$	0.152	3.6031	$\frac{1}{277}$
8.919	3.5114	$\frac{1}{284}$	8.958	3.5267	$\frac{1}{283}$	8.907	3.5421	$\frac{1}{282}$	0.096	3.5374	$\frac{1}{281}$	0.075	3.5728	$\frac{1}{279}$	0.114	3.5681	$\frac{1}{278}$	0.153	3.6035	$\frac{1}{277}$
8.920	3.5118	$\frac{1}{284}$	8.959	3.5271	$\frac{1}{283}$	8.908	3.5425	$\frac{1}{282}$	0.097	3.5378	$\frac{1}{281}$	0.076	3.5732	$\frac{1}{279}$	0.115	3.5685	$\frac{1}{278}$	0.154	3.6039	$\frac{1}{277}$
8.921	3.5121	$\frac{1}{284}$	8.960	3.5275	$\frac{1}{283}$	8.909	3.5429	$\frac{1}{282}$	0.098	3.5382	$\frac{1}{281}$	0.077	3.5736	$\frac{1}{279}$	0.116	3.5689	$\frac{1}{278}$	0.155	3.6043	$\frac{1}{277}$
8.922	3.5125	$\frac{1}{284}$	8.961	3.5279	$\frac{1}{283}$	9.000	3.5433	$\frac{1}{282}$	0.099	3.5386	$\frac{1}{280}$	0.078	3.5740	$\frac{1}{279}$	0.117	3.5693	$\frac{1}{278}$	0.156	3.6047	$\frac{1}{277}$
8.923	3.5129	$\frac{1}{284}$	8.962	3.5283	$\frac{1}{283}$	0.001	3.5436	$\frac{1}{282}$	0.040	3.5500	$\frac{1}{280}$	0.079	3.5744	$\frac{1}{279}$	0.118	3.5697	$\frac{1}{278}$	0.157	3.6051	$\frac{1}{277}$
8.924	3.5133	$\frac{1}{284}$	8.963	3.5287	$\frac{1}{283}$	9.002	3.5440	$\frac{1}{282}$	0.041	3.5504	$\frac{1}{280}$	0.080	3.5747	$\frac{1}{279}$	0.119	3.5701	$\frac{1}{278}$	0.158	3.6055	$\frac{1}{277}$
8.925	3.5137	$\frac{1}{284}$	8.964	3.5291	$\frac{1}{283}$	0.003	3.5444	$\frac{1}{282}$	0.042	3.5508	$\frac{1}{280}$	0.081	3.5751	$\frac{1}{279}$	0.120	3.5705	$\frac{1}{278}$	0.159	3.6059	$\frac{1}{277}$
8.926	3.5141	$\frac{1}{284}$	8.965	3.5295	$\frac{1}{283}$	9.004	3.5448	$\frac{1}{282}$	0.043	3.5502	$\frac{1}{280}$	0.082	3.5755	$\frac{1}{279}$	0.121	3.5709	$\frac{1}{278}$	0.160	3.6063	$\frac{1}{277}$
8.927	3.5145	$\frac{1}{284}$	8.966	3.5299	$\frac{1}{283}$	0.005	3.5452	$\frac{1}{282}$	0.044	3.5506	$\frac{1}{280}$	0.083	3.5759	$\frac{1}{279}$	0.122	3.5713	$\frac{1}{278}$	0.161	3.6067	$\frac{1}{277}$
8.928	3.5149	$\frac{1}{284}$	8.967	3.5303	$\frac{1}{283}$	9.006	3.5456	$\frac{1}{282}$	0.045	3.5510	$\frac{1}{280}$	0.084	3.5763	$\frac{1}{279}$	0.123	3.5717	$\frac{1}{278}$	0.162	3.6071	$\frac{1}{277}$
8.929	3.5153	$\frac{1}{284}$	8.968	3.5307	$\frac{1}{283}$	0.007	3.5460	$\frac{1}{282}$	0.046	3.5514	$\frac{1}{280}$	0.085	3.5767	$\frac{1}{279}$	0.124	3.5721	$\frac{1}{278}$	0.163	3.6075	$\frac{1}{277}$
8.930	3.5157	$\frac{1}{284}$	8.969	3.5310	$\frac{1}{283}$	9.008	3.5464	$\frac{1}{282}$	0.047	3.5518	$\frac{1}{280}$	0.086	3.5771	$\frac{1}{279}$	0.125	3.5725	$\frac{1}{278}$	0.164	3.6079	$\frac{1}{277}$
8.931	3.5161	$\frac{1}{284}$	8.970	3.5314	$\frac{1}{283}$	0.009	3.5468	$\frac{1}{282}$	0.048	3.5522	$\frac{1}{280}$	0.087	3.5775	$\frac{1}{279}$	0.126	3.5729	$\frac{1}{278}$	0.165	3.6083	$\frac{1}{277}$
8.932	3.5165	$\frac{1}{284}$	8.971	3.5318	$\frac{1}{283}$	9.010	3.5472	$\frac{1}{282}$	0.049	3.5526	$\frac{1}{280}$	0.088	3.5779	$\frac{1}{279}$	0.127	3.5733	$\frac{1}{278}$	0.166	3.6087	$\frac{1}{277}$
8.933	3.5169	$\frac{1}{284}$	8.972	3.5322	$\frac{1}{283}$	0.011	3.5476	$\frac{1}{282}$	0.050	3.5530	$\frac{1}{280}$	0.089	3.5783	$\frac{1}{279}$	0.128	3.5737	$\frac{1}{278}$	0.167	3.6091	$\frac{1}{277}$
8.934	3.5173	$\frac{1}{284}$	8.973	3.5326	$\frac{1}{283}$	9.012	3.5480	$\frac{1}{282}$	0.051	3.5534	$\frac{1}{280}$	0.090	3.5787	$\frac{1}{279}$	0.129	3.5741	$\frac{1}{278}$	0.168	3.6095	$\frac{1}{277}$
8.935	3.5177	$\frac{1}{284}$	8.974	3.5330	$\frac{1}{283}$	0.013	3.5484	$\frac{1}{282}$	0.052	3.5538	$\frac{1}{280}$	0.091	3.5791	$\frac{1}{279}$	0.130	3.5745	$\frac{1}{278}$	0.169	3.6099	$\frac{1}{277}$
8.936	3.5181	$\frac{1}{284}$	8.975	3.5334	$\frac{1}{283}$	9.014	3.5488	$\frac{1}{282}$	0.053	3.5542	$\frac{1}{280}$	0.092	3.5795	$\frac{1}{279}$	0.131	3.5749	$\frac{1}{278}$	0.170	3.6103	$\frac{1}{277}$
8.937	3.5184	$\frac{1}{284}$	8.976	3.5338	$\frac{1}{283}$	0.015	3.5492	$\frac{1}{282}$	0.054	3.5546	$\frac{1}{280}$	0.093	3.5799	$\frac{1}{279}$	0.132	3.5753	$\frac{1}{278}$	0.171	3.6107	$\frac{1}{277}$
8.938	3.5188	$\frac{1}{284}$	8.977	3.5342	$\frac{1}{283}$	9.016	3.5496	$\frac{1}{282}$	0.055	3.5550	$\frac{1}{280}$	0.094	3.5803	$\frac{1}{279}$	0.133	3.5757	$\frac{1}{278}$	0.172	3.6111	$\frac{1}{277}$
8.939	3.5192	$\frac{1}{284}$	8.978	3.5346	$\frac{1}{283}$	0.017	3.5499	$\frac{1}{282}$	0.056	3.5554	$\frac{1}{280}$	0.095	3.5807	$\frac{1}{279}$	0.134	3.5761	$\frac{1}{278}$	0.173	3.6115	$\frac{1}{277}$
8.940	3.5196	$\frac{1}{284}$	8.979	3.5350	$\frac{1}{283}$	9.018	3.5503	$\frac{1}{282}$	0.057	3.5558	$\frac{1}{280}$	0.096	3.5811	$\frac{1}{279}$	0.135	3.5765	$\frac{1}{278}$	0.174	3.6119	$\frac{1}{277}$
8.941	3.5200	$\frac{1}{284}$	8.980	3.5354	$\frac{1}{283}$	0.019	3.5507	$\frac{1}{282}$	0.058	3.5562	$\frac{1}{280}$	0.097	3.5815	$\frac{1}{279}$	0.136	3.5769	$\frac{1}{278}$	0.175	3.6123	$\frac{1}{277}$
8.942	3.5204	$\frac{1}{284}$	8.981	3.5358	$\frac{1}{283}$	9.020	3.5511	$\frac{1}{282}$	0.059	3.5566	$\frac{1}{280}$	0.098	3.5819	$\frac{1}{279}$	0.137	3.5773	$\frac{1}{278}$	0.176	3.6127	$\frac{1}{277}$
8.943	3.5208	$\frac{1}{283}$	8.982	3.5362	$\frac{1}{283}$	0.021	3.5515	$\frac{1}{282}$	0.060	3.5570	$\frac{1}{280}$	0.099	3.5823	$\frac{1}{279}$	0.138	3.5777	$\frac{1}{278}$	0.177	3.6131	$\frac{1}{277}$
8.944	3.5212	$\frac{1}{283}$	8.983	3.5366	$\frac{1}{283}$	9.022	3.5519	$\frac{1}{282}$	0.061	3.5574	$\frac{1}{280}$	0.100	3.5827	$\frac{1}{279}$	0.139	3.5781	$\frac{1}{278}$	0.178	3.6135	$\frac{1}{277}$
8.945	3.5216	$\frac{1}{283}$	8.984	3.5370	$\frac{1}{283}$	0.023	3.5523	$\frac{1}{282}$	0.062	3.5578	$\frac{1}{280}$	0.101	3.5831	$\frac{1}{279}$	0.140	3.5785	$\frac{1}{278}$	0.179	3.6139	$\frac{1}{277}$
8.946	3.5220	$\frac{1}{283}$	8.985	3.5374	$\frac{1}{283}$	9.024	3.5527	$\frac{1}{282}$	0.063	3.5582	$\frac{1}{280}$	0.102	3.5835	$\frac{1}{279}$	0.141	3.5789	$\frac{1}{278}$	0.180	3.6143	$\frac{1}{277}$
8.947	3.5224	$\frac{1}{283}$	8.986	3.5378	$\frac{1}{283}$	0.025	3.5531	$\frac{1}{282}$	0.064	3.5586	$\frac{1}{280}$	0.103	3.5839	$\frac{1}{279}$	0.142	3.5793	$\frac{1}{278}$	0.181	3.6147	$\frac{1}{277}$
8.948	3.5228	$\frac{1}{283}$	8.987	3.5382	$\frac{1}{283}$	9.026	3.5535	$\frac{1}{282}$	0.065	3.5590	$\frac{1}{280}$	0.104	3.5843	$\frac{1}{279}$	0.143	3.5797	$\frac{1}{278}$	0.182	3.6151	$\frac{1}{277}$
8.949	3.5232	$\frac{1}{283}$	8.988	3.5386	$\frac{1}{283}$	0.027	3.5539	$\frac{1}{282}$	0.066	3.5594	$\frac{1}{280}$	0.105	3.5847	$\frac{1}{279}$	0.144	3.5801	$\frac{1}{278}$	0.183	3.6155	$\frac{1}{277}$
8.950	3.5236	$\frac{1}{283}$	8.989	3.5390	$\frac{1}{283}$	9.028	3.5543	$\frac{1}{282}$	0.067	3.5598	$\frac{1}{280}$	0.106	3.5851	$\frac{1}{279}$	0.145	3.5805	$\frac{1}{278}$	0.184	3.6159	$\frac{1}{277}$
8.951	3.5240	$\frac{1}{283}$	8.990	3.5394	$\frac{1}{283}$	0.029	3.5547	$\frac{1}{282}$	0.068	3.5602	$\frac{1}{280}$	0.107	3.5855	$\frac{1}{279}$	0.146	3.5809	$\frac{1}{278}$	0.185	3.6163	$\frac{1}{277}$
8.952	3.5244	$\frac{1}{283}$	8.991	3.5398	$\frac{1}{283}$	9.030	3.5551	$\frac{1}{282}$	0.069	3.5606	$\frac{1}{280}$	0.108	3.5859	$\frac{1}{279}$	0.147	3.5813	$\frac{1}{278}$	0.186	3.6167	$\frac{1}{277}$
8.953	3.5247	$\frac{1}{283}$	8.992	3.5401	$\frac{1}{283}$	0.031	3.5555	$\frac{1}{282}$	0.070	3.5610	$\frac{1}{280}$	0.109	3.5863	$\frac{1}{279}$	0.148	3.5817	$\frac{1}{278}$	0.187	3.6171	$\frac{1}{277}$
8.954	3.5251	$\frac{1}{283}$	8.993	3.5405	$\frac{1}{283}$	9.032	3.5559	$\frac{1}{282}$	0.071	3.5614	$\frac{1}{280}$	0.110	3.5867	$\frac{1}{279}$	0.149	3.5821	$\frac{1}{278}$	0.188	3.6175	$\frac{1}{277}$
8.955	3.5255	$\frac{1}{283}$	8.994	3.5409	$\frac{1}{283}$	0.033	3.5563	$\frac{1}{282}$	0.072	3.5618	$\frac{1}{280}$	0.111	3.5871	$\frac{1}{279}$	0.150	3.5825	$\frac{1}{278}$	0.189	3.6179	$\frac{1}{277}$



I.—Table for reduction of centimillimeters to fractions of an inch—Continued.

Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.
9.190	3.6181	$\frac{1}{276}$	9.220	3.6334	$\frac{1}{275}$	9.268	3.6488	$\frac{1}{274}$	9.307	3.6641	$\frac{1}{273}$	9.346	3.6795	$\frac{1}{272}$	9.385	3.6948	$\frac{1}{271}$	9.424	3.7102	$\frac{1}{270}$
9.191	3.6184	$\frac{1}{270}$	9.230	3.6338	$\frac{1}{275}$	9.269	3.6492	$\frac{1}{273}$	9.308	3.6645	$\frac{1}{272}$	9.347	3.6799	$\frac{1}{271}$	9.386	3.6952	$\frac{1}{270}$	9.425	3.7106	$\frac{1}{269}$
9.192	3.6188	$\frac{1}{276}$	9.231	3.6342	$\frac{1}{275}$	9.270	3.6495	$\frac{1}{273}$	9.309	3.6649	$\frac{1}{272}$	9.348	3.6803	$\frac{1}{271}$	9.387	3.6956	$\frac{1}{270}$	9.426	3.7110	$\frac{1}{269}$
9.193	3.6192	$\frac{1}{276}$	9.232	3.6346	$\frac{1}{275}$	9.271	3.6499	$\frac{1}{273}$	9.310	3.6653	$\frac{1}{272}$	9.349	3.6807	$\frac{1}{271}$	9.388	3.6960	$\frac{1}{270}$	9.427	3.7114	$\frac{1}{269}$
9.194	3.6196	$\frac{1}{276}$	9.233	3.6350	$\frac{1}{275}$	9.272	3.6503	$\frac{1}{273}$	9.311	3.6657	$\frac{1}{272}$	9.350	3.6810	$\frac{1}{271}$	9.389	3.6964	$\frac{1}{270}$	9.428	3.7118	$\frac{1}{269}$
9.195	3.6200	$\frac{1}{276}$	9.234	3.6354	$\frac{1}{275}$	9.273	3.6507	$\frac{1}{273}$	9.312	3.6661	$\frac{1}{272}$	9.351	3.6814	$\frac{1}{271}$	9.390	3.6968	$\frac{1}{270}$	9.429	3.7122	$\frac{1}{269}$
9.196	3.6204	$\frac{1}{276}$	9.235	3.6358	$\frac{1}{275}$	9.274	3.6511	$\frac{1}{273}$	9.313	3.6665	$\frac{1}{272}$	9.352	3.6818	$\frac{1}{271}$	9.391	3.6972	$\frac{1}{270}$	9.430	3.7126	$\frac{1}{269}$
9.197	3.6208	$\frac{1}{276}$	9.236	3.6362	$\frac{1}{274}$	9.275	3.6515	$\frac{1}{273}$	9.314	3.6669	$\frac{1}{272}$	9.353	3.6822	$\frac{1}{271}$	9.392	3.6976	$\frac{1}{270}$	9.431	3.7130	$\frac{1}{269}$
9.198	3.6212	$\frac{1}{276}$	9.237	3.6366	$\frac{1}{274}$	9.276	3.6519	$\frac{1}{273}$	9.315	3.6673	$\frac{1}{272}$	9.354	3.6826	$\frac{1}{271}$	9.393	3.6980	$\frac{1}{270}$	9.432	3.7134	$\frac{1}{269}$
9.199	3.6216	$\frac{1}{276}$	9.238	3.6370	$\frac{1}{274}$	9.277	3.6523	$\frac{1}{273}$	9.316	3.6677	$\frac{1}{272}$	9.355	3.6830	$\frac{1}{271}$	9.394	3.6984	$\frac{1}{270}$	9.433	3.7138	$\frac{1}{269}$
9.200	3.6220	$\frac{1}{276}$	9.239	3.6374	$\frac{1}{274}$	9.278	3.6527	$\frac{1}{273}$	9.317	3.6681	$\frac{1}{272}$	9.356	3.6834	$\frac{1}{271}$	9.395	3.6988	$\frac{1}{270}$	9.434	3.7142	$\frac{1}{269}$
9.201	3.6224	$\frac{1}{276}$	9.240	3.6378	$\frac{1}{274}$	9.279	3.6531	$\frac{1}{273}$	9.318	3.6685	$\frac{1}{272}$	9.357	3.6838	$\frac{1}{271}$	9.396	3.6992	$\frac{1}{270}$	9.435	3.7146	$\frac{1}{269}$
9.202	3.6228	$\frac{1}{276}$	9.241	3.6382	$\frac{1}{274}$	9.280	3.6535	$\frac{1}{273}$	9.319	3.6689	$\frac{1}{272}$	9.358	3.6842	$\frac{1}{271}$	9.397	3.6996	$\frac{1}{270}$	9.436	3.7150	$\frac{1}{269}$
9.203	3.6232	$\frac{1}{275}$	9.242	3.6386	$\frac{1}{274}$	9.281	3.6539	$\frac{1}{273}$	9.320	3.6693	$\frac{1}{272}$	9.359	3.6846	$\frac{1}{271}$	9.398	3.6999	$\frac{1}{270}$	9.437	3.7154	$\frac{1}{269}$
9.204	3.6236	$\frac{1}{275}$	9.243	3.6390	$\frac{1}{274}$	9.282	3.6543	$\frac{1}{273}$	9.321	3.6697	$\frac{1}{272}$	9.360	3.6850	$\frac{1}{271}$	9.399	3.7003	$\frac{1}{270}$	9.438	3.7158	$\frac{1}{269}$
9.205	3.6240	$\frac{1}{275}$	9.244	3.6394	$\frac{1}{274}$	9.283	3.6547	$\frac{1}{273}$	9.322	3.6701	$\frac{1}{272}$	9.361	3.6854	$\frac{1}{271}$	9.400	3.7007	$\frac{1}{270}$	9.439	3.7162	$\frac{1}{269}$
9.206	3.6244	$\frac{1}{275}$	9.245	3.6398	$\frac{1}{274}$	9.284	3.6551	$\frac{1}{273}$	9.323	3.6705	$\frac{1}{272}$	9.362	3.6858	$\frac{1}{271}$	9.401	3.7011	$\frac{1}{270}$	9.440	3.7166	$\frac{1}{269}$
9.207	3.6247	$\frac{1}{275}$	9.246	3.6402	$\frac{1}{274}$	9.285	3.6555	$\frac{1}{273}$	9.324	3.6709	$\frac{1}{272}$	9.363	3.6862	$\frac{1}{271}$	9.402	3.7015	$\frac{1}{270}$	9.441	3.7170	$\frac{1}{269}$
9.208	3.6251	$\frac{1}{275}$	9.247	3.6406	$\frac{1}{274}$	9.286	3.6559	$\frac{1}{273}$	9.325	3.6713	$\frac{1}{272}$	9.364	3.6866	$\frac{1}{271}$	9.403	3.7019	$\frac{1}{270}$	9.442	3.7174	$\frac{1}{269}$
9.209	3.6255	$\frac{1}{275}$	9.248	3.6410	$\frac{1}{274}$	9.287	3.6563	$\frac{1}{273}$	9.326	3.6717	$\frac{1}{272}$	9.365	3.6870	$\frac{1}{271}$	9.404	3.7023	$\frac{1}{270}$	9.443	3.7178	$\frac{1}{269}$
9.210	3.6259	$\frac{1}{275}$	9.249	3.6414	$\frac{1}{274}$	9.288	3.6567	$\frac{1}{273}$	9.327	3.6721	$\frac{1}{272}$	9.366	3.6874	$\frac{1}{271}$	9.405	3.7027	$\frac{1}{270}$	9.444	3.7182	$\frac{1}{269}$
9.211	3.6263	$\frac{1}{275}$	9.250	3.6418	$\frac{1}{274}$	9.289	3.6571	$\frac{1}{273}$	9.328	3.6725	$\frac{1}{272}$	9.367	3.6878	$\frac{1}{271}$	9.406	3.7031	$\frac{1}{270}$	9.445	3.7186	$\frac{1}{269}$
9.212	3.6267	$\frac{1}{275}$	9.251	3.6422	$\frac{1}{274}$	9.290	3.6575	$\frac{1}{273}$	9.329	3.6729	$\frac{1}{272}$	9.368	3.6882	$\frac{1}{271}$	9.407	3.7035	$\frac{1}{269}$	9.446	3.7190	$\frac{1}{268}$
9.213	3.6271	$\frac{1}{275}$	9.252	3.6426	$\frac{1}{274}$	9.291	3.6579	$\frac{1}{273}$	9.330	3.6733	$\frac{1}{272}$	9.369	3.6886	$\frac{1}{271}$	9.408	3.7039	$\frac{1}{269}$	9.447	3.7194	$\frac{1}{268}$
9.214	3.6275	$\frac{1}{275}$	9.253	3.6430	$\frac{1}{274}$	9.292	3.6583	$\frac{1}{273}$	9.331	3.6737	$\frac{1}{272}$	9.370	3.6890	$\frac{1}{271}$	9.409	3.7043	$\frac{1}{269}$	9.448	3.7198	$\frac{1}{268}$
9.215	3.6279	$\frac{1}{275}$	9.254	3.6434	$\frac{1}{274}$	9.293	3.6587	$\frac{1}{273}$	9.332	3.6741	$\frac{1}{272}$	9.371	3.6894	$\frac{1}{271}$	9.410	3.7047	$\frac{1}{269}$	9.449	3.7202	$\frac{1}{268}$
9.216	3.6283	$\frac{1}{275}$	9.255	3.6438	$\frac{1}{274}$	9.294	3.6591	$\frac{1}{273}$	9.333	3.6745	$\frac{1}{272}$	9.372	3.6898	$\frac{1}{271}$	9.411	3.7051	$\frac{1}{269}$	9.450	3.7206	$\frac{1}{268}$
9.217	3.6287	$\frac{1}{275}$	9.256	3.6442	$\frac{1}{274}$	9.295	3.6595	$\frac{1}{273}$	9.334	3.6749	$\frac{1}{272}$	9.373	3.6902	$\frac{1}{271}$	9.412	3.7055	$\frac{1}{269}$	9.451	3.7210	$\frac{1}{268}$
9.218	3.6291	$\frac{1}{275}$	9.257	3.6446	$\frac{1}{274}$	9.296	3.6599	$\frac{1}{273}$	9.335	3.6753	$\frac{1}{272}$	9.374	3.6906	$\frac{1}{271}$	9.413	3.7059	$\frac{1}{269}$	9.452	3.7214	$\frac{1}{268}$
9.219	3.6295	$\frac{1}{275}$	9.258	3.6450	$\frac{1}{274}$	9.297	3.6603	$\frac{1}{273}$	9.336	3.6757	$\frac{1}{272}$	9.375	3.6910	$\frac{1}{271}$	9.414	3.7063	$\frac{1}{269}$	9.453	3.7218	$\frac{1}{268}$
9.220	3.6299	$\frac{1}{275}$	9.259	3.6454	$\frac{1}{274}$	9.298	3.6607	$\frac{1}{273}$	9.337	3.6761	$\frac{1}{272}$	9.376	3.6914	$\frac{1}{271}$	9.415	3.7067	$\frac{1}{269}$	9.454	3.7222	$\frac{1}{268}$
9.221	3.6303	$\frac{1}{275}$	9.260	3.6458	$\frac{1}{274}$	9.299	3.6611	$\frac{1}{273}$	9.338	3.6765	$\frac{1}{272}$	9.377	3.6918	$\frac{1}{271}$	9.416	3.7071	$\frac{1}{269}$	9.455	3.7226	$\frac{1}{268}$
9.222	3.6307	$\frac{1}{275}$	9.261	3.6462	$\frac{1}{274}$	9.300	3.6615	$\frac{1}{273}$	9.339	3.6769	$\frac{1}{272}$	9.378	3.6922	$\frac{1}{271}$	9.417	3.7075	$\frac{1}{269}$	9.456	3.7230	$\frac{1}{268}$
9.223	3.6311	$\frac{1}{275}$	9.262	3.6466	$\frac{1}{274}$	9.301	3.6619	$\frac{1}{273}$	9.340	3.6773	$\frac{1}{272}$	9.379	3.6926	$\frac{1}{271}$	9.418	3.7079	$\frac{1}{269}$	9.457	3.7234	$\frac{1}{268}$
9.224	3.6314	$\frac{1}{275}$	9.263	3.6470	$\frac{1}{274}$	9.302	3.6623	$\frac{1}{273}$	9.341	3.6777	$\frac{1}{272}$	9.380	3.6930	$\frac{1}{271}$	9.419	3.7083	$\frac{1}{269}$	9.458	3.7238	$\frac{1}{268}$
9.225	3.6318	$\frac{1}{275}$	9.264	3.6474	$\frac{1}{274}$	9.303	3.6627	$\frac{1}{273}$	9.342	3.6781	$\frac{1}{272}$	9.381	3.6934	$\frac{1}{271}$	9.420	3.7087	$\frac{1}{269}$	9.459	3.7242	$\frac{1}{268}$
9.226	3.6322	$\frac{1}{275}$	9.265	3.6478	$\frac{1}{274}$	9.304	3.6631	$\frac{1}{273}$	9.343	3.6785	$\frac{1}{272}$	9.382	3.6938	$\frac{1}{271}$	9.421	3.7091	$\frac{1}{269}$	9.460	3.7246	$\frac{1}{268}$
9.227	3.6326	$\frac{1}{275}$	9.266	3.6482	$\frac{1}{274}$	9.305	3.6635	$\frac{1}{273}$	9.344	3.6789	$\frac{1}{272}$	9.383	3.6942	$\frac{1}{271}$	9.422	3.7095	$\frac{1}{269}$	9.461	3.7250	$\frac{1}{268}$
9.228	3.6330	$\frac{1}{275}$	9.267	3.6486	$\frac{1}{274}$	9.306	3.6639	$\frac{1}{273}$	9.345	3.6793	$\frac{1}{272}$	9.384	3.6946	$\frac{1}{271}$	9.423	3.7099	$\frac{1}{269}$	9.462	3.7254	$\frac{1}{268}$



I.—Table for reduction of centimillimeters to fractions of an inch—Continued.

Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.
9.463	3.7255	$\frac{1}{268}$	9.502	3.7400	$\frac{1}{267}$	9.541	3.7562	$\frac{1}{266}$	9.580	3.7716	$\frac{1}{265}$	9.619	3.7870	$\frac{1}{264}$	9.658	3.8023	$\frac{1}{263}$	9.697	3.8177	$\frac{1}{261}$
9.464	3.7259	$\frac{1}{268}$	9.503	3.7413	$\frac{1}{267}$	9.542	3.7566	$\frac{1}{266}$	9.581	3.7720	$\frac{1}{265}$	9.620	3.7873	$\frac{1}{264}$	9.659	3.8027	$\frac{1}{263}$	9.698	3.8181	$\frac{1}{261}$
9.465	3.7263	$\frac{1}{268}$	9.504	3.7417	$\frac{1}{267}$	9.543	3.7570	$\frac{1}{266}$	9.582	3.7724	$\frac{1}{265}$	9.621	3.7877	$\frac{1}{263}$	9.660	3.8031	$\frac{1}{261}$	9.699	3.8184	$\frac{1}{261}$
9.466	3.7267	$\frac{1}{268}$	9.505	3.7421	$\frac{1}{267}$	9.544	3.7574	$\frac{1}{266}$	9.583	3.7728	$\frac{1}{265}$	9.622	3.7881	$\frac{1}{263}$	9.661	3.8035	$\frac{1}{261}$	9.700	3.8188	$\frac{1}{261}$
9.467	3.7271	$\frac{1}{268}$	9.506	3.7425	$\frac{1}{267}$	9.545	3.7578	$\frac{1}{266}$	9.584	3.7732	$\frac{1}{265}$	9.623	3.7885	$\frac{1}{263}$	9.662	3.8039	$\frac{1}{261}$	9.701	3.8192	$\frac{1}{261}$
9.468	3.7275	$\frac{1}{268}$	9.507	3.7429	$\frac{1}{267}$	9.546	3.7582	$\frac{1}{266}$	9.585	3.7736	$\frac{1}{265}$	9.624	3.7889	$\frac{1}{263}$	9.663	3.8043	$\frac{1}{261}$	9.702	3.8196	$\frac{1}{261}$
9.469	3.7279	$\frac{1}{268}$	9.508	3.7432	$\frac{1}{267}$	9.517	3.7586	$\frac{1}{266}$	9.586	3.7740	$\frac{1}{265}$	9.625	3.7893	$\frac{1}{263}$	9.664	3.8047	$\frac{1}{261}$	9.703	3.8200	$\frac{1}{261}$
9.470	3.7283	$\frac{1}{268}$	9.509	3.7436	$\frac{1}{267}$	9.548	3.7590	$\frac{1}{266}$	9.587	3.7744	$\frac{1}{265}$	9.626	3.7897	$\frac{1}{263}$	9.665	3.8051	$\frac{1}{261}$	9.704	3.8204	$\frac{1}{261}$
9.471	3.7287	$\frac{1}{268}$	9.510	3.7440	$\frac{1}{267}$	9.549	3.7594	$\frac{1}{266}$	9.588	3.7747	$\frac{1}{265}$	9.627	3.7901	$\frac{1}{263}$	9.666	3.8055	$\frac{1}{261}$	9.705	3.8208	$\frac{1}{261}$
9.472	3.7291	$\frac{1}{268}$	9.511	3.7444	$\frac{1}{267}$	9.550	3.7598	$\frac{1}{266}$	9.589	3.7751	$\frac{1}{265}$	9.628	3.7905	$\frac{1}{263}$	9.667	3.8059	$\frac{1}{261}$	9.706	3.8212	$\frac{1}{261}$
9.473	3.7295	$\frac{1}{268}$	9.512	3.7448	$\frac{1}{266}$	9.551	3.7602	$\frac{1}{265}$	9.590	3.7755	$\frac{1}{261}$	9.629	3.7909	$\frac{1}{263}$	9.668	3.8062	$\frac{1}{261}$	9.707	3.8216	$\frac{1}{261}$
9.474	3.7299	$\frac{1}{268}$	9.513	3.7453	$\frac{1}{266}$	9.552	3.7606	$\frac{1}{265}$	9.591	3.7759	$\frac{1}{264}$	9.630	3.7913	$\frac{1}{263}$	9.669	3.8066	$\frac{1}{261}$	9.708	3.8220	$\frac{1}{261}$
9.475	3.7303	$\frac{1}{268}$	9.514	3.7456	$\frac{1}{266}$	9.553	3.7610	$\frac{1}{265}$	9.592	3.7763	$\frac{1}{264}$	9.631	3.7917	$\frac{1}{263}$	9.670	3.8070	$\frac{1}{261}$	9.709	3.8224	$\frac{1}{261}$
9.476	3.7307	$\frac{1}{268}$	9.515	3.7460	$\frac{1}{266}$	9.554	3.7614	$\frac{1}{265}$	9.593	3.7767	$\frac{1}{264}$	9.632	3.7921	$\frac{1}{263}$	9.671	3.8074	$\frac{1}{261}$	9.710	3.8228	$\frac{1}{261}$
9.477	3.7310	$\frac{1}{267}$	9.516	3.7461	$\frac{1}{266}$	9.555	3.7618	$\frac{1}{265}$	9.594	3.7771	$\frac{1}{264}$	9.633	3.7925	$\frac{1}{263}$	9.672	3.8078	$\frac{1}{261}$	9.711	3.8232	$\frac{1}{261}$
9.478	3.7314	$\frac{1}{267}$	9.517	3.7468	$\frac{1}{266}$	9.556	3.7621	$\frac{1}{265}$	9.595	3.7775	$\frac{1}{264}$	9.634	3.7929	$\frac{1}{263}$	9.673	3.8082	$\frac{1}{261}$	9.712	3.8236	$\frac{1}{261}$
9.479	3.7318	$\frac{1}{267}$	9.518	3.7472	$\frac{1}{266}$	9.557	3.7625	$\frac{1}{265}$	9.596	3.7779	$\frac{1}{264}$	9.635	3.7932	$\frac{1}{263}$	9.674	3.8086	$\frac{1}{261}$	9.713	3.8240	$\frac{1}{261}$
9.480	3.7322	$\frac{1}{267}$	9.519	3.7476	$\frac{1}{266}$	9.558	3.7629	$\frac{1}{265}$	9.597	3.7783	$\frac{1}{264}$	9.636	3.7936	$\frac{1}{263}$	9.675	3.8090	$\frac{1}{261}$	9.714	3.8244	$\frac{1}{261}$
9.481	3.7326	$\frac{1}{267}$	9.520	3.7480	$\frac{1}{266}$	9.559	3.7633	$\frac{1}{265}$	9.598	3.7787	$\frac{1}{264}$	9.637	3.7940	$\frac{1}{263}$	9.676	3.8094	$\frac{1}{261}$	9.715	3.8247	$\frac{1}{261}$
9.482	3.7330	$\frac{1}{267}$	9.521	3.7481	$\frac{1}{266}$	9.560	3.7637	$\frac{1}{265}$	9.599	3.7791	$\frac{1}{264}$	9.638	3.7944	$\frac{1}{263}$	9.677	3.8098	$\frac{1}{261}$	9.716	3.8251	$\frac{1}{261}$
9.483	3.7334	$\frac{1}{267}$	9.522	3.7488	$\frac{1}{266}$	9.561	3.7641	$\frac{1}{265}$	9.600	3.7795	$\frac{1}{264}$	9.639	3.7948	$\frac{1}{263}$	9.678	3.8102	$\frac{1}{261}$	9.717	3.8255	$\frac{1}{261}$
9.484	3.7338	$\frac{1}{267}$	9.523	3.7492	$\frac{1}{266}$	9.562	3.7645	$\frac{1}{265}$	9.601	3.7799	$\frac{1}{264}$	9.640	3.7952	$\frac{1}{263}$	9.679	3.8106	$\frac{1}{261}$	9.718	3.8259	$\frac{1}{261}$
9.485	3.7342	$\frac{1}{267}$	9.524	3.7495	$\frac{1}{266}$	9.563	3.7649	$\frac{1}{265}$	9.602	3.7803	$\frac{1}{261}$	9.641	3.7956	$\frac{1}{263}$	9.680	3.8110	$\frac{1}{261}$	9.719	3.8263	$\frac{1}{261}$
9.486	3.7346	$\frac{1}{267}$	9.525	3.7499	$\frac{1}{266}$	9.564	3.7653	$\frac{1}{265}$	9.603	3.7807	$\frac{1}{264}$	9.642	3.7960	$\frac{1}{263}$	9.681	3.8114	$\frac{1}{261}$	9.720	3.8267	$\frac{1}{261}$
9.487	3.7350	$\frac{1}{267}$	9.526	3.7508	$\frac{1}{266}$	9.565	3.7657	$\frac{1}{265}$	9.604	3.7810	$\frac{1}{261}$	9.643	3.7964	$\frac{1}{263}$	9.682	3.8118	$\frac{1}{261}$	9.721	3.8271	$\frac{1}{261}$
9.488	3.7354	$\frac{1}{267}$	9.527	3.7507	$\frac{1}{266}$	9.566	3.7661	$\frac{1}{265}$	9.605	3.7814	$\frac{1}{264}$	9.644	3.7968	$\frac{1}{263}$	9.683	3.8121	$\frac{1}{261}$	9.722	3.8275	$\frac{1}{261}$
9.489	3.7358	$\frac{1}{267}$	9.528	3.7511	$\frac{1}{266}$	9.567	3.7665	$\frac{1}{265}$	9.606	3.7818	$\frac{1}{264}$	9.645	3.7972	$\frac{1}{263}$	9.684	3.8125	$\frac{1}{261}$	9.723	3.8279	$\frac{1}{261}$
9.490	3.7362	$\frac{1}{267}$	9.529	3.7515	$\frac{1}{266}$	9.568	3.7669	$\frac{1}{265}$	9.607	3.7822	$\frac{1}{264}$	9.646	3.7976	$\frac{1}{263}$	9.685	3.8129	$\frac{1}{261}$	9.724	3.8283	$\frac{1}{261}$
9.491	3.7366	$\frac{1}{267}$	9.530	3.7519	$\frac{1}{266}$	9.569	3.7673	$\frac{1}{265}$	9.608	3.7826	$\frac{1}{264}$	9.647	3.7980	$\frac{1}{263}$	9.686	3.8133	$\frac{1}{261}$	9.725	3.8287	$\frac{1}{261}$
9.492	3.7370	$\frac{1}{267}$	9.531	3.7523	$\frac{1}{266}$	9.570	3.7677	$\frac{1}{265}$	9.609	3.7830	$\frac{1}{264}$	9.648	3.7984	$\frac{1}{263}$	9.687	3.8137	$\frac{1}{261}$	9.726	3.8291	$\frac{1}{261}$
9.493	3.7373	$\frac{1}{267}$	9.532	3.7527	$\frac{1}{266}$	9.571	3.7681	$\frac{1}{265}$	9.610	3.7834	$\frac{1}{264}$	9.649	3.7988	$\frac{1}{263}$	9.688	3.8141	$\frac{1}{261}$	9.727	3.8295	$\frac{1}{261}$
9.494	3.7377	$\frac{1}{267}$	9.533	3.7531	$\frac{1}{266}$	9.572	3.7684	$\frac{1}{265}$	9.611	3.7838	$\frac{1}{264}$	9.650	3.7992	$\frac{1}{263}$	9.689	3.8145	$\frac{1}{261}$	9.728	3.8299	$\frac{1}{261}$
9.495	3.7381	$\frac{1}{267}$	9.534	3.7535	$\frac{1}{266}$	9.573	3.7688	$\frac{1}{265}$	9.612	3.7843	$\frac{1}{264}$	9.651	3.7996	$\frac{1}{263}$	9.690	3.8149	$\frac{1}{261}$	9.729	3.8303	$\frac{1}{261}$
9.496	3.7385	$\frac{1}{267}$	9.535	3.7539	$\frac{1}{266}$	9.574	3.7692	$\frac{1}{265}$	9.613	3.7846	$\frac{1}{264}$	9.652	3.7999	$\frac{1}{263}$	9.691	3.8153	$\frac{1}{261}$	9.730	3.8307	$\frac{1}{261}$
9.497	3.7389	$\frac{1}{267}$	9.536	3.7543	$\frac{1}{266}$	9.575	3.7696	$\frac{1}{265}$	9.614	3.7850	$\frac{1}{264}$	9.653	3.8003	$\frac{1}{263}$	9.692	3.8157	$\frac{1}{261}$	9.731	3.8311	$\frac{1}{261}$
9.498	3.7393	$\frac{1}{267}$	9.537	3.7547	$\frac{1}{266}$	9.576	3.7700	$\frac{1}{265}$	9.615	3.7854	$\frac{1}{264}$	9.654	3.8007	$\frac{1}{263}$	9.693	3.8161	$\frac{1}{261}$	9.732	3.8314	$\frac{1}{261}$
9.499	3.7397	$\frac{1}{267}$	9.538	3.7551	$\frac{1}{266}$	9.577	3.7704	$\frac{1}{265}$	9.616	3.7858	$\frac{1}{264}$	9.655	3.8011	$\frac{1}{263}$	9.694	3.8165	$\frac{1}{261}$	9.733	3.8318	$\frac{1}{261}$
9.500	3.7401	$\frac{1}{267}$	9.539	3.7555	$\frac{1}{266}$	9.578	3.7708	$\frac{1}{265}$	9.617	3.7862	$\frac{1}{264}$	9.656	3.8015	$\frac{1}{263}$	9.695	3.8169	$\frac{1}{261}$	9.734	3.8322	$\frac{1}{261}$
9.501	3.7405	$\frac{1}{267}$	9.540	3.7558	$\frac{1}{266}$	9.579	3.7712	$\frac{1}{265}$	9.618	3.7866	$\frac{1}{264}$	9.657	3.8019	$\frac{1}{263}$	9.696	3.8173	$\frac{1}{261}$	9.735	3.8326	$\frac{1}{261}$



I.—Table for reduction of centimillimeters to fractions of an inch—Continued.

Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.	Centimillimeters.	Thousandths of an inch.	Fractions of an inch.
9.736	3.8330	$\frac{1}{260}$	9.774	3.8180	$\frac{1}{259}$	9.812	3.8629	$\frac{1}{258}$	9.850	3.8779	$\frac{1}{257}$	9.888	3.8929	$\frac{1}{256}$	9.926	3.9078	$\frac{1}{255}$	9.963	3.9224	$\frac{1}{254}$
9.737	3.8331	$\frac{1}{260}$	9.775	3.8184	$\frac{1}{259}$	9.813	3.8633	$\frac{1}{258}$	9.851	3.8783	$\frac{1}{257}$	9.889	3.8932	$\frac{1}{256}$	9.927	3.9082	$\frac{1}{255}$	9.964	3.9228	$\frac{1}{254}$
9.738	3.8338	$\frac{1}{260}$	9.776	3.8488	$\frac{1}{259}$	9.814	3.8637	$\frac{1}{258}$	9.852	3.8787	$\frac{1}{257}$	9.890	3.8936	$\frac{1}{256}$	9.928	3.9086	$\frac{1}{255}$	9.965	3.9232	$\frac{1}{254}$
9.739	3.8342	$\frac{1}{260}$	9.777	3.8492	$\frac{1}{259}$	9.815	3.8641	$\frac{1}{258}$	9.853	3.8791	$\frac{1}{257}$	9.891	3.8940	$\frac{1}{256}$	9.929	3.9090	$\frac{1}{255}$	9.966	3.9236	$\frac{1}{254}$
9.740	3.8346	$\frac{1}{260}$	9.778	3.8495	$\frac{1}{259}$	9.816	3.8645	$\frac{1}{258}$	9.854	3.8795	$\frac{1}{257}$	9.892	3.8944	$\frac{1}{256}$	9.980	3.9094	$\frac{1}{255}$	9.967	3.9240	$\frac{1}{254}$
9.741	3.8350	$\frac{1}{260}$	9.779	3.8499	$\frac{1}{259}$	9.817	3.8649	$\frac{1}{258}$	9.855	3.8799	$\frac{1}{257}$	9.893	3.8948	$\frac{1}{256}$	9.931	3.9098	$\frac{1}{255}$	9.968	3.9244	$\frac{1}{254}$
9.742	3.8354	$\frac{1}{260}$	9.780	3.8508	$\frac{1}{259}$	9.818	3.8653	$\frac{1}{258}$	9.856	3.8803	$\frac{1}{257}$	9.894	3.8952	$\frac{1}{256}$	9.932	3.9102	$\frac{1}{255}$	9.969	3.9247	$\frac{1}{254}$
9.743	3.8358	$\frac{1}{260}$	9.781	3.8507	$\frac{1}{259}$	9.819	3.8657	$\frac{1}{258}$	9.857	3.8807	$\frac{1}{257}$	9.895	3.8956	$\frac{1}{256}$	9.933	3.9106	$\frac{1}{255}$	9.970	3.9251	$\frac{1}{254}$
9.744	3.8362	$\frac{1}{260}$	9.782	3.8511	$\frac{1}{259}$	9.820	3.8661	$\frac{1}{258}$	9.858	3.8810	$\frac{1}{257}$	9.896	3.8960	$\frac{1}{256}$	9.934	3.9110	$\frac{1}{255}$	9.971	3.9255	$\frac{1}{254}$
9.745	3.8366	$\frac{1}{260}$	9.783	3.8515	$\frac{1}{259}$	9.821	3.8665	$\frac{1}{258}$	9.859	3.8814	$\frac{1}{257}$	9.897	3.8964	$\frac{1}{256}$	9.935	3.9114	$\frac{1}{255}$	9.972	3.9259	$\frac{1}{254}$
9.746	3.8370	$\frac{1}{260}$	9.784	3.8519	$\frac{1}{259}$	9.822	3.8669	$\frac{1}{258}$	9.860	3.8818	$\frac{1}{257}$	9.898	3.8968	$\frac{1}{256}$	9.936	3.9118	$\frac{1}{255}$	9.973	3.9263	$\frac{1}{254}$
9.747	3.8373	$\frac{1}{260}$	9.785	3.8523	$\frac{1}{259}$	9.823	3.8673	$\frac{1}{258}$	9.861	3.8822	$\frac{1}{257}$	9.899	3.8972	$\frac{1}{256}$	9.937	3.9121	$\frac{1}{255}$	9.974	3.9267	$\frac{1}{254}$
9.748	3.8377	$\frac{1}{260}$	9.786	3.8527	$\frac{1}{259}$	9.824	3.8677	$\frac{1}{258}$	9.862	3.8826	$\frac{1}{257}$	9.900	3.8976	$\frac{1}{256}$	9.938	3.9125	$\frac{1}{255}$	9.975	3.9271	$\frac{1}{254}$
9.749	3.8381	$\frac{1}{260}$	9.787	3.8681	$\frac{1}{259}$	9.825	3.8681	$\frac{1}{258}$	9.863	3.8830	$\frac{1}{257}$	9.901	3.8980	$\frac{1}{256}$	9.939	3.9129	$\frac{1}{255}$	9.976	3.9275	$\frac{1}{254}$
9.750	3.8385	$\frac{1}{260}$	9.788	3.8535	$\frac{1}{259}$	9.826	3.8684	$\frac{1}{258}$	9.864	3.8834	$\frac{1}{257}$	9.902	3.8984	$\frac{1}{256}$	9.940	3.9133	$\frac{1}{255}$	9.977	3.9279	$\frac{1}{254}$
9.751	3.8389	$\frac{1}{260}$	9.789	3.8539	$\frac{1}{259}$	9.827	3.8688	$\frac{1}{258}$	9.865	3.8838	$\frac{1}{257}$	9.903	3.8988	$\frac{1}{256}$	9.941	3.9137	$\frac{1}{255}$	9.978	3.9283	$\frac{1}{254}$
9.752	3.8393	$\frac{1}{260}$	9.790	3.8543	$\frac{1}{259}$	9.828	3.8692	$\frac{1}{258}$	9.866	3.8842	$\frac{1}{257}$	9.904	3.8992	$\frac{1}{256}$	9.942	3.9141	$\frac{1}{255}$	9.979	3.9287	$\frac{1}{254}$
9.753	3.8397	$\frac{1}{260}$	9.791	3.8547	$\frac{1}{259}$	9.829	3.8696	$\frac{1}{258}$	9.867	3.8846	$\frac{1}{257}$	9.905	3.8996	$\frac{1}{256}$	9.943	3.9145	$\frac{1}{255}$	9.980	3.9291	$\frac{1}{254}$
9.754	3.8401	$\frac{1}{260}$	9.792	3.8551	$\frac{1}{259}$	9.830	3.8700	$\frac{1}{258}$	9.868	3.8850	$\frac{1}{257}$	9.906	3.8999	$\frac{1}{256}$	9.944	3.9149	$\frac{1}{255}$	9.981	3.9295	$\frac{1}{254}$
9.755	3.8405	$\frac{1}{260}$	9.793	3.8555	$\frac{1}{259}$	9.831	3.8704	$\frac{1}{258}$	9.869	3.8854	$\frac{1}{257}$	9.907	3.9003	$\frac{1}{256}$	9.945	3.9153	$\frac{1}{255}$	9.982	3.9299	$\frac{1}{254}$
9.756	3.8409	$\frac{1}{260}$	9.794	3.8558	$\frac{1}{259}$	9.832	3.8708	$\frac{1}{258}$	9.870	3.8858	$\frac{1}{257}$	9.908	3.9007	$\frac{1}{256}$	9.946	3.9157	$\frac{1}{255}$	9.983	3.9303	$\frac{1}{254}$
9.757	3.8413	$\frac{1}{260}$	9.795	3.8562	$\frac{1}{259}$	9.833	3.8712	$\frac{1}{258}$	9.871	3.8862	$\frac{1}{257}$	9.909	3.9011	$\frac{1}{256}$	9.947	3.9161	$\frac{1}{255}$	9.984	3.9307	$\frac{1}{254}$
9.758	3.8417	$\frac{1}{260}$	9.796	3.8566	$\frac{1}{259}$	9.834	3.8716	$\frac{1}{258}$	9.872	3.8866	$\frac{1}{257}$	9.910	3.9015	$\frac{1}{256}$	9.948	3.9165	$\frac{1}{255}$	9.985	3.9311	$\frac{1}{254}$
9.759	3.8421	$\frac{1}{260}$	9.797	3.8570	$\frac{1}{259}$	9.835	3.8720	$\frac{1}{258}$	9.873	3.8870	$\frac{1}{257}$	9.911	3.9019	$\frac{1}{256}$	9.949	3.9169	$\frac{1}{255}$	9.986	3.9314	$\frac{1}{254}$
9.760	3.8425	$\frac{1}{260}$	9.798	3.8574	$\frac{1}{259}$	9.836	3.8724	$\frac{1}{258}$	9.874	3.8873	$\frac{1}{257}$	9.912	3.9023	$\frac{1}{256}$	9.950	3.9173	$\frac{1}{255}$	9.987	3.9318	$\frac{1}{254}$
9.761	3.8429	$\frac{1}{260}$	9.799	3.8578	$\frac{1}{259}$	9.837	3.8728	$\frac{1}{258}$	9.875	3.8877	$\frac{1}{257}$	9.913	3.9027	$\frac{1}{256}$	9.951	3.9177	$\frac{1}{255}$	9.988	3.9322	$\frac{1}{254}$
9.762	3.8433	$\frac{1}{260}$	9.800	3.8582	$\frac{1}{259}$	9.838	3.8732	$\frac{1}{258}$	9.876	3.8881	$\frac{1}{257}$	9.914	3.9031	$\frac{1}{256}$	9.952	3.9181	$\frac{1}{255}$	9.989	3.9326	$\frac{1}{254}$
9.763	3.8436	$\frac{1}{260}$	9.801	3.8586	$\frac{1}{259}$	9.839	3.8736	$\frac{1}{258}$	9.877	3.8885	$\frac{1}{257}$	9.915	3.9035	$\frac{1}{256}$	9.953	3.9184	$\frac{1}{255}$	9.990	3.9330	$\frac{1}{254}$
9.764	3.8440	$\frac{1}{260}$	9.802	3.8590	$\frac{1}{259}$	9.840	3.8740	$\frac{1}{258}$	9.878	3.8889	$\frac{1}{257}$	9.916	3.9039	$\frac{1}{256}$	9.954	3.9188	$\frac{1}{255}$	9.991	3.9334	$\frac{1}{254}$
9.765	3.8444	$\frac{1}{260}$	9.803	3.8594	$\frac{1}{259}$	9.841	3.8744	$\frac{1}{258}$	9.879	3.8893	$\frac{1}{257}$	9.917	3.9043	$\frac{1}{256}$	9.955	3.9192	$\frac{1}{255}$	9.992	3.9338	$\frac{1}{254}$
9.766	3.8448	$\frac{1}{260}$	9.804	3.8598	$\frac{1}{259}$	9.842	3.8747	$\frac{1}{258}$	9.880	3.8897	$\frac{1}{257}$	9.918	3.9047	$\frac{1}{256}$	9.956	3.9196	$\frac{1}{255}$	9.993	3.9342	$\frac{1}{254}$
9.767	3.8452	$\frac{1}{260}$	9.805	3.8602	$\frac{1}{259}$	9.843	3.8751	$\frac{1}{258}$	9.881	3.8901	$\frac{1}{257}$	9.919	3.9051	$\frac{1}{256}$	9.957	3.9200	$\frac{1}{255}$	9.994	3.9346	$\frac{1}{254}$
9.768	3.8456	$\frac{1}{260}$	9.806	3.8606	$\frac{1}{259}$	9.844	3.8755	$\frac{1}{258}$	9.882	3.8905	$\frac{1}{257}$	9.920	3.9055	$\frac{1}{256}$	9.958	3.9204	$\frac{1}{255}$	9.995	3.9350	$\frac{1}{254}$
9.769	3.8460	$\frac{1}{259}$	9.807	3.8610	$\frac{1}{258}$	9.845	3.8759	$\frac{1}{257}$	9.883	3.8909	$\frac{1}{256}$	9.921	3.9059	$\frac{1}{255}$	9.959	3.9208	$\frac{1}{254}$	9.996	3.9354	$\frac{1}{254}$
9.770	3.8464	$\frac{1}{259}$	9.808	3.8614	$\frac{1}{258}$	9.846	3.8763	$\frac{1}{257}$	9.884	3.8913	$\frac{1}{256}$	9.922	3.9063	$\frac{1}{255}$	9.960	3.9212	$\frac{1}{254}$	9.997	3.9358	$\frac{1}{254}$
9.771	3.8468	$\frac{1}{259}$	9.809	3.8618	$\frac{1}{258}$	9.847	3.8767	$\frac{1}{257}$	9.885	3.8917	$\frac{1}{256}$	9.923	3.9067	$\frac{1}{255}$	9.961	3.9216	$\frac{1}{254}$	9.998	3.9362	$\frac{1}{254}$
9.772	3.8472	$\frac{1}{259}$	9.810	3.8622	$\frac{1}{258}$	9.848	3.8771	$\frac{1}{257}$	9.886	3.8921	$\frac{1}{256}$	9.924	3.9071	$\frac{1}{255}$	9.962	3.9220	$\frac{1}{254}$	9.999	3.9366	$\frac{1}{254}$
9.773	3.8476	$\frac{1}{259}$	9.811	3.8625	$\frac{1}{258}$	9.849	3.8775	$\frac{1}{257}$	9.887	3.8925	$\frac{1}{256}$	9.925	3.9074	$\frac{1}{255}$						



Now to return to the results of our measurements proper and the construction of our tables. As we have already seen, it has been deemed advisable, because of the close relation existing between them, to consider the length of the fiber, its crimp and fineness together, and the figures representing the values of these properties are therefore given in the same tables. So in Table II we must first call attention to the figures at the head of the table, under each sample, indicated by catalogue number showing length of fiber in crimp and the number of crimps per inch. The manner in which these figures were determined has already been described. The headings B<sup>1</sup>, B<sup>2</sup>, B<sup>3</sup>, &c., have also been mentioned and refer to the section of the sample measured and represented, B<sup>1</sup> corresponding to that section of the sample nearest the root, B<sup>2</sup> that nearest the outer extremity of the fibers, and B<sup>3</sup> the intermediate portion. In the body of the table and under the letters here described we find the actual measurements in centimillimeters taken in each case, and they are given in detail for obvious reasons. An important one is that each reader may for himself make comparisons of the figures of each column with those of any other, and determine not only the measure of each sample represented, but also all the other relations to which we shall have occasion to call attention.

At the foot of each column is found the average for that column. Compared with each other the averages of the different columns show the relative value of each part and of each sample. Collected in the lower portion of the table these averages furnish the data for determination of the general average for each sample. In the latter portion of the table are also collected the extreme measurements taken upon each section, which show the general extremes for the entire sample, while the bottom lines show the number of measurements found above the average and below it, respectively, and, taken in connection with the extremes, furnish a fair indication of the evenness of the fiber in the sample. This is an important relation to manufacturers and should therefore be to breeders; hence it should become a matter of very careful study on the part of all interested in the wool industry. In this lower half of the table we have reduced the measurements from the French to the English standards. The reason for giving two sets of English standards has already been stated, and we need here only express the hope that the figures may be readily understood by all into whose hands they may come.

In a table of detailed results such as these it is difficult for general readers to work out with satisfaction the interesting and valuable relations which more careful study make apparent, and this has led us to collect and arrange in a proper manner the data serving to show what these relations may be and their influence upon the character of the staple under consideration. To render the comparisons more easy the general extremes and averages of Table II for each sample have first been collected in Table III. Here we may more easily obtain a general knowledge of the relative value of the fiber in the fleeces of different animals, but we may study the quality of the different parts of the fleeces as well. As in the previous tables and all subsequent ones, the results are arranged according to the breed to which the sample represented belongs, so that in the comparisons to be made each element not under consideration may be as far as possible left out. In this table neither sex, age, nor other conditions are taken into account. The parts of the fleece in each case may be compared with those of any other, and individual samples may be made the subject of other comparisons. For the several breeds we have at the bottom of each column the general or grand average of all the measurements taken, with the necessary reductions. As regards the fineness of fiber in each breed the question is not at all difficult to determine. This table, like its predecessor, also serves for the construction of subsequent ones showing other important relations.

In Table IV we have collected together from Table III the extremes and averages of the measurements of samples from the same parts of the fleeces of different animals, the figures for each part occupying a separate division of the table. To determine what may be the influence of the part of the fleece upon the quality of the fiber, the measurements of samples from each sex are also separated and placed in different divisions. Thus we have in one division the measurements representing the rams, and in another those representing the ewes, while in each division we have represented, in the first part, the shoulder samples; in the second, the side samples; in the third, the hip samples; and in the fourth, the belly samples. This arrangement will furnish data for interesting study for those especially interested in the uniformity of the quality of the fiber on the different parts of the body of the animal, or, in other words, in a "good covering of wool of uniform quality," as we have heard breeders express it; for this uniformity of quality is often justly considered as desirable as superior fineness, especially in stud flocks. The differences to be found in this particular are better illustrated in Table V, in which we have the averages of all the results heretofore given. First we have the averages for the whole fleece, taken from Table III, then those for the different parts represented in our samples, taken from Table IV, so that this table presents a ready means for comparison of the fineness of the different breeds, as well as that of the different parts of the fleece; and since the figures for each sex are separated from each other, it further serves for the comparison of sex as well. In an adjoining column we have also the figures representing the length of the fiber in crimp in each case. But it must be remembered that these latter figures are of only relative value, since the samples taken were in most cases of only five or six months' growth, and were therefore not of normal length.



As regards the fineness, the Merino of course stands first, and to some extent the fineness varies with the length of the fiber, the longer wools being the coarser. The following synopsis of the table will show the relation in which the several breeds stand to each other in this particular:

Breed.	Average diameter of fiber.
	<i>Centi-millimeters.</i>
Merino .....	2.127
Southdown .....	2.936
Hampshiredown .....	3.298
Lincoln .....	3.707
Leicester .....	3.879
Cotswold .....	4.190
Oxforddown .....	4.365

Between the different parts of the fleece we sometimes find almost inappreciable variations. But as a general rule we find a less vigorous development of the fiber on the belly than upon other parts, and here we find the finer staple. Taken in the order of their comparative fineness, the several parts usually range as follows: belly, shoulder, side, hip. The plan followed by graders in the division of the fleece is therefore justified.

As regards the influence of sex upon the fineness of the fiber, no absolute standard or rule can be established. In the merinos and downs the ewes' wools are generally finer than those of the rams, while in the Cotswold and Lincoln the rams appear to bear the finer staple. These relations are of great interest, and they are amply illustrated in the following statement:

Breed.	Rams' fleece.	Ewes' fleece.
	<i>Centi-millimeters.</i>	<i>Centi-millimeters.</i>
Cotswold .....	4.227	4.252
Lincoln .....	3.671	3.774
Southdown .....	2.940	2.904
Oxforddown .....	4.269	4.241
Merino .....	2.215	2.084

Of course there will be found exceptions to the rule here apparently established, for if we look over the table we find that it will not always hold good for the same parts of the fleece, even when confirmed by the average of the whole fleece. Nor will it hold for all animals, so far as our observations have extended; but with further examination it is possible the rule would be more thoroughly established.

In Table VI we have the results collected to show the influence of age upon the fineness of the fiber. Here the sexes have also been separated to eliminate any sex influence that might be exerted, and leave the simple influence of age apparent in each case. As in the other tables, the results are arranged according to the breeds, parts of the fleece, sex, &c., and serve to show the relation in question under all the different phases in which it could be considered. In the classification according to age we begin with the lamb, the age of which is presumably four to six months; then we have exactly six months, then one year, &c. Collecting the general averages of this table and condensing them as in Table VII, the relations in question become more manifest both in different breeds and in different sexes. In neither do we find that the influence is in all cases uniform, and while it appears as a general rule that the diameter of the fiber increases with the age of the animal represented, this increase is more regular and uniform in the coarse wooled breeds than in the merinos, and in the ram than in the ewe.

In Table VIII we come to the effect of the wrinkles or folds of the skin of the merinos upon the fineness of the fiber. These characteristics of the merino breed have been, and it seems must always remain, a matter of dispute among breeders, and the fact presented in the figures here collected cannot fail to prove of interest. Some good authorities in sheep-breeding have held that there is no difference in the fineness of the fiber grown upon the folds and that grown between them; but the results given in these tables directly contradict such a statement, and we must believe that the opinion was based upon general observation rather than upon actual measurement. The tables bearing upon this point will speak for themselves. The several relations of the folds and the fineness of the fiber are shown in Tables VIII to X, inclusive. In the first table we have collected all the individual extremes and averages, showing these relations without regard to other influences. Here we may compare the effect of wrinkle in each animal, or we may compare one animal directly with another with regard to this point. In the second, these figures are classified as to sex and portion of fleece, and in Table X we have the general extremes and averages made out in Tables VIII and IX arranged to show this influence in the sexes, the whole fleece or different parts of the fleece. We also note that these differences are greater in some parts of the fleece than in others, the greatest occurring on the hip, the least on the shoulder, while those of the side are intermediate between the other two. On the neck they vary, in some cases greater, in others less. So also in another portion of the table we find that the



sex influence is marked here, and that in the ram the differences in question are more marked than in the ewe. But, from whatever side we consider the question, the fact remains prominent that the fiber is coarser upon the folds than between them or upon that portion of the skin in which no folds occur.

In view of this fact and the additional fact that the principal value of the fold resides in the increased surface for wool production, we may venture the opinion that since the fiber is very much coarser and the wool upon the folds very thin and short, it will be as well, as a general rule, for breeders to abandon their development by selection. So far as our observations extend, there appears to be no greatly increased production of wool, and since the product upon the fold is so inferior as regards fineness, it would appear of advantage to eliminate the fold if possible.

In Table XI that other disputed question of the relation of crimp in the fine wools to the fineness of the fiber is illustrated. Here we have first collected the individual extremes and averages bearing upon the point at issue. The data are at once classified with reference to sex and portion of the fleece, so that the relation under discussion may become more prominent. All the data are arranged to show the variations which wools having the same crimp may suffer as regards their fineness, and the extremes and averages for the samples having the same crimp are brought together. The general extremes and averages given by this table are afterward collected in the following one, XII, where the comparisons may be more readily made. Here we find the popular notion completely confirmed, fineness of fiber increasing with closeness of the crimp, though the rule is by no means absolute. It has been impossible to determine a definite proportion for this, though it is possible that something of the kind might be developed if more numerous data were at hand. The principal value of this property or relation resides in the fact that it places in the breeders' own hands a ready and comparatively satisfactory means for learning the value of the product. It may not invariably hold good for all samples or all parts of fleeces, but it will serve to show variations in the values of the animals. In all the tables there may be other important relations which we have overlooked, and which will be apparent to those who may have occasion to study them. Our principal object here has been so to arrange the figures as to develop the leading relations bearing upon the value of the fiber and its physical characteristics and to leave them in convenient form for further study by those interested. To us there is much in them to suggest further study, and while there is apparently much of detail throughout, we feel that this cannot fail to serve a useful purpose. We therefore submit the results with the hope that they may prove of all the benefit and advancement to the woolen industry that those interested in the work have expected.

Sample No.	Sex	Portion of Fleece	Crimp (%)	Fineness (microns)	Weight (g)	Length (cm)	Staple Length (cm)	Staple Strength (g)	Staple Extension (%)	Staple Curvature (mm)	Staple Curvature Rate (mm/cm)
1001	Ram	Back	15	45	100	10	10	100	10	10	1.0
1002	Ram	Back	15	45	100	10	10	100	10	10	1.0
1003	Ram	Back	15	45	100	10	10	100	10	10	1.0
1004	Ram	Back	15	45	100	10	10	100	10	10	1.0
1005	Ram	Back	15	45	100	10	10	100	10	10	1.0
1006	Ram	Back	15	45	100	10	10	100	10	10	1.0
1007	Ram	Back	15	45	100	10	10	100	10	10	1.0
1008	Ram	Back	15	45	100	10	10	100	10	10	1.0
1009	Ram	Back	15	45	100	10	10	100	10	10	1.0
1010	Ram	Back	15	45	100	10	10	100	10	10	1.0
1011	Ram	Back	15	45	100	10	10	100	10	10	1.0
1012	Ram	Back	15	45	100	10	10	100	10	10	1.0
1013	Ram	Back	15	45	100	10	10	100	10	10	1.0
1014	Ram	Back	15	45	100	10	10	100	10	10	1.0
1015	Ram	Back	15	45	100	10	10	100	10	10	1.0
1016	Ram	Back	15	45	100	10	10	100	10	10	1.0
1017	Ram	Back	15	45	100	10	10	100	10	10	1.0
1018	Ram	Back	15	45	100	10	10	100	10	10	1.0
1019	Ram	Back	15	45	100	10	10	100	10	10	1.0
1020	Ram	Back	15	45	100	10	10	100	10	10	1.0
1021	Ram	Back	15	45	100	10	10	100	10	10	1.0
1022	Ram	Back	15	45	100	10	10	100	10	10	1.0
1023	Ram	Back	15	45	100	10	10	100	10	10	1.0
1024	Ram	Back	15	45	100	10	10	100	10	10	1.0
1025	Ram	Back	15	45	100	10	10	100	10	10	1.0
1026	Ram	Back	15	45	100	10	10	100	10	10	1.0
1027	Ram	Back	15	45	100	10	10	100	10	10	1.0
1028	Ram	Back	15	45	100	10	10	100	10	10	1.0
1029	Ram	Back	15	45	100	10	10	100	10	10	1.0
1030	Ram	Back	15	45	100	10	10	100	10	10	1.0
1031	Ram	Back	15	45	100	10	10	100	10	10	1.0
1032	Ram	Back	15	45	100	10	10	100	10	10	1.0
1033	Ram	Back	15	45	100	10	10	100	10	10	1.0
1034	Ram	Back	15	45	100	10	10	100	10	10	1.0
1035	Ram	Back	15	45	100	10	10	100	10	10	1.0
1036	Ram	Back	15	45	100	10	10	100	10	10	1.0
1037	Ram	Back	15	45	100	10	10	100	10	10	1.0
1038	Ram	Back	15	45	100	10	10	100	10	10	1.0
1039	Ram	Back	15	45	100	10	10	100	10	10	1.0
1040	Ram	Back	15	45	100	10	10	100	10	10	1.0
1041	Ram	Back	15	45	100	10	10	100	10	10	1.0
1042	Ram	Back	15	45	100	10	10	100	10	10	1.0
1043	Ram	Back	15	45	100	10	10	100	10	10	1.0
1044	Ram	Back	15	45	100	10	10	100	10	10	1.0
1045	Ram	Back	15	45	100	10	10	100	10	10	1.0
1046	Ram	Back	15	45	100	10	10	100	10	10	1.0
1047	Ram	Back	15	45	100	10	10	100	10	10	1.0
1048	Ram	Back	15	45	100	10	10	100	10	10	1.0
1049	Ram	Back	15	45	100	10	10	100	10	10	1.0
1050	Ram	Back	15	45	100	10	10	100	10	10	1.0
1051	Ram	Back	15	45	100	10	10	100	10	10	1.0
1052	Ram	Back	15	45	100	10	10	100	10	10	1.0
1053	Ram	Back	15	45	100	10	10	100	10	10	1.0
1054	Ram	Back	15	45	100	10	10	100	10	10	1.0
1055	Ram	Back	15	45	100	10	10	100	10	10	1.0
1056	Ram	Back	15	45	100	10	10	100	10	10	1.0
1057	Ram	Back	15	45	100	10	10	100	10	10	1.0
1058	Ram	Back	15	45	100	10	10	100	10	10	1.0
1059	Ram	Back	15	45	100	10	10	100	10	10	1.0
1060	Ram	Back	15	45	100	10	10	100	10	10	1.0
1061	Ram	Back	15	45	100	10	10	100	10	10	1.0
1062	Ram	Back	15	45	100	10	10	100	10	10	1.0
1063	Ram	Back	15	45	100	10	10	100	10	10	1.0
1064	Ram	Back	15	45	100	10	10	100	10	10	1.0
1065	Ram	Back	15	45	100	10	10	100	10	10	1.0
1066	Ram	Back	15	45	100	10	10	100	10	10	1.0
1067	Ram	Back	15	45	100	10	10	100	10	10	1.0
1068	Ram	Back	15	45	100	10	10	100	10	10	1.0
1069	Ram	Back	15	45	100	10	10	100	10	10	1.0
1070	Ram	Back	15	45	100	10	10	100	10	10	1.0
1071	Ram	Back	15	45	100	10	10	100	10	10	1.0
1072	Ram	Back	15	45	100	10	10	100	10	10	1.0
1073	Ram	Back	15	45	100	10	10	100	10	10	1.0
1074	Ram	Back	15	45	100	10	10	100	10	10	1.0
1075	Ram	Back	15	45	100	10	10	100	10	10	1.0
1076	Ram	Back	15	45	100	10	10	100	10	10	1.0
1077	Ram	Back	15	45	100	10	10	100	10	10	1.0
1078	Ram	Back	15	45	100	10	10	100	10	10	1.0
1079	Ram	Back	15	45	100	10	10	100	10	10	1.0
1080	Ram	Back	15	45	100	10	10	100	10	10	1.0
1081	Ram	Back	15	45	100	10	10	100	10	10	1.0
1082	Ram	Back	15	45	100	10	10	100	10	10	1.0
1083	Ram	Back	15	45	100	10	10	100	10	10	1.0
1084	Ram	Back	15	45	100	10	10	100	10	10	1.0
1085	Ram	Back	15	45	100	10	10	100	10	10	1.0
1086	Ram	Back	15	45	100	10	10	100	10	10	1.0
1087	Ram	Back	15	45	100	10	10	100	10	10	1.0
1088	Ram	Back	15	45	100	10	10	100	10	10	1.0
1089	Ram	Back	15	45	100	10	10	100	10	10	1.0
1090	Ram	Back	15	45	100	10	10	100	10	10	1.0
1091	Ram	Back	15	45	100	10	10	100	10	10	1.0
1092	Ram	Back	15	45	100	10	10	100	10	10	1.0
1093	Ram	Back	15	45	100	10	10	100	10	10	1.0
1094	Ram	Back	15	45	100	10	10	100	10	10	1.0
1095	Ram	Back	15	45	100	10	10	100	10	10	1.0
1096	Ram	Back	15	45	100	10	10	100	10	10	1.0
1097	Ram	Back	15	45	100	10	10	100	10	10	1.0
1098	Ram	Back	15	45	100	10	10	100	10	10	1.0
1099	Ram	Back	15	45	100	10	10	100	10	10	1.0
1100	Ram	Back	15	45	100	10	10	100	10	10	1.0



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions.

		COTSWOLD.																	
Catalogue number of samples..		34. SHOULDER.					34. SIDE.					34. HIP.					34. BELLY.		
Length of fiber in crimp.....		6.5 inches.					4.75 inches.					6 inches.					3.75 inches.		
Number of crimps per inch.....		—					—					—					—		
Number of section.....		B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>5</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>5</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>5</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .
Actual measurement in centimillimeters.	4.0	4.66	6.0	3.33	4.66	3.5	5.0	4.66	6.33	4.66	5.0	3.66	5.33	3.66	5.0	5.33	4.33	4.66	4.38
	4.33	4.22	4.0	5.0	4.66	4.0	4.0	4.66	4.66	4.66	5.0	4.66	6.0	6.0	4.66	4.33	4.33	4.33	4.0
	4.33	4.66	3.833	5.66	4.66	4.5	4.0	5.33	3.33	4.66	4.0	4.66	5.0	4.66	5.33	2.0	3.33	6.0	4.0
	3.66	4.0	4.33	3.66	3.0	4.66	4.0	4.66	5.33	5.33	5.66	3.83	5.0	3.33	3.33	3.33	4.33	4.66	4.0
	4.33	5.0	5.33	4.0	3.33	4.33	4.0	5.0	4.66	5.33	4.33	3.33	5.66	2.66	4.0	4.0	4.66	4.0	4.66
	3.33	4.66	4.66	4.166	5.0	3.333	4.0	5.33	5.33	4.33	4.66	3.66	5.33	5.66	3.33	3.33	3.66	3.33	4.33
	4.0	8.66	4.0	4.833	5.33	3.66	4.0	5.33	4.66	5.66	5.0	4.0	4.66	5.33	5.0	3.66	3.33	5.33	4.33
	3.66	4.66	6.33	5.33	4.33	3.0	4.0	5.0	6.0	3.66	5.0	3.33	4.0	4.33	6.0	4.33	5.33	4.66	3.66
	3.0	4.66	4.66	5.0	4.66	4.66	3.66	4.0	4.66	3.33	3.66	3.33	3.33	3.33	6.33	4.0	4.33	4.0	5.66
	4.0	5.0	4.33	3.66	4.0	4.0	4.66	3.66	6.0	5.33	4.66	3.33	4.0	5.0	2.66	4.33	5.33	4.33	5.33
	5.33	4.66	4.66	5.33	4.0	4.33	4.66	6.0	4.33	6.0	4.0	3.33	5.0	4.66	2.66	5.66	4.0	4.33	4.66
	4.0	3.33	4.66	4.0	5.0	3.66	4.33	4.66	6.0	5.33	5.0	3.33	4.0	4.33	6.0	0.33	4.66	5.33	4.5
	3.66	5.33	4.33	4.33	5.66	4.33	3.33	6.33	6.33	3.33	4.0	3.0	4.66	5.33	5.33	5.33	4.0	4.66	4.66
	4.33	4.66	5.33	4.33	3.33	4.66	4.33	5.33	5.0	4.33	3.33	4.66	4.66	5.33	4.0	2.33	4.33	4.66	4.0
	4.33	4.33	5.0	4.33	3.166	4.33	4.66	5.33	4.33	4.0	4.66	4.66	4.66	3.66	3.33	3.33	4.33	5.33	5.0
	4.66	6.33	4.0	6.33	4.0	3.66	5.33	6.66	5.33	4.66	5.33	5.0	4.66	5.33	5.33	4.33	4.33	4.66	4.0
	4.0	5.0	5.0	6.33	4.33	5.5	4.66	5.33	4.33	4.0	3.5	4.66	4.0	4.66	4.0	5.0	4.66	5.0	4.66
	5.0	4.33	3.0	3.833	3.66	3.66	4.0	4.66	4.33	4.66	4.0	5.0	4.66	3.0	5.66	5.33	5.33	5.0	4.5
	5.66	4.33	5.66	2.66	4.33	3.33	3.66	4.0	4.66	3.66	6.0	4.66	3.66	5.66	5.33	4.0	5.66	4.33	4.5
	4.33	5.0	4.33	4.166	4.0	4.33	5.0	4.66	4.66	2.66	5.33	4.0	3.66	5.33	3.0	4.0	5.33	4.166	5.33
3.33	5.0	4.0	3.33	4.0	3.33	4.0	4.166	4.33	5.33	4.66	4.66	4.66	2.66	5.33	4.33	4.66	3.66	5.0	
3.66	4.66	4.33	5.0	5.33	4.66	4.66	5.66	3.33	4.66	5.0	4.66	6.0	5.33	6.0	3.33	3.33	4.66	3.66	
5.0	5.0	3.66	0.0	5.66	4.833	5.66	3.33	4.0	4.33	5.33	5.33	5.66	4.33	2.33	5.33	4.0	5.33	4.33	
3.33	5.33	5.66	4.33	3.33	4.33	4.66	4.66	6.0	3.66	3.833	3.33	3.33	4.66	4.0	5.66	3.33	4.5	4.66	
4.166	4.33	5.166	4.0	3.66	5.166	4.66	5.0	6.33	5.33	6.33	2.66	4.66	3.33	6.0	5.0	4.0	4.33	3.66	
Averages.....	4.137	4.640	4.619	4.573	4.286	4.150	4.436	4.936	4.903	4.595	4.650	4.009	4.609	4.582	4.613	4.330	4.315	4.666	4.443

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:												
Maximum measurements.	B <sup>1</sup>	5.66	2.2283	B <sup>1</sup>	5.66	2.2283	B <sup>1</sup>	5.33	2.0984	B <sup>1</sup>	5.66	2.2283
	B <sup>2</sup>	5.33	2.0984	B <sup>2</sup>	6.66	2.6220	B <sup>2</sup>	6.0	2.3622	B <sup>2</sup>	6.0	2.3622
	B <sup>3</sup>	6.0	2.3622	B <sup>3</sup>	6.33	2.4921	B <sup>3</sup>	6.33	2.4921	B <sup>3</sup>	5.33	2.0984
	B <sup>4</sup>	6.33	2.4921	B <sup>4</sup>	6.0	2.3622	B <sup>4</sup>	6.0	2.3622	B <sup>4</sup>	6.0	2.3622
	B <sup>5</sup>	5.66	2.2283	B <sup>5</sup>	6.0	2.3622	B <sup>5</sup>	6.33	2.4921	B <sup>5</sup>	6.33	2.4921
Highest.....		6.33	2.4921		6.66	2.6220		6.33	2.4921		6.0	2.3622
Minimum measurements.	B <sup>1</sup>	3.0	1.1811	B <sup>1</sup>	3.66	1.4409	B <sup>1</sup>	2.66	1.0472	B <sup>1</sup>	3.33	1.3110
	B <sup>2</sup>	3.33	1.3110	B <sup>2</sup>	3.33	1.3110	B <sup>2</sup>	3.33	1.3110	B <sup>2</sup>	3.33	1.3110
	B <sup>3</sup>	3.0	1.1811	B <sup>3</sup>	3.33	1.3110	B <sup>3</sup>	2.66	1.0472	B <sup>3</sup>	3.66	1.4409
	B <sup>4</sup>	2.66	1.0472	B <sup>4</sup>	2.66	1.0472	B <sup>4</sup>	2.33	0.9110	B <sup>4</sup>	3.33	1.3110
	B <sup>5</sup>	3.0	1.1811	B <sup>5</sup>	3.33	1.3110	B <sup>5</sup>	2.0	0.7874	B <sup>5</sup>	3.33	1.3110
Lowest.....		2.66	1.0472		2.66	1.0472		2.0	0.7874		3.33	1.3110
Average measurements..	B <sup>1</sup>	4.137	1.6287	B <sup>1</sup>	4.436	1.7464	B <sup>1</sup>	4.009	1.5793	B <sup>1</sup>	4.315	1.6988
	B <sup>2</sup>	4.640	1.8567	B <sup>2</sup>	4.936	1.9433	B <sup>2</sup>	4.609	1.8145	B <sup>2</sup>	4.666	1.8370
	B <sup>3</sup>	4.619	1.8149	B <sup>3</sup>	4.903	1.9303	B <sup>3</sup>	4.582	1.8089	B <sup>3</sup>	4.443	1.7492
	B <sup>4</sup>	4.573	1.8003	B <sup>4</sup>	4.595	1.8090	B <sup>4</sup>	4.613	1.8161	B <sup>4</sup>	4.443	1.7492
	B <sup>5</sup>	4.286	1.6873	B <sup>5</sup>	4.650	1.8307	B <sup>5</sup>	4.330	1.7047	B <sup>5</sup>	4.443	1.7492
Average.....	4.399	1.7318		4.704	1.8519		4.428	1.7483		4.474	1.7614	
Measurements above average.....		63			49			64			39	
Measurements below average.....		87			76			61			86	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		COTSWOLD.																						
Catalogue number of samples..		35. SHOULDER.			35. SIDE.				35. HIPS.			35. BELLY.				36. SHOULDER.								
Length of fiber in crimp.....		4.75 inches.			4.25 inches.				5.25 inches.			5.30 inches.				7.25 inches.								
Number of crimps per inch....		—			—				—			—				—								
Number of section.....		B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	
Actual measurement in centimillimeters.	3.66	3.0	4.33	4.66	3.33	4.66	4.66	4.0	4.0	3.33	4.0	5.0	4.33	3.33	3.33	3.66	4.0	4.06	4.0	5.33	3.66	4.0	5.33	
	3.33	4.0	5.66	4.0	5.33	2.833	4.0	6.66	4.33	2.66	4.33	4.33	4.33	4.33	4.0	4.0	4.0	5.0	4.0	3.66	4.0	3.66	4.0	
	2.66	5.33	4.33	4.33	4.66	5.0	5.33	4.66	4.66	3.33	4.33	3.66	5.66	4.33	4.0	4.0	5.66	4.0	4.33	4.33	4.0	4.33	4.0	
	4.66	4.0	5.0	3.33	5.33	4.0	5.0	4.0	4.0	5.33	4.0	4.66	4.00	5.33	4.66	3.33	5.0	4.0	4.0	4.0	4.33	4.0	4.66	
	4.0	4.66	4.33	4.0	4.66	5.0	4.33	3.33	3.33	5.0	7.0	4.0	5.33	5.33	4.33	4.66	4.0	4.0	4.0	4.0	4.66	4.0	4.66	
	5.0	4.66	4.33	4.0	4.66	4.0	4.66	4.66	4.66	4.33	2.66	2.66	5.0	5.33	4.66	4.66	4.0	4.0	4.0	4.0	4.66	4.0	4.66	
	4.33	3.66	4.66	4.33	7.0	4.66	4.0	3.66	3.66	4.0	2.66	2.66	5.0	3.66	3.66	4.0	4.0	4.0	4.0	4.0	4.66	4.33	3.66	
	4.0	4.0	3.0	5.33	3.66	4.0	3.66	3.66	3.33	3.33	3.33	3.33	4.0	4.0	5.33	5.66	4.0	4.0	4.0	4.0	4.66	4.0	4.66	
	5.33	2.33	5.0	5.66	5.0	4.0	3.33	4.0	4.33	4.0	5.66	3.66	3.66	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.66	4.33	2.66	
	3.66	4.66	4.0	4.33	4.66	3.33	4.66	4.66	4.66	5.0	4.66	4.66	4.66	4.33	4.33	4.0	4.0	4.0	4.0	4.0	4.66	4.33	4.0	
	4.66	4.66	4.0	3.0	5.33	5.0	4.0	3.33	4.0	6.0	3.33	4.0	4.66	3.66	4.33	2.66	4.33	4.66	4.33	5.0	3.66	4.0	3.66	
	4.33	5.33	4.0	3.66	5.0	4.0	5.33	5.0	5.33	4.0	4.66	4.66	4.66	4.66	4.0	4.66	4.66	4.0	4.0	2.0	2.66	4.0	4.0	
	5.0	4.0	5.0	4.33	4.0	4.0	3.66	6.0	4.66	6.0	4.66	4.66	4.0	6.0	4.0	5.0	3.66	4.66	4.66	3.33	2.33	4.5	4.0	
	4.33	4.0	4.33	4.33	4.66	5.33	4.66	4.66	3.33	3.33	4.66	4.66	4.66	4.66	4.0	4.33	4.0	4.33	4.0	4.33	3.33	4.5	3.166	
	4.66	4.0	4.66	5.0	4.0	6.0	5.0	4.0	2.0	3.66	5.0	5.0	4.66	2.66	2.66	4.0	4.33	4.33	4.33	4.66	4.66	3.66	4.0	
	5.0	5.33	4.66	2.33	5.33	4.33	4.0	3.33	4.0	3.66	5.33	5.0	4.66	4.66	5.33	4.33	4.66	4.66	4.66	4.66	4.66	4.66	4.66	3.66
	5.0	5.33	4.66	3.833	4.0	3.66	6.0	5.0	3.66	3.66	6.0	4.66	4.66	4.66	5.33	4.33	4.66	4.66	4.66	4.66	4.66	3.166	3.833	
	4.33	4.66	4.0	5.0	5.0	4.6	5.33	3.66	3.66	3.66	5.166	4.33	4.66	4.66	5.33	4.0	4.0	4.0	4.0	4.0	4.66	4.66	4.0	
4.33	4.33	4.0	4.66	5.166	4.66	3.33	5.33	6.33	4.0	4.0	5.33	5.0	5.33	5.33	4.0	4.0	4.0	4.0	4.0	4.66	3.66	5.33		
4.66	4.0	3.66	5.66	5.66	5.33	4.33	3.33	5.33	4.0	5.33	4.0	5.33	5.0	6.0	4.0	4.0	4.0	4.0	4.0	4.66	4.66	4.66		
4.33	4.33	4.66	4.66	4.0	4.64	2.833	3.33	4.0	3.66	5.33	5.66	4.0	4.33	4.33	4.0	4.0	4.0	4.0	4.0	4.66	4.66	3.66		
5.0	4.66	2.0	4.0	2.833	3.66	4.5	4.0	4.0	4.166	4.66	5.0	5.0	4.0	4.33	3.33	4.0	4.0	4.0	4.166	3.66	4.0	4.0		
4.5	5.66	2.66	4.0	3.33	4.33	4.0	4.66	5.33	3.33	3.33	2.66	4.66	4.66	4.33	3.75	4.33	4.5	4.0	4.33	3.66	4.0	4.33		
Average.....	4.336	4.502	4.283	4.297	4.663	4.370	4.288	4.503	4.317	4.090	4.716	4.770	4.556	4.490	3.766	4.616	4.337	4.037	3.936	3.957				

Recapitulation and reduction:		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Maximum measurements.	B <sup>1</sup>	5.33	2.0964	B <sup>1</sup>	5.66	2.2283	B <sup>1</sup>	6.66	2.6220	B <sup>1</sup>	5.33	2.0964	B <sup>1</sup>	5.0	1.9685	
	B <sup>2</sup>	6.33	2.4921	B <sup>2</sup>	7.0	2.7550	B <sup>2</sup>	6.33	2.4921	B <sup>2</sup>	6.0	2.3623	B <sup>2</sup>	6.0	2.3623	
	B <sup>3</sup>	5.66	2.2283	B <sup>3</sup>	6.0	2.3622	B <sup>3</sup>	7.0	2.7556	B <sup>3</sup>	5.66	2.2283	B <sup>3</sup>	5.33	2.0964	
	B <sup>4</sup>			B <sup>4</sup>	6.0	2.3622	B <sup>4</sup>			B <sup>4</sup>	6.0	2.3622	B <sup>4</sup>	5.33	2.0964	
Highest.....		6.33	2.4921		7.0	2.7550		7.0	2.7556		6.0	2.3623		6.0	2.3623	
Minimum measurements.	B <sup>1</sup>	2.66	1.0472	B <sup>1</sup>	3.0	1.1811	B <sup>1</sup>	3.33	1.3110	B <sup>1</sup>	3.66	1.4400	B <sup>1</sup>	2.66	1.0472	
	B <sup>2</sup>	3.0	1.1811	B <sup>2</sup>	3.33	1.3110	B <sup>2</sup>	2.66	1.0472	B <sup>2</sup>	3.66	1.4400	B <sup>2</sup>	3.33	1.3110	
	B <sup>3</sup>	3.0	1.1811	B <sup>3</sup>	3.33	1.3110	B <sup>3</sup>	2.66	1.0472	B <sup>3</sup>	3.66	1.4400	B <sup>3</sup>	2.0	0.7874	
	B <sup>4</sup>			B <sup>4</sup>	3.33	1.3110	B <sup>4</sup>			B <sup>4</sup>	3.33	1.3110	B <sup>4</sup>	2.66	1.0472	
Lowest.....		2.66	1.0472		3.0	1.1811		2.66	1.0472		3.33	1.3110		2.0	0.7874	
Average measurements.	B <sup>1</sup>	4.336	1.7070	B <sup>1</sup>	4.297	1.6917	B <sup>1</sup>	4.503	1.7728	B <sup>1</sup>	4.716	1.8566	B <sup>1</sup>	3.766	1.4826	
	B <sup>2</sup>	4.502	1.7724	B <sup>2</sup>	4.663	1.8358	B <sup>2</sup>	4.317	1.6997	B <sup>2</sup>	4.770	1.8779	B <sup>2</sup>	4.616	1.8173	
	B <sup>3</sup>	4.283	1.6862	B <sup>3</sup>	4.370	1.7204	B <sup>3</sup>	4.090	1.6102	B <sup>3</sup>	4.556	1.7936	B <sup>3</sup>	4.257	1.7153	
	B <sup>4</sup>			B <sup>4</sup>	4.288	1.6881	B <sup>4</sup>			B <sup>4</sup>	4.490	1.7677	B <sup>4</sup>	4.037	1.5893	
Average.....		4.373	1.6216		4.404	1.7338		4.203	1.6044		4.633	1.8240		4.111	1.6185	
Measurements above average.....		34			45			34			58			60		
Measurements below average.....		41			55			41			42			31		



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		COTSWOLD.																	
Catalogue number of samples..		36. SIDE.					36. HRP.					36. BELLY.							
Length of fiber in crimp.....		3½ inches.					8 inches.					5½ inches.							
Number of crimps per inch...		—					—					—							
Number of section.....		B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>5</sup> .	B <sup>6</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>5</sup> .	B <sup>6</sup> .	B <sup>1a</sup> .	B <sup>2a</sup> .	B <sup>3a</sup> .	B <sup>4a</sup> .	B <sup>5a</sup> .	B <sup>6a</sup> .
Actual measurement in centimillimeters.		3.66	3.83	3.66	3.0	4.66	5.33	4.0	4.5	4.66	4.0	3.33	4.66	5.0	4.66	4.66	4.0	4.66	4.66
Averages .....		4.280	4.239	4.285	4.003	4.274	4.024	3.866	4.266	4.477	4.388	4.102	4.118	4.180	4.264	4.252	3.714	4.457	4.346

		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:										
Maximum measurements.	B <sup>1</sup>	5.66	2.2283	B <sup>1</sup>	4.66	1.8346	B <sup>1a</sup>	5.0	1.9685	
	B <sup>2</sup>	5.66	2.2283	B <sup>2</sup>	5.66	2.2283	B <sup>2a</sup>	5.0	1.9685	
	B <sup>3</sup>	5.66	2.2283	B <sup>3</sup>	5.33	2.0984	B <sup>3a</sup>	6.0	2.3622	
	B <sup>4</sup>	6.0	1.9686	B <sup>4</sup>	5.33	2.0984	B <sup>4a</sup>	4.66	1.8346	
	B <sup>5</sup>	5.33	2.0984	B <sup>5</sup>	6.0	2.3622	B <sup>5a</sup>	5.0	1.9685	
Highest.....		5.66	2.2283		6.0	2.3622		6.0	2.3622	
Minimum measurements.	B <sup>1</sup>	3.0	1.1811	B <sup>1</sup>	3.0	1.1811	B <sup>1a</sup>	3.33	1.3110	
	B <sup>2</sup>	2.0	0.7874	B <sup>2</sup>	2.66	1.0472	B <sup>2a</sup>	3.33	1.3110	
	B <sup>3</sup>	2.33	0.9173	B <sup>3</sup>	2.66	1.0472	B <sup>3a</sup>	3.166	1.2464	
	B <sup>4</sup>	3.0	1.1811	B <sup>4</sup>	2.66	1.0472	B <sup>4a</sup>	2.0	0.7874	
	B <sup>5</sup>	3.166	1.2464	B <sup>5</sup>	2.0	0.7874	B <sup>5a</sup>	3.66	1.4509	
Lowest.....		2.0	0.7874		2.0	0.7874		2.0	0.7874	
Average measurements..	B <sup>1</sup>	4.280	1.6850	B <sup>1</sup>	3.856	1.5220	B <sup>1a</sup>	4.186	1.6450	
	B <sup>2</sup>	4.239	1.6688	B <sup>2</sup>	4.256	1.6755	B <sup>2a</sup>	4.264	1.6787	
	B <sup>3</sup>	4.285	1.6670	B <sup>3</sup>	4.477	1.7625	B <sup>3a</sup>	4.252	1.6740	
	B <sup>4</sup>	4.003	1.5759	B <sup>4</sup>	4.388	1.7275	B <sup>4a</sup>	3.714	1.4622	
	B <sup>5</sup>	4.274	1.6826	B <sup>5</sup>	4.102	1.6149	B <sup>5a</sup>	4.437	1.7547	
Average.....		4.184	1.6472		4.184	1.6472		4.203	1.6547	
Measurements above average.....		84			89			95		
Measurements below average.....		96			91			85		



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		COTSWOLD.																	
Catalogue number of samples..		37. SHOULDER.						37. SIDE.						37. HIP.					
Length of fiber in crimp .....		9½ inches.						9¼ inches.						9 inches.					
Number of crimps per inch....		—						—						—					
Number of section.....		B¹.	B².	B³.	B⁴.	B⁵.	B⁶.	B¹.	B².	B³.	B⁴.	B⁵.	B⁶.	B¹.	B².	B³.	B⁴.	B⁵.	B⁶.
Actual measurement in centimillimeters.	3.33	5.0	4.66	5.0	2.0	3.33	4.66	4.0	4.66	4.33	4.33	4.33	5.66	5.33	5.33	5.33	5.33	5.33	5.33
	4.66	3.33	6.33	4.0	4.33	2.0	5.66	4.0	5.0	4.66	3.66	2.66	5.0	4.66	6.0	5.66	4.66	4.66	5.33
	4.0	4.66	4.66	4.0	4.0	2.66	4.33	4.66	4.0	4.66	4.0	4.66	4.0	4.33	5.33	4.66	6.0	4.66	5.33
	4.0	3.66	4.66	3.33	4.0	4.0	5.33	4.66	4.0	4.66	5.33	3.33	4.0	5.33	4.33	4.0	5.33	4.66	4.0
	3.33	4.0	4.33	4.0	3.33	5.0	4.0	5.33	4.0	4.66	5.33	4.66	4.66	6.0	5.33	5.33	5.33	4.0	4.66
	4.66	4.66	4.0	5.0	3.33	4.33	3.66	5.0	5.0	4.0	4.66	4.33	5.33	5.66	5.0	6.0	5.33	3.66	5.33
	4.66	3.33	4.33	5.0	3.33	4.33	4.66	5.66	3.66	3.33	2.0	4.66	5.33	5.33	5.0	3.33	6.33	5.33	4.33
	4.66	6.0	4.0	4.66	5.0	4.66	4.0	4.0	4.33	5.33	4.0	4.66	4.66	6.66	6.66	4.66	5.0	5.66	5.0
	3.33	4.66	5.0	4.0	2.66	4.0	4.33	4.33	4.66	4.0	3.33	4.0	5.0	6.0	6.0	5.33	5.33	4.66	3.66
	4.33	3.0	3.33	4.66	3.66	3.0	5.0	6.0	4.66	4.0	4.0	3.33	5.0	3.33	4.0	4.66	4.0	4.66	4.0
	5.33	6.0	3.33	4.0	4.33	4.66	4.0	3.66	4.66	4.0	3.33	3.66	4.66	5.33	5.0	5.33	5.0	5.33	6.0
	5.33	4.66	4.66	4.0	3.0	5.33	4.33	4.66	4.33	4.0	4.0	5.0	4.66	5.0	5.33	5.33	5.66	4.33	5.66
	3.33	5.33	4.66	2.66	4.0	3.33	4.66	4.66	4.66	3.33	4.33	2.66	4.33	2.66	5.33	5.33	4.66	4.66	5.0
	4.66	4.66	4.33	4.0	4.0	4.33	4.33	4.66	4.0	4.0	3.33	4.0	3.66	4.0	4.66	5.33	4.33	3.33	4.66
	4.0	4.0	4.66	5.33	3.33	3.33	3.33	4.66	4.0	5.0	3.0	3.66	5.33	5.33	5.66	6.0	5.66	5.66	5.66
	4.66	5.66	5.0	5.0	5.33	4.33	4.66	4.66	4.33	4.66	3.0	3.66	5.33	5.66	5.0	4.66	5.33	4.33	4.66
	5.0	4.66	4.33	3.66	2.66	2.33	3.66	4.66	3.33	4.0	3.33	4.166	4.66	7.0	6.0	5.33	5.66	5.0	4.0
	4.33	5.33	3.0	5.33	5.33	4.0	4.0	3.33	3.33	4.66	4.0	4.33	3.33	5.33	6.0	5.33	5.33	4.66	5.33
	5.0	5.33	4.0	3.66	4.33	4.0	4.0	4.33	5.33	4.0	4.0	3.0	5.0	5.33	6.0	4.33	5.33	5.33	6.0
	3.33	4.66	4.66	3.0	2.33	4.66	4.0	5.0	5.0	3.0	5.0	4.5	5.33	6.0	4.0	3.66	5.33	5.33	5.33
4.66	6.33	3.66	3.33	4.33	4.33	4.66	5.66	4.0	4.33	4.0	4.66	5.33	5.0	5.33	4.66	4.0	5.33	4.0	
5.33	5.0	4.66	2.0	5.33	3.166	4.66	4.0	4.33	4.33	4.66	4.33	4.66	4.66	6.0	5.0	4.66	5.166	4.33	
3.66	6.33	4.33	4.0	4.66	3.33	4.66	4.0	3.0	4.66	2.66	4.5	4.66	4.66	5.33	5.0	5.33	5.33	4.0	
4.66	3.66	4.66	4.66	5.66	3.166	5.0	3.66	3.66	5.33	3.33	2.33	4.66	5.66	5.33	4.33	4.66	5.0	4.0	
4.66	4.33	3.66	4.66	4.0	3.66	4.0	4.0	4.66	4.66	3.66	3.0	4.66	4.66	5.66	5.33	5.66	5.33	4.66	
3.33	4.0	5.66	3.66	3.33	3.5	5.0	4.0	4.0	4.833	5.66	4.66	4.66	5.0	5.166	5.33	4.66	4.5	4.0	
4.66	4.66	5.33	4.0	3.5	3.66	5.33	3.33	3.66	4.66	3.33	3.33	5.0	4.66	5.66	4.0	4.33	5.33	5.33	
4.66	5.66	4.66	4.66	3.166	2.0	4.66	4.5	4.5	4.33	4.0	4.5	4.5	5.66	6.33	4.66	5.0	4.33	5.5	
5.33	5.0	5.33	5.33	3.0	3.833	4.33	4.5	5.0	2.66	3.166	3.33	5.0	5.66	5.0	5.0	5.0	4.5	4.66	
4.66	4.166	5.66	4.9	3.833	3.33	3.833	5.166	3.33	5.0	4.0	3.33	5.33	5.166	5.33	5.166	5.66	5.166	4.5	
Averages.....	4.384	4.724	4.551	4.153	3.696	3.719	4.424	4.502	4.233	4.280	3.903	3.919	4.972	5.312	5.425	4.957	5.107	5.029	4.619

Recapitulation and reduction:		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Maximum measurements.	B¹	5.33	2.0984	B¹	5.66	2.2283	B¹	5.66	2.2283	
	B²	6.33	2.4921	B²	6.0	2.3622	B²	7.0	2.7559	
	B³	6.33	2.4921	B³	5.33	2.0984	B³	6.66	2.6220	
	B⁴	5.33	2.0984	B⁴	5.33	2.0984	B⁴	6.0	2.3622	
	B⁵	5.66	2.2283	B⁵	5.66	2.2283	B⁵	6.33	2.4291	
Highest.....		6.33	2.4921		6.0	2.3622		7.0	2.7559	
Minimum measurements.	B¹	3.33	1.3110	B¹	3.33	1.3110	B¹	4.0	1.5748	
	B²	3.0	1.1811	B²	3.66	1.4509	B²	4.66	1.8346	
	B³	3.0	1.1811	B³	3.0	1.1811	B³	4.0	1.5748	
	B⁴	2.0	0.7874	B⁴	2.66	1.0472	B⁴	3.33	1.3110	
	B⁵	2.0	0.7874	B⁵	2.0	0.7874	B⁵	4.0	1.5748	
Lowest.....		2.0	0.7874		2.0	0.7874		3.33	1.3110	
Average measurements.	B¹	4.384	1.7259	B¹	4.424	1.7417	B¹	4.972	1.9574	
	B²	4.724	1.8598	B²	4.502	1.7724	B²	5.312	2.0913	
	B³	4.551	1.7917	B³	4.233	1.6665	B³	5.425	2.1358	
	B⁴	4.153	1.6350	B⁴	4.280	1.6850	B⁴	4.957	1.9515	
	B⁵	3.896	1.5338	B⁵	3.903	1.5365	B⁵	5.107	2.0106	
Average.....		4.237	1.6681		4.210	1.6574		4.995	1.9665	
Measurements above average.....			96			93			135	
Measurements below average.....			84			87			75	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of samples..	COTSWOLD.																		
	37. BELLY.				38. SHOULDER.				38. SIDE.				38. HIP.				38. BELLY.		
	5½ inches.				4 inches.				4½ inches.				5½ inches.				3½ inches.		
Length of fiber in crimp .....																			
Number of crimps per inch .....																			
Number of section.....	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.
Actual measurement in centi- millimeters.	4.66	4.0	4.0	3.33	4.0	3.33	5.66	4.33	5.33	3.33	3.33	4.66	5.0	5.33	5.0	5.0	4.33	4.0	3.66
Averages .....	4.197	4.663	4.262	4.542	4.313	4.515	4.457	3.944	4.580	4.707	4.163	4.229	4.029	5.260	4.802	4.891	4.615	4.088	3.985

Recapitulation and reduction:	No. of section.	In centimillime- ters.	In thousandths of inch.	No. of section.	In centimillime- ters.	In thousandths of inch.	No. of section.	In centimillime- ters.	In thousandths of inch.	No. of section.	In centimillime- ters.	In thousandths of inch.	No. of section.	In centimillime- ters.	In thousandths of inch.
Maximum measurements.	B¹	5.0	1.9685	B¹	5.33	2.0984	B¹	5.33	2.0684	B¹	6.0	2.3622	B¹	6.33	2.4921
	B²	6.33	2.4921	B²	5.66	2.2283	B²	6.0	2.3622	B²	6.66	2.6220	B²	6.0	2.3622
	B³	5.66	2.2283	B³	6.00	2.2283	B³	5.33	2.0684	B³	6.0	2.3622	B³	5.66	2.2283
	B⁴	6.0	2.3622	B⁴	5.0	1.9685	B⁴	5.66	2.2283	B⁴	6.0	2.3622	B⁴	.....	.....
Highest .....		6.33	2.4921		5.66	2.2283		6.0	2.3622		6.66	2.6220		6.33	2.4921
Minimum measurements.	B¹	3.0	1.1811	B¹	3.66	1.4509	B¹	3.33	1.3110	B¹	4.33	1.7047	B¹	8.33	1.3110
	B²	3.33	1.3110	B²	3.33	1.3110	B²	2.33	0.9173	B²	4.33	1.7047	B²	3.0	1.1811
	B³	2.66	1.0472	B³	2.66	1.0472	B³	3.0	1.1811	B³	4.0	1.5746	B³	3.0	1.1811
	B⁴	2.33	0.9173	B⁴	2.0	0.7874	B⁴	2.66	1.0472	B⁴	3.33	1.3110	B⁴	.....	.....
Lowest .....		2.33	0.9173		2.0	0.7874		2.33	0.9173		3.33	1.3110		3.0	1.1811
Average measurements..	B¹	4.197	1.6523	B¹	4.313	1.6980	B¹	4.580	1.8031	B¹	4.929	1.9405	B¹	4.615	1.8169
	B²	4.663	1.8358	B²	4.515	1.7775	B²	4.707	1.8531	B²	5.266	2.0732	B²	4.088	1.6094
	B³	4.262	1.6779	B³	4.451	1.7523	B³	4.163	1.6380	B³	4.802	1.8676	B³	3.985	1.5688
	B⁴	4.542	1.7881	B⁴	3.944	1.5527	B⁴	4.229	1.6649	B⁴	4.891	1.8255	B⁴	.....	.....
Average .....		4.416	1.7385		4.305	1.6948		4.419	1.7397		4.072	1.6574		4.229	1.6649
Measurements above average..	64			66			65			76			44		
Measurements below average..	56			54			55			44			46		



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of sample...	COTSWOLD.																			
	39. SHOULDER.				39. SIDE.				39. HIP.				39. BELLY.			109. ———				
	4 1/4 inches.				4 1/2 inches.				5 1/4 inches.				5 1/2 inches.			—————				
Number of crimps per inch .....	—————																			
Number of section .....	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>5</sup> .
Actual measurement in centimillimeters.	3.33	3.33	4.0	4.0	4.66	4.33	2.66	4.66	4.0	4.33	5.0	5.66	4.0	2.33	5.33	2.125	2.5	2.25	2.5	2.75
Averages .....	3.930	4.085	4.163	4.175	4.151	4.357	4.363	4.691	4.397	4.496	4.630	4.556	4.214	4.385	3.907	2.791	3.075	3.041	3.000	3.063

Recapitulation and reduction:	No. of section.			No. of section.			No. of section.			No. of section.			No. of section.		
	In centimillimeters.	In thousandths of inch.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In thousandths of inch.
Maximum measurements.	B <sup>1</sup> 5.33	2.0964	2.2283	B <sup>1</sup> 5.66	2.2283	2.3622	B <sup>1</sup> 5.0	1.9685	2.1116	B <sup>1</sup> 6.6	2.5590	2.7550	B <sup>1</sup> 3.5	1.3779	1.4763
Highest .....	5.66	2.2283	2.3622	6.0	2.3622	2.5000	5.66	2.2283	2.3622	7.0	2.7550	2.9000	4.25	1.6732	1.8779
Minimum measurements.	B <sup>1</sup> 2.66	1.0472	1.1811	B <sup>1</sup> 2.0	0.7874	0.8858	B <sup>1</sup> 3.0	1.1811	1.3116	B <sup>1</sup> 2.0	1.1811	1.3116	B <sup>1</sup> 1.5	0.5905	0.6858
Lowest .....	2.66	1.0472	1.1811	2.0	0.7874	0.8858	3.0	1.1811	1.3116	2.66	1.0472	1.1811	1.6	0.5905	0.6858
Average measurements.	B <sup>1</sup> 3.990	1.5472	1.6342	B <sup>1</sup> 4.151	1.6342	1.7153	B <sup>1</sup> 4.397	1.7310	1.8226	B <sup>1</sup> 4.214	1.6590	1.7263	B <sup>1</sup> 2.791	1.0696	1.2104
Average .....	4.085	1.6082	1.7153	4.363	1.7153	1.7936	4.496	1.7700	1.8226	4.385	1.7263	1.7936	3.075	1.1972	1.2187
Measurements above average .....	54			60			67			32			91		
Measurements below average .....	66			54			53			68			59		







TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		COTSWOLD.																
Catalogue number of samples...		171. HIP.					171. BELLY.				172. SHOULDER.				172. SIDE.			
Length of fiber in crimp.....		6 inches.					3½ inches.				4½ inches.				6 inches.			
Number of crimps per inch.....		—					—				—				—			
Number of section.....		B¹	B²	B³	B⁴	B⁵	B¹	B²	B³	B⁴	B¹	B²	B³	B⁴	B¹	B²	B³	B⁴
Actual measurement in centimillimeters.	3.75	4.375	4.875	4.5	4.0	3.875	3.5	3.625	4.0	3.5	2.875	2.5	2.875	4.0	3.875	3.875	2.625	
	4.0	4.625	4.125	3.5	3.0	3.125	3.75	2.875	2.25	3.375	3.375	3.0	2.375	3.75	4.25	4.25	3.25	
	3.625	3.75	4.375	3.375	2.5	4.375	3.5	3.375	3.875	3.375	3.625	3.875	2.625	4.0	3.625	4.0	2.875	
	4.625	4.75	4.375	4.375	4.0	4.125	3.5	3.0	3.0	3.625	3.0	3.625	2.875	3.0	3.375	3.125	2.5	
	4.5	5.875	5.0	4.5	4.0	3.0	3.5	4.375	4.125	3.0	2.625	2.75	3.25	3.5	3.625	4.25	3.5	
	4.125	4.125	4.0	5.0	4.0	4.375	3.25	3.625	3.5	3.0	3.5	3.125	2.75	4.0	2.75	3.875	2.875	
	3.875	5.25	5.375	3.875	4.125	3.625	3.5	2.875	3.25	3.0	2.5	3.875	2.75	4.0	3.875	4.0	2.5	
	3.75	4.5	2.625	4.375	4.375	3.375	3.5	4.625	3.75	2.875	3.0	2.875	3.875	3.875	3.375	3.875	4.5	
	4.0	3.25	4.375	4.125	3.25	4.0	3.25	4.75	3.5	3.5	3.5	3.0	2.0	3.75	2.5	3.625	2.375	
	3.375	4.25	3.375	4.0	4.25	3.125	3.5	3.0	3.375	3.5	3.875	3.5	2.75	2.875	3.625	3.5	4.0	
	4.75	4.125	5.375	4.5	4.625	4.0	3.5	3.25	3.0	3.0	3.25	4.375	3.0	3.5	5.25	3.375	4.125	
	4.25	3.875	4.75	4.0	4.5	3.875	4.25	3.75	4.0	3.75	3.0	2.875	2.75	4.125	3.5	3.75	3.5	
	5.125	5.0	4.375	4.0	4.5	4.0	4.375	3.75	2.875	3.375	3.125	3.125	3.75	3.5	3.625	3.875	2.875	
	4.0	3.25	4.125	4.125	3.875	3.75	4.0	3.25	2.0	3.0	3.5	3.25	3.625	4.0	2.75	3.0	3.0	
	4.125	4.875	4.875	4.375	3.0	4.0	4.0	4.0	3.375	2.875	3.375	3.375	3.5	4.0	4.375	3.0	3.125	
	4.625	4.0	3.875	4.0	2.875	3.5	3.125	3.875	3.875	3.375	3.875	4.5	3.375	3.25	2.75	3.75	4.0	
	3.5	4.25	4.5	4.75	4.0	3.5	4.0	4.375	2.0	3.125	3.375	2.0	3.375	3.375	3.75	3.875	2.625	
	4.125	4.5	3.875	3.75	4.0	4.0	4.75	4.25	4.0	3.5	1.75	3.0	2.5	3.375	3.25	3.0	2.75	
	4.75	4.25	4.0	4.125	4.0	3.5	4.0	3.0	4.375	3.0	2.75	3.0	2.875	3.0	4.0	3.5	4.25	
	2.375	4.25	4.125	3.25	4.125	3.0	3.875	4.0	3.5	3.375	3.0	3.0	2.375	3.25	3.75	3.125	3.0	
5.0	3.125	5.0	4.25	4.125	4.0	4.625	3.75	4.0	3.75	3.375	3.125	3.0	4.375	4.0	4.5	2.75		
4.25	5.25	4.5	2.75	2.875	3.5	3.25	3.5	3.625	2.25	3.0	4.0	3.0	4.125	3.625	4.5	3.875		
5.375	4.75	4.375	4.125	3.625	4.125	4.0	4.375	3.375	2.875	2.875	3.375	3.375	3.25	3.875	3.125	3.5		
3.5	4.5	4.0	3.5	4.5	4.375	4.0	3.5	3.75	3.375	3.375	3.5	3.375	3.375	3.375	3.25	3.375		
4.125	3.75	4.75	4.125	4.5	3.75	4.0	3.875	3.25	3.5	4.375	3.375	3.0	3.0	3.125	2.0	3.875		
4.0	4.875	5.0	3.625	2.5	4.375	4.125	3.25	2.5	2.5	3.875	3.875	3.0	2.75	4.0	1.625	3.5		
4.5	4.5	4.75	4.75	3.5	4.125	3.5	2.75	4.375	3.375	2.625	2.5	3.25	4.375	3.25	3.0	2.75		
4.375	4.375	3.875	2.0	2.5	3.5	4.25	3.75	4.375	3.125	3.25	3.5	2.25	3.75	3.375	2.25	2.75		
2.875	3.75	4.375	3.625	5.25	3.75	3.875	3.0	1.875	3.625	3.0	3.0	2.375	4.875	3.75	3.75	4.5		
4.25	4.375	5.0	4.375	3.875	4.375	4.0	4.0	4.625	3.25	3.75	3.875	2.75	3.375	2.625	3.375	5.0		
Averages.....	4.116	4.345	4.400	3.987	3.808	3.804	3.808	3.645	3.445	3.225	3.212	3.295	2.970	3.621	3.558	3.462	3.334	

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:												
Maximum measurements.	B¹	5.375	2.1161	B¹	4.50	1.7716	B¹	3.875	1.5255	B¹	4.875	1.9192
	B²	5.875	2.3129	B²	4.75	1.8700	B²	4.375	1.7224	B²	5.25	2.0669
	B³	5.375	2.1161	B³	4.75	1.8700	B³	4.50	1.7716	B³	4.50	1.7716
	B⁴	5.0	1.9685	B⁴	4.625	1.8197	B⁴	4.0	1.5748	B⁴	5.0	1.9685
	B⁵	5.25	2.0669									
Highest.....		5.875	2.3129		4.75	1.8700		4.50	1.7716		5.25	2.0669
Minimum measurements.	B¹	2.375	0.9350	B¹	3.00	1.1811	B¹	2.50	0.9842	B¹	2.75	1.0826
	B²	3.125	1.2303	B²	3.125	1.2303	B²	1.75	0.6880	B²	2.50	0.9842
	B³	2.625	1.0334	B³	2.75	1.0826	B³	2.0	0.7874	B³	1.625	0.6397
	B⁴	2.0	0.7874	B⁴	1.875	0.7381	B⁴	2.25	0.8858	B⁴	2.375	0.9350
	B⁵	2.50	0.9842									
Lowest.....		2.0	0.7874		1.875	0.7381		1.75	0.6880		1.625	0.6397
Average measurements..	B¹	4.116	1.4204	B¹	3.804	1.4976	B¹	3.225	1.2696	B¹	3.621	1.4255
	B²	4.345	1.7106	B²	3.808	1.4992	B²	3.212	1.2645	B²	3.558	1.4007
	B³	4.400	1.7322	B³	3.645	1.4350	B³	3.295	1.2972	B³	3.462	1.3629
	B⁴	3.987	1.5696	B⁴	3.445	1.3562	B⁴	2.970	1.1692	B⁴	3.358	1.3220
	B⁵	3.808	1.4992									
Average.....		4.131	1.6263		3.675	1.4468		3.175	1.2499		3.499	1.3775
Measurements above average.....			71			61			58			66
Measurements below average.....			79			56			62			54



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of samples..		COTSWOLD.																		
		172. HIP.				172. BELLY.			173. SHOULDER.				173. SIDE.				173. HIP.			
Length of fiber in crimp.....		4½ inches.				3½ inches.			3¼ inches.				4¼ inches.				—			
Number of crimps per inch....		—				—			—				—				—			
Number of section.....		B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.
Actual measurement in centimillimeters.		3.0	4.625	4.375	3.5	3.5	3.375	3.75	3.25	3.5	3.5	3.5	4.5	4.0	2.875	4.0	4.25	6.25	5.0	7.125
		3.5	2.0	3.875	2.75	3.625	3.5	3.0	3.75	4.0	2.5	3.75	3.25	4.125	4.0	3.375	5.75	5.75	5.0	5.375
		3.5	3.75	4.375	4.625	3.875	3.5	3.125	2.875	3.375	4.125	4.875	4.625	4.375	3.5	4.875	3.5	4.5	5.0	5.0
		3.5	3.375	3.375	2.625	3.3	2.875	3.5	4.0	3.375	4.625	3.875	4.125	5.0	4.25	3.875	4.75	5.25	5.375	6.375
		4.375	3.25	2.5	2.5	3.375	3.25	3.5	3.125	3.25	3.75	3.875	4.5	3.25	4.0	3.5	2.75	4.875	5.5	5.5
		3.375	3.5	2.75	3.5	3.5	3.5	3.625	4.0	3.75	4.6	3.375	4.5	3.125	3.75	6.25	4.375	1.75	5.0	6.125
		2.375	2.875	2.5	3.5	3.125	3.25	2.75	3.625	3.875	3.75	2.125	2.75	3.875	3.875	4.375	4.0	3.5	4.875	3.875
		4.375	3.125	1.875	2.875	3.75	4.25	3.875	3.75	3.25	4.0	4.375	4.625	3.375	5.5	3.875	4.375	5.375	4.5	5.5
		3.5	3.375	2.5	3.375	3.0	3.25	3.0	4.0	3.5	4.5	4.625	4.375	4.5	3.875	3.0	5.0	4.5	4.375	5.5
		3.375	4.875	3.5	2.875	3.75	3.375	3.5	3.25	4.375	4.25	4.375	3.25	3.125	4.375	5.0	3.25	4.75	4.875	3.75
		2.5	3.375	3.875	3.0	3.5	2.875	1.375	5.0	3.375	3.5	4.125	5.0	4.125	5.375	2.5	4.5	5.875	4.0	6.75
		2.375	2.0	3.125	2.875	3.125	3.5	2.375	4.875	3.125	4.25	3.875	3.125	4.125	5.375	4.5	4.875	3.75	4.875	3.75
		2.625	3.25	3.75	3.875	3.375	4.0	2.0	4.5	3.25	3.125	4.25	2.875	3.625	5.5	4.875	3.375	5.375	5.5	3.875
		5.0	3.875	4.5	4.0	3.875	2.875	4.0	3.5	3.875	5.625	5.375	5.0	5.0	3.5	3.375	3.875	5.0	6.0	5.5
		3.25	3.5	2.75	3.75	3.25	3.0	3.75	4.25	3.75	4.0	4.125	3.5	4.375	4.25	5.375	3.5	6.75	4.5	6.375
		2.5	2.0	3.375	3.875	3.25	4.0	2.875	4.5	3.5	3.25	4.0	2.875	3.25	3.5	4.5	4.5	3.0	6.25	4.375
		2.75	3.375	3.875	3.0	3.5	3.25	3.625	4.0	3.75	5.0	4.0	4.375	4.0	4.0	4.5	4.5	5.25	4.75	6.375
		4.0	3.0	4.375	3.0	3.875	3.5	2.5	3.875	4.0	5.0	4.125	6.0	5.25	4.5	4.0	5.875	4.0	5.125	7.75
		4.0	3.0	3.25	3.875	3.75	3.5	3.875	4.0	4.375	4.875	3.75	2.625	4.375	4.375	2.625	5.125	4.25	4.875	5.5
		2.5	3.75	4.375	5.5	3.0	3.5	2.625	4.625	4.125	4.5	3.875	4.25	4.375	4.625	2.75	6.375	4.0	5.0	4.5
		3.0	4.25	3.625	2.625	2.625	3.375	3.125	4.875	4.25	4.25	3.125	3.875	2.375	3.875	4.25	3.25	3.0	3.5	7.5
		3.875	3.0	3.875	5.0	4.0	3.625	4.0	3.5	2.5	4.375	3.375	4.0	3.625	4.875	5.0	3.375	4.25	4.5	4.25
		4.375	4.5	3.5	2.75	3.375	2.875	2.5	4.0	3.25	3.5	5.125	4.125	4.25	2.875	2.5	6.375	6.5	5.5	3.75
		3.375	2.5	3.125	3.875	2.625	2.75	4.0	4.125	3.5	3.375	3.5	5.25	4.5	4.0	4.25	3.875	4.0	3.875	3.375
		4.875	4.25	3.25	3.5	3.5	3.375	3.5	4.0	4.5	5.375	3.5	4.5	7.0	2.5	4.625	4.125	6.5	2.5	5.0
		3.875	3.5	3.0	2.75	3.125	3.375	2.5	3.5	3.75	3.75	3.625	4.125	3.125	5.5	5.0	5.3	3.0	4.0	4.0
		3.5	3.75	3.25	2.0	3.875	2.25	3.75	4.25	3.625	4.25	2.375	4.375	3.0	3.0	4.5	4.5	5.875	4.0	5.5
		3.375	3.0	4.5	3.0	3.0	3.25	3.625	3.875	4.25	5.25	4.375	3.625	5.0	5.25	5.5	5.25	4.375	4.0	6.5
		2.875	3.25	3.5	2.125	3.25	3.5	3.125	3.75	4.125	4.75	4.375	3.875	3.25	5.5	6.25	5.75	4.5	5.25	6.25
		3.375	1.75	3.0	3.375	3.25	3.0	3.0	2.75	4.375	4.25	3.875	4.0	3.0	4.375	2.5	2.875	6.5	4.0	5.25
Averages.....		3.420	3.320	3.475	3.329	3.385	3.225	3.191	3.912	3.683	4.191	3.916	4.045	4.012	4.325	4.141	4.416	4.675	4.695	5.354

		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:																
Maximum measurements.		B¹	5.00	1.9685	B¹	4.00	1.5748	B¹	5.0	1.9685	B¹	6.0	2.3622	B¹	6.375	2.5098
		B²	4.875	1.9192	B²	4.25	1.6732	B²	4.50	1.7716	B²	7.0	2.7559	B²	6.50	2.5590
		B³	4.50	1.7716	B³	4.00	1.6748	B³	5.625	2.2145	B³	5.50	2.1653	B³	6.50	2.5590
		B⁴	5.50	1.1653	B⁴	.....	.....	B⁴	5.375	2.1161	B⁴	6.25	2.4606	B⁴	7.75	3.0511
Highest.....			5.50	2.1653		4.25	1.6732		5.625	2.2145		7.0	2.7559		7.75	3.0511
Minimum measurements.		B¹	2.375	0.5413	B¹	2.625	1.0334	B¹	2.75	1.0826	B¹	2.625	1.0334	B¹	2.50	0.9842
		B²	1.75	0.6889	B²	2.25	0.8858	B²	2.50	0.9842	B²	2.375	0.9350	B²	1.75	0.6889
		B³	1.875	0.7381	B³	1.375	0.5413	B³	2.50	0.9842	B³	2.50	0.9842	B³	2.50	0.9842
		B⁴	2.0	0.7874	B⁴	.....	.....	B⁴	2.125	0.8366	B⁴	2.50	0.9842	B⁴	3.375	1.3237
Lowest.....			1.75	0.6889		1.375	0.5413		2.125	0.8366		2.375	0.9350		1.75	0.6889
Average measurements..		B¹	3.429	1.3499	B¹	3.385	1.3326	B¹	3.912	1.5401	B¹	4.045	1.5925	B¹	4.416	1.7385
		B²	3.320	1.3070	B²	3.225	1.2696	B²	3.683	1.4499	B²	4.012	1.6795	B²	4.675	1.8405
		B³	3.475	1.3681	B³	3.191	1.2562	B³	4.191	1.6499	B³	4.325	1.7027	B³	4.695	1.8484
		B⁴	3.329	1.3106	B⁴	.....	.....	B⁴	3.916	1.5417	B⁴	4.141	1.6303	B⁴	5.354	2.1073
Average.....			3.388	1.3338		3.267	1.2862		3.925	1.5452		4.130	1.6259		4.785	1.8339
Measurements above average.....			54			50			60			58			60	
Measurements below average.....			66			40			60			62			60	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		COTSWOLD.																	
Catalogue number of samples..		173. BELLY.			174. SHOULDER.				174. SIDE.				174. HIP.				174. BELLY.		
Length of fiber in crimp .....		2 inches.			4½ inches.				4½ inches.				4½ inches.				2½ inches.		
Number of crimps per inch .....		—			—				—				—				—		
Number of section .....		B¹	B²	B³	B¹	B²	B³	B⁴	B¹	B²	B³	B⁴	B¹	B²	B³	B⁴	B¹	B²	B³
Actual measurement in centimillimeters.	3.75	3.75	3.025	2.75	4.0	3.5	4.0	4.75	4.25	3.25	3.875	2.5	3.5	3.0	3.0	2.875	4.125	3.875	
	3.5	3.5	3.0	2.625	4.125	4.0	4.0	3.5	3.375	2.625	2.875	4.25	4.25	3.5	3.0	3.0	3.75	3.025	
	3.75	3.875	4.25	2.5	4.125	3.875	4.0	4.25	4.75	3.875	3.875	4.25	3.375	4.25	4.5	3.875	3.75	4.25	2.5
	2.75	4.125	3.5	4.125	3.625	4.0	3.0	2.875	3.875	4.025	3.75	3.0	3.25	4.375	3.25	3.5	3.625	3.5	3.5
	4.25	3.0	4.375	4.125	3.5	3.75	4.5	4.375	4.875	3.75	4.375	3.5	4.25	4.0	4.625	4.0	3.875	4.0	4.0
	4.375	3.875	4.375	3.875	3.125	4.25	4.5	4.375	4.75	3.875	4.5	5.75	4.125	2.25	3.25	4.0	3.75	3.125	4.0
	4.6	4.375	4.0	3.5	5.0	3.5	3.0	4.0	3.875	3.5	4.25	3.75	4.5	4.375	5.75	4.0	3.75	4.5	4.5
	4.25	4.5	3.375	2.875	3.625	4.75	4.0	4.5	4.5	4.5	4.25	4.0	4.375	5.25	4.5	3.0	3.75	3.75	3.75
	4.25	3.375	3.5	2.5	4.0	4.25	3.875	3.75	3.75	2.0	2.75	4.125	3.75	4.875	4.25	5.0	4.0	3.875	2.25
	3.375	3.875	4.25	3.5	4.0	3.75	5.0	3.25	4.0	4.375	4.625	4.0	3.375	3.875	4.25	2.125	4.5	3.125	3.125
	5.0	4.375	5.0	3.75	4.0	4.0	4.0	4.0	3.0	5.0	4.25	3.0	2.5	4.0	5.0	3.375	3.875	3.875	3.875
	3.75	3.25	4.0	4.0	3.75	4.25	4.375	4.0	4.0	5.0	5.0	3.5	3.25	4.6	2.375	4.0	4.0	3.875	3.875
	3.125	3.875	4.0	2.75	3.375	2.875	3.5	3.5	3.875	4.5	4.75	4.75	2.75	4.75	3.75	5.25	4.125	4.875	3.875
	3.25	4.375	4.5	3.5	4.0	3.5	4.0	3.25	3.875	3.5	2.25	3.75	4.0	3.5	4.375	3.5	2.6	2.625	2.625
	3.5	4.75	3.5	3.875	3.25	3.875	3.875	3.875	2.875	4.5	3.25	3.0	4.625	4.5	4.8	4.375	3.875	3.875	3.125
	3.0	5.375	4.5	2.25	4.25	3.875	4.0	3.25	4.375	4.375	4.5	4.0	3.0	4.75	4.25	3.0	3.5	2.5	2.5
	5.0	4.375	4.875	3.0	4.25	4.0	3.375	4.25	4.5	4.6	3.75	2.5	4.75	3.25	5.0	1.175	3.5	3.5	3.5
	3.5	3.25	3.5	3.75	3.875	3.875	3.875	3.75	4.75	2.875	4.0	3.875	4.625	4.125	2.25	2.625	3.125	2.875	2.875
	4.625	4.0	4.0	3.75	4.0	2.5	3.5	4.375	4.5	2.875	4.25	3.75	3.5	4.0	2.375	3.75	3.875	3.75	3.75
	4.25	3.5	3.875	3.625	3.75	3.875	3.875	3.875	4.25	4.375	3.875	4.875	3.25	3.875	3.0	3.25	2.875	3.75	3.75
2.75	4.0	3.875	3.875	3.625	3.75	4.0	3.875	3.0	4.875	4.5	3.75	4.5	4.125	4.375	2.75	3.125	4.25	4.25	
3.875	4.25	3.875	4.125	3.875	3.75	4.675	4.125	3.875	2.875	3.5	4.0	3.375	3.75	3.875	3.625	3.5	4.0	4.0	
3.75	3.5	3.875	3.75	3.875	4.675	4.125	4.875	3.0	4.25	4.5	2.75	4.0	4.0	4.875	2.125	3.5	3.5	3.5	
4.125	3.875	3.875	4.0	3.875	3.5	4.375	4.125	4.5	3.5	4.75	3.375	4.0	4.0	4.25	4.25	3.875	3.875	3.875	
3.5	3.875	3.875	4.5	4.125	3.625	3.5	4.25	4.0	4.5	3.75	3.75	4.5	4.0	3.375	3.875	2.375	3.625	3.625	
3.75	3.875	4.25	3.0	2.75	4.375	4.0	4.0	3.5	3.25	4.125	3.75	3.25	5.375	4.5	2.5	3.625	2.375	2.375	
4.375	3.5	3.5	4.25	3.5	2.75	3.0	3.75	3.375	4.375	3.0	4.25	3.5	4.375	4.0	2.5	3.125	3.5	3.5	
3.875	4.0	4.0	3.75	3.75	3.0	3.875	3.75	3.0	2.5	3.5	4.875	4.0	4.125	4.25	3.0	3.625	4.0	4.0	
3.5	3.75	3.75	3.75	3.0	2.5	3.875	3.875	4.875	3.875	3.5	4.0	4.6	3.25	2.8	3.0	3.0	3.5	3.5	
4.125	3.5	3.875	3.875	3.5	3.375	4.0	4.0	2.625	3.0	4.75	4.5	4.0	3.875	4.5	3.5	3.875	3.75	3.75	
Averages .....	3.845	3.888	4.095	3.670	3.733	3.754	3.967	3.806	4.141	3.820	4.007	3.795	4.154	4.110	4.325	3.445	3.650	3.520	

		173. BELLY.			174. SHOULDER.				174. SIDE.				174. HIP.				174. BELLY.		
Recapitulation and reductions:		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.			
Maximum measurements.	B¹	6.0	1.9685	1.6732	B¹	4.25	1.6732	B¹	4.875	1.0192	B¹	3.75	2.2637	B¹	4.25	1.6732			
	B²	5.375	2.1161	1.9685	B²	5.0	1.9685	B²	5.0	2.3622	2.3622	B²	5.5	2.1653	B²	4.5	1.7716		
	B³	5.375	2.1161	1.0192	B³	4.875	1.0192	B³	5.25	3.4606	3.4606	B³	5.375	2.1161	B³	4.6	1.7716		
Highest .....		5.375	2.1161	5.0	2.9685				6.25	2.4006		5.75	2.2637		4.5	1.7716			
Minimum measurements.	B¹	2.75	1.0826	0.9642	B¹	2.5	0.9642	B¹	2.375	0.9350	B¹	2.5	0.8858	B¹	1.75	0.6680			
	B²	3.0	1.1811	1.0826	B²	2.75	1.0826	B²	3.0	0.7874	0.7874	B²	3.25	1.2795	B²	2.875	1.1218		
	B³	3.5	1.3779	2.5	0.9642	B³	3.0	0.9642	B³	2.5	0.8558	B³	2.25	0.8858	B³	2.6	0.9642		
Lowest .....		2.75	1.0826	2.5	0.9642				2.0	0.7874		2.25	0.8858		1.75	0.6680			
Average measurements.	B¹	3.845	1.6137	1.4448	B¹	3.670	1.4448	B¹	2.866	1.3220	B¹	3.795	1.4940	B¹	3.445	1.3502			
	B²	3.883	1.8287	1.4696	B²	3.733	1.4696	B²	4.141	1.6369	B²	4.154	1.6354	B²	3.650	1.4370			
	B³	4.095	1.6122	1.4779	B³	3.754	1.4779	B³	3.820	1.5089	B³	4.116	1.6204	B³	3.520	1.3893			
Average .....		3.941	1.5515	3.780	1.4905				3.058	1.5582		4.007	1.6129		3.541	1.3040			
Measurements above average .....		41		61					64			68			45				
Measurements below average .....		40		59					54			62			45				



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		COTSWOLD.																			
Catalogue number of samples..		175. SHOULDER.				175. SIDE.				175. HIP.				175. BELLY.			176. SHOULDER.				
Length of fiber in crimp .....		2½ inches,				3¼ inches.				2¾ inches.				2 inches.			4½ inches.				
Number of crimps per inch....		—				—				—				—			—				
Number of section .....		B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	
Actual measurement in centimillimeters.	5.625	4.25	4.875	5.0	5.0	4.0	5.5	4.625	5.0	5.5	5.25	5.25	4.75	4.5	4.625	3.75	4.25	4.0	4.0	4.0	
	3.0	4.375	4.375	4.875	3.625	3.875	3.875	6.0	4.75	5.5	4.75	6.5	4.0	3.75	4.5	4.75	3.75	3.875	3.875	3.5	
	5.0	4.875	4.875	5.0	5.0	4.0	2.5	5.375	5.25	5.875	4.25	5.375	4.0	5.375	3.625	3.625	4.5	3.75	4.375	3.75	
	5.25	4.625	4.875	5.0	4.75	5.0	4.25	3.875	5.75	5.75	5.875	6.5	5.125	4.875	4.25	4.25	4.5	3.5	4.0	3.875	4.5
	5.0	4.875	4.75	4.5	4.0	5.0	5.5	3.875	5.5	5.5	4.875	6.625	3.875	4.25	3.625	4.5	5.25	5.25	4.375	4.5	3.5
	4.0	4.6	5.375	4.0	5.875	6.125	5.0	3.5	5.375	4.5	5.375	5.375	3.875	6.25	6.5	3.875	4.5	4.5	4.5	3.5	4.5
	5.25	4.375	4.875	4.5	4.375	4.5	5.25	4.0	4.5	5.0	5.25	6.125	5.125	6.375	4.5	5.5	3.5	3.5	4.25	4.375	4.5
	4.875	4.625	4.75	4.0	5.25	4.5	6.125	4.025	5.0	4.875	5.0	5.875	4.5	4.5	3.75	3.75	4.0	3.5	4.0	3.5	4.25
	4.25	4.375	4.5	3.5	4.5	5.25	4.875	4.6	5.5	6.625	5.5	6.5	4.625	6.5	3.75	4.5	3.5	5.125	5.125	4.5	3.5
	3.375	4.5	4.625	5.25	4.25	4.5	6.0	2.125	6.0	6.125	6.75	5.5	5.75	3.875	4.0	4.5	4.5	3.25	4.5	3.5	4.25
	4.375	4.45	5.5	4.75	4.375	5.0	3.75	4.375	5.75	2.875	4.875	5.5	4.875	6.25	3.5	4.5	4.0	4.125	5.375	4.5	3.375
	5.0	5.0	5.0	5.0	4.0	5.875	4.025	4.0	4.875	4.75	5.0	6.5	3.125	4.6	4.0	4.25	4.5	4.5	4.5	4.0	3.375
	5.0	5.0	5.5	5.0	6.875	4.75	4.875	3.125	5.375	5.25	6.5	6.5	3.5	4.0	6.25	4.125	4.75	5.375	4.875	4.5	3.375
	4.375	3.875	5.5	3.0	3.125	4.125	5.75	4.875	5.5	0.0	4.875	4.875	4.375	3.5	4.5	4.5	4.5	4.5	4.25	3.5	2.875
	5.0	1.75	3.0	2.875	3.875	4.75	2.375	4.75	5.5	5.375	4.875	5.0	4.375	4.5	4.875	4.0	3.5	4.0	3.5	4.0	4.0
	4.5	3.625	4.875	3.875	4.0	5.75	3.875	5.0	5.25	4.875	3.25	4.25	3.5	4.75	4.125	4.5	4.875	4.5	4.0	4.5	4.125
	3.875	3.375	5.0	4.75	4.5	4.375	5.75	5.75	5.0	3.25	5.0	2.875	4.5	5.0	4.75	4.125	4.0	4.0	4.0	4.0	4.5
	3.5	4.0	3.0	4.5	4.25	3.25	5.25	5.5	4.375	5.0	5.375	4.625	3.125	3.5	5.0	4.0	4.25	5.0	4.25	4.0	4.5
	4.375	2.5	4.5	5.0	4.0	3.5	5.125	5.75	5.125	6.125	5.875	5.25	3.125	3.5	5.0	4.0	4.25	4.25	3.5	3.5	3.5
	4.5	4.375	3.875	5.0	4.5	4.5	5.5	4.5	4.0	4.5	5.5	5.375	3.025	4.25	4.0	3.875	4.5	4.25	4.0	4.0	4.0
4.375	4.625	3.25	4.5	5.375	4.625	5.75	5.25	4.375	4.625	5.25	5.5	4.5	4.25	3.875	4.5	4.25	4.0	4.0	4.0	4.0	
4.75	4.25	3.875	4.5	4.375	4.625	5.25	5.0	5.375	5.875	6.375	4.0	4.375	4.5	3.5	5.0	4.0	4.0	4.875	4.125	4.125	
5.375	4.5	4.625	4.125	3.875	2.25	4.75	4.625	5.0	6.25	5.0	6.0	4.625	4.25	3.5	4.0	4.0	4.0	3.625	4.5	4.5	
5.0	4.5	5.0	4.5	4.5	5.0	5.5	5.5	4.5	6.0	3.75	3.875	3.375	3.625	5.125	3.875	4.5	5.25	4.5	4.0	4.0	
4.25	4.5	5.75	3.875	4.875	6.375	4.375	4.5	4.625	4.5	5.75	5.25	4.875	3.75	4.75	5.0	4.125	4.5	4.5	4.5	4.5	
5.875	4.875	4.5	4.75	4.625	4.5	4.75	4.5	5.625	5.0	5.875	6.25	4.5	4.875	4.625	4.0	4.0	4.0	4.5	4.0	4.0	
4.5	3.875	4.5	5.0	4.5	5.875	3.875	4.0	3.0	5.5	5.375	5.0	4.875	5.0	4.0	4.0	4.0	4.5	4.375	3.875	3.875	
5.125	3.875	4.0	4.75	4.25	5.25	4.0	5.0	5.25	5.75	4.75	3.875	4.0	4.0	4.0	4.0	4.5	4.25	4.0	4.0	4.0	
5.125	4.0	5.0	4.625	4.375	4.5	4.5	5.125	4.375	4.75	5.5	3.5	4.0	4.375	4.0	4.0	4.5	4.0	4.0	4.0	4.0	
Averages.....	4.612	4.194	4.875	4.491	4.504	4.670	4.694	4.587	6.104	5.120	5.204	5.233	4.275	4.500	4.287	4.333	4.162	4.244	4.087		

Recapitulation and reduction:		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Maximum measurements.	B <sup>1</sup>	5.625	2.2145	B <sup>1</sup>	6.875	2.7060	B <sup>1</sup>	6.125	2.4114	B <sup>1</sup>	5.375	2.1161	B <sup>1</sup>	5.5	2.1053	
	B <sup>2</sup>	5.0	1.9685	B <sup>2</sup>	6.25	2.4600	B <sup>2</sup>	6.25	2.4600	B <sup>2</sup>	6.25	2.4600	B <sup>2</sup>	5.25	2.0669	
	B <sup>4</sup>	5.75	2.2637	B <sup>4</sup>	5.75	2.2637	B <sup>4</sup>	6.875	2.7066	B <sup>4</sup>	5.25	2.0669	B <sup>4</sup>	5.375	2.1161	
Highest .....		6.75	2.2637		6.875	2.7060		6.875	2.7066		6.25	2.4606		5.5	2.1053	
Minimum measurements.	B <sup>1</sup>	3.0	1.1811	B <sup>1</sup>	3.125	1.2303	B <sup>1</sup>	4.0	1.5748	B <sup>1</sup>	3.125	1.2803	B <sup>1</sup>	3.75	1.4763	
	B <sup>2</sup>	1.75	0.6889	B <sup>2</sup>	2.25	0.8366	B <sup>2</sup>	2.875	1.1318	B <sup>2</sup>	3.5	1.3779	B <sup>2</sup>	3.25	1.2795	
	B <sup>4</sup>	2.875	1.1318	B <sup>4</sup>	2.375	0.9366	B <sup>4</sup>	3.25	1.2795	B <sup>4</sup>	3.5	1.3779	B <sup>4</sup>	3.5	1.3779	
Lowest .....		1.75	0.6889		2.125	0.8366		2.875	1.1318		3.125	1.2803		2.875	1.1318	
Average measurements..	B <sup>1</sup>	4.812	1.8157	B <sup>1</sup>	4.504	1.7732	B <sup>1</sup>	6.104	2.0094	B <sup>1</sup>	4.275	1.6830	B <sup>1</sup>	4.333	1.7059	
	B <sup>2</sup>	4.194	1.6311	B <sup>2</sup>	4.670	1.8385	B <sup>2</sup>	5.120	2.0157	B <sup>2</sup>	4.500	1.7216	B <sup>2</sup>	4.162	1.6385	
	B <sup>3</sup>	4.675	1.8405	B <sup>3</sup>	4.694	1.8480	B <sup>3</sup>	5.204	2.0488	B <sup>3</sup>	4.287	1.6877	B <sup>3</sup>	4.244	1.6708	
	B <sup>4</sup>	4.491	1.7681	B <sup>4</sup>	4.587	1.8059	B <sup>4</sup>	5.233	2.0602	B <sup>4</sup>	4.287	1.6877	B <sup>4</sup>	4.087	1.6090	
Average .....		4.493	1.7683		4.613	1.8161		5.165	2.0334		4.354	1.7141		4.206	1.6559	
Measurements above average.....		76			61			67			50			58		
Measurements below average.....		44			59			53			40			62		



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		COTSWOLD.																			
Catalogue number of samples..		176. SIDR.				176. HIP.				176. BELLY.				177. SHOULDER.				177. SIDR.			
Length of fiber in crimp .....		4½ inches.				4½ inches.				2½ inches.				3½ inches.				3½ inches.			
Number of crimps per inch.....		—				—				—				—				—			
Number of section.....		B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.
Actual measurement in centimillimeters.	3.376	4.75	5.0	3.0	4.0	4.0	5.75	5.375	3.25	4.75	4.125	3.625	2.375	4.5	3.5	3.5	4.375	4.625	3.0	4.25	
	3.5	4.875	3.5	4.25	5.25	3.75	4.25	3.875	3.875	4.25	3.75	3.25	4.025	4.0	4.0	4.375	4.5	5.0	4.0	5.0	
	3.625	5.125	4.75	5.375	4.125	4.75	3.875	4.5	3.875	5.25	3.5	4.25	3.125	3.0	3.125	3.75	5.0	3.875	5.0	4.75	
	3.6	4.25	3.625	4.125	5.0	3.5	4.5	5.375	4.25	4.125	3.5	3.5	3.625	3.0	4.33	2.75	5.375	5.0	5.0	3.25	
	4.0	4.0	3.875	4.25	3.5	3.125	4.0	3.375	3.625	4.5	3.5	4.0	4.25	3.5	4.25	4.0	3.6	4.675	3.875	5.0	
	5.25	4.375	4.375	3.25	4.875	5.25	4.0	4.375	4.875	3.625	5.0	3.875	4.875	3.875	3.125	4.0	5.0	4.25	4.0	3.75	4.875
	3.875	5.875	4.25	4.875	3.875	4.125	3.5	4.5	4.875	4.875	2.875	4.0	3.75	5.0	3.625	4.875	3.75	4.25	3.0	5.0	4.25
	4.0	5.25	4.0	4.875	3.25	5.0	3.125	4.5	4.0	4.875	3.875	4.5	2.875	2.25	3.875	4.25	4.0	2.75	4.0	5.0	5.0
	5.25	3.875	5.0	4.0	2.0	0.75	4.875	5.0	4.0	4.0	4.875	4.125	3.5	2.875	3.625	3.5	4.125	4.6	5.25	4.0	4.0
	3.875	4.5	4.0	3.75	3.0	4.375	4.875	4.75	4.25	4.0	4.6	3.75	3.0	2.5	2.625	3.75	4.25	4.375	3.0	5.0	5.0
	3.875	5.0	5.0	5.125	3.75	3.025	4.375	5.0	4.0	4.875	3.0	4.0	3.125	2.875	3.0	4.125	3.75	5.125	4.625	5.0	5.0
	4.375	3.875	3.5	4.0	4.125	4.0	3.875	4.75	3.875	4.0	4.875	3.75	2.375	3.875	2.75	3.0	4.25	4.125	4.75	5.5	5.5
	4.5	3.025	4.5	4.5	4.0	4.0	3.875	4.5	5.0	4.5	3.875	4.25	3.75	3.875	4.875	3.25	3.75	4.75	3.75	4.875	4.75
	4.875	4.75	4.0	5.0	3.25	2.75	5.75	4.375	4.875	4.875	3.75	4.0	3.75	3.125	4.5	3.0	2.625	4.75	5.25	4.625	4.25
	4.875	4.875	4.0	5.0	3.0	4.75	5.0	4.375	4.5	4.875	3.75	3.75	4.25	3.25	3.0	4.375	4.625	3.75	4.25	4.0	4.0
	3.875	4.25	4.125	5.25	5.25	4.125	5.0	5.0	5.25	4.25	4.0	4.75	3.875	3.125	3.5	3.5	3.75	4.875	4.0	2.0	4.75
	3.875	4.375	4.0	5.0	3.875	4.5	4.75	5.5	1.75	4.75	4.125	3.75	2.0	2.0	3.625	3.5	4.0	4.25	4.0	3.875	4.0
	3.625	4.0	3.625	3.25	4.5	5.25	2.875	4.675	3.125	4.0	3.75	3.25	4.125	3.0	4.0	4.25	4.875	3.5	3.875	3.875	3.875
	3.8	4.0	3.5	4.0	5.0	5.0	3.0	4.5	4.125	5.25	3.875	3.5	2.875	4.75	3.0	2.25	5.375	4.375	3.5	4.5	4.5
	4.6	3.0	5.0	4.0	4.0	4.0	4.5	3.0	3.875	4.0	4.0	4.0	2.0	4.0	5.75	4.625	4.5	5.0	4.25	4.5	4.5
5.125	4.5	4.6	4.5	3.625	4.0	5.025	3.75	2.5	4.875	3.5	4.625	4.875	3.0	2.875	4.0	4.25	4.875	3.875	4.0	4.0	
4.375	5.0	5.0	4.75	4.75	4.375	4.5	3.5	3.5	4.875	4.0	4.5	5.0	5.0	4.625	3.0	4.375	5.0	3.75	3.625	4.375	
3.875	4.5	4.25	4.5	3.75	4.6	4.5	4.5	4.875	4.0	6.0	4.0	4.25	2.5	4.875	5.125	5.0	4.5	3.875	3.625	3.625	
4.875	4.0	4.375	3.875	3.25	4.0	5.0	4.875	4.6	4.5	4.5	5.0	3.25	3.5	4.375	3.75	4.25	4.6	4.0	4.75	4.75	
4.75	4.875	3.625	3.75	4.6	4.5	4.5	3.875	3.875	3.875	3.875	4.0	4.5	2.5	4.5	4.5	4.75	5.0	5.75	5.75	4.25	
4.5	4.5	4.0	4.75	4.125	4.125	3.875	5.75	4.875	4.0	4.875	4.0	3.5	4.5	2.5	4.5	4.25	4.0	5.25	5.125	5.125	
3.875	4.375	5.0	4.25	5.125	3.5	4.0	4.75	4.25	3.75	3.875	4.0	4.0	3.0	3.875	3.375	3.625	4.0	3.75	3.25	3.25	
4.125	4.0	4.5	3.75	4.5	4.875	4.0	4.25	4.25	4.25	2.875	3.25	2.625	3.5	3.0	3.5	5.75	4.875	4.375	4.125	4.125	
4.125	4.75	4.5	3.75	3.625	3.625	3.75	4.375	4.25	4.25	4.625	4.875	4.0	4.0	4.25	3.5	4.0	4.375	4.0	4.625	4.625	
4.875	5.25	4.0	4.5	4.375	3.5	3.75	3.25	4.375	4.25	4.75	3.25	3.0	2.625	3.375	2.75	4.75	3.5	4.375	4.25	4.25	
Averages .....	4.320	4.400	4.120	4.341	4.070	4.279	4.543	4.010	3.912	4.290	4.130	3.374	3.547	3.505	3.007	3.366	4.475	4.291	4.262	4.429	

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:															
Maximum measurements.	B¹.	6.0	2.3622	B¹.	5.25	2.0609	B¹.	4.5	1.7710	B¹.	5.0	1.9685	B¹.	5.75	2.3631
	B².	5.375	2.1101	B².	4.75	2.0374	B².	5.25	2.0609	B².	4.75	1.8700	B².	5.25	2.0609
	B³.	5.0	1.9685	B³.	4.5	2.5390	B³.	5.0	1.9685	B³.	5.75	2.3637	B³.	5.75	2.3637
	B⁴.	5.75	2.2637	B⁴.	4.25	2.4006	B⁴.	5.0	1.9685	B⁴.	5.125	2.0177	B⁴.	5.5	2.1653
Highest .....	6.0	2.3622	6.5	2.5390	5.25	2.0609	5.75	2.2637	5.75	2.2637	5.75	2.2637			
Minimum measurements.	B¹.	3.375	1.3287	B¹.	2.0	0.7874	B¹.	1.75	0.6889	B¹.	3.375	0.9850	B¹.	3.5	1.3779
	B².	3.0	1.1811	B².	2.75	1.0826	B².	2.875	1.1818	B².	2.25	0.8858	B².	3.0	1.1811
	B³.	3.5	1.3779	B³.	3.125	1.2303	B³.	3.5	1.3779	B³.	2.0	0.7674	B³.	3.0	0.7874
	B⁴.	3.0	1.1811	B⁴.	3.875	1.3287	B⁴.	3.25	1.2795	B⁴.	2.25	0.8858	B⁴.	3.25	1.2795
Lowest .....	3.0	1.1811	2.0	0.7874	1.75	0.6889	2.0	0.7674	2.0	0.7674	2.0	0.7874			
Average measurements..	B¹.	4.320	1.7007	B¹.	4.070	1.6023	B¹.	3.912	1.5401	B¹.	3.547	1.3964	B¹.	4.475	1.7018
	B².	4.460	1.7559	B².	4.279	1.6340	B².	4.296	1.6013	B².	3.505	1.3799	B².	4.291	1.6303
	B³.	4.120	1.6229	B³.	4.545	1.7893	B³.	4.130	1.6259	B³.	3.007	1.4200	B³.	4.262	1.6779
	B⁴.	4.341	1.7090	B⁴.	4.010	1.6173	B⁴.	3.874	1.5251	B⁴.	3.866	1.5220	B⁴.	4.429	1.7437
Average'.....	4.310	1.6968	4.377	1.7233	4.078	1.6055	3.631	1.4295	3.631	1.4295	3.631	1.4295			
Measurements above average..	63			56			53			56			61		
Measurements below average..	67			64			67			64			59		



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of samples..	COTSWOLD.																		
	177. HIP.				177. BELLY.			178. SHOULDER.				178. SIDE.				178. HIP.			
	3½ inches.				2¾ inches.			3½ inches.				3¼ inches.				2½ inches.			
	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.
4.75	4.75	5.0	6.0	3.875	4.0	3.75	3.75	4.5	4.5	4.75	4.25	4.5	4.5	4.0	3.5	4.25	4.625	4.625	
4.875	4.5	3.5	4.5	3.25	3.875	4.5	4.0	4.5	4.5	3.75	3.375	5.75	3.125	3.0	4.0	4.75	4.375	5.5	
4.0	4.375	5.5	4.75	3.5	4.375	3.5	4.375	4.0	4.625	4.75	3.25	3.0	4.25	3.25	3.5	4.125	5.0	5.0	
4.0	3.125	3.75	5.0	4.5	4.5	4.75	3.75	4.375	4.0	3.875	3.75	4.625	4.0	4.75	2.75	4.75	4.5	4.0	
4.625	2.75	5.375	4.75	3.5	2.875	4.5	2.5	3.75	5.125	4.25	4.25	5.0	4.0	3.75	2.75	4.0	2.5	4.0	
3.75	2.875	4.5	5.0	5.0	3.5	4.0	4.0	4.0	4.25	3.875	3.5	5.125	3.5	5.5	4.875	4.25	4.875	4.875	
4.0	4.875	5.125	4.625	4.5	3.5	3.625	4.25	3.0	4.25	3.0	4.25	4.0	3.75	3.0	3.0	4.375	5.25	4.75	
2.75	4.875	4.0	5.875	3.75	4.25	4.0	4.25	4.25	4.5	3.875	4.5	4.125	3.75	3.5	4.5	5.25	5.0	5.375	
6.0	4.125	4.0	4.875	4.5	3.25	4.25	4.5	3.75	3.875	4.625	4.0	3.75	4.25	4.75	4.0	3.875	4.125	5.125	
6.5	4.375	3.875	3.0	4.0	4.125	4.25	4.5	4.875	3.75	4.25	3.25	3.5	5.0	3.25	4.875	4.25	5.75	4.5	
5.5	3.25	4.5	4.5	3.75	3.75	3.875	3.875	4.5	5.25	4.25	4.0	3.5	4.0	3.5	4.75	3.0	4.875	4.375	
2.875	3.5	5.0	4.5	4.5	4.0	4.25	5.0	4.125	5.0	4.25	3.0	3.875	4.125	3.625	3.75	3.75	5.0	5.0	
4.125	4.875	4.25	4.875	4.0	3.25	4.625	4.0	2.25	3.875	3.25	3.5	4.125	3.625	2.0	4.625	4.375	4.5	4.5	
4.125	5.5	4.375	5.0	4.6	3.75	3.5	2.875	2.75	4.25	5.0	3.5	4.0	4.375	4.5	6.0	5.5	4.875	4.875	
4.25	4.625	4.875	5.625	3.5	4.0	3.375	3.875	4.125	4.75	4.875	3.625	4.375	4.25	4.0	4.125	4.0	5.0	5.75	
5.0	4.75	3.0	3.0	4.75	3.5	5.0	3.5	3.875	3.625	2.5	4.25	4.0	3.75	4.875	4.75	5.125	4.5	5.875	
5.0	4.375	4.125	3.625	4.0	3.5	3.0	4.25	3.75	4.5	4.0	3.375	4.0	3.25	4.375	4.75	5.25	4.875	4.75	
4.5	5.25	5.375	4.375	3.75	3.875	4.5	3.5	5.0	5.5	5.0	4.875	4.75	4.375	4.0	3.375	4.0	4.5	4.625	
3.0	4.625	3.5	4.125	4.0	4.25	3.875	4.0	5.625	4.625	5.0	5.0	4.625	5.5	4.0	4.375	4.0	4.5	4.5	
3.375	4.5	5.5	2.75	4.0	3.375	4.25	4.5	4.625	4.0	5.0	3.5	4.75	4.0	3.75	4.125	4.25	4.875	4.5	
4.875	4.5	5.75	5.25	3.75	4.0	4.25	2.875	4.75	5.125	4.375	3.25	3.0	4.5	4.5	4.0	4.75	5.125	4.625	
4.5	2.5	4.375	4.5	4.5	3.625	4.75	4.0	4.5	4.25	4.75	3.375	4.0	4.25	2.0	4.5	4.5	4.75	3.25	
6.875	6.75	2.375	5.25	3.5	4.0	4.375	4.375	2.5	4.5	4.75	4.0	4.0	4.0	2.125	4.5	4.5	5.375	4.5	
4.625	3.0	4.75	5.5	4.375	3.5	3.875	4.0	5.75	4.125	3.75	3.875	3.75	4.25	2.0	4.625	4.5	5.0	2.75	
5.0	4.875	5.0	5.5	4.5	4.0	3.75	4.5	4.25	4.375	3.25	4.0	4.375	4.0	3.875	5.375	4.875	4.625	5.375	
5.5	3.5	4.875	5.625	3.625	3.5	4.25	5.6	3.75	3.75	4.875	3.5	3.5	4.0	3.5	3.375	5.875	4.375	3.75	
5.375	5.0	5.75	4.75	3.25	3.0	4.0	4.25	3.75	4.0	4.25	3.0	4.5	3.0	4.5	5.0	4.5	3.25	4.375	
3.875	6.0	2.875	4.5	4.25	4.0	4.0	4.0	4.625	4.0	3.75	3.625	4.75	3.5	4.0	4.5	3.25	3.25	4.25	
4.75	2.875	4.75	5.375	3.5	4.625	4.25	3.5	4.375	3.625	4.375	4.0	4.75	4.375	4.375	5.0	5.0	4.25	4.375	
4.125	5.875	4.375	4.75	4.125	3.5	3.0	3.5	4.875	4.0	4.125	3.625	3.375	3.0	2.0	4.25	6.0	6.0	4.375	
Averages .....	4.450	4.291	4.466	4.708	4.016	3.775	4.062	3.991	4.141	4.358	4.245	3.754	4.145	4.004	3.658	4.150	4.520	4.636	4.587

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousands of inch.	In thousands of inch.		In thousands of inch.	In thousands of inch.		In thousands of inch.	In thousands of inch.						
Maximum measurements.	B¹.	5.875	2.3120	B¹.	5.0	1.9685	B¹.	5.5	2.1653	B¹.	4.875	1.9192	B¹.	5.375	2.1161
	B².	6.75	2.6574	B².	4.625	1.8205	B².	5.75	2.2637	B².	5.75	2.2637	B².	6.0	2.3622
	B³.	5.75	2.2637	B³.	5.0	1.9685	B³.	5.5	2.1653	B³.	5.0	1.9685	B³.	6.75	2.2637
	B⁴.	6.0	2.3622	B⁴.	5.5	2.1653	B⁴.	5.5	2.1653	B⁴.	5.5	2.1653	B⁴.	6.75	2.2637
Highest .....		6.75	2.6574		5.0	1.9685		5.75	2.2637		6.75	2.2637		6.0	2.3622
Minimum measurements.	B¹.	2.75	1.0826	B¹.	3.25	1.2795	B¹.	2.5	0.9842	B¹.	3.0	1.1811	B¹.	2.75	1.0826
	B².	2.5	0.9842	B².	2.875	1.1318	B².	2.25	0.8858	B².	3.0	1.1811	B².	3.0	1.1811
	B³.	2.375	0.9350	B³.	3.0	1.1811	B³.	3.625	1.4271	B³.	3.0	1.1811	B³.	3.0	0.9842
	B⁴.	2.75	1.0826	B⁴.	2.5	0.9842	B⁴.	2.5	0.9842	B⁴.	2.0	0.7874	B⁴.	2.625	1.0334
Lowest .....		2.375	0.9350		2.875	1.1318		2.25	0.8858		2.0	0.7874		2.6	0.9842
Average measurements.	B¹.	4.450	1.7519	B¹.	4.016	1.5810	B¹.	3.991	1.6712	B¹.	3.754	1.4770	B¹.	4.150	1.6338
	B².	4.291	1.6693	B².	3.775	1.4852	B².	4.141	1.6303	B².	4.145	1.6318	B².	4.520	1.7795
	B³.	4.466	1.7582	B³.	4.062	1.5992	B³.	4.358	1.7157	B³.	4.004	1.5763	B³.	4.636	1.8251
	B⁴.	4.708	1.8595	B⁴.	3.951	1.5555	B⁴.	4.245	1.6712	B⁴.	3.658	1.4401	B⁴.	4.537	1.7862
Average .....		4.478	1.7629		3.951	1.5555		4.183	1.6468		3.890	1.5314		4.460	1.7559
Measurements above average.		78			49			65			63			73	
Measurements below average.		47			41			55			57			47	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Con'vd.

		COTSWOLD.																		
Catalogue number of samples..		178. BELLY.			179. SHOULDER.				179. SIDE.				179. HIP.				179. BELLY.			
Length of fiber in crimp .....		2½ inches.			3½ inches.				4½ inches.				3½ inches.				5 inches.			
Number of crimps per inch.....		—			—				—				—				—			
Number of section.....		B¹	B²	B³	B¹	B²	B³	B⁴	B¹	B²	B³	B⁴	B¹	B²	B³	B⁴	B¹	B²	B³	B⁴
Actual measurement in centimillimeters.	3.5	3.25	3.375	3.25	4.125	2.5	1.875	2.625	4.375	4.75	5.375	6.25	4.875	5.5	5.5	4.125	2.75	5.5	4.75	
	4.5	4.25	4.375	3.75	3.875	4.75	4.375	3.375	3.625	3.625	5.75	4.5	4.875	5.0	5.875	3.875	5.0	3.0	4.625	
	2.75	3.125	3.5	3.75	4.125	3.375	5.0	8.5	4.875	4.75	5.25	5.375	5.375	4.875	5.375	3.75	2.625	3.875	4.25	
	3.875	3.0	4.25	4.0	4.25	5.5	4.875	1.75	3.75	2.875	3.25	5.5	4.25	5.5	5.75	4.0	4.0	4.0	5.375	
	3.625	4.0	3.75	4.875	4.375	4.5	4.5	1.875	5.0	4.0	5.875	4.375	4.375	6.0	3.75	2.5	3.875	4.125	4.25	
	3.875	3.875	3.625	5.0	3.875	4.625	4.625	5.5	3.75	5.625	6.0	4.5	5.0	6.375	5.375	4.0	3.875	4.125	5.0	
	3.75	3.625	4.0	4.125	4.0	5.25	5.5	2.25	4.75	4.875	6.0	5.625	4.75	5.75	5.5	4.0	4.375	4.5	4.0	
	4.0	4.0	3.875	4.5	4.25	5.0	5.0	5.25	4.5	5.5	5.0	5.875	4.875	4.75	5.375	3.375	3.875	4.0	2.75	
	3.625	3.75	3.625	3.625	3.875	4.5	4.75	8.625	4.5	6.0	4.875	4.375	4.0	4.375	6.5	3.25	4.0	5.0	4.375	
	2.625	3.75	4.0	2.875	4.5	4.25	3.25	2.0	5.0	5.75	5.875	4.625	4.0	4.375	5.25	4.875	3.5	4.0	4.375	
	2.75	4.75	3.375	4.75	3.0	4.75	3.875	4.5	5.125	5.875	5.375	4.75	4.5	5.5	6.0	3.75	2.125	4.25	3.625	
	3.25	3.625	3.0	4.125	5.0	3.125	5.125	5.25	6.0	8.0	5.375	5.375	5.375	4.75	5.0	3.0	3.625	4.875	3.375	
	4.0	3.25	4.5	4.375	4.5	4.0	5.125	3.875	3.0	5.5	4.75	5.125	4.75	4.875	5.25	2.625	3.5	5.125	4.25	
	3.5	3.75	3.875	3.875	4.75	4.875	5.875	4.0	4.5	3.5	5.5	3.875	4.0	4.5	6.0	3.625	3.5	2.75	4.0	
	3.0	3.25	4.25	3.75	3.25	4.625	5.0	4.5	4.375	3.25	6.0	5.5	4.875	5.25	5.5	2.75	3.0	4.5	4.75	
	3.0	3.5	3.0	4.0	5.25	4.5	3.5	4.5	4.375	5.75	4.5	5.25	4.5	6.0	5.5	4.0	3.5	4.625	4.875	
	3.75	3.875	4.375	3.125	4.0	3.5	4.875	2.625	4.375	5.0	5.0	4.125	4.5	5.5	3.875	4.375	4.25	3.875	4.5	
	3.0	3.0	3.875	4.375	4.375	4.375	5.0	4.875	4.125	3.875	5.875	5.0	5.125	6.25	5.5	4.5	4.0	4.875	5.0	
	3.0	3.5	3.5	4.5	3.25	3.875	5.0	4.5	5.375	5.125	2.875	4.0	4.75	5.25	5.75	5.0	3.375	4.0	4.125	
	4.0	3.75	4.125	3.125	4.125	2.0	4.0	5.0	2.875	4.75	2.5	4.875	5.375	5.875	6.25	4.875	4.875	5.0	4.5	
3.125	3.25	3.5	4.5	3.875	4.875	4.0	5.875	4.5	5.75	5.25	5.375	5.25	3.275	5.5	4.125	3.5	4.0	5.0		
3.0	3.0	3.5	4.25	3.875	5.0	4.625	4.5	4.375	4.25	4.5	3.0	2.75	3.875	4.625	3.75	3.5	4.0	5.0		
3.125	3.0	4.25	4.25	3.75	4.25	5.25	4.75	3.75	3.875	4.5	3.375	4.75	6.5	4.25	2.5	2.625	5.0	5.0		
3.75	3.5	4.5	3.75	4.0	2.875	5.0	5.0	3.25	4.875	5.625	6.25	4.5	6.0	5.125	4.375	3.5	4.375	3.5		
3.5	4.0	4.5	3.5	3.875	4.75	4.125	5.25	3.75	5.0	3.75	4.625	4.0	4.0	5.0	2.75	2.25	4.25	4.5		
4.375	4.0	4.0	3.625	4.0	4.375	4.75	4.5	3.75	4.0	3.125	4.875	5.0	5.0	6.0	3.375	4.25	2.75	4.875		
4.0	4.375	2.875	4.0	4.5	4.5	4.5	5.0	3.0	5.875	6.625	6.125	5.5	5.75	4.75	2.5	2.25	4.5	4.5		
3.25	3.125	3.0	3.0	4.25	4.875	4.875	5.0	4.75	4.5	5.5	5.875	5.5	6.25	6.5	4.375	3.875	4.25	5.125		
4.75	3.5	3.5	3.25	3.875	3.875	5.0	4.875	2.875	5.25	5.25	5.875	4.5	5.75	2.5	3.75	4.0	4.5	4.5		
4.0	4.375	4.0	3.5	3.75	4.875	5.25	4.75	4.5	2.5	5.5	5.5	4.75	5.875	6.0	4.75	4.625	4.5	4.125		
Averages.....	3.541	3.616	3.770	3.912	4.050	4.304	4.736	4.212	4.258	4.601	5.137	5.238	4.683	5.379	5.504	3.941	3.770	4.191	4.495	

		178. BELLY.			179. SHOULDER.				179. SIDE.				179. HIP.				179. BELLY.							
Recapitulation and reduction:		No. of section.			In centimillimeters.				In thousandths of inch.				No. of section.				In centimillimeters.				In thousandths of inch.			
Maximum measurements.	B¹	4.75	1.8700	B¹	5.0	1.9685	D¹	5.875	2.3129	D¹	6.25	2.4606	D¹	5.0	1.9685									
	B²	4.75	1.8700	B²	5.25	2.0096	D²	6.0	2.3623	D²	5.5	2.1653	D²	5.0	1.9685									
	B³	4.5	1.7718	B³	5.5	2.1635	D³	6.0	2.3623	D³	6.875	2.5598	D³	5.50	2.1653									
Highest.....	4.75	1.8700	5.875	2.3129	6.625	2.6682	6.5	2.5590	6.0	2.3623														
Minimum measurements.	B¹	2.625	1.0334	D¹	2.875	1.1318	B¹	1.75	0.6889	D¹	4.125	1.6240	D¹	2.50	0.9642									
	B²	3.0	1.1811	B²	3.0	1.1811	D²	2.875	1.1318	D²	2.75	1.0626	D²	3.0	1.1811									
	D³	2.875	1.1318	B³	2.5	0.9842	D³	2.875	1.1318	D³	3.875	1.3287	D³	2.625	1.0334									
Lowest.....	2.625	1.0334	1.875	0.7381	1.75	0.6889	2.5	0.9642	2.50	0.9642														
Average measurements..	B¹	3.541	1.3940	B¹	3.912	1.5461	D¹	4.212	1.6592	D¹	5.238	2.0522	D¹	3.941	1.5151									
	B²	3.616	1.4236	B²	4.050	1.5744	D²	4.258	1.6763	D²	4.683	1.8436	D²	3.770	1.4842									
	B³	3.770	1.4877	B³	4.304	1.6044	D³	4.601	1.8468	D³	5.379	2.1177	D³	4.191	1.6499									
Average.....	3.645	1.4350	4.250	1.6732	4.574	1.8007	5.198	2.0464	4.099	1.6137														
Measurements above average.....	42	60	61	63	61																			
Measurements below average.....	48	53	59	52	59																			



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		COTSWOLD.																				
Catalogue number of samples..		190. SHOULDER.				180. SIDE.				180. HIP.				181. SHOULDER.			181. SIDE.					
Length of fiber in crimp.....		3 7/8 inches.				4 3/8 inches.				5 1/4 inches.				4 1/4 inches.			4 inches.					
Number of crimps per inch....		—				—				—				—			—					
Number of section.....		B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .		
Actual measurement in centimillimeters.		5.0	5.5	5.0	4.825	4.75	4.5	4.5	6.0	3.5	5.125	3.375	4.125	4.875	5.375	4.625	4.75	4.875	4.5	4.75		
		3.875	3.75	5.0	4.375	5.0	3.5	2.125	4.25	4.875	5.125	5.0	4.5	4.75	5.625	3.875	5.25	6.25	4.125	5.125		
		4.0	3.75	3.875	4.875	3.875	3.25	2.375	2.75	4.875	4.75	5.375	5.75	4.0	4.0	4.25	3.5	3.875	3.875	6.25	2.875	
		3.875	3.825	3.875	2.75	4.0	4.375	5.5	4.5	4.875	5.25	5.375	4.875	4.0	4.0	2.375	4.125	5.0	5.25	2.25	5.5	
		4.75	3.875	2.5	3.0	5.5	4.5	2.875	2.25	4.375	4.125	4.25	4.75	4.25	4.25	5.0	4.875	4.25	4.5	5.25	4.875	
		4.5	4.25	4.75	3.875	4.75	3.25	4.75	4.0	5.0	4.5	4.5	5.0	4.5	3.5	4.375	3.75	5.25	4.125	5.875	3.25	
		4.375	4.375	5.0	4.125	3.25	2.875	4.0	2.75	4.5	4.5	5.25	5.5	4.0	4.5	5.375	4.375	4.375	4.375	4.125	3.875	
		5.0	3.5	4.75	3.125	4.0	4.875	4.625	3.375	3.625	5.375	5.875	5.875	5.875	4.375	2.875	3.625	4.0	4.625	4.5	5.0	
		5.0	5.75	4.0	2.875	3.375	3.0	5.0	4.75	5.25	4.5	4.375	3.5	3.75	3.75	4.375	3.25	4.75	6.0	4.5	5.5	
		4.0	5.375	6.5	4.625	4.875	4.25	2.375	4.0	4.125	4.0	3.75	4.0	4.125	4.125	4.5	2.875	5.0	4.0	4.75	4.625	
		4.5	4.125	5.5	4.0	5.875	4.375	2.875	5.375	3.875	4.375	5.25	4.375	4.375	3.5	3.75	3.0	5.625	5.375	3.625	5.0	
		3.375	5.125	5.25	3.375	4.875	4.5	5.0	4.0	5.75	4.875	5.375	4.0	4.25	5.125	3.375	3.625	3.625	4.875	3.5	3.375	
		5.25	3.75	4.375	0.0	5.0	5.125	1.75	2.875	5.0	4.5	1.875	3.75	4.375	4.0	4.5	4.5	4.5	5.5	5.5	4.75	5.0
		4.75	5.5	4.0	4.25	4.5	3.75	4.375	3.0	4.0	4.5	5.5	3.375	4.875	3.875	3.5	5.0	3.125	3.625	5.0	5.0	
		3.875	4.75	3.25	3.875	4.375	5.25	5.625	5.0	5.25	4.5	4.375	4.5	4.5	4.75	4.375	4.0	5.0	5.125	5.0	5.25	
		4.25	4.75	4.375	4.375	4.875	4.0	6.375	2.125	5.25	4.125	5.5	5.5	5.5	5.5	4.5	4.0	4.0	4.875	5.25	3.75	
		5.125	3.25	5.0	5.0	5.5	4.625	4.0	5.5	4.25	4.5	5.375	5.75	3.75	3.75	4.75	4.375	3.75	4.75	3.875	5.25	
		5.0	5.25	5.5	4.0	4.0	3.375	4.125	3.5	5.375	4.5	5.375	3.25	4.375	3.5	4.5	4.375	5.0	4.375	5.375	6.0	
		4.375	4.625	5.5	3.875	5.5	5.25	4.375	3.75	4.25	3.875	5.625	4.875	3.75	3.75	3.5	4.25	5.5	4.125	5.0	4.375	
		4.875	5.0	4.125	5.0	3.5	4.5	5.125	5.0	5.0	5.375	4.875	4.875	3.375	3.375	3.625	4.0	3.875	0.375	4.0	5.0	
3.875	5.375	4.125	3.125	5.5	4.125	3.75	4.375	4.5	3.875	5.5	5.5	4.875	5.0	3.25	4.625	2.875	4.875	4.5	4.375			
5.25	6.25	4.875	5.0	4.5	4.875	4.375	4.5	5.0	3.0	3.75	5.0	4.0	4.0	4.5	4.5	6.0	4.0	4.5	3.5			
5.0	4.0	5.0	3.75	5.375	3.375	4.0	4.5	3.875	5.25	3.75	4.375	4.5	4.5	5.0	3.375	5.625	4.625	4.5	3.5			
4.875	4.875	3.75	4.375	4.0	2.375	3.25	4.25	4.0	5.75	4.75	3.75	3.75	4.75	4.75	5.0	5.375	5.0	3.125	5.125			
4.0	4.75	4.0	3.0	5.5	5.875	4.125	3.5	4.875	4.75	6.25	6.0	6.25	4.625	4.375	4.375	4.25	3.0	3.5	5.5			
6.0	4.625	2.025	4.75	3.0	4.5	4.75	4.5	4.75	5.0	5.125	3.75	4.375	3.875	4.25	4.0	4.0	4.75	3.375	4.125			
4.0	3.875	3.875	2.375	4.25	4.0	2.5	3.625	5.125	5.0	6.25	5.0	6.25	3.75	3.75	4.0	4.0	4.5	4.375	5.5			
3.625	5.375	2.75	3.375	3.75	3.5	4.625	4.875	5.5	5.625	4.5	6.5	4.0	5.125	4.5	5.5	5.5	2.5	4.0	4.875			
3.375	4.625	3.875	4.0	2.875	2.875	2.0	4.5	4.0	4.875	2.75	3.625	4.75	5.25	3.0	4.25	4.25	4.5	4.5	3.375			
5.0	2.5	3.125	4.75	4.75	4.625	4.125	3.5	3.375	5.0	4.0	3.75	5.375	5.0	4.0	4.0	4.0	4.625	5.625	4.0			
Averages.....	4.475	4.537	4.337	4.049	4.495	4.108	3.975	4.029	4.600	4.676	4.762	4.591	4.363	4.360	4.086	4.611	4.770	4.395	4.475			

		No. of section.		In centimillimeters.		In thousandths of inch.		No. of section.		In centimillimeters.		In thousandths of inch.		No. of section.		In centimillimeters.		In thousandths of inch.			
Recapitulation and reduction:		B <sup>1</sup>	B <sup>2</sup>	B <sup>3</sup>	B <sup>4</sup>	B <sup>1</sup>	B <sup>2</sup>	B <sup>3</sup>	B <sup>4</sup>	B <sup>1</sup>	B <sup>2</sup>	B <sup>3</sup>	B <sup>4</sup>	B <sup>1</sup>	B <sup>2</sup>	B <sup>3</sup>	B <sup>4</sup>	B <sup>1</sup>	B <sup>2</sup>		
Maximum measurements		6.0	6.25	6.50	6.0	2.3622	2.4006	2.5590	2.3622	5.875	5.875	6.375	6.0	2.3120	2.3120	2.5098	2.5098	5.75	5.75		
Highest.....		6.50	2.5500	6.375	2.5098	6.50	2.5590	6.25	2.4606	6.375	2.5098	6.50	2.5590	6.25	2.4606	6.375	2.5098	6.50	2.5590		
Minimum measurements		3.375	2.50	2.50	2.375	1.9287	0.9842	0.9842	0.9350	2.875	2.375	1.75	2.125	1.1318	0.9350	0.6889	0.6889	1.875	1.75		
Lowest.....		2.375	0.9350	1.75	0.6889	1.875	0.7381	2.375	0.9350	1.875	0.7381	2.375	0.9350	2.25	0.8858	2.25	0.8858	1.875	1.1318		
Average measurements		4.475	4.537	4.337	4.040	1.7618	1.7862	1.7074	1.5940	4.495	4.108	3.975	4.020	1.7696	1.6173	1.5649	1.5862	4.600	4.676		
Average.....		4.350	1.7125	4.151	1.6312	4.657	1.8334	4.253	1.6744	4.570	1.7992	4.475	1.7618	4.641	4.770	4.895	4.475	4.641	4.875		
Measurements above average..		63				64				63				46				58			
Measurements below average..		67				56				57				44				62			



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		COTSWOLD.																			
Catalogue number of samples..		181. HIR.				181. BELLY.			182. SHOULDER.			182. SIDK.			182. HIP.				182. BELLY.		
Length of fiber in crimp.....		4½ inches.				3½ inches.			3½ inches.			3½ inches.			4½ inches.				3½ inches.		
Number of crimps per inch....		—				—			—			—			—				—		
Number of section.....		B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.
Actual measurement in centimillimeters.	5.625	2.5	4.0	5.126	5.0	4.875	4.0	2.5	5.0	4.5	4.875	4.5	4.6	5.126	8.75	5.5	4.5	4.375	4.5	4.0	
	4.375	8.25	8.025	4.875	4.75	3.75	4.0	4.875	4.625	4.75	4.625	4.25	2.5	4.0	5.375	6.0	4.5	4.25	4.625	5.125	
	4.75	8.375	8.25	4.25	4.625	4.125	4.0	3.0	5.375	4.625	2.5	5.25	5.0	3.5	4.125	5.5	5.0	2.875	4.5	4.625	
	6.5	5.5	3.125	4.5	4.75	5.25	3.5	4.625	4.125	3.5	5.0	2.75	3.125	5.5	4.25	4.5	5.0	4.875	5.25	4.0	
	4.75	7.375	4.75	2.75	5.0	4.125	4.625	3.25	3.75	1.75	5.375	5.0	4.5	5.375	6.0	5.0	4.75	4.75	4.025	4.125	
	4.75	5.0	4.0	8.25	4.0	5.875	3.25	5.0	3.125	6.25	5.0	4.75	5.5	4.5	5.875	4.5	4.625	4.75	4.75	4.25	
	5.125	5.0	5.5	4.75	5.0	4.875	4.0	4.75	3.875	4.0	3.75	5.25	5.5	3.75	6.5	3.25	3.75	4.25	4.875	3.875	
	6.025	6.5	5.25	3.75	4.5	3.875	3.5	3.875	5.025	4.875	4.125	3.875	3.875	3.875	5.75	5.25	4.5	3.875	5.0	4.5	
	5.5	5.5	5.75	5.0	4.375	4.875	4.75	3.875	3.5	1.675	4.25	5.875	5.875	2.5	5.875	5.625	4.5	3.5	5.5	4.0	
	5.375	7.0	6.025	5.125	5.0	3.875	4.625	3.875	3.925	4.5	4.0	4.125	4.125	4.0	4.375	3.0	5.75	3.75	4.75	4.0	
	5.375	4.125	6.025	5.0	5.25	3.75	4.375	4.0	4.875	3.875	4.75	4.75	5.125	5.125	5.5	5.875	3.75	4.0	3.0		
	4.0	5.5	4.5	4.0	3.125	4.625	3.0	4.375	3.0	3.25	5.75	1.5	2.0	4.0	4.5	4.875	3.75	4.0	4.25		
	5.0	4.0	4.75	5.8	5.375	4.5	3.875	4.5	3.25	5.5	4.25	5.75	5.0	2.375	2.5	6.5	5.5	4.5	4.125		
	5.75	5.0	4.5	8.25	5.125	3.625	3.25	5.0	4.5	4.5	3.5	4.5	4.75	0.25	5.125	4.0	4.875	4.25	4.5		
	5.0	4.5	3.75	4.875	4.625	4.625	3.5	3.0	5.0	5.25	5.875	4.75	4.0	4.875	4.375	6.5	3.25	3.625	4.25		
	5.75	5.25	5.125	4.0	5.0	4.875	4.875	4.0	4.925	4.75	3.875	4.875	4.375	5.125	4.875	0.0	3.5	4.5	4.675		
	4.5	5.0	3.875	4.875	4.0	6.0	3.875	3.25	3.0	3.0	2.5	4.25	4.5	5.0	6.25	4.75	5.75	4.25	3.5		
	5.75	4.625	6.0	3.75	4.75	3.875	5.0	2.875	4.75	5.5	3.5	4.0	5.0	5.875	5.0	3.0	4.875	3.5	4.25		
	4.0	5.5	6.025	5.25	4.625	3.25	2.75	5.375	4.75	4.0	6.375	4.75	3.875	4.625	6.0	2.375	4.0	4.5	4.875		
	3.875	5.75	5.875	5.875	4.5	5.0	4.25	4.75	2.625	4.375	3.5	4.75	5.5	5.5	2.875	5.0	5.0	3.625	2.25		
	5.0	3.75	5.875	6.75	4.875	3.0	4.875	3.75	4.625	5.5	2.875	4.625	4.625	5.375	3.875	4.5	5.375	4.0	4.875		
	4.0	5.75	0.375	4.875	4.875	4.25	4.75	3.75	4.125	4.25	5.0	3.75	2.125	5.75	4.25	3.0	3.75	4.5	4.125		
	4.75	5.0	4.0	4.5	4.375	4.375	4.125	3.875	5.0	4.25	2.5	2.0	4.625	3.5	2.25	3.0	3.375	3.875	4.75		
	5.0	5.25	4.5	5.0	5.125	4.875	4.75	3.375	3.5	4.5	2.75	3.0	3.0	3.5	5.75	2.375	4.0	4.25	4.75		
	0.5	5.0	5.875	2.875	4.875	4.0	3.75	4.375	3.875	2.625	3.25	5.0	3.875	4.75	5.375	3.375	5.875	3.875	3.5		
	4.375	5.0	6.0	4.5	5.375	4.25	3.75	3.5	4.125	2.75	3.75	4.0	4.875	4.75	4.25	4.375	3.875	4.5	4.375		
	4.0	4.25	5.875	3.75	3.5	4.375	3.5	4.5	4.225	4.0	4.5	5.875	5.375	4.25	4.25	3.0	3.875	4.5	4.0		
	2.0	5.75	5.875	4.875	3.75	4.5	2.875	2.75	4.375	3.125	3.875	5.0	4.625	4.625	5.0	4.5	4.125	4.0	4.125		
5.875	4.25	5.25	5.0	5.0	4.0	2.875	7.5	4.5	4.75	5.25	6.875	4.125	4.0	4.5	5.0	4.875	4.0	4.875			
4.875	5.875	4.875	5.125	5.875	4.875	4.875	3.875	2.875	4.625	5.5	4.75	2.0	4.5	5.0	5.0	4.5	3.5	4.25			
Averages.....	4.975	5.287	5.131	4.700	4.766	4.320	4.037	3.933	4.270	4.200	4.160	4.476	4.357	4.616	4.770	4.745	4.501	4.116	4.433	3.920	

Recapitulation and reduction:		181. HIR.			181. BELLY.			182. SHOULDER.			182. SIDK.			182. HIP.				182. BELLY.		
		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	
Maximum measurements.	B¹	6.625	2.6062	B¹	5.875	2.3120	B¹	5.0	1.9685	B¹	5.75	2.2637	B¹	8.25	2.4608	B¹	4.75	1.8700		
	B²	7.875	2.9085	B²	8.0	2.3622	B²	3.625	2.2145	B²	3.875	2.3129	B²	6.75	2.6574	B²	5.50	2.1433		
	B³	8.25	3.2480	B³	5.0	1.9885	B³	5.50	2.1653	B³	3.875	2.3129	B³	6.50	2.5590	B³	5.125	2.0177		
	B⁴	6.75	2.6574																	
Highest.....		8.25	3.2480		6.0	2.3622		5.625	2.2145		5.875	2.3129		8.75	2.6574		5.50	2.1433		
Minimum measurements.	B¹	3.0	1.1811	B¹	2.50	1.3770	B¹	2.50	0.9842	B¹	2.50	0.9842	B¹	2.375	0.9350	B¹	3.0	1.1811		
	B²	3.50	1.3770	B²	3.0	1.1811	B²	3.0	1.1811	B²	1.50	0.6905	B²	2.0	0.7874	B²	3.0	1.1811		
	B³	3.125	1.2903	B³	3.0	1.1811	B³	1.75	0.6989	B³	2.0	0.7874	B³	2.375	0.9350	B³	1.125	0.4129		
	B⁴	2.75	1.0826											3.25	1.2793	B⁴				
Lowest.....		2.75	1.0826		3.0	1.1811		1.75	0.6989		1.50	0.6905		2.0	0.7874		1.125	0.4129		
Average measurements.	B¹	4.975	1.9586	B¹	4.766	1.8763	B¹	3.933	1.5484	B¹	4.160	1.6413	B¹	4.616	1.8173	B¹	4.116	1.6204		
	B²	5.287	2.0814	B²	4.320	1.7007	B²	4.270	1.6834	B²	4.476	1.7622	B²	4.770	1.8779	B²	4.433	1.7432		
	B³	5.131	2.0200	B³	4.037	1.5693	B³	4.200	1.6595	B³	4.357	1.7133	B³	4.745	1.8681	B³	3.920	1.5433		
	B⁴	4.700	1.8503											4.510	1.7755					
Average.....		5.023	1.9775		4.374	1.7220		4.136	1.6233		4.384	1.7062		4.600	1.8316		4.156	1.6363		
Measurements above average.....		53			52			47			52			63				47		
Measurements below average.....		68			38			43			38			68				43		



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of samples..	COTSWOLD.																			
	183. SHOULDER.						183. SIDE.					183. HIP.					183. BELLY.			
	10½ inches.						10½ inches.					9¾ inches.					8 inches.			
	Number of crimps per inch....						Number of crimps per inch....					Number of crimps per inch....					Number of crimps per inch....			
Number of section.....	B¹.	B².	B³.	B⁴.	B⁵.	B⁶.	B¹.	B².	B³.	B⁴.	B⁵.	B¹.	B².	B³.	B⁴.	B⁵.	B¹.	B².	B³.	B⁴.
4.5	5.0	4.125	4.5	4.375	3.75	4.0	4.0	4.0	3.875	4.125	5.0	5.75	5.75	4.0	3.0	5.125	4.0	4.75	3.25	3.25
3.125	4.75	4.875	3.75	5.25	4.0	4.0	4.125	4.375	4.5	4.5	3.375	5.5	6.0	4.5	5.375	3.5	4.875	3.0	4.0	4.0
4.5	5.5	5.25	5.0	4.875	4.5	4.25	3.75	4.5	3.0	4.25	4.375	4.25	6.0	3.625	6.0	3.375	2.75	4.75	4.5	4.5
3.75	4.75	3.375	4.5	3.625	4.0	4.5	5.0	5.0	4.5	4.5	4.5	4.125	5.5	5.5	3.875	3.5	3.5	4.0	3.875	3.75
4.5	4.0	4.5	3.5	5.25	4.25	4.5	4.375	4.0	3.0	4.5	4.0	2.875	4.25	4.0	4.375	4.25	4.5	4.375	4.0	3.5
4.125	4.875	3.6	4.25	3.125	3.875	3.75	4.25	4.375	6.5	4.5	3.875	3.25	4.0	4.875	3.875	4.0	3.875	4.0	3.875	4.0
5.0	5.0	4.25	4.25	3.375	4.625	5.625	4.375	4.0	4.875	3.875	5.5	5.0	5.5	4.5	5.375	3.875	5.125	4.875	3.0	3.0
4.625	4.5	6.5	4.25	4.5	3.875	3.25	4.75	3.25	3.875	3.75	2.875	3.5	5.375	4.5	4.875	3.875	3.5	4.75	2.25	2.25
3.75	4.625	4.5	4.75	4.0	4.75	4.25	4.625	3.75	4.25	2.0	4.375	6.5	2.5	2.0	4.5	4.25	4.375	4.875	2.0	3.0
4.75	4.25	3.5	3.25	3.5	3.625	3.75	4.5	4.0	3.5	2.0	4.25	3.5	4.0	4.375	4.75	3.5	4.25	4.875	3.0	3.0
5.0	5.0	4.375	5.0	3.375	4.5	4.25	3.75	3.75	4.5	3.75	3.875	5.0	4.0	4.0	5.0	4.75	5.0	5.375	3.5	3.5
3.75	4.5	5.625	4.0	3.75	3.75	8.75	4.5	3.375	5.0	4.25	3.375	4.875	5.5	2.5	4.0	5.125	3.0	4.625	3.5	3.5
4.375	5.375	4.5	4.5	4.75	4.0	2.875	3.625	3.75	4.5	4.5	4.875	3.875	3.25	5.0	3.125	3.625	4.5	4.875	3.75	3.75
5.0	4.5	4.875	4.875	4.0	2.5	4.0	5.25	4.5	5.0	5.25	5.375	2.875	4.375	4.0	4.25	4.0	4.5	3.625	3.25	3.25
3.875	3.75	4.75	4.5	5.0	4.0	4.25	4.625	3.375	4.875	4.5	4.5	4.875	3.5	4.0	3.875	4.375	4.75	4.875	5.0	5.0
4.25	4.5	5.0	4.5	3.0	3.25	4.75	4.5	4.25	4.5	2.25	4.25	3.875	3.75	3.625	5.0	4.5	5.25	2.5	4.75	4.75
5.0	5.25	3.375	4.5	4.5	4.25	4.25	5.5	2.875	4.125	3.875	4.75	4.375	3.75	3.5	2.625	4.25	4.375	3.75	5.875	5.875
4.5	3.625	4.5	3.75	5.25	4.5	3.75	4.5	4.0	3.75	4.375	4.0	3.875	3.5	5.0	3.0	4.25	4.5	4.375	4.0	4.0
5.0	4.5	4.5	4.5	3.125	4.25	4.0	5.0	5.125	4.5	5.5	3.875	5.25	5.0	5.5	4.75	4.5	4.5	4.875	3.625	3.625
3.5	4.75	4.0	5.25	3.875	4.0	3.875	4.5	3.625	3.0	5.25	3.0	4.75	4.875	3.125	3.0	3.5	4.125	4.375	4.375	4.375
3.875	4.75	4.25	4.0	3.5	4.625	3.875	3.0	3.5	2.75	4.0	4.5	4.5	5.375	3.875	5.0	3.75	3.875	3.875	2.875	2.875
3.5	4.375	4.0	5.0	4.5	4.625	4.0	4.0	2.0	4.0	4.0	4.375	5.25	4.0	4.5	3.0	4.875	4.5	4.5	4.625	4.625
4.25	4.25	3.25	5.375	4.5	2.875	3.5	3.375	2.5	4.0	4.25	4.0	4.0	3.75	4.875	5.0	4.5	5.5	5.0	5.25	5.25
4.375	4.375	3.5	4.5	3.5	4.5	4.0	4.0	4.875	5.0	3.0	5.25	4.5	3.25	5.125	4.5	3.875	4.5	4.0	3.75	3.75
5.0	4.0	3.75	4.0	2.5	5.0	4.25	4.625	4.5	3.5	4.125	3.75	5.375	5.375	5.0	4.25	4.125	4.5	4.5	3.75	3.75
4.5	4.25	3.625	4.125	5.5	4.375	4.375	4.125	3.625	3.25	5.5	4.0	3.875	3.5	3.25	5.0	4.625	3.75	4.75	3.5	3.5
3.875	3.875	5.375	4.875	3.5	3.75	2.875	3.625	3.5	5.0	4.25	3.25	3.75	4.0	4.75	4.5	4.375	3.75	4.5	3.5	3.5
4.125	4.5	4.375	4.5	4.0	4.5	4.125	5.25	5.0	4.25	3.125	4.0	3.875	4.5	3.5	3.0	4.125	3.5	4.5	4.75	4.75
3.375	4.75	4.125	4.375	3.0	4.5	4.5	3.5	3.5	2.125	3.75	3.5	3.875	5.5	3.25	2.5	3.625	4.0	4.375	2.5	2.5
4.5	4.5	4.5	3.5	4.0	3.0	5.0	4.625	5.0	3.75	4.375	3.875	4.375	4.375	2.25	4.0	3.125	5.0	4.875	4.0	4.0
Averages.....	4.275	4.554	4.320	4.420	4.016	4.066	4.104	4.220	3.029	4.075	4.062	4.150	4.375	4.466	4.083	4.179	4.121	4.275	4.399	3.779

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.			
Maximum measurements.	B¹	5.0	1.9685	B¹	5.625	2.2145	B¹	5.5	2.1653	B¹	5.125	2.0177
	B²	5.5	2.1653	B²	5.5	2.1653	B²	5.75	2.2637	B²	5.5	2.1653
	B³	5.625	2.2145	B³	5.125	2.0177	B³	6.0	2.3622	B³	5.375	2.1161
	B⁴	5.375	2.1161	B⁴	5.5	2.1653	B⁴	5.5	2.1653	B⁴	5.875	2.3129
	B⁵	5.5	2.1653	B⁵	5.5	2.1653	B⁵	6.0	2.3622			
Highest.....		5.625	2.2145		5.625	2.2145		6.0	2.3622		5.875	2.3129
Minimum measurements.	B¹	3.125	1.2303	B¹	2.875	1.1318	B¹	2.875	1.1318	B¹	3.125	1.2303
	B²	3.625	1.4271	B²	3.0	1.1811	B²	2.875	1.1318	B²	2.75	1.0820
	B³	3.25	1.2795	B³	2.0	0.7874	B³	2.5	0.9842	B³	2.5	0.9842
	B⁴	3.25	1.2795	B⁴	2.125	0.8560	B⁴	2.0	0.7874	B⁴	2.0	0.7874
	B⁵	2.5	0.9842	B⁵	2.0	0.7874	B⁵	2.5	0.9842			
Lowest.....		2.5	0.9842		2.0	0.7874		2.0	0.7874		2.0	0.7874
Average measurements..	B¹	4.275	1.6830	B¹	4.104	1.6157	B¹	4.150	1.6336	B¹	4.121	1.6224
	B²	4.554	1.7929	B²	4.320	1.7007	B²	4.375	1.7224	B²	4.275	1.6830
	B³	4.320	1.7007	B³	3.929	1.5468	B³	4.466	1.7582	B³	4.399	1.7318
	B⁴	4.420	1.7401	B⁴	4.075	1.6043	B⁴	4.083	1.6074	B⁴	3.779	1.4877
	B⁵	4.016	1.5810	B⁵	4.062	1.5992	B⁵	4.179	1.6452			
Average.....		4.275	1.6830		4.098	1.6133		4.245	1.6712		4.143	1.6310
Measurements above average..			90			79			77			63
Measurements below average..			84			71			73			57







TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		COTSWOLD.																				
Catalogue number of samples..		185. SIDE.					185. HIP.				185. BELLY.				186. SHOULDER.				186. SIDE.			
Length of fiber in crimp .....		9½ inches.					7½ inches.				6½ inches.				6 inches.				6¾ inches.			
Number of crimps per inch....		—					—				—				—				—			
Number of section .....		B¹.	B².	B³.	B⁴.	B⁵.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.
Actual measurement in centimillimeters.		3.875	4.25	4.0	3.625	3.25	4.0	3.5	4.6	4.0	3.625	3.75	2.0	2.875	5.0	5.0	5.25	5.625	3.875	4.375	4.375	3.875
		3.625	4.25	4.25	4.25	3.5	4.5	4.5	4.0	4.5	3.0	3.375	4.75	2.5	4.375	4.0	4.625	4.5	3.0	4.875	4.375	3.5
		4.0	4.5	3.0	5.375	5.25	4.0	4.875	4.125	6.25	4.75	3.875	3.375	3.75	4.0	3.875	5.0	5.0	2.5	4.125	5.375	5.375
		4.25	4.125	4.0	5.0	3.75	3.25	4.625	4.375	4.125	3.5	4.0	4.75	3.75	4.75	5.375	4.0	4.5	5.375	4.25	5.25	4.875
		4.5	4.0	3.875	5.5	5.0	3.375	4.625	4.5	5.0	4.0	4.625	4.0	3.25	4.25	3.625	4.5	4.0	3.0	3.875	3.75	4.5
		4.5	5.0	3.625	4.875	4.25	3.0	3.875	3.75	2.0	3.375	3.5	4.5	3.25	4.5	4.5	5.875	6.0	4.0	4.125	6.375	2.875
		4.5	3.0	3.875	3.875	2.875	3.5	4.025	3.875	4.5	4.125	4.5	3.875	3.75	4.25	3.375	4.0	4.75	4.0	2.875	4.0	2.25
		4.0	5.25	3.125	4.125	5.25	4.75	4.375	5.5	4.0	3.0	3.5	3.875	3.625	4.375	4.75	4.5	3.5	3.625	4.0	5.5	6.0
		4.25	4.5	4.0	5.0	3.25	5.0	6.0	4.125	5.25	3.375	4.125	3.375	4.5	4.25	5.875	5.0	5.25	4.5	5.5	4.0	6.0
		4.5	4.125	4.125	3.25	4.375	5.5	4.125	4.625	5.0	4.0	4.25	4.25	2.75	4.875	3.5	4.25	4.6	4.0	3.5	3.0	4.5
		3.5	3.625	4.5	3.75	4.375	3.875	5.625	5.0	4.5	3.75	4.375	4.0	3.5	4.25	3.5	5.25	4.5	5.0	5.75	4.0	3.875
		4.375	4.0	3.625	4.5	4.25	3.375	5.5	4.5	2.5	4.5	3.25	3.375	3.0	3.875	4.875	5.875	4.75	4.75	3.0	5.0	4.375
		3.5	4.75	4.75	5.0	3.875	4.625	4.25	4.6	4.125	4.5	4.375	4.375	4.0	4.875	4.75	5.25	4.5	4.0	4.5	2.375	5.0
		4.125	4.5	4.25	4.875	4.5	4.5	4.125	5.25	5.0	3.5	2.875	4.0	4.5	5.25	5.375	4.0	5.0	5.0	3.5	2.375	5.0
		3.875	4.0	3.875	4.75	3.875	3.375	6.0	4.25	5.25	3.5	4.25	3.875	3.25	3.75	4.0	5.75	4.0	3.5	5.5	4.0	4.0
		3.625	4.0	3.375	3.25	4.25	4.375	4.875	4.5	4.0	3.875	4.375	3.875	4.0	3.375	5.0	4.0	4.5	4.5	3.875	2.75	4.75
		4.5	3.875	4.0	4.25	3.25	5.0	4.0	3.625	5.25	4.0	4.5	4.5	3.25	4.375	4.375	4.75	5.5	4.25	4.75	3.25	4.5
		4.0	3.5	3.625	4.0	3.5	4.75	5.25	3.75	3.75	3.25	3.6	4.75	4.25	4.5	5.375	4.0	4.25	4.875	3.875	4.125	4.5
		4.25	3.0	4.375	4.875	4.875	4.25	4.625	4.125	4.875	3.25	3.6	4.0	4.0	3.815	5.0	4.75	3.875	4.25	3.5	4.25	2.875
		4.125	4.5	3.25	4.625	4.625	4.375	5.375	3.625	5.125	3.75	8.25	4.125	3.75	4.75	4.625	4.375	4.5	4.875	4.625	4.25	3.0
4.375	4.0	4.25	3.5	4.75	3.5	4.5	2.25	4.625	4.375	4.75	4.0	4.0	3.375	4.375	4.25	4.375	3.5	2.5	3.125	5.0		
5.0	5.125	4.0	4.375	4.0	4.5	5.0	4.25	3.5	4.0	3.5	4.0	4.5	3.75	6.0	4.0	5.75	3.375	3.875	4.0	5.25		
4.0	4.875	3.75	4.375	3.875	5.0	4.5	3.875	2.125	4.375	4.0	4.75	4.875	3.75	4.5	4.5	4.125	4.0	2.625	4.5	3.75		
4.0	4.75	4.0	3.875	4.75	4.375	4.875	5.25	4.875	4.75	4.5	4.5	3.375	5.0	4.5	4.625	5.0	4.0	4.375	4.5	4.5		
4.0	3.0	4.25	4.0	4.25	4.375	4.75	4.5	5.25	4.5	4.0	4.5	3.25	5.375	4.375	5.25	3.625	2.875	6.0	4.5	4.25		
3.5	4.75	3.875	4.125	4.0	4.375	4.0	2.75	4.5	3.25	3.0	3.125	3.5	4.5	5.625	6.25	3.0	4.0	6.5	4.125	5.0		
4.0	4.625	4.25	5.0	4.875	3.875	4.875	4.875	5.0	4.75	4.25	5.0	4.0	4.75	5.0	4.25	3.5	4.25	4.75	5.625	5.0		
4.375	3.025	4.875	4.875	3.875	4.875	3.25	4.25	4.875	3.75	3.5	3.75	4.0	4.625	4.0	4.75	3.5	6.0	6.25	3.5	7.0		
3.625	4.25	4.25	4.25	3.75	4.0	5.25	4.625	4.5	4.0	4.0	4.625	4.0	4.0	4.0	4.875	4.875	3.75	5.5	4.125	5.0		
3.875	5.0	4.375	5.0	4.75	4.5	2.75	4.75	6.75	4.875	4.5	4.0	3.375	3.5	6.0	6.0	4.375	4.875	5.25	5.125	6.5		
Averages .....		4.070	4.208	3.972	4.404	4.151	4.225	4.633	4.262	4.433	5.906	3.908	4.041	3.683	4.387	4.570	4.708	4.362	4.165	4.300	4.187	4.441

		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:																
Maximum measurements		B¹	5.0	1.9685	B¹	5.5	2.1653	B¹	4.875	1.9192	B¹	5.875	2.3129	B¹	6.000	2.3622
		B²	5.25	2.0669	B²	6.0	2.3622	B²	4.875	1.9192	B²	5.875	2.3129	B²	6.000	2.3622
		B³	4.875	1.9192	B³	5.5	2.1653	B³	5.000	1.9685	B³	6.000	2.3622	B³	5.750	2.2637
		B⁴	5.5	2.1653	B⁴	5.75	2.2637	B⁴	4.625	1.8208	B⁴	6.000	2.3622	B⁴	6.500	2.5590
		B⁵	5.25	2.0669												
Highest .....			5.5	2.1653		6.0	2.3622		5.000	1.9685		6.000	2.3622		6.500	2.5590
Minimum measurements.		B¹	3.5	1.3779	B¹	3.0	1.1811	B¹	3.000	1.1811	B¹	3.375	1.3287	B¹	2.500	0.9842
		B²	3.0	1.1811	B²	2.75	1.0826	B²	2.875	1.1318	B²	3.375	1.3287	B²	2.500	0.9842
		B³	3.0	1.1811	B³	2.25	0.8858	B³	2.000	0.7874	B³	4.000	1.5748	B³	2.375	0.9550
		B⁴	3.25	1.2795	B⁴	2.0	0.7874	B⁴	2.500	0.9842	B⁴	3.000	1.1811	B⁴	2.250	0.8858
		B⁵	2.875	1.1811												
Lowest .....			2.875	1.1811		2.0	0.7874		2.000	0.7874		3.000	1.1811		2.250	0.8858
Average measurements.		B¹	4.070	1.6023	B¹	4.225	1.6633	B¹	3.906	1.5385	B¹	4.387	1.7271	B¹	4.165	1.6397
		B²	4.208	1.6566	B²	4.633	1.8240	B²	3.906	1.5385	B²	4.570	1.7992	B²	4.800	1.6999
		B³	3.972	1.5637	B³	4.262	1.6770	B³	4.041	1.5909	B³	4.708	1.8585	B³	4.187	1.6484
		B⁴	4.404	1.7338	B⁴	4.433	1.7452	B⁴	3.683	1.4499	B⁴	4.362	1.7173	B⁴	4.441	1.7484
		B⁵	4.161	1.6342												
Average .....			4.161	1.6361		4.388	1.7275		3.885	1.5295		4.506	1.7740		4.278	1.6823
Measurements above average.....				72			67			64			52			58
Measurements below average.....				78			58			56			68			62



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		COTSWOLD.																
Catalogue number of samples..		186. HIP.				186. BELLY.			187. SHOULDER.					187. SIDE.				
Length of fiber in crimp.....		9 inches.				5½ inches.			7½ inches.					8½ inches.				
Number of crimps per inch....		—				—			—					—				
Number of section .....		B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>5</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>5</sup> .
Actual measurement in centimillimeters.	4.75	5.5	5.875	3.5	4.0	5.75	4.375	3.875	3.75	4.25	3.75	4.0	4.25	5.5	5.0	3.625	3.0	
	4.875	7.125	4.5	6.0	4.75	5.375	5.625	3.875	5.0	3.75	3.75	4.875	4.5	3.75	3.875	4.0	3.25	
	4.0	4.0	3.5	3.5	4.75	6.125	3.625	4.375	4.0	5.875	3.625	4.5	4.0	3.5	4.875	3.75	3.5	
	5.5	4.875	5.5	4.875	4.75	4.375	3.25	4.0	4.375	4.375	5.25	5.0	4.5	3.0	4.0	3.125	4.125	
	4.5	4.875	5.5	5.125	4.625	5.0	3.0	4.125	3.5	3.75	3.5	3.75	2.875	5.25	3.125	2.0	4.25	
	3.25	4.375	3.5	1.75	6.0	5.5	3.5	3.75	4.5	4.0	4.5	4.75	4.125	5.125	3.75	2.125	5.0	
	4.5	5.0	5.625	3.75	4.75	4.0	4.375	5.0	4.875	3.5	3.875	2.75	3.5	5.75	3.25	3.0	4.0	
	5.375	7.25	3.75	4.5	4.0	5.875	4.0	3.5	3.625	4.25	1.75	3.875	3.25	5.25	2.875	2.0	5.0	
	5.0	4.375	5.5	4.75	4.875	3.375	3.375	3.5	5.25	4.875	2.5	2.875	4.5	5.375	4.75	3.5	5.875	
	6.25	4.5	5.75	1.5	5.5	4.875	3.75	4.0	4.0	2.875	3.875	3.75	5.25	4.875	4.5	4.625	2.75	
	4.0	4.0	3.75	4.25	3.75	5.0	4.625	4.0	3.875	4.0	3.25	2.625	4.0	7.0	3.25	2.5	3.875	
	4.625	5.0	5.625	4.0	6.5	4.25	4.375	4.5	5.25	2.125	2.875	4.75	4.25	5.0	3.75	4.125	5.875	
	4.125	3.25	4.375	2.5	3.375	5.5	5.0	3.5	4.125	3.25	4.375	3.5	3.25	5.0	6.25	2.875	4.25	
	5.0	6.25	3.75	4.5	3.75	3.375	4.875	3.25	4.5	3.5	4.875	4.375	3.875	6.0	3.375	5.0	5.25	
	4.125	5.0	5.5	2.25	6.0	3.75	4.0	3.5	4.25	5.0	2.875	1.875	4.75	3.875	4.75	5.5	3.5	
	4.25	4.75	4.625	3.5	3.875	5.75	3.375	4.75	4.5	4.625	3.875	3.75	3.25	3.375	3.5	5.625	3.875	
	6.5	5.125	3.0	3.5	3.875	5.375	5.75	4.5	3.375	3.875	4.125	2.875	4.375	4.875	3.5	4.0	2.875	
	4.0	5.5	5.25	3.25	3.75	4.5	4.5	4.25	4.5	4.275	4.0	2.875	4.0	3.5	2.75	3.5	2.5	
	6.0	4.0	3.0	4.5	4.875	4.375	4.25	4.25	5.25	4.75	4.875	3.375	5.75	4.5	2.25	4.25	3.875	
	4.125	6.0	4.25	3.0	5.25	5.75	4.875	3.75	5.25	4.875	1.875	3.5	4.875	3.5	4.0	3.5	4.875	
4.375	4.75	3.25	6.5	3.875	4.25	5.0	4.375	3.875	4.125	3.5	3.5	4.0	5.75	5.5	2.5	2.75		
2.375	5.75	3.875	4.25	4.75	4.5	4.5	3.25	4.5	3.875	3.625	4.0	3.75	5.25	4.0	4.0	2.5		
4.75	4.5	3.5	5.25	4.875	3.75	4.875	2.625	5.75	3.375	3.75	3.625	5.625	4.875	3.5	4.375	3.875		
5.875	5.0	6.5	6.25	4.5	4.5	4.25	4.0	4.25	5.0	4.25	2.875	3.25	3.875	3.75	4.875	3.875		
5.5	4.75	4.625	2.75	4.125	5.25	4.75	3.75	4.625	4.5	4.0	3.25	4.375	4.5	4.5	2.75	4.5		
6.5	6.125	4.0	4.75	3.875	5.25	3.375	4.25	4.375	2.75	3.5	3.875	4.0	3.5	4.75	2.75	3.5		
5.25	3.75	4.0	4.875	5.875	4.75	4.75	3.5	4.0	3.25	4.0	3.75	4.25	4.5	3.25	4.0	4.75		
5.5	4.0	6.5	5.0	4.25	4.25	4.25	4.5	2.875	5.0	3.875	2.75	3.0	3.875	3.125	3.0	4.625		
4.875	3.0	4.25	3.125	5.0	4.0	4.5	4.125	4.0	3.5	3.375	3.375	5.25	3.0	4.25	4.375	4.625		
4.5	4.375	5.25	3.75	5.25	4.75	5.625	4.5	4.0	5.125	4.125	3.0	3.875	3.25	4.5	5.375	5.0		
Averages.....	4.807	4.891	4.595	4.030	4.629	4.770	4.345	3.970	4.333	4.052	3.679	3.554	4.150	4.529	3.950	3.687	3.999	

		186. HIP.			186. BELLY.			187. SHOULDER.					187. SIDE.			
Recapitulation and reduction:		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Maximum measurements.	B <sup>1</sup>	6.500	2.5590	B <sup>1</sup>	6.500	2.5590	B <sup>1</sup>	5.000	1.9685	B <sup>1</sup>	5.625	2.2145				
	B <sup>2</sup>	7.125	2.8051	B <sup>2</sup>	6.125	2.4114	B <sup>2</sup>	5.750	2.2637	B <sup>2</sup>	7.000	2.7559				
	B <sup>3</sup>	6.500	2.5390	B <sup>3</sup>	5.750	2.2637	B <sup>3</sup>	5.375	2.1161	B <sup>3</sup>	6.250	2.4606				
	B <sup>4</sup>	6.500	2.5590				B <sup>4</sup>	5.250	2.0689	B <sup>4</sup>	5.625	2.2145				
Highest.....		7.125	2.8051		6.500	2.5590		5.750	2.2637		7.000	2.7559				
Minimum measurements.	B <sup>1</sup>	2.375	0.9350	B <sup>1</sup>	3.375	1.3287	B <sup>1</sup>	2.625	1.0334	B <sup>1</sup>	2.875	1.1318				
	B <sup>2</sup>	3.000	1.1811	B <sup>2</sup>	3.375	1.3287	B <sup>2</sup>	2.875	1.1318	B <sup>2</sup>	3.000	1.1811				
	B <sup>3</sup>	3.000	1.1811	B <sup>3</sup>	3.000	1.1811	B <sup>3</sup>	2.125	0.8366	B <sup>3</sup>	2.250	0.8833				
	B <sup>4</sup>	1.500	0.5905				B <sup>4</sup>	1.750	0.6889	B <sup>4</sup>	2.000	0.7874				
Lowest.....		1.500	0.5905		3.000	1.1811		1.750	0.6889		2.000	0.7874				
Average measurements.	B <sup>1</sup>	4.807	1.8925	B <sup>1</sup>	4.629	1.8224	B <sup>1</sup>	3.970	1.5629	B <sup>1</sup>	4.150	1.6333				
	B <sup>2</sup>	4.891	1.9255	B <sup>2</sup>	4.770	1.8779	B <sup>2</sup>	4.333	1.7059	B <sup>2</sup>	4.529	1.7890				
	B <sup>3</sup>	4.595	1.8090	B <sup>3</sup>	4.345	1.7106	B <sup>3</sup>	4.052	1.5952	B <sup>3</sup>	3.950	1.5551				
	B <sup>4</sup>	4.030	1.5866				B <sup>4</sup>	3.679	1.4484	B <sup>4</sup>	3.687	1.4515				
Average.....		4.580	1.8031		4.581	1.8035		3.917	1.5421		4.051	1.5948				
Measurements above average.....		59			44			76			67					
Measurements below average.....		61			46			74			83					



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of samples..		COTSWOLD.																		
		187. HIP.				187. BELLY.			188. SHOULDER.				188. SIDE.				188. HIP.			
		7½ inches.				4 inches.			6½ inches.				7½ inches.				7½ inches.			
		B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.
	3.5	4.5	3.75	4.0	3.25	2.875	4.0	3.25	4.5	4.0	1.875	4.0	3.875	5.0	4.5	3.0	7.75	2.75	3.75	
	4.0	4.75	4.875	5.875	3.375	3.025	3.375	3.375	3.25	4.0	1.5	3.875	3.75	4.375	4.5	3.875	4.5	3.875	3.625	
	4.875	6.375	4.0	4.5	4.0	2.025	3.5	3.625	4.0	4.0	3.0	3.875	4.5	3.375	4.125	3.25	3.0	5.0	3.5	
	4.5	5.5	5.0	5.625	4.0	3.75	4.0	3.25	3.375	2.5	2.5	3.75	4.25	3.625	2.5	3.5	4.25	4.75	4.5	
	4.75	4.5	6.375	5.0	4.0	2.5	3.125	3.75	4.25	3.0	2.875	4.0	3.5	5.0	2.75	3.0	5.0	4.75	3.875	
	5.375	4.75	4.0	4.6	2.625	3.5	2.875	3.25	3.0	2.375	2.0	2.875	3.0	3.25	1.5	3.125	3.5	3.25	3.375	
	4.5	6.0	4.5	5.5	3.5	3.75	4.0	4.75	3.75	2.5	2.375	3.375	4.0	4.0	4.0	3.125	2.25	4.5	5.5	
	4.875	4.5	4.5	4.0	3.25	3.5	4.5	3.375	4.0	4.0	3.75	4.875	3.25	4.375	2.75	3.5	3.875	2.5	3.0	
	5.375	4.625	4.875	3.875	3.25	4.0	3.0	3.25	3.75	3.6	1.875	4.75	3.25	4.5	3.5	3.375	5.25	3.5	3.5	
	4.0	3.875	5.625	4.0	3.5	3.25	2.5	3.0	2.5	2.5	4.75	2.75	4.375	3.375	1.25	3.125	6.125	5.25	4.25	
	5.0	5.0	4.0	4.25	3.5	3.25	4.0	4.0	2.5	3.0	3.875	4.25	5.5	4.125	2.5	4.125	4.125	2.25	4.25	
	4.0	3.5	4.875	3.5	3.25	3.25	3.875	4.0	4.375	2.375	3.375	3.5	3.5	4.0	3.875	4.125	6.875	5.0	3.75	
	4.75	5.125	3.25	3.5	4.0	3.25	3.25	2.875	2.75	2.125	3.75	3.375	4.25	4.375	4.75	3.375	5.25	4.125	3.875	
	6.25	4.75	0.0	3.0	4.0	3.6	3.875	4.0	4.375	2.375	3.375	3.5	3.5	4.0	3.875	4.125	6.875	5.0	3.75	
	5.375	6.0	4.6	5.25	3.625	2.875	3.375	4.375	3.25	2.625	4.25	4.375	4.5	2.75	3.5	2.75	4.25	2.5	4.25	
	4.125	4.5	4.75	5.875	4.125	3.875	4.75	2.125	4.0	3.75	3.25	3.625	4.0	2.25	2.5	6.0	5.0	3.5	5.0	
	3.25	3.625	3.25	3.5	3.875	3.25	4.0	2.875	3.875	2.75	2.5	4.5	2.875	2.625	1.75	3.0	4.375	5.25	4.375	
	3.875	5.5	3.5	5.5	4.0	3.5	3.0	4.125	2.5	3.5	2.0	2.875	3.875	3.25	3.75	3.0	5.375	4.25	4.6	
	3.5	5.25	4.375	4.5	3.75	3.0	2.625	3.125	3.25	3.75	3.5	3.375	2.625	3.5	4.25	2.75	2.875	2.5	4.375	
	4.5	6.0	4.25	2.625	4.0	3.5	4.25	4.0	4.5	3.5	3.5	3.875	5.375	3.5	3.75	5.25	4.875	4.0	5.0	
	3.25	3.5	4.875	4.25	4.0	4.0	2.0	3.375	5.0	3.5	3.0	3.75	3.5	3.625	3.0	4.75	4.0	4.5	4.25	
	4.0	6.5	5.375	4.75	4.0	4.25	4.875	4.25	4.25	3.25	4.5	3.0	3.75	4.75	4.0	3.5	5.25	3.875	3.0	
	5.5	6.75	4.5	3.625	3.5	3.5	4.0	3.0	2.5	3.375	3.5	3.75	4.75	3.875	4.5	2.5	4.75	3.25	4.75	
	4.0	4.0	4.625	4.375	3.25	3.875	2.25	4.75	3.5	1.625	4.875	3.875	4.25	2.125	3.5	4.25	4.125	3.5	3.0	
	4.0	4.875	3.375	3.375	4.875	3.75	3.5	3.875	3.875	2.875	2.875	2.875	3.375	4.125	4.125	4.125	5.0	4.5	5.75	
	3.875	5.5	4.0	4.0	4.375	3.875	3.75	3.625	1.75	3.75	4.125	4.25	3.75	4.625	1.75	4.5	4.375	4.0		
	5.0	6.375	5.5	4.75	3.75	3.875	2.5	2.5	4.0	2.625	3.5	3.75	5.25	3.75	3.875	5.375	4.875	4.0		
	4.0	5.0	4.75	3.75	4.0	4.0	4.25	3.375	3.0	4.0	3.25	3.25	5.0	3.5	2.875	3.5	4.625	5.875		
	3.375	4.0	4.25	5.0	3.625	3.875	3.0	3.75	4.625	3.25	4.5	4.5	4.5	2.75	3.25	3.25	3.5	3.0		
Averages .....	4.399	4.891	4.445	4.440	3.745	3.483	3.495	3.525	3.650	3.112	3.233	3.733	4.058	3.725	3.320	3.583	4.545	3.995	4.102	

Recapitulation and reduction:		No. of section.		In centimillimeters.		In thousandths of inch.	
		B¹	B²	B¹	B²	B¹	B²
Maximum measurements.	B¹	6.250	2.4006	4.875	1.9192	4.875	1.9192
	B²	6.000	2.3022	4.000	1.5748	4.025	1.8208
	B³	6.000	2.3622	4.750	1.8760	4.000	1.6748
	B⁴	5.875	2.3129			4.875	1.9192
Highest .....		6.250	2.4006	4.875	1.9192	4.875	1.9192
Minimum measurements.	B¹	3.250	1.2705	2.625	1.0334	2.125	0.8300
	B²	3.500	1.3779	2.500	0.9842	2.500	0.9842
	B³	2.250	0.8858	2.000	0.7874	1.625	0.6397
	B⁴	2.625	1.0334			1.500	0.5905
Lowest .....		2.250	0.8858	2.000	0.7874	1.500	0.5905
Average measurements.	B¹	4.399	1.7318	3.745	1.4744	3.525	1.3677
	B²	4.891	1.9255	3.483	1.3712	3.650	1.4370
	B³	4.445	1.7499	3.495	1.3759	3.112	1.2251
	B⁴	4.440	1.7503			3.233	1.2728
Average .....		4.545	1.7893	3.574	1.4070	3.380	1.3307
Measurements above average .....		56		45		59	
Measurements below average .....		64		45		61	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		COTSWOLD.																													
Catalogue number of samples..		188. BELLY.				189. SHOULDER.				189. SIDE.			189. HIP.			189. BELLY.			190. SHOULDER.												
Length of fiber in crimp.....		5½ inches.				4 inches.				4½ inches.			4½ inches.			2 inches.			4½ inches.												
Number of crimps per inch....		—				—				—			—			—			—												
Number of section.....		B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.										
Actual measurement in centimillimeters.		4.0	4.025	3.5	4.625	2.5	3.0	3.875	3.75	5.0	4.5	3.875	4.675	3.0	4.5	4.0	4.5	4.375	3.75	4.375	2.5										
Averages .....		3.616	3.750	3.916	3.790	3.757	3.862	4.021	3.687	4.325	4.462	4.349	4.278	4.329	4.187	3.991	4.054	3.726	4.264	4.291	3.779										
Recapitulation and reduction:		No. of section.		In centimillimeters.		In thousandths of inch.		No. of section.		In centimillimeters.		In thousandths of inch.		No. of section.		In centimillimeters.		In thousandths of inch.		No. of section.		In centimillimeters.		In thousandths of inch.							
Maximum measurements.		B¹	4.75	1.8700	B¹	3.0	1.9685	B¹	5.375	2.1161	B¹	3.875	2.3129	B¹	3.0	1.9685	B¹	5.375	2.1161	B¹	3.375	2.1161	B¹	4.75	1.8700	B¹	3.0	1.9685			
Highest .....		B²	5.25	2.0660	B²	3.5	2.1633	B²	6.0	2.3622	B²	4.0	2.3622	B²	5.0	2.3622	B²	4.5	2.3622	B²	5.875	2.3129	B²	4.875	1.9192	B²	4.0	1.9685	B²	3.5	2.1633
Minimum measurements.		B³	2.50	0.9842	B³	2.5	0.9842	B³	3.0	1.1811	B³	2.5	0.9842	B³	2.0	0.9842	B³	2.0	1.1811	B³	2.0	1.1811	B³	2.5	0.9842	B³	2.875	1.0334	B³	2.5	0.9842
Lowest .....		B⁴	2.75	0.9858	B⁴	2.5	0.8858	B⁴	3.0	1.1811	B⁴	2.0	0.9842	B⁴	2.0	0.9842	B⁴	2.0	1.1811	B⁴	2.0	1.1811	B⁴	2.5	0.9842	B⁴	2.25	0.8858	B⁴	2.5	0.9842
Average measurements..		B¹	3.613	1.4224	B¹	3.757	1.4791	B¹	4.325	1.7027	B¹	4.278	1.6842	B¹	3.991	1.5712	B¹	4.264	1.5444	B¹	4.254	1.6747	B¹	3.750	1.4703	B¹	3.916	1.5417	B¹	3.750	1.4703
Average .....		B²	3.750	1.4703	B²	3.862	1.5204	B²	4.462	1.7566	B²	4.349	1.7122	B²	4.329	1.7043	B²	4.054	1.5960	B²	4.291	1.6893	B²	3.750	1.4703	B²	3.916	1.5417	B²	3.750	1.4703
Measurements above average..		B³	3.916	1.5417	B³	4.021	1.5890	B³	4.349	1.7122	B³	4.187	1.6184	B³	3.725	1.4963	B³	3.779	1.4677	B³	3.779	1.4677	B³	3.916	1.5417	B³	3.916	1.5417	B³	3.916	1.5417
Measurements below average..		B⁴	3.700	1.4566	B⁴	3.687	1.4515	B⁴	4.378	1.7206	B⁴	4.264	1.6767	B⁴	3.923	1.5444	B⁴	4.264	1.6767	B⁴	4.264	1.6767	B⁴	3.700	1.4566	B⁴	3.700	1.4566	B⁴	3.700	1.4566
		66		63		45		47		43		43		49		42															



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of samples..	COTSWOLD.												LEICESTER.					
	190. SIDE.			190. HIP.			190. BELLY.			198.			113.					
	4½ inches.			4¼ inches.			4 inches.			13¼ inches.								
Length of fiber in crimp.....																		
Number of crimps per inch....																		
Number of section.....	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.	B⁵.
4.875	4.75	3.75	5.0	4.0	5.0	4.875	4.125	4.5	3.375	4.0	5.125	5.0	3.0	3.0	4.0	3.5	4.25	4.25
4.375	6.6	3.0	5.0	5.375	4.0	5.125	4.5	3.5	3.625	4.25	5.75	4.25	3.5	3.25	4.5	3.25	4.5	4.5
4.25	4.5	4.0	4.75	5.375	5.375	4.875	5.125	3.5	3.5	4.125	4.5	4.0	4.5	4.0	4.75	5.0	3.5	4.0
3.5	4.25	4.625	4.815	5.75	4.875	4.6	4.75	3.5	4.5	4.5	4.375	5.25	4.0	4.0	4.375	4.5	4.0	4.0
4.25	4.75	4.0	4.5	5.0	5.0	4.5	4.5	4.0	3.875	5.75	4.5	4.125	3.0	4.0	4.375	3.5	4.25	4.25
4.0	4.5	3.625	3.875	4.75	5.25	5.0	4.75	5.75	3.5	4.375	4.0	4.375	3.5	4.25	3.5	4.0	4.0	4.5
4.5	3.5	3.0	5.5	5.375	3.875	4.5	4.5	3.5	4.25	4.75	4.75	4.875	3.5	3.75	3.25	3.75	4.75	4.75
6.25	4.5	4.0	5.0	4.815	3.375	4.625	4.0	3.875	4.75	4.25	5.25	2.5	3.5	5.00	3.125	4.25	4.25	4.25
3.875	4.0	4.5	3.5	5.0	4.25	4.625	5.375	4.375	5.0	5.0	4.75	4.75	3.5	3.5	4.0	3.75	3.5	3.5
4.375	4.0	4.125	3.25	5.25	3.0	5.125	4.5	4.0	3.375	4.625	6.0	3.5	2.75	3.25	3.75	3.75	4.5	4.5
4.375	4.25	3.875	5.375	3.75	4.375	4.875	4.75	4.25	3.875	3.5	3.75	4.75	3.5	3.5	4.0	4.5	4.5	4.5
4.0	4.0	3.875	4.25	4.875	4.875	3.5	4.0	5.0	2.75	4.5	3.5	5.5	4.75	4.0	3.0	4.0	4.0	4.0
4.375	4.5	5.25	4.875	4.875	5.25	6.0	6.875	4.125	2.75	5.375	3.5	5.5	4.0	3.75	4.0	3.25	3.5	4.0
4.5	4.75	4.25	3.6	4.5	4.0	5.0	4.0	2.75	3.75	3.875	3.0	3.875	3.0	3.5	4.75	3.5	3.5	3.5
4.875	5.25	3.5	4.5	5.375	4.5	5.0	4.0	4.5	2.0	3.875	4.0	4.25	3.75	3.5	3.875	6.0	4.0	4.5
5.0	5.0	3.625	6.0	5.375	5.0	4.25	6.5	4.625	3.375	5.125	2.75	2.75	3.75	3.0	3.25	3.5	4.0	4.0
4.875	5.0	4.875	3.0	4.0	5.0	4.0	5.375	3.75	3.5	3.875	3.5	4.75	3.25	4.25	3.0	3.25	3.5	4.0
4.875	5.5	5.375	3.375	4.75	5.375	4.5	4.75	3.875	3.75	4.0	3.25	4.5	3.5	3.75	4.5	3.75	4.5	4.5
4.6	3.875	3.815	2.75	6.375	5.5	4.25	4.0	3.5	4.0	4.375	4.25	3.875	4.25	2.5	3.75	3.25	4.75	4.75
4.5	4.625	4.125	4.75	5.0	4.25	4.5	4.125	4.375	5.0	4.5	4.375	3.75	3.5	3.25	4.375	5.0	4.0	4.0
3.25	3.6	4.5	4.75	4.75	4.25	4.125	4.75	4.375	3.875	4.25	2.875	3.875	3.25	3.75	4.375	4.5	4.5	4.5
4.375	6.75	3.875	4.5	4.75	5.75	3.875	4.0	3.25	4.25	4.0	4.75	3.375	2.75	3.00	4.0	3.75	4.5	4.5
3.5	4.0	4.0	3.875	5.5	6.375	5.625	5.0	2.875	4.0	4.5	5.25	3.75	4.875	3.25	4.25	3.25	4.0	4.0
5.25	5.25	5.0	3.75	5.375	4.75	4.5	4.5	4.0	1.75	6.0	4.375	4.0	3.25	4.0	4.25	3.75	3.25	3.25
4.0	4.5	4.625	4.25	3.875	4.625	3.75	4.0	4.5	3.5	4.875	2.5	2.625	4.5	3.25	4.375	4.5	4.0	4.0
4.375	6.125	5.5	2.75	3.25	5.375	4.75	4.25	4.375	4.0	4.25	2.75	5.375	5.75	3.25	4.25	3.75	4.25	4.25
4.5	5.0	4.75	5.0	4.25	3.375	5.5	5.375	4.75	4.5	4.0	3.75	5.5	3.25	3.5	4.0	4.0	4.0	4.5
3.75	3.25	3.75	4.0	3.75	4.75	3.5	5.0	4.5	4.25	3.875	6.0	5.375	3.0	4.0	4.6	4.75	4.0	4.0
3.25	4.125	4.6	5.25	4.875	4.125	4.5	3.875	3.5	4.75	6.25	3.5	5.0	4.25	3.25	4.5	4.5	3.75	3.75
4.75	5.0	4.25	4.75	1.875	5.0	4.5	4.0	3.5	3.625	4.125	3.5	5.5	4.5	3.5	4.0	4.0	4.0	4.25
Averages.....	4.336	4.783	3.845	4.404	4.741	4.658	4.554	4.537	4.066	3.783	4.516	4.033	4.385	3.6416	3.5916	4.054	3.9666	4.1416

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.						
Maximum measurements	B¹	5.25	2.0660	B¹	6.0	2.3622	B¹	6.5	2.1653	B¹	4.75	1.8700	B¹	5.75	2.2637
	B²	6.5	2.5590	B²	6.375	2.5098	B²	6.5	2.5590	B²	6.25	2.4608	B²	6.0	1.9085
	B³	5.5	2.1653	B³	5.75	2.2637	B³	5.75	2.2637	B³	5.75	2.2637	B³	4.75	1.8700
	B⁴			B⁴			B⁴			B⁴	5.5	2.1653	B⁴	5.0	1.0685
Highest.....		6.5	2.5590		6.375	2.5098		6.5	2.5590		6.25	2.4608		5.75	2.2637
Minimum measurements.	B¹	3.25	1.2795	B¹	2.75	1.0826	B¹	3.5	1.3779	B¹	1.75	0.6889	B¹	2.75	1.0820
	B²	3.25	1.2795	B²	1.875	0.7381	B²	2.875	1.1318	B²	3.875	1.5255	B²	2.50	0.9842
	B³	3.0	1.1811	B³	3.0	1.1811	B³	2.75	1.0826	B³	2.5	0.9842	B³	3.0	1.1811
	B⁴			B⁴			B⁴			B⁴	2.5	0.9842	B⁴	3.25	1.2795
Lowest.....		3.0	1.1811		1.875	0.7381		2.75	1.0826		1.75	0.6889		2.50	0.9842
Average measurements..	B¹	4.336	1.7070	B¹	4.404	1.7338	B¹	4.554	1.7929	B¹	3.783	1.4893	B¹	3.641	1.4334
	B²	4.783	1.8830	B²	4.741	1.8065	B²	4.537	1.7882	B²	4.516	1.7779	B²	3.591	1.4137
	B³	3.845	1.6137	B³	4.653	1.8338	B³	4.066	1.6007	B³	4.033	1.5877	B³	4.054	1.5960
	B⁴			B⁴			B⁴			B⁴	4.385	1.7263	B⁴	3.966	1.5014
Average.....		4.321	1.7011		4.601	1.8114		4.385	1.7263		4.179	1.6452		3.879	1.5217
Measurements above average..		50		53		46		62			78				
Measurements below average..		40		37		44		58			72				



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		LINCOLN.																			
Catalogue number of samples..		59. SHOULDER.					59. SIDE.			59. HIP.			60. SHOULDER.				60. SIDE.				
Length of fiber in crimp.....		3½ inches.					3 inches.			3 inches.			3½ inches.				3½ inches.				
Number of crimps per inch....		—					—			—			—				—				
Number of section.....		B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>5</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	
Actual measurement in centimillimeters.	4.0	4.33	3.33	3.0	5.66	4.166	3.833	3.33	5.0	4.33	3.33	4.66	3.80	3.33	5.0	4.66	5.33	4.166	4.66	5.0	4.66
	4.33	4.66	4.0	4.0	4.33	3.166	5.33	3.33	5.33	5.0	4.66	4.33	3.50	3.33	4.66	4.166	5.0	5.0	5.0	4.0	4.0
	4.0	4.33	5.0	4.0	5.833	3.0	4.166	6.33	5.33	5.33	4.0	4.0	3.33	3.5	5.0	4.0	4.833	4.66	4.66	3.33	3.33
	3.33	4.66	3.0	5.0	4.66	3.33	3.33	4.5	3.33	3.66	6.0	5.33	4.0	4.33	4.0	5.33	4.33	4.66	6.33	4.66	4.66
	3.66	4.66	3.66	5.33	4.0	3.0	4.0	3.33	4.5	3.33	3.5	5.45	5.166	3.833	4.66	5.0	4.33	4.33	4.33	4.66	4.66
	5.0	4.0	4.5	3.33	5.0	4.0	3.66	3.33	3.33	5.66	4.0	4.33	4.66	4.33	5.66	3.833	6.0	4.0	4.0	3.5	3.5
	4.0	4.0	4.66	4.0	3.33	3.33	4.33	4.66	4.833	4.66	4.66	4.0	5.0	5.33	5.0	4.0	4.33	3.66	4.0	4.0	4.0
	5.33	3.0	4.0	4.0	5.0	5.33	4.33	4.166	4.33	5.0	4.66	4.0	4.66	6.0	4.833	4.66	5.33	3.66	5.0	5.0	5.0
	3.66	4.66	4.0	4.66	4.33	5.33	5.33	4.66	4.66	5.33	4.66	2.33	4.66	3.66	4.833	3.66	4.0	4.33	4.33	4.33	4.33
	5.0	2.66	3.66	5.33	3.0	4.33	3.833	3.66	6.0	6.33	4.33	5.33	2.66	5.0	4.66	4.66	4.0	4.0	4.0	4.0	4.0
	3.33	4.0	3.33	4.833	4.0	5.0	4.0	4.0	5.33	4.0	6.0	3.0	3.33	5.0	4.0	4.66	4.33	5.166	4.33	4.33	4.33
	4.0	5.0	4.66	3.33	3.33	4.0	4.0	3.0	4.66	2.66	4.66	4.0	4.0	2.66	4.66	4.0	4.33	6.0	4.0	4.0	4.0
	3.33	3.66	3.0	4.66	3.5	3.66	3.33	3.66	4.66	5.33	4.66	5.0	4.0	4.0	5.166	4.66	4.66	4.66	4.0	5.33	5.33
	3.66	3.66	5.0	3.0	4.5	5.33	4.33	4.0	4.66	3.33	4.33	5.0	4.66	4.166	4.0	4.66	5.33	4.0	4.0	4.0	4.0
	4.0	5.0	4.5	5.166	4.66	4.33	3.33	3.33	5.33	4.66	5.66	5.166	5.33	4.66	5.0	4.33	4.0	3.66	5.0	5.0	5.0
	3.66	4.0	3.33	5.0	4.66	4.33	4.0	3.33	4.66	4.66	5.0	5.33	5.833	6.0	3.33	4.0	5.0	4.33	4.66	4.66	4.66
	4.66	4.66	3.33	3.66	5.33	3.33	3.33	3.166	4.33	3.33	3.0	5.0	5.33	3.0	3.833	4.66	7.33	3.66	4.0	4.0	4.0
	3.66	3.66	4.66	4.0	4.0	4.166	4.66	5.66	5.0	4.33	4.33	2.66	4.66	5.33	3.66	4.66	4.33	3.0	4.66	4.66	4.66
	3.33	3.33	4.33	3.33	4.0	4.5	3.66	4.66	5.0	5.33	5.33	4.5	5.166	5.33	5.0	4.66	4.66	5.66	4.66	4.66	4.66
	4.0	3.33	3.0	3.33	5.166	3.0	4.66	3.33	4.66	4.0	4.66	4.66	5.33	4.33	4.0	4.66	5.0	5.33	4.33	4.33	4.33
4.166	5.833	5.166	4.166	4.833	3.166	3.33	3.33	2.66	5.33	4.66	3.833	4.5	4.833	4.33	4.166	4.66	5.0	3.33	3.33	3.33	
5.833	3.66	5.33	4.0	5.833	3.33	4.0	4.0	3.66	5.166	3.833	4.66	5.0	5.66	5.0	4.33	4.33	4.5	4.833	4.833	4.833	
5.33	4.0	5.33	3.33	3.33	4.66	4.66	3.33	5.66	3.33	5.33	4.66	4.33	4.33	5.0	5.0	2.33	4.0	4.66	4.66	4.66	
3.33	3.833	4.5	4.33	5.833	3.33	4.0	3.66	5.33	3.166	4.0	4.66	4.5	3.33	4.33	4.0	5.66	4.33	4.33	4.33	4.33	
4.66	4.0	4.0	4.66	4.5	3.66	3.5	5.33	4.0	4.66	5.166	5.33	5.0	4.66	4.66	3.66	3.66	3.33	4.33	4.33	5.0	
Averages.....	4.050	4.103	4.131	4.217	4.504	3.910	4.037	3.963	4.649	4.476	4.576	4.448	4.457	4.437	4.571	4.403	4.710	4.377	4.462	4.462	

Recapitulation and reduction:		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Maximum measurements.	B <sup>1</sup>	5.33	2.0984	B <sup>1</sup>	5.33	2.0984	B <sup>1</sup>	6.0	2.3622	B <sup>1</sup>	5.45	2.1456	B <sup>1</sup>	5.33	2.0984	
	B <sup>2</sup>	5.833	2.2964	B <sup>2</sup>	5.33	2.0984	B <sup>2</sup>	6.33	2.4921	B <sup>2</sup>	5.833	2.2964	B <sup>2</sup>	7.33	2.8858	
	B <sup>3</sup>	5.33	2.0984	B <sup>3</sup>	6.33	2.4921	B <sup>3</sup>	6.0	2.3622	B <sup>3</sup>	5.66	2.2283	B <sup>3</sup>	6.0	2.3622	
	B <sup>4</sup>	5.33	2.0984	B <sup>4</sup>	5.833	2.2964	B <sup>4</sup>	5.66	2.2283	B <sup>4</sup>	5.66	2.2283	B <sup>4</sup>	6.33	2.4921	
Highest.....		5.833	2.2964		6.33	2.4921		6.33	2.4921		5.833	2.2964		7.33	2.8858	
Minimum measurements.	B <sup>1</sup>	3.33	1.3110	B <sup>1</sup>	3.0	1.1811	B <sup>1</sup>	3.33	1.3110	B <sup>1</sup>	2.33	0.9173	B <sup>1</sup>	3.66	1.4409	
	B <sup>2</sup>	2.66	1.0472	B <sup>2</sup>	3.33	1.3110	B <sup>2</sup>	2.66	1.0472	B <sup>2</sup>	2.66	1.0472	B <sup>2</sup>	2.33	0.9173	
	B <sup>3</sup>	3.0	1.1811	B <sup>3</sup>	3.33	1.3110	B <sup>3</sup>	3.0	1.1811	B <sup>3</sup>	2.66	1.0472	B <sup>3</sup>	3.0	1.1811	
	B <sup>4</sup>	3.0	1.1811	B <sup>4</sup>	3.0	1.1811	B <sup>4</sup>	3.33	1.3110	B <sup>4</sup>	3.33	1.3110	B <sup>4</sup>	3.33	1.3110	
Lowest.....		2.66	1.0472		3.0	1.1811		2.66	1.0472		2.33	0.9173		2.33	0.9173	
Average measurements.	B <sup>1</sup>	4.050	1.5944	B <sup>1</sup>	3.910	1.5393	B <sup>1</sup>	4.649	1.8363	B <sup>1</sup>	4.448	1.7511	B <sup>1</sup>	4.403	1.7334	
	B <sup>2</sup>	4.103	1.6153	B <sup>2</sup>	4.037	1.5893	B <sup>2</sup>	4.476	1.7622	B <sup>2</sup>	4.457	1.7547	B <sup>2</sup>	4.710	1.8543	
	B <sup>3</sup>	4.131	1.6263	B <sup>3</sup>	3.963	1.5602	B <sup>3</sup>	4.576	1.8015	B <sup>3</sup>	4.437	1.7468	B <sup>3</sup>	4.377	1.7232	
	B <sup>4</sup>	4.217	1.6602	B <sup>4</sup>	4.504	1.7732	B <sup>4</sup>	4.571	1.7906	B <sup>4</sup>	4.571	1.7906	B <sup>4</sup>	4.462	1.7566	
Average.....		4.201	1.6539		3.970	1.5629		4.567	1.7980		4.475	1.7629		4.488	1.7609	
Measurements above average.....			56			38			46			58			48	
Measurements below average.....			69			37			29			42			52	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of samples..		LINCOLN.																	
		60. HIP.				60. BELLY.				61. SHOULDER.					61. SIDE.				
		3½ inches.				2½ inches.				6¼ inches.					6½ inches.				
		—				—				—					—				
Length of fiber in crimp.....																			
Number of crimps per inch....																			
Number of section.....		B¹	B²	B³	B⁴	B¹	B²	B³	B⁴	B¹	B²	B³	B⁴	B⁵	B¹	B²	B³	B⁴	B⁵
Actual measurement in centimillimeters.		5.0	4.66	3.66	4.66	3.66	4.0	4.66	3.33	4.33	4.0	4.66	4.0	3.66	4.0	3.33	2.66	3.0	3.66
		4.33	3.33	4.33	5.0	4.33	5.0	3.0	4.0	2.66	4.33	4.66	2.0	2.66	4.66	2.66	4.33	3.166	4.0
		5.33	4.33	4.0	4.66	4.0	3.33	3.33	3.33	3.33	3.66	5.166	3.0	4.0	3.33	4.33	3.33	3.33	4.33
		3.66	4.33	4.66	4.0	4.0	4.66	2.33	3.0	3.66	3.66	3.33	3.66	4.0	3.66	5.0	4.0	3.33	3.00
		4.0	4.66	4.0	3.66	5.33	4.0	3.33	2.66	4.00	5.33	4.0	3.0	4.33	3.33	3.66	3.33	3.66	4.0
		5.33	4.0	5.33	5.33	4.66	4.0	5.0	3.33	3.33	4.66	4.66	4.66	2.66	4.33	3.66	4.0	3.0	3.66
		5.0	4.0	4.0	5.60	4.66	4.5	4.33	4.0	4.33	4.33	3.66	4.33	3.0	4.33	2.66	3.33	3.33	3.33
		4.33	4.33	4.0	4.33	3.66	3.66	4.66	4.33	4.0	3.33	4.33	4.0	3.33	4.33	4.0	2.33	3.33	4.0
		5.0	4.66	4.66	3.66	3.66	4.0	4.0	3.66	4.0	3.33	4.0	3.33	4.0	4.33	4.33	4.33	2.33	2.33
		4.66	4.66	4.33	4.0	4.33	4.33	4.66	3.66	4.66	4.0	4.0	3.66	3.33	3.33	4.66	4.166	3.0	4.5
		3.33	4.0	4.33	2.66	5.60	3.33	3.66	4.66	4.66	4.5	3.66	3.0	3.66	4.0	3.66	4.0	4.33	3.166
		4.0	3.66	4.0	4.66	4.0	4.33	3.66	4.0	4.66	4.5	4.66	3.33	4.66	3.33	3.33	4.66	4.0	4.33
		4.0	5.33	4.66	4.0	3.66	3.66	4.0	3.33	4.66	2.66	4.66	4.33	3.0	4.0	2.66	3.66	5.0	3.33
		5.0	6.0	4.66	2.66	4.33	3.33	3.33	3.66	4.66	4.33	5.33	3.66	3.33	4.66	3.66	3.166	3.166	2.66
		4.0	6.0	5.0	4.66	3.33	3.33	2.0	4.66	4.66	4.0	4.66	3.66	3.33	3.66	3.66	3.33	3.66	2.66
		4.0	4.66	5.33	4.33	4.33	4.66	3.66	4.0	4.33	3.66	5.0	3.66	4.0	3.166	3.33	3.33	2.33	9.166
		3.0	3.33	4.0	4.33	3.33	3.0	3.33	4.0	3.33	4.66	4.33	4.0	2.66	3.833	2.33	3.33	3.66	4.166
		4.0	4.0	4.66	4.0	3.0	4.5	3.66	3.33	4.33	2.66	4.66	3.66	3.66	3.33	4.33	4.5	3.33	2.66
		3.33	3.0	4.33	4.33	2.0	4.66	4.0	4.0	3.66	3.66	2.66	4.0	3.33	4.166	4.66	3.66	3.66	3.33
		4.33	4.33	3.66	3.0	4.0	4.0	5.33	4.0	4.0	4.0	4.66	4.66	3.33	4.66	3.33	2.66	4.33	4.5
		4.66	3.66	4.166	4.5	4.33	3.66	4.33	4.66	4.0	3.66	4.166	4.33	3.0	3.833	3.166	3.66	3.33	4.33
		4.66	4.66	4.0	4.33	4.5	4.33	2.66	4.23	4.66	4.0	3.33	4.0	4.66	3.0	2.66	3.33	4.0	2.833
		4.66	3.33	3.66	4.66	3.33	4.0	3.33	3.33	4.33	5.0	3.33	4.0	3.33	2.833	4.0	3.166	3.33	3.166
		4.66	4.0	4.66	3.33	3.33	4.0	3.33	3.33	4.66	4.66	4.33	3.66	3.66	5.33	4.33	3.0	3.166	4.0
		5.66	4.66	3.33	4.5	3.33	3.833	4.66	3.66	4.0	4.66	4.66	3.33	3.33	3.66	3.833	2.0	4.0	4.33
Averages.....		4.397	4.303	4.296	4.279	3.963	3.950	3.869	3.766	4.083	3.089	4.256	3.743	3.476	3.736	3.702	3.591	3.451	3.577

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.			
Maximum measurements.	B¹	5.66	2.2283	B¹	5.66	2.2283	B¹	4.66	1.8340	B¹	5.33	2.0984
	B²	6.0	2.3622	B²	5.0	1.6685	B²	5.33	2.0984	B²	5.33	2.0984
	B³	5.33	2.0984	B³	5.33	2.0984	B³	5.33	2.0984	B³	4.50	1.7716
	B⁴	5.66	2.2283	B⁴	4.66	1.8346	B⁴	4.66	1.8346	B⁴	5.0	1.9685
Highest.....		6.0	2.3622		5.66	2.2283		5.33	2.0984		5.33	2.0984
Minimum measurements.	B¹	3.0	1.1811	B¹	2.0	0.7874	B¹	2.66	1.0472	B¹	2.33	0.9173
	B²	3.0	1.1811	B²	3.0	1.1811	B²	2.66	1.0472	B²	2.33	0.9173
	B³	3.33	1.3110	B³	2.0	0.7874	B³	2.66	1.0472	B³	2.0	0.7874
	B⁴	2.66	1.0472	B⁴	2.66	1.0472	B⁴	2.0	0.7874	B⁴	2.0	0.7874
Lowest.....		2.66	1.0472		2.0	0.7874		2.0	0.7874		2.0	0.7874
Average measurements..	B¹	4.397	1.7310	B¹	3.963	1.5602	B¹	4.083	1.6074	B¹	3.736	1.4708
	B²	4.303	1.6940	B²	3.950	1.6551	B²	3.089	1.5704	B²	3.702	1.4574
	B³	4.296	1.6913	B³	3.869	1.5232	B³	4.256	1.6755	B³	3.591	1.4137
	B⁴	4.279	1.6846	B⁴	3.766	1.4826	B⁴	3.743	1.4736	B⁴	3.451	1.3586
Average.....		4.318	1.6999		3.887	1.6308		3.909	1.5389		3.611	1.4216
Measurements above average..		57			53			72			67	
Measurements below average..		43			47			53			58	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		LINCOLN.																				
Catalogue number of samples..		01. HHP.					01. BELLY.				104. SHOULDER.						104. SIDE.					
Length of fiber in crimp.....		6½ inches.					3½ inches.				6½ inches.						7 inches.					
Number of crimps per inch....																						
Number of section.....		B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>5</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>5</sup> .	B <sup>6</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>5</sup> .	B <sup>6</sup> .
Actual measurement in centimillimeters.	3.33	2.06	5.0	3.33	4.66	4.0	3.0	3.06	4.0	3.375	4.375	3.75	3.75	4.5	4.6	3.375	3.5	2.285	4.25	3.375	3.25	
	4.66	3.66	1.66	4.66	3.33	3.66	3.06	3.33	3.33	3.25	4.375	3.0	4.75	3.625	2.6	3.375	3.375	2.5	2.25	3.125	3.25	
	4.0	4.0	3.33	4.66	4.0	4.0	3.66	4.0	4.0	3.625	3.75	3.875	3.0	2.75	3.25	2.375	2.5	4.0	4.0	3.125	2.5	
	4.33	4.66	5.33	4.0	4.0	3.33	4.0	4.33	3.33	3.75	3.875	4.0	3.25	4.25	4.25	4.5	2.75	3.5	2.0	3.875	4.75	
	3.33	4.33	5.0	4.0	2.66	4.0	3.33	3.33	4.33	3.375	3.75	4.375	4.375	4.625	3.25	4.0	3.125	3.875	3.575	4.625	2.6	
	5.0	5.33	5.0	4.66	4.66	4.0	3.33	4.0	3.33	3.0	3.5	3.875	4.0	3.0	3.0	3.375	4.0	2.0	3.875	2.0	3.0	2.75
	4.0	2.66	4.0	4.66	3.33	3.66	3.66	3.66	2.33	2.75	3.625	4.25	3.75	3.0	4.0	4.25	3.5	3.0	2.75	3.125	3.625	
	4.5	4.0	3.66	3.33	4.0	3.66	3.33	3.33	4.0	3.25	3.0	4.5	2.25	3.0	2.75	3.375	3.5	2.0	3.5	3.25	3.625	3.875
	3.0	3.66	4.0	3.33	3.0	4.33	3.66	4.0	3.66	4.375	3.125	4.5	3.75	3.575	4.25	3.875	3.625	3.5	3.5	2.6	3.625	3.0
	4.33	3.66	3.66	4.0	3.0	4.0	3.66	4.0	3.0	4.125	3.25	3.75	2.75	3.0	2.5	3.625	2.75	2.375	3.25	3.25	4.25	3.5
	4.66	4.66	5.0	4.66	3.66	2.66	4.66	2.0	2.66	3.5	4.0	3.875	4.0	3.125	3.5	3.125	3.5	4.0	2.125	2.625	2.75	4.0
	5.66	3.33	4.66	5.0	5.0	4.0	4.33	3.33	3.66	3.625	3.625	2.75	4.375	2.375	4.0	3.5	3.0	3.625	3.625	3.875	4.25	4.25
	4.66	3.66	4.0	4.0	3.33	4.0	4.0	3.0	3.66	4.125	4.875	3.75	2.875	4.0	5.0	4.0	3.375	3.625	1.625	2.875	2.5	4.25
	4.66	3.66	4.33	4.66	4.33	4.66	3.5	4.0	3.33	4.375	3.375	3.875	4.0	4.625	3.25	3.5	3.625	4.25	3.5	3.875	2.75	4.25
	4.33	3.66	3.66	4.0	3.66	3.66	3.33	3.66	3.33	4.25	4.375	3.0	3.5	2.125	3.75	3.375	3.375	3.625	3.875	4.25	4.25	4.25
	5.33	4.33	4.33	3.33	3.0	3.66	3.66	4.5	4.0	3.375	4.25	3.5	2.875	3.875	3.875	3.6	3.625	3.875	4.625	3.875	3.0	3.0
	3.33	5.0	4.66	3.33	4.0	3.33	3.66	3.0	3.0	3.375	3.25	3.75	4.75	3.875	3.875	4.5	4.625	3.5	4.25	3.25	3.5	2.75
	4.0	4.0	3.66	5.0	2.66	3.33	3.5	3.33	3.166	3.75	3.75	3.5	4.125	4.0	4.0	4.5	2.5	3.5	3.20	3.75	4.125	4.125
	5.33	4.33	4.0	4.0	3.66	3.66	3.66	3.66	3.166	3.166	3.33	3.875	4.0	4.0	3.875	3.0	4.0	2.0	4.0	4.75	3.625	3.625
	3.33	4.33	3.33	4.0	3.66	3.0	3.5	3.66	3.166	3.625	3.75	3.75	3.25	3.875	3.25	2.875	3.25	4.375	3.75	3.875	4.0	3.375
5.0	3.166	4.33	5.0	4.33	3.33	4.0	3.166	3.33	3.5	2.0	3.875	3.5	2.75	1.875	3.375	4.25	3.625	2.5	3.875	4.0	3.75	
3.66	4.0	4.33	4.0	4.33	3.33	3.66	3.33	3.5	4.5	2.125	3.5	3.625	5.0	3.0	3.875	4.25	4.0	3.5	2.5	4.6	4.6	
4.0	4.0	4.66	4.66	4.0	4.0	3.66	4.0	3.66	3.875	4.0	3.875	4.25	2.75	3.125	3.375	4.375	2.375	3.375	4.125	3.0	4.125	
4.33	4.66	3.33	4.0	4.33	3.33	4.0	3.33	3.0	3.625	4.0	3.25	4.25	3.875	3.875	3.375	3.5	2.0	3.375	2.875	4.25	3.25	
									3.5	3.875	4.0	4.5	3.875	4.0	3.0	3.5	4.0	2.0	3.25	2.875	2.875	
									2.875	4.0	2.125	4.0	4.0	3.0	3.5	4.0	3.0	2.875	3.625	4.375	3.625	
									3.625	4.25	3.5	3.0	3.875	4.0	3.0	3.75	3.75	4.0	3.75	3.75	3.75	
									2.875	4.375	3.125	3.5	4.0	3.125	2.625	3.625	3.625	3.625	3.625	3.125	4.375	
									3.875	3.125	3.25	3.875	3.875	3.875	3.25	3.25	4.5	4.375	3.0	1.25	2.375	
Averages.....	4.270	4.082	4.176	4.207	3.707	3.826	3.656	3.501	3.257	3.704	3.770	3.633	3.700	3.625	3.291	3.941	3.664	3.375	3.408	3.525	3.375	

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:	B <sup>1</sup>	5.66	2.2283	B <sup>1</sup>	3.33	2.0984	B <sup>1</sup>	4.5	1.7710	B <sup>1</sup>	4.5	1.7716
Maximum measurements.	B <sup>2</sup>	5.33	2.0984	B <sup>2</sup>	4.66	1.8340	B <sup>2</sup>	4.875	1.8192	B <sup>2</sup>	3.0	1.0685
	B <sup>3</sup>	5.33	2.0984	B <sup>3</sup>	4.50	1.7716	B <sup>3</sup>	4.5	1.7710	B <sup>3</sup>	4.375	1.7224
	B <sup>4</sup>	5.33	2.0984	B <sup>4</sup>	4.33	1.7047	B <sup>4</sup>	4.75	1.8700	B <sup>4</sup>	5.0	1.8208
	B <sup>5</sup>	5.0	1.9655	B <sup>5</sup>	4.33	1.7047	B <sup>5</sup>	5.0	1.9665	B <sup>5</sup>	4.75	1.8760
Highest.....		5.66	2.2283		3.33	2.0984		5.0	1.9685		5.375	2.1161
Minimum measurements.	B <sup>1</sup>	3.0	1.1811	B <sup>1</sup>	3.0	1.1811	B <sup>1</sup>	3.25	1.2795	B <sup>1</sup>	2.375	0.9350
	B <sup>2</sup>	2.66	1.0472	B <sup>2</sup>	2.66	1.0472	B <sup>2</sup>	3.0	1.1811	B <sup>2</sup>	2.0	0.7874
	B <sup>3</sup>	2.66	1.0472	B <sup>3</sup>	2.66	1.0472	B <sup>3</sup>	2.75	1.0826	B <sup>3</sup>	2.0	0.7874
	B <sup>4</sup>	3.33	1.3110	B <sup>4</sup>	2.166	0.8527	B <sup>4</sup>	2.25	0.8858	B <sup>4</sup>	1.625	0.6397
	B <sup>5</sup>	2.66	1.0472				B <sup>5</sup>	2.125	0.8306	B <sup>5</sup>	1.25	0.4921
Lowest.....		2.66	1.0472		2.166	0.8527		1.875	0.7390		1.25	0.4921
Average measurements..	B <sup>1</sup>	4.270	1.6810	B <sup>1</sup>	3.826	1.5082	B <sup>1</sup>	3.704	1.4582	B <sup>1</sup>	3.941	1.5515
	B <sup>2</sup>	4.082	1.6070	B <sup>2</sup>	3.656	1.4303	B <sup>2</sup>	3.770	1.4842	B <sup>2</sup>	3.664	1.4433
	B <sup>3</sup>	4.176	1.6440	B <sup>3</sup>	3.501	1.4137	B <sup>3</sup>	3.633	1.4303	B <sup>3</sup>	3.375	1.3287
	B <sup>4</sup>	4.207	1.6917	B <sup>4</sup>	3.251	1.2799	B <sup>4</sup>	3.700	1.4566	B <sup>4</sup>	3.408	1.3417
	B <sup>5</sup>	3.707	1.4948				B <sup>5</sup>	3.625	1.4271	B <sup>5</sup>	3.525	1.3877
Average.....		4.124	1.6236		3.581	1.4108		3.620	1.4251		3.649	1.3909
Measurements above average..		56			55			102			51	
Measurements below average..		69			45			78			66	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of samples..	LINCOLN.																				
	164. HIP.					164. BELLY.				165. SHOULDER.				165. SIDE.				165. HIP.			
	5½ inches.					3½ inches.				5 inches.				6 inches.				6 inches.			
Length of fiber in crimp.....																					
Number of crimps per inch....																					
Number of section.....	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>5</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .
Actual measurement in centimillimeters.	2.75	4.75	3.25	2.75	3.0	2.875	3.625	3.5	2.75	2.375	2.75	4.0	3.625	3.5	2.5	4.0	3.0	3.0	2.375	4.75	2.875
Average.....	3.337	3.716	3.591	3.625	3.345	2.804	3.054	3.200	2.800	2.827	3.241	3.287	3.358	3.079	3.297	3.208	3.120	3.208	3.245	3.433	3.391

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousandths of an inch.	In thousandths of an inch.		In thousandths of an inch.	In thousandths of an inch.		In thousandths of an inch.	In thousandths of an inch.		In thousandths of an inch.	In thousandths of an inch.			
Maximum measurements.	B <sup>1</sup>	4.25	1.6732	B <sup>1</sup>	3.875	1.5255	B <sup>1</sup>	5.325	2.0904	B <sup>1</sup>	4.25	1.6732	B <sup>1</sup>	4.75	1.8700
	B <sup>2</sup>	5.0	1.9685	B <sup>2</sup>	3.75	1.4763	B <sup>2</sup>	4.50	1.7716	B <sup>2</sup>	4.625	1.8208	B <sup>2</sup>	4.50	1.7716
	B <sup>3</sup>	5.0	1.9685	B <sup>3</sup>	3.75	1.4763	B <sup>3</sup>	4.25	1.6732	B <sup>3</sup>	4.50	1.7716	B <sup>3</sup>	4.75	1.8700
	B <sup>4</sup>	4.875	1.9192	B <sup>4</sup>	3.625	1.4271	B <sup>4</sup>	8.75	3.4448	B <sup>4</sup>	4.25	1.6732	B <sup>4</sup>	4.75	1.8700
	B <sup>5</sup>	4.75	1.8700												
Highest.....		5.0	1.9685		3.875	1.5255		8.75	3.4448		4.625	1.8208		4.75	1.8700
Minimum measurements.	B <sup>1</sup>	1.5	0.5905	B <sup>1</sup>	2.0	0.7874	B <sup>1</sup>	2.0	0.7874	B <sup>1</sup>	2.0	0.7874	B <sup>1</sup>	2.25	0.8858
	B <sup>2</sup>	2.0	0.7874	B <sup>2</sup>	2.375	0.9354	B <sup>2</sup>	2.0	0.7874	B <sup>2</sup>	2.125	0.8366	B <sup>2</sup>	1.875	0.7381
	B <sup>3</sup>	2.125	0.8366	B <sup>3</sup>	2.50	0.9842	B <sup>3</sup>	1.50	0.6905	B <sup>3</sup>	2.125	0.8366	B <sup>3</sup>	2.0	0.7874
	B <sup>4</sup>	1.5	0.5905	B <sup>4</sup>	1.375	0.5413	B <sup>4</sup>	2.375	0.9850	B <sup>4</sup>	1.875	0.7381	B <sup>4</sup>	2.25	0.8858
	B <sup>5</sup>	1.5	0.5905												
Lowest.....		1.5	0.5905		1.375	0.5413		1.50	0.5905		1.875	0.7381		1.875	0.7381
Average measurements.	B <sup>1</sup>	3.337	1.3137	B <sup>1</sup>	2.804	1.1030	B <sup>1</sup>	2.827	1.1129	B <sup>1</sup>	3.070	1.2122	B <sup>1</sup>	3.208	1.2029
	B <sup>2</sup>	3.716	1.4629	B <sup>2</sup>	3.054	1.2023	B <sup>2</sup>	3.241	1.2759	B <sup>2</sup>	3.297	1.2980	B <sup>2</sup>	3.245	1.2775
	B <sup>3</sup>	3.591	1.4137	B <sup>3</sup>	3.200	1.2598	B <sup>3</sup>	3.287	1.2940	B <sup>3</sup>	3.208	1.2629	B <sup>3</sup>	3.433	1.3515
	B <sup>4</sup>	3.625	1.4271	B <sup>4</sup>	2.800	1.1023	B <sup>4</sup>	3.358	1.3220	B <sup>4</sup>	3.120	1.2318	B <sup>4</sup>	3.391	1.3550
	B <sup>5</sup>	3.345	1.3169												
Average.....		3.522	1.3866		2.964	1.1669		3.178	1.2511		3.178	1.2511		3.819	1.3066
Measurements above average.....		74			70			58			59			59	
Measurements below average.....		76			50			62			61			61	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		LINCOLN.																
Catalogue number of samples..	165. BELLY.				166. SHOULDER.				168. SIDE.				169. HIP.			169. BELLY.		
Length of fiber in crimp.....	2½ inches.				2½ inches.				2½ inches.				2½ inches.			2 inches.		
Number of crimp per inch.....	—				—				—				—			—		
Number of section .....	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B¹.	B².	B³.
Actual measurement in centimillimeters.	2.0	2.75	3.0	2.25	4.0	2.5	4.0	5.25	2.25	2.625	2.0	4.0	5.0	5.0	3.25	2.267	2.375	2.875
	2.5	2.75	3.5	3.375	3.5	2.625	2.875	3.25	2.875	4.0	3.0	2.125	4.875	4.5	4.375	2.75	2.5	2.0
	2.375	2.75	4.0	2.125	4.375	3.75	2.25	2.875	2.875	4.125	2.5	2.25	2.625	4.375	2.0	2.75	2.25	2.75
	3.5	2.5	2.875	2.125	4.25	2.25	4.875	2.875	4.0	2.875	2.75	2.25	4.6	4.375	4.75	2.875	2.375	2.75
	2.75	2.0	2.5	3.5	2.875	2.875	2.625	4.75	2.0	2.6	3.75	4.0	4.6	5.75	5.125	2.6	2.625	2.75
	3.25	2.75	2.625	3.0	3.75	2.0	2.0	2.375	2.25	2.75	4.6	2.375	2.0	3.875	4.0	2.75	2.6	4.0
	2.75	2.75	2.75	1.875	4.0	2.5	4.125	2.5	2.5	2.0	4.875	2.0	2.25	5.375	2.6	2.0	2.0	2.0
	3.125	2.125	2.25	2.875	2.625	4.375	2.875	2.125	2.125	4.625	4.375	4.6	4.0	4.75	4.5	2.0	2.875	2.0
	2.875	2.375	3.75	2.75	5.0	2.375	4.25	4.0	2.625	2.625	4.0	4.25	2.25	2.0	2.875	2.6	2.5	2.5
	2.875	4.25	2.875	2.25	4.5	4.5	2.0	2.25	2.75	4.5	2.75	4.0	2.6	2.75	2.0	2.25	2.75	2.0
	3.5	2.25	2.875	2.25	4.25	4.125	2.625	4.625	2.75	2.75	4.625	4.375	2.875	4.875	4.25	2.75	2.6	2.5
	3.5	2.75	2.875	3.5	5.0	3.25	2.5	2.875	2.75	4.0	2.125	2.6	4.25	5.875	2.25	2.6	4.0	2.875
	3.25	2.75	3.25	2.875	2.875	2.625	2.875	4.25	4.375	2.875	2.25	4.25	2.25	4.875	2.25	2.0	4.875	2.75
	2.0	2.875	2.375	2.375	4.0	5.75	2.5	4.0	4.0	2.875	2.25	4.25	4.0	4.875	2.75	2.25	2.375	2.375
	2.625	2.875	1.25	2.0	3.75	4.25	2.875	2.875	3.375	4.0	2.375	2.875	2.875	2.875	2.5	2.6	2.875	2.25
	3.375	2.0	2.75	2.25	2.25	4.0	2.5	4.0	4.0	4.875	2.25	2.5	4.0	4.0	4.875	2.125	2.75	2.5
	3.25	2.875	2.375	3.0	2.5	4.5	4.25	4.0	2.625	2.0	4.25	2.25	2.25	2.6	2.625	2.625	2.75	2.0
	2.25	2.375	2.625	2.75	3.5	2.5	2.5	4.375	2.125	4.75	3.75	2.0	2.0	4.5	2.375	2.875	2.25	2.5
	2.5	4.0	2.125	2.75	2.875	2.125	4.0	2.375	2.5	3.75	4.0	2.75	4.875	5.0	2.0	2.875	2.375	2.6
	2.625	2.0	2.0	1.125	2.375	2.375	2.125	4.125	2.5	2.875	2.875	2.875	4.75	2.6	5.0	2.25	2.25	2.25
	1.6	2.75	2.25	2.375	4.0	3.25	5.0	2.75	2.875	2.5	2.75	2.875	2.875	2.75	2.875	2.75	2.625	2.625
	2.5	2.75	2.0	2.875	2.75	4.25	2.75	2.125	2.875	4.75	2.125	2.375	4.75	2.25	2.875	3.0	2.0	2.0
	2.375	2.875	2.125	1.6	5.625	5.375	3.25	4.25	2.25	2.375	4.875	2.75	2.75	5.375	5.25	2.875	2.25	2.75
	2.625	2.625	2.0	2.6	2.875	2.125	3.5	2.75	2.6	4.5	2.875	2.6	2.625	2.25	4.25	2.6	2.875	2.5
	1.25	2.375	2.25	2.0	2.25	4.0	2.25	4.5	4.0	4.125	2.6	2.875	2.0	2.0	4.625	2.25	2.875	2.25
	2.625	4.75	2.375	2.875	2.0	2.25	2.5	5.0	2.375	2.0	3.875	2.0	4.875	5.0	5.5	2.375	2.625	2.25
	2.875	4.875	2.0	2.625	2.625	2.25	4.75	2.125	2.0	2.625	2.5	2.6	5.25	2.875	2.5	2.6	2.25	2.25
	2.0	2.875	2.125	4.5	2.6	2.375	2.875	5.0	2.875	2.625	2.5	2.6	2.625	2.875	4.5	2.25	2.75	2.375
	2.625	2.375	2.375	2.125	2.6	4.375	5.75	4.125	2.875	2.0	4.0	4.0	2.625	4.875	4.5	2.25	2.75	2.375
	2.375	2.5	2.0	2.25	2.625	2.75	4.125	4.25	2.25	4.0	4.125	2.6	5.875	5.0	5.0	4.0	2.0	2.25
Averages.....	2.019	2.283	2.117	2.957	2.833	3.741	3.787	2.967	3.408	2.837	2.708	2.672	4.354	4.404	4.070	2.183	2.324	2.141

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:															
Maximum measurements.	B¹	2.625	1.4271	B¹	5.625	2.2145	B¹	4.375	1.7224	B¹	5.975	2.1161	B¹	4.0	1.5748
	B²	4.25	1.6732	B²	5.75	2.2637	B²	5.0	1.9685	B²	5.75	2.2637	B²	4.375	1.7224
	B³	4.0	1.5748	B³	5.75	2.2637	B³	4.625	1.8268	B³	2.0	2.3622	B³	4.25	1.6732
	B⁴	4.50	1.7716	B⁴	5.25	2.0609	B⁴	4.50	1.7716						
Highest.....		4.50	1.7716		5.75	2.2637		5.0	1.9685		2.0	2.3622		4.25	1.6732
Minimum measurements.	B¹	2.375	0.9350	B¹	2.875	1.1818	B¹	2.125	0.8366	B¹	2.375	0.9350	B¹	2.25	0.8838
	B²	2.375	0.9350	B²	2.125	0.8366	B²	2.75	1.0826	B²	2.875	1.1818	B²	2.25	0.8838
	B³	2.125	0.8366	B³	2.50	0.9842	B³	2.75	1.0826	B³	2.50	0.9842	B³	2.25	0.8838
	B⁴	1.50	0.5905	B⁴	2.75	1.0826	B⁴	2.50	0.9842						
Lowest.....		1.50	0.5905		2.125	0.8366		2.125	0.8366		2.375	0.9351		2.25	0.8838
Average measurements.	B¹	3.040	1.2003	B¹	3.833	1.5090	B¹	2.408	1.3177	B¹	4.254	1.7141	B¹	2.183	1.2331
	B²	3.283	1.2925	B²	3.741	1.4728	B²	2.837	1.5706	B²	4.404	1.7358	B²	2.324	1.2666
	B³	2.117	1.2371	B³	3.787	1.4909	B³	2.708	1.4598	B³	4.070	1.6023	B³	2.141	1.2366
	B⁴	2.957	1.1641	B⁴	3.937	1.5696	B⁴	2.512	1.3826						
Average.....		3.101	1.2208		3.837	1.5166		2.616	1.4206		4.276	1.6834		2.216	1.2661
Measurements above average.....		59			58			50			50			51	
Measurements below average.....		61			62			61			40			39	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of samples..		LINCOLN.																	
		167. SHOULDER.			167. SIDE.			167. HIP.			167. BELLY.			168. SHOULDER.			168. SIDE.		
Length of fiber in crimp.....		3½ inches.			2¾ inches.			2½ inches.			1¾ inches.			2½ inches.			3¼ inches.		
Number of crimps per inch....		—			—			—			—			—			—		
Number of section.....		B¹	B²	B³	B¹	B²	B³	B¹	B²	B³	B¹	B²	B³	B¹	B²	B³	B¹	B²	B³
Actual measurement in centimillimeters.	4.375	3.75	2.75	3.5	4.125	4.125	3.875	3.75	4.375	3.375	3.75	3.875	3.5	3.625	3.0	4.375	3.0	4.375	
	4.0	3.0	3.25	4.0	4.25	4.125	3.25	4.375	4.0	3.125	3.5	3.125	3.5	3.625	3.625	3.0	3.25	4.25	
	3.25	3.5	4.125	3.3	3.25	3.75	3.625	3.875	4.0	3.625	4.0	3.0	4.0	4.0	3.75	3.75	3.75	2.625	4.0
	3.0	3.75	5.0	4.125	4.125	3.375	4.5	2.25	5.0	3.0	3.125	3.25	3.125	2.875	4.25	3.25	4.25	3.25	3.25
	3.875	2.75	3.75	3.875	3.0	3.5	3.875	4.0	5.125	3.375	2.25	3.875	4.0	4.25	3.625	3.5	3.5	3.0	3.0
	4.0	4.5	4.0	3.125	3.5	3.5	3.5	4.25	4.25	3.375	3.25	3.875	3.875	3.625	3.875	3.6	2.875	4.0	4.0
	3.875	2.5	4.0	4.125	4.25	3.375	3.5	4.25	4.875	3.625	4.125	3.375	4.125	3.375	3.75	4.375	4.0	4.5	4.5
	4.25	3.5	4.0	3.25	3.25	3.5	3.375	4.25	3.5	3.375	4.125	3.875	4.0	3.625	3.875	3.75	3.125	4.0	4.0
	3.5	3.25	4.0	4.125	3.875	3.875	3.25	3.5	4.5	3.625	3.125	4.375	3.875	2.75	3.375	3.375	3.625	2.875	2.875
	4.125	3.125	4.5	3.875	4.875	3.875	3.375	4.5	4.625	3.25	3.125	3.0	3.75	3.375	3.5	3.375	3.75	3.75	4.75
	3.5	3.75	4.0	3.875	4.0	3.625	3.625	5.25	5.0	3.625	4.0	3.75	3.375	2.875	3.5	2.875	3.5	3.375	4.375
	3.75	3.125	3.25	3.375	3.625	4.5	3.375	3.0	4.25	2.875	4.0	3.25	3.125	3.5	3.875	3.625	3.5	3.125	3.125
	4.375	3.375	3.0	3.375	3.375	3.875	3.625	4.375	2.125	3.125	4.375	3.5	3.5	2.875	3.5	2.875	3.5	2.875	3.5
	3.25	2.625	3.875	4.375	4.125	4.25	3.375	3.625	3.0	3.375	3.5	3.75	3.5	2.75	3.125	3.0	3.25	4.0	4.0
	4.0	3.0	4.0	3.375	3.625	3.75	3.875	3.375	3.375	3.75	3.25	3.5	3.375	3.125	3.125	3.25	3.0	3.375	3.375
	3.75	4.0	3.875	3.75	3.75	3.875	4.5	4.5	6.25	3.25	4.0	3.375	3.625	4.0	4.5	2.75	2.75	3.625	3.625
	3.25	4.0	3.75	3.125	4.25	3.25	3.75	4.5	4.625	4.25	3.25	3.375	3.875	3.125	3.875	3.5	3.875	3.875	4.0
	3.125	3.75	3.5	3.5	3.875	3.875	3.5	4.0	3.125	3.125	4.375	2.75	3.875	3.375	2.875	3.0	3.0	3.25	3.25
	3.75	3.5	4.0	3.125	3.375	3.75	3.5	3.125	4.0	4.0	3.75	3.625	3.0	3.75	3.5	3.875	3.75	4.0	4.0
	3.375	3.0	3.5	3.625	4.125	3.25	4.25	3.875	2.25	3.5	4.0	3.375	2.875	3.0	3.375	3.375	3.6	3.6	3.6
3.125	2.625	3.75	2.625	2.375	3.25	4.25	4.375	3.375	4.5	4.5	3.5	3.5	3.25	3.75	3.0	4.25	4.375	4.375	
3.375	3.25	3.5	2.375	3.75	4.0	4.125	5.25	3.875	3.5	3.0	3.875	3.5	3.375	4.125	3.375	3.0	4.5	4.5	
3.125	3.125	3.875	3.25	3.25	4.25	4.25	3.875	4.375	3.375	3.5	3.625	3.5	1.625	2.875	3.5	3.0	3.5	3.5	
3.5	2.5	3.75	4.0	3.0	4.5	3.875	4.0	4.375	3.75	3.625	3.875	2.5	3.625	3.0	2.375	3.75	3.75	4.75	
3.625	2.625	2.875	4.0	3.25	3.5	4.375	3.875	4.375	3.5	3.75	2.5	3.25	3.875	3.5	3.5	2.75	4.25	4.25	
4.0	3.0	3.625	3.0	2.75	4.0	3.25	4.125	3.75	2.75	4.0	3.0	3.75	3.75	3.75	3.125	4.0	4.375	4.375	
2.6	2.875	4.0	4.0	4.0	2.5	4.25	2.875	2.75	3.0	2.75	3.5	3.5	3.75	3.125	3.25	4.0	2.5	2.5	
3.5	3.0	3.5	4.25	2.25	4.125	4.0	3.625	4.0	3.875	2.75	3.25	2.75	3.375	3.375	3.125	3.875	3.875	3.875	
3.5	4.0	3.25	3.5	3.5	3.375	3.25	2.875	4.125	3.625	3.25	3.125	3.0	1.75	3.125	3.5	3.5	4.75	4.75	
4.25	3.5	3.375	4.25	2.875	3.75	3.5	4.25	3.875	3.5	4.25	3.125	3.0	3.75	3.75	3.0	3.0	3.625	3.625	
Averages .....	3.640	3.220	3.724	3.607	3.604	3.729	3.754	3.965	4.004	3.508	3.654	3.470	3.454	3.266	3.512	3.345	3.402	3.829	

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.		No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.		No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.	
		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.						
Maximum measurements.	B¹	4.375	1.7224	B¹	4.375	1.7224	B¹	4.5	1.7716	B¹	4.5	1.7716	B¹	4.125	1.6240	B¹	4.375	1.7224
	B²	4.50	1.7716	B²	4.875	1.9192	B²	5.25	2.0609	B²	4.5	1.7716	B²	4.25	1.6732	B²	4.625	1.8208
	B³	5.0	1.9685	B³	4.5	1.7716	B³	5.25	2.0609	B³	4.375	1.7224	B³	4.5	1.7716	B³	4.875	1.9192
Highest .....		5.0	1.9685		4.875	1.9192		5.25	2.0609		4.5	1.7716		4.5	1.7716		4.875	1.9192
Minimum measurements.	B¹	2.50	0.9842	B¹	2.875	0.9350	B¹	3.25	1.2795	B¹	2.75	1.0826	B¹	2.5	0.9842	B¹	2.375	0.9350
	B²	2.50	0.9842	B²	2.375	0.9350	B²	2.25	0.8858	B²	2.75	1.0826	B²	1.625	0.6397	B²	2.625	1.0334
	B³	2.75	1.0826	B³	3.25	1.2795	B³	2.125	0.8366	B³	2.5	0.9842	B³	2.5	1.0826	B³	2.5	0.9842
Lowest .....		2.50	0.9842		2.375	0.9350		2.125	0.8366		2.5	0.9842		1.625	0.6397		2.375	0.9350
Average measurements.	B¹	3.640	1.4330	B¹	3.607	1.4200	B¹	3.754	1.4770	B¹	3.608	1.3810	B¹	3.454	1.3598	B¹	3.345	1.3169
	B²	3.220	1.2677	B²	3.604	1.4188	B²	3.965	1.5810	B²	3.654	1.3992	B²	3.266	1.2858	B²	3.462	1.3629
	B³	3.724	1.4661	B³	3.729	1.4681	B³	4.004	1.5763	B³	3.479	1.3096	B³	3.512	1.3826	B³	3.629	1.5074
Average .....		3.528	1.3880		3.646	1.4354		3.907	1.5381		3.613	1.3830		3.410	1.3425		3.545	1.3956
Measurements above average.....		44			47			44			30			49			39	
Measurements below average.....		46			43			46			51			41			51	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		LINCOLN.																	
Catalogue number of samples..		168. HIP.			168. BELLY.			169. SHOULDER.			169. SIDE.			169. HIP.			169. BELLY.		
Length of fiber in crimp .....		2½ inches.			1¾ inches.			2¼ inches.			2¼ inches.			2½ inches.			1¾ inches.		
Number of crimps per inch....		—			—			—			—			—			—		
Number of section.....		B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.
Actual measurement in centimillimeters.	3.75	3.0	3.625	3.5	3.6	2.25	3.75	4.25	2.5	4.0	3.375	4.125	2.75	4.375	3.375	4.0	4.5	5.25	
	4.0	3.0	3.0	3.5	3.875	4.0	3.625	3.0	4.125	4.125	4.375	4.5	4.375	4.25	3.125	4.25	3.5	3.75	
	4.125	4.25	4.0	2.875	2.875	3.375	3.625	3.5	3.875	3.375	4.125	4.625	3.5	3.875	3.75	3.3	3.625	2.9	
	4.125	2.75	3.625	3.875	3.5	3.25	3.5	4.0	3.625	4.375	3.125	4.0	3.0	3.875	4.625	2.875	3.25	3.75	
	3.5	3.0	3.5	3.625	3.125	3.5	2.5	5.0	3.0	3.875	3.625	4.25	4.25	4.5	5.0	3.375	4.5	4.375	
	4.0	4.0	4.0	2.75	3.5	2.875	2.875	3.875	4.5	3.875	4.375	2.5	5.0	3.5	4.5	3.875	3.5	4.125	
	4.0	3.625	4.125	2.625	3.875	3.375	3.375	3.375	4.25	4.375	3.875	4.5	3.75	3.975	4.625	3.875	3.5	4.125	
	2.75	3.0	4.375	3.125	3.0	4.0	3.0	4.25	3.625	3.125	3.25	4.875	4.25	3.625	2.25	3.75	2.25	3.5	
	4.25	3.375	4.75	3.125	3.0	4.0	2.875	4.0	4.375	4.0	3.5	4.0	3.5	4.0	2.5	4.0	2.875	2.875	
	3.75	3.25	4.875	2.875	2.5	3.875	3.75	4.375	4.375	3.75	3.875	4.125	4.25	4.375	5.125	4.0	3.0	4.75	
	4.125	3.75	4.125	3.75	3.375	3.5	3.75	3.25	4.375	3.75	4.0	4.25	4.5	4.375	5.0	3.875	5.0	3.0	
	2.875	3.625	4.5	4.0	4.25	3.0	3.75	3.875	4.25	4.125	3.875	2.5	4.5	4.0	4.5	4.125	3.625	3.5	
	3.375	2.875	4.0	3.375	3.625	3.625	4.125	4.0	4.5	3.375	4.25	4.0	3.25	3.875	5.0	3.5	4.25	4.0	
	3.75	3.0	2.75	3.875	3.5	3.25	4.125	4.625	3.25	3.75	4.5	3.75	5.0	4.125	3.875	2.5	3.625	4.5	
	3.375	3.875	3.5	3.375	3.0	3.625	2.0	4.5	1.5	2.375	2.875	3.5	4.0	3.5	3.875	3.5	4.125	3.0	
	3.25	3.5	3.625	3.0	3.0	3.75	3.675	3.875	4.25	4.375	2.625	4.0	3.5	3.125	4.375	3.875	3.875	3.875	
	4.25	3.625	3.25	3.25	4.0	2.625	4.375	4.0	4.625	4.625	4.0	4.125	4.75	4.875	4.25	3.875	3.5	4.75	
	4.0	3.625	4.125	3.75	3.375	3.5	2.875	3.875	3.875	4.0	2.875	4.0	3.125	2.875	3.875	3.125	3.875	4.125	
	3.5	3.75	4.125	4.0	3.0	3.75	3.625	3.75	4.25	2.875	4.125	4.0	4.5	4.5	2.125	3.75	3.625	3.75	
	2.875	3.625	3.25	3.75	4.25	3.375	3.125	2.625	4.25	4.375	3.75	3.0	4.0	3.0	3.5	4.75	3.75	4.0	
3.75	3.875	2.5	3.875	3.75	3.875	4.25	3.375	3.75	3.625	3.875	4.125	2.5	4.875	3.75	3.125	3.875	4.125		
4.25	4.0	4.5	3.25	3.375	2.125	3.875	3.5	3.625	4.5	4.875	3.5	3.5	3.0	4.0	2.75	3.5	3.25		
4.0	3.5	4.75	3.125	3.75	3.5	3.875	4.0	3.875	3.0	3.75	3.0	3.25	3.75	3.0	3.0	3.625	3.75		
3.125	3.125	3.25	3.625	3.75	3.25	4.25	4.25	4.875	4.375	4.125	3.875	2.875	3.25	3.75	4.0	3.25	4.5		
3.25	3.5	3.375	3.0	3.125	3.625	4.875	4.0	3.0	4.0	4.125	2.875	4.125	4.25	3.375	3.75	3.875	3.125		
3.0	3.0	3.875	3.625	4.0	3.25	4.0	2.75	5.0	2.75	4.5	4.5	4.25	3.125	3.5	4.0	3.875	4.375		
3.625	3.25	3.875	3.5	3.625	3.5	4.25	4.5	3.625	4.25	4.625	5.0	3.875	4.0	4.5	2.875	4.125	2.5		
4.0	4.5	3.875	3.5	3.25	3.25	4.0	4.0	4.25	4.125	4.75	3.875	2.375	4.5	4.0	2.875	4.125	4.0		
3.0	3.875	4.5	3.625	2.875	2.0	3.875	4.125	2.625	4.25	3.875	3.75	2.875	2.0	4.75	3.0	4.25	2.5		
3.875	3.5	3.25	3.375	3.125	3.625	4.125	4.0	4.375	3.0	3.875	4.125	4.875	3.875	5.0	3.75	4.25	3.875		
Averages.....	3.650	3.454	3.812	3.866	3.362	3.363	3.700	3.894	3.880	3.829	3.841	3.891	3.891	3.900	4.002	3.479	3.620	3.779	

Recapitulation and reduction:		No. of section.			No. of section.			No. of section.			No. of section.			No. of section.		
		In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	
Maximum measurements.	B¹	4.25	1.6732	B¹	4.0	1.5748	B¹	4.5	1.7716	B¹	4.5	1.7716	B¹	5.0	1.9685	
	B²	4.5	1.7716	B²	4.25	1.6732	B²	5.0	1.9685	B²	4.75	1.8700	B²	5.375	2.1161	
	B³	4.75	1.8700	B³	4.0	1.5748	B³	5.0	1.9685	B³	5.0	1.9685	B³	5.125	2.0177	
Highest.....		4.75	1.8700		4.25	1.6732		5.0	1.9685		5.0	1.9685		5.375	2.1161	
Minimum measurements.	B¹	2.75	1.0826	B¹	2.625	1.0334	B¹	2.5	0.9842	B¹	2.375	0.9350	B¹	2.75	1.0826	
	B²	2.625	1.0334	B²	2.375	0.9350	B²	2.625	1.0334	B²	2.625	1.0334	B²	2.0	0.7874	
	B³	2.5	0.9842	B³	2.0	0.7874	B³	1.5	0.5905	B³	2.5	0.9842	B³	2.125	0.8366	
Lowest.....		2.5	0.9842		2.0	0.7874		1.5	0.5905		2.375	0.9350		2.0	0.7874	
Average measurements.	B¹	3.650	1.4370	B¹	3.866	1.5220	B¹	3.700	1.4566	B¹	3.829	1.5074	B¹	3.891	1.5318	
	B²	3.454	1.3508	B²	3.362	1.3236	B²	3.894	1.5330	B²	3.841	1.5122	B²	3.890	1.4960	
	B³	3.812	1.5007	B³	3.363	1.3240	B³	3.880	1.5275	B³	3.891	1.5318	B³	4.062	1.5092	
Average.....		3.638	1.4322		3.530	1.3897		3.824	1.5055		3.853	1.5189		3.917	1.5421	
Measurements above average.....		43			33			55			57			48		
Measurements below average.....		47			57			35			33			44		



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of samples..	LINCOLN.								SOUTHDOWN.									
	191.				25				62. SHOULDER.		62. SIDE.		62. HIP.		62. BELLY.			
	8½ inches.				3¾ inches.				1½ inches.		1½ inches.		1 inch.		—			
	—				12.				12.		12.		—		—			
Number of section .....				B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.	B¹.	B².	B¹.	B².	B¹.	B².	
Actual measurement in centimillimeters.	1.875	2.75	3.0	3.0	2.375	2.625	2.5	3.125	3.66	4.0	2.66	2.66	2.33	3.66	3.33	3.66	3.33	3.66
	3.5	3.0	3.25	2.25	2.5	2.375	3.375	3.25	3.33	3.33	4.33	2.66	3.33	3.0	3.66	3.0	3.66	3.0
	2.75	3.875	3.5	4.25	2.625	2.875	2.875	3.0	4.0	4.0	3.66	2.66	2.66	4.0	3.0	3.0	3.33	3.33
	3.75	2.75	3.0	2.625	2.5	2.5	2.625	3.125	4.66	3.66	3.33	3.0	2.33	2.66	3.0	3.0	2.66	2.66
	1.25	2.75	3.75	3.5	3.0	3.5	3.375	3.0	3.33	3.33	4.33	3.0	2.66	4.66	3.0	3.0	2.66	3.33
	3.375	3.0	2.0	2.0	2.75	2.875	2.875	2.875	3.66	3.0	2.833	3.33	3.0	3.66	3.0	3.0	2.66	2.66
	3.0	3.5	3.5	2.75	2.25	2.75	3.0	2.875	4.0	2.66	3.33	2.33	3.0	3.0	3.0	3.0	3.0	3.33
	3.375	1.875	3.5	4.25	2.0	2.25	2.25	3.0	2.0	3.0	3.33	3.33	3.0	3.0	3.0	3.0	4.0	3.33
	2.875	2.875	1.875	3.0	2.25	2.625	2.375	3.125	2.66	2.833	3.33	2.0	3.0	3.0	3.0	3.0	3.0	3.33
	2.375	3.0	2.0	2.5	3.375	2.5	2.75	3.5	3.0	3.0	2.66	4.0	2.66	3.66	3.0	3.0	2.66	3.33
	3.125	3.375	2.25	3.875	3.25	2.875	2.5	2.875	2.0	3.0	3.66	3.32	3.0	3.0	3.0	3.0	3.0	2.66
	2.25	4.0	2.75	2.375	2.25	2.5	2.875	3.0	3.33	3.0	2.66	2.66	2.66	3.33	3.0	3.0	2.66	2.66
	2.0	2.875	2.75	3.125	2.025	2.75	2.875	2.5	2.66	3.5	3.66	3.33	3.33	3.5	2.66	2.66	2.66	2.66
	2.5	3.0	3.5	3.0	2.5	2.875	2.625	2.75	2.66	2.0	3.66	4.66	3.33	3.33	3.33	3.33	3.33	2.0
	2.75	2.125	3.25	3.875	2.875	3.0	2.5	2.5	2.66	2.0	3.33	2.66	2.66	3.0	2.66	3.0	2.66	2.66
	3.5	2.5	4.0	2.75	3.25	2.75	2.0	3.625	2.33	3.33	3.66	3.66	3.33	3.0	3.33	3.0	3.33	3.0
	2.5	3.125	3.125	1.25	2.5	2.75	2.5	3.875	2.66	3.33	3.66	3.0	4.0	3.66	3.0	3.0	4.0	3.0
	2.25	2.5	3.75	4.0	2.375	2.5	2.875	2.875	3.0	3.33	3.66	3.186	2.66	3.33	2.66	3.33	2.66	3.33
	2.25	2.625	3.25	4.375	2.375	2.625	2.0	3.125	2.33	3.33	3.33	3.33	3.33	2.66	2.66	2.66	3.33	3.33
	2.25	3.75	3.5	2.5	2.375	3.0	2.75	2.875	3.33	3.0	4.0	3.33	3.33	2.66	2.66	2.66	3.33	3.33
	2.375	3.25	2.875	2.75	2.875	2.75	2.375	3.0	3.33	4.0	3.0	3.33	3.33	4.0	2.66	2.66	3.33	4.0
	3.875	2.375	3.0	2.375	2.75	2.25	2.75	2.625	2.33	2.66	3.33	3.33	3.33	4.0	3.33	3.0	3.33	4.0
	3.375	3.0	3.875	3.0	2.25	2.75	2.75	2.5	2.66	3.33	3.66	3.33	2.66	4.0	3.33	3.33	2.66	3.33
	2.0	2.0	3.375	2.625	2.375	2.5	2.375	2.75	2.66	3.0	3.66	3.33	2.66	3.33	3.33	3.33	2.66	3.33
	2.0	2.75	2.875	4.375	2.5	2.875	3.125	3.5	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.33	3.0
	2.375	2.375	3.0	1.75	2.5	2.875	2.5	3.0	2.33	3.0	3.0	3.33	3.33	4.0	3.33	3.33	2.0	3.0
	3.875	3.0	3.125	3.75	2.5	2.5	3.0	3.0	3.0	2.66	3.33	3.33	2.66	4.0	3.33	3.33	2.0	2.66
	4.25	2.875	2.25	3.25	2.75	2.625	2.25	2.875	2.66	2.66	3.0	3.33	3.33	3.33	3.33	3.33	3.0	4.0
3.25	2.6	3.375	2.375	2.0	2.625	3.0	2.75	2.66	3.0	3.33	2.0	3.66	3.0	3.66	3.0	3.33	3.33	
2.375	3.375	3.875	2.5	2.25	2.5	2.0	2.875	2.66	2.66	3.66	3.33	3.33	2.66	2.33	2.33	2.33	2.66	
Averages .....	2.804	2.875	3.054	3.000	2.558	2.591	2.654	2.958	2.962	3.184	3.390	3.158	3.007	3.366	2.952	3.096		

Recapitulation and reduction:	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Maximum measurements	B¹	4.25	1.6732	B¹	3.375	1.3287	B¹	4.66	1.8346	B¹	4.33	1.7047	B¹	4.00	1.5748	B¹	4.00	1.5748
	B²	4.00	1.5748	B²	3.000	1.1811	B²	4.33	1.7047	B²	4.66	1.8340	B²	4.66	1.8346	B²	4.33	1.7017
	B³	4.00	1.5748	B³	3.375	1.3287												
	B⁴	4.25	1.6732	B⁴	3.625	1.4271												
Highest .....		4.25	1.6732		3.625	1.4271		4.66	1.8346		4.66	1.8346		4.66	1.8346		4.33	1.7047
Minimum measurements	B¹	1.875	0.3781	B¹	2.0	0.7874	B¹	2.00	0.7874	B¹	2.66	1.0472	B¹	2.33	0.9173	B¹	2.33	0.9173
	B²	1.875	0.3781	B²	2.25	0.8858	B²	2.00	0.7874	B²	2.00	0.7874	B²	2.66	1.0472	B²	2.00	0.7874
	B³	1.875	0.3781	B³	2.0	0.7874												
	B⁴	1.250	0.4921	B⁴	2.375	0.9350												
Lowest .....		1.250	0.4921		2.0	0.7874		2.00	0.7874		2.00	0.7874		2.33	0.9173		2.00	0.7874
Average measurements	B¹	2.804	1.1039	B¹	2.558	1.0070	B¹	2.962	1.1601	B¹	3.390	1.3340	B¹	3.007	1.1838	B¹	2.952	1.1622
	B²	2.875	1.1318	B²	2.601	1.0594	B²	3.164	1.2456	B²	3.158	1.2433	B²	3.366	1.3251	B²	3.096	1.2188
	B³	3.054	1.2023	B³	2.654	1.0448												
	B⁴	3.000	1.1811	B⁴	2.653	1.1645												
Average .....		2.933	1.1547		2.715	1.0688		3.063	1.2059		3.274	1.2889		3.136	1.2543		3.024	1.1905
Measurements above average .....		62			64			20			39			29			21	
Measurements below average .....		58			56			34			21			31			36	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		SOUTHDOWN.																	
Catalogue number of samples..		63. SHOULDER.			63. SIDE.			63. HIP.			63. BELLY.			91. SHOULDER.			91. SIDE.		
Length of fiber in crimp .....		1½ inches.			—			—			¾ inch.			1½ inches.			1½ inches.		
Number of crimps per inch .....		14.			14.			—			—			12.			—		
Number of section .....		B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.
Actual measurement in centimillimeters.	3.0	3.0	2.0	2.33	3.0	3.0	4.0	2.66	2.75	3.5	3.0	3.66	3.0	3.0	2.33				
	2.66	2.33	3.33	2.33	3.33	4.33	3.33	2.33	2.75	3.5	3.5	2.0	3.0	2.66					
	3.0	3.0	2.0	4.66	3.66	4.0	2.66	2.66	3.25	2.75	3.25	3.66	3.0	2.33					
	3.33	2.66	3.33	3.0	2.66	3.0	4.0	2.66	3.25	3.25	3.5	3.33	4.0	3.66					
	2.33	3.0	3.33	2.66	3.66	3.33	3.33	3.0	3.0	2.75	3.0	3.0	2.00	3.0					
	3.0	4.0	4.0	3.0	3.33	3.66	3.66	3.0	3.5	4.0	3.0	3.33	3.0	2.33					
	2.66	2.66	2.66	3.33	2.66	4.33	3.0	2.66	3.5	2.5	3.5	3.33	3.0	3.33					
	2.66	2.66	3.0	2.0	3.0	4.66	3.33	3.0	3.0	2.75	3.25	3.0	3.66	3.33					
	3.0	3.33	3.0	3.33	3.33	2.66	3.0	2.66	3.25	3.5	2.5	3.33	3.33	3.0					
	3.66	2.66	3.66	1.33	3.33	3.66	3.0	3.33	3.5	3.25	3.5	3.0	3.0	3.33					
	3.33	2.66	3.0	3.0	2.66	3.0	4.0	2.66	3.5	1.75	3.0	3.0	4.66	4.0					
	2.66	2.33	3.833	2.66	4.0	3.33	3.33	2.66	3.5	3.0	2.75	2.66	3.33	3.66					
	3.33	2.66	3.0	2.66	2.66	3.33	3.33	3.33	3.66	3.75	4.0	3.5	3.0	3.66					
	2.66	2.66	3.33	3.0	2.33	3.33	2.66	2.66	2.66	3.25	2.75	3.75	3.33	2.66					
	2.66	2.0	2.66	4.0	2.66	3.0	2.66	2.66	3.33	3.75	3.5	2.75	2.0	3.0					
	2.66	2.66	2.66	3.33	2.66	2.66	3.66	3.66	3.66	3.25	2.75	2.75	3.0	3.66					
	3.33	2.66	2.66	4.33	2.66	2.66	3.33	3.33	2.66	3.25	3.0	2.75	3.33	3.0					
	2.66	3.33	3.33	2.66	2.66	3.0	2.66	2.66	3.0	3.75	2.75	2.75	4.0	4.0					
	40.	2.33	3.33	2.66	5.0	2.66	4.0	2.66	2.66	3.75	3.0	3.25	4.33	3.33					
	3.66	3.0	2.66	2.66	4.0	3.33	3.33	2.33	4.0	3.75	3.25	3.5	3.33	2.66					
	3.0	2.0	2.66	4.0	2.66	3.33	3.33	5.0	2.0	3.5	3.25	3.25	3.0	3.66					
	2.66	2.0	2.5	2.33	3.33	3.0	2.66	2.66	3.0	3.5	3.25	4.25	4.0	4.0					
	2.66	2.66	4.0	4.0	2.66	3.0	1.66	2.66	3.0	3.0	2.5	3.25	3.66	3.33					
	3.33	3.66	3.0	2.33	3.0	3.33	2.66	2.66	3.33	3.5	3.0	3.25	3.0	4.0					
	4.0	3.66	3.0	2.33	2.66	3.66	2.66	2.66	2.66	3.5	2.75	3.0	4.66	3.33					
	3.0	2.66	3.33	3.33	3.33	3.33	3.33	2.66	2.66	2.5	3.33	2.833	3.33	2.66					
	4.0	2.66	3.0	2.33	3.33	3.33	2.66	2.66	3.33	2.5	2.66	3.0	3.0	3.0					
	2.5	3.66	3.0	3.33	5.23	2.66	2.66	2.66	3.33	3.16	3.16	4.0	3.0	3.0					
	2.0	3.33	3.33	3.66	4.0	3.33	3.33	3.33	2.66	3.86	2.66	2.833	3.66	3.66					
	2.66	3.33	3.33	3.33	4.66	3.66	4.33	4.33	2.5	2.5	2.66	3.833	5.0	3.0					
Averages .....	3.035	2.857	3.064	2.963	3.270	3.229	3.207	2.912	3.291	3.024	3.204	3.266	3.110	3.010					

		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.		
Recapitulation and reduction:																		
Maximum measurements.	B¹	4.00	1.5748	B¹	4.00	1.5748	B¹	5.233	2.0002	B¹	4.0	1.5748	B¹	3.833	1.5090	B¹	4.66	1.8346
	B²	4.00	1.5748	B²	4.66	1.8346	B²	4.66	1.8346	B²	4.00	1.5748	B²	4.00	1.5748	B²	4.66	1.8346
	B³	4.00	1.5748	B³	4.66	1.8346	B³	4.33	1.7047	B³	4.250	1.6732	B³	4.33	1.7047	B³	4.33	1.7047
Highest .....		4.00	1.5748	4.66	1.8346	5.233	2.0002	4.0	1.5748	4.250	1.6732	4.66	1.8346					
Minimum measurements.	B¹	2.33	0.9173	B¹	2.0	0.7874	B¹	2.66	1.0472	B¹	2.00	0.7874	B¹	2.5	0.9842	B¹	2.0	0.7874
	B²	2.00	0.7874	B²	1.33	0.5236	B²	2.66	1.0472	B²	1.75	0.6889	B²	2.66	1.0472	B²	2.66	1.0472
	B³	2.00	0.7874	B³	1.33	0.5236	B³	1.66	0.6535	B³	2.5	0.9842	B³	2.0	0.7874	B³	2.0	0.7874
Lowest .....		2.00	0.7874	1.33	0.5236	1.66	0.6535	2.00	0.7874	1.75	0.6889	2.0	0.7874					
Average measurements.	B¹	3.035	1.1948	B¹	3.064	1.2062	B¹	3.270	1.2873	B¹	2.912	1.1464	B¹	3.291	1.2956	B¹	3.266	1.2858
	B²	2.857	1.1248	B²	2.963	1.1665	B²	3.229	1.2712	B²	3.024	1.1905	B²	3.110	1.2244	B²	3.110	1.2244
	B³	2.857	1.1248	B³	2.963	1.1665	B³	3.207	1.2625	B³	3.204	1.2614	B³	3.010	1.1850	B³	3.010	1.1850
Average .....		2.946	1.1598	3.013	1.1862	3.235	1.2736	2.912	1.1464	3.193	1.2570	3.128	1.2314					
Measurements above average .....		29		24		46		14		49		43						
Measurements below average .....		31		36		44		16		41		47						



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		SOUTHDOWN.																	
Catalogue number of samples..		91. HIP.			01. BELLY.			92. SHOULDER.			92. SIDE.			92. HIP.			92. BELLY.		
Length of fiber in crimp .....		1 <sup>1</sup> / <sub>8</sub> inches.			1/2 inch.			1 1/8 inches.			1 inch.			1 1/8 inches.			3/8 inch.		
Number of crimps per inch....		12.			14.			12.			—			12.			16.		
Number of section.....		B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .
Actual measurement in centimillimeters.	2.66	3.33	4.0	2.66	2.66	3.0	3.0	3.33	4.0	2.5	3.5	2.5	3.33	2.33	4.0	2.66	2.66	2.66	2.66
	3.0	3.33	3.66	3.0	3.0	2.33	4.66	2.66	3.0	2.75	2.5	3.0	2.66	4.0	3.0	3.0	2.66	3.0	2.66
	4.0	2.66	3.0	2.66	3.33	3.0	3.33	4.0	2.60	3.75	2.5	4.25	3.33	2.66	2.60	2.66	2.66	2.33	2.66
	2.66	3.66	2.833	2.66	3.33	2.0	3.0	5.33	3.66	3.0	3.0	3.5	2.0	3.66	1.66	3.33	3.0	2.33	2.33
	2.66	3.33	2.66	2.66	2.66	2.66	2.66	5.0	3.66	2.75	3.0	2.5	2.33	2.33	4.0	2.66	2.33	2.33	2.33
	2.66	3.33	2.0	3.33	2.66	3.0	4.33	5.33	3.33	2.25	2.5	2.5	2.0	3.66	5.33	3.0	2.33	3.0	2.33
	2.66	2.66	4.33	3.0	3.33	2.66	4.66	2.33	4.0	3.0	4.5	3.0	2.66	2.66	3.66	3.0	2.66	2.66	2.33
	3.0	3.0	3.33	2.60	2.66	2.0	3.33	2.66	3.66	2.75	2.0	3.0	4.33	3.0	2.33	3.33	3.0	2.66	2.66
	2.66	3.33	3.33	2.33	2.33	2.33	4.66	3.0	4.0	2.75	3.25	2.0	3.66	2.66	2.30	3.33	3.0	2.66	2.66
	3.33	2.66	4.33	3.0	2.66	2.0	3.33	3.0	4.0	2.75	2.5	3.0	3.33	2.66	2.0	2.66	2.66	2.66	2.66
	2.66	3.33	3.33	3.0	2.66	3.0	4.66	3.33	2.66	3.5	3.0	2.0	4.0	3.33	2.66	2.66	2.66	2.33	3.0
	3.0	3.33	3.33	2.33	2.66	2.66	3.33	3.33	6.33	3.5	3.5	2.5	3.0	2.33	3.66	3.0	2.66	2.66	2.33
	2.66	3.33	3.33	2.66	3.33	2.66	3.33	3.0	3.0	4.0	2.75	3.0	2.33	2.66	4.66	4.0	3.0	3.0	3.33
	3.33	2.0	2.66	3.33	3.33	3.33	4.66	2.66	3.66	2.5	3.75	1.5	2.33	2.66	3.33	2.66	2.0	2.0	2.0
	3.04	2.66	3.33	3.33	3.0	3.0	4.0	4.0	3.66	3.5	2.5	1.75	4.33	5.0	3.0	3.0	2.33	2.66	2.66
	3.0	4.0	3.33	1.66	2.66	2.33	4.0	3.33	2.33	3.5	2.5	2.25	2.66	2.66	3.33	2.33	2.66	3.0	2.66
	2.66	3.66	4.0	3.33	3.0	2.33	4.0	3.33	4.33	3.5	4.75	2.0	3.33	3.33	4.66	2.66	2.66	2.66	2.0
	3.33	3.0	4.0	3.0	2.66	2.66	3.33	4.0	3.66	4.5	2.25	2.5	2.0	2.0	2.66	3.0	2.33	2.66	2.66
	4.66	3.33	2.66	2.66	2.66	2.66	3.66	3.66	3.0	3.0	3.0	2.75	2.66	4.0	2.33	3.0	2.66	2.66	2.33
	2.66	3.33	4.0	2.33	3.0	2.33	4.0	2.66	3.33	3.5	2.25	2.0	2.66	2.66	3.33	3.0	2.66	2.66	2.66
	3.33	3.0	3.33	3.0	2.66	2.66	3.0	2.33	3.0	2.5	2.75	3.5	2.33	3.66	3.33	3.33	3.33	3.33	2.33
	3.0	3.33	3.66	2.66	3.33	2.0	3.33	3.33	3.66	2.5	2.0	2.75	2.66	2.66	3.66	2.33	3.0	2.0	2.0
	3.0	3.0	3.66	2.66	2.66	2.33	3.33	3.0	4.33	4.5	2.5	3.0	2.66	2.33	3.33	4.66	2.66	3.0	3.0
	3.0	4.0	3.66	2.66	3.33	2.66	4.66	4.0	6.0	4.0	2.75	3.5	3.0	3.66	2.33	4.33	2.33	3.0	3.0
	4.0	3.66	3.33	2.33	2.66	3.33	3.0	3.0	3.33	3.5	2.25	2.5	2.33	2.33	2.0	2.66	3.66	2.66	2.66
	2.66	4.0	3.33	2.66	2.66	3.0	3.33	3.33	5.0	4.0	2.0	3.25	4.0	3.33	2.66	3.0	2.33	3.33	3.33
	3.33	3.0	3.0	3.0	2.66	2.66	4.66	4.66	3.66	2.5	2.25	3.0	3.0	3.0	3.0	3.0	3.33	2.66	3.33
	2.66	3.66	3.66	3.33	2.66	2.33	3.33	3.33	3.66	2.25	3.5	3.0	3.0	2.66	2.66	2.66	2.66	3.33	3.33
2.66	3.33	3.33	2.33	3.0	2.66	5.33	4.0	2.66	2.0	4.25	2.25	3.33	2.33	3.33	3.33	2.66	3.0	3.0	
2.66	3.0	3.33	3.33	2.66	2.66	3.33	4.0	2.33	1.5	3.0	2.75	2.66	2.0	2.0	3.0	2.66	3.0	2.66	
Averages.....	3.255	3.277	3.416	2.811	2.888	2.611	3.708	3.404	3.619	3.080	2.866	2.666	2.851	2.945	3.100	3.073	2.777	2.766	2.766

Recapitulation and reduction:		No. of section.		In centimillimeters.		In thousandths of inch.		No. of section.		In centimillimeters.		In thousandths of inch.		No. of section.		In centimillimeters.		In thousandths of inch.	
Maximum measurements.	B <sup>1</sup>	4.66	1.8346	B <sup>1</sup>	3.33	1.3110	B <sup>1</sup>	5.33	2.0984	B <sup>1</sup>	4.50	1.7716	B <sup>1</sup>	4.33	1.7047	B <sup>1</sup>	4.66	1.8346	
	B <sup>2</sup>	4.0	1.5748	B <sup>2</sup>	3.33	1.3110	B <sup>2</sup>	5.33	2.0984	B <sup>2</sup>	4.75	1.8760	B <sup>2</sup>	5.00	1.9685	B <sup>2</sup>	3.66	1.4409	
	B <sup>3</sup>	4.33	1.7047	B <sup>3</sup>	3.33	1.3110	B <sup>3</sup>	6.33	2.4921	B <sup>3</sup>	4.25	1.6732	B <sup>3</sup>	5.33	2.0984	B <sup>3</sup>	4.00	1.5748	
Highest .....		4.66	1.8346		3.33	1.3110		6.33	2.4921		4.75	1.8760		5.33	2.0984		4.66	1.8346	
Minimum measurements.	B <sup>1</sup>	2.66	1.0472	B <sup>1</sup>	1.66	0.6535	B <sup>1</sup>	2.66	1.0472	B <sup>1</sup>	1.5	0.5905	B <sup>1</sup>	2.0	0.7874	B <sup>1</sup>	2.33	0.9173	
	B <sup>2</sup>	2.0	0.7874	B <sup>2</sup>	2.33	0.9173	B <sup>2</sup>	2.33	0.9173	B <sup>2</sup>	2.0	0.7874	B <sup>2</sup>	2.0	0.7874	B <sup>2</sup>	2.0	0.7874	
	B <sup>3</sup>	2.0	0.7874	B <sup>3</sup>	2.0	0.7874	B <sup>3</sup>	2.33	0.9173	B <sup>3</sup>	2.0	0.7874	B <sup>3</sup>	1.66	0.6535	B <sup>3</sup>	2.0	0.7874	
Lowest .....		2.0	0.7874		1.66	0.6535		2.33	0.9173		1.5	0.5905		1.66	0.6535		2.0	0.7874	
Average measurements.	B <sup>1</sup>	3.255	1.2814	B <sup>1</sup>	2.811	1.1066	B <sup>1</sup>	3.708	1.4578	B <sup>1</sup>	3.080	1.2125	B <sup>1</sup>	2.851	1.1224	B <sup>1</sup>	3.073	1.2098	
	B <sup>2</sup>	3.277	1.2901	B <sup>2</sup>	2.888	1.1370	B <sup>2</sup>	3.494	1.3755	B <sup>2</sup>	2.866	1.1283	B <sup>2</sup>	2.945	1.1594	B <sup>2</sup>	2.777	1.0933	
	B <sup>3</sup>	3.416	1.3448	B <sup>3</sup>	2.611	1.0279	B <sup>3</sup>	3.619	1.4248	B <sup>3</sup>	2.666	1.0496	B <sup>3</sup>	3.100	1.2204	B <sup>3</sup>	2.736	1.0889	
Average .....		3.316	1.3055		2.770	1.0905		3.607	1.4200		2.705	1.0649		2.965	1.1673		2.872	1.1307	
Measurements above average.....		61			33			42			53			42				38	
Measurements below average.....		39			57			48			37			46				52	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		SOUTHDOWN.																		
Catalogue number of samples...		93. SHOULDER.			93. SIDE.			93. HIP.			93. BELLY.		94. SHOULDER.			94. SIDE.				
Length of fiber in crimp .....		1 1/8 inches.			1 inch.			1 1/2 inches.			—		1 1/4 inches.			1 1/2 inches.				
Number of crimps per inch .....		12			14			12			12		14			14				
Number of section .....		B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .		
Actual measurement in centimillimeters.		2.66	3.66	3.33	2.66	2.0	2.66	3.33	3.33	3.0	2.0	2.66	2.66	2.66	2.66	2.66	2.66	2.66	3.0	
		2.56	2.66	2.0	3.0	2.0	3.0	3.33	3.33	2.33	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66	3.0	3.0
		3.33	2.66	3.0	2.66	2.66	3.0	3.0	4.0	2.66	3.0	2.0	2.33	3.0	2.33	2.66	2.66	3.33	2.66	2.33
		2.66	3.0	2.66	3.66	4.0	2.66	4.0	4.0	2.33	2.0	2.33	2.66	2.66	2.66	2.66	2.66	4.0	3.66	3.33
		2.66	2.66	2.0	2.0	2.0	2.0	3.0	2.33	3.33	3.0	2.66	2.66	2.66	2.66	3.0	2.66	3.66	3.66	3.33
		3.0	2.66	2.0	2.66	2.66	4.0	3.0	3.33	3.0	2.66	2.33	2.33	2.33	2.0	3.33	3.33	3.33	3.0	3.0
		3.33	2.66	3.0	3.0	3.33	2.66	3.33	3.0	5.0	2.33	3.33	3.33	3.33	2.66	4.33	2.66	2.33	3.0	3.0
		2.66	3.0	3.33	3.33	3.33	2.66	2.66	3.33	3.33	3.33	3.33	2.66	2.66	2.66	2.66	2.66	2.66	3.0	3.0
		2.66	2.66	3.0	3.33	3.0	3.33	3.33	3.0	4.0	3.0	4.0	3.0	4.0	3.0	3.33	2.33	3.33	2.33	2.66
		3.66	2.66	3.33	3.33	2.66	3.0	2.66	3.33	2.66	2.33	2.66	2.66	2.66	2.66	2.66	2.66	2.66	3.0	3.33
		2.66	3.0	2.66	2.66	3.33	2.66	2.33	2.66	2.66	3.0	3.0	3.33	2.66	3.0	2.66	2.66	3.0	3.33	2.66
		2.33	2.66	3.0	3.0	3.0	2.66	4.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66
		3.0	2.66	3.66	3.33	3.33	2.33	3.33	3.33	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66	3.33	3.33
		3.33	2.66	3.0	3.33	2.66	3.33	2.66	2.66	2.66	3.33	2.33	2.33	2.33	3.0	1.66	2.66	2.66	2.66	2.66
		4.33	4.0	3.0	2.0	2.66	3.0	4.0	2.66	3.0	3.0	3.0	3.0	3.0	4.0	2.33	3.66	3.66	3.33	3.33
		4.33	3.0	2.66	2.66	2.66	3.0	3.33	3.0	3.33	3.33	2.33	2.33	2.33	2.33	2.66	3.66	3.0	2.66	2.66
		2.33	2.66	3.0	2.66	4.0	3.33	2.33	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66	3.33	3.0	2.66	2.66
		3.0	3.33	3.0	2.33	3.0	2.66	3.33	3.33	3.33	3.33	3.33	3.33	3.33	4.06	3.0	2.33	2.33	3.33	2.0
		2.66	3.33	3.0	3.66	2.66	2.66	2.33	2.33	3.33	2.66	2.66	2.66	2.66	3.0	3.0	2.33	3.33	3.0	2.66
		3.66	3.33	3.66	3.33	2.33	3.33	2.33	3.0	3.0	3.0	3.0	3.0	2.66	2.66	2.66	2.33	3.33	3.33	2.66
		2.0	3.33	3.0	2.66	2.66	3.66	2.33	3.33	2.66	2.0	3.0	3.33	2.33	2.33	3.0	3.0	3.0	3.0	2.66
		3.0	3.33	3.33	2.66	3.0	2.33	3.33	3.0	3.0	2.33	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66	3.0
		3.0	3.33	2.66	1.66	3.0	2.66	2.66	2.66	3.33	2.66	3.33	2.66	2.66	2.66	3.0	2.66	3.0	2.66	3.33
		2.66	2.66	2.66	3.66	3.33	3.0	3.0	3.0	3.0	3.0	3.66	3.0	3.0	2.66	2.66	2.66	2.66	3.0	2.33
		2.66	3.33	3.0	3.33	3.33	3.33	3.33	4.0	2.33	3.0	2.66	3.0	2.66	2.66	3.33	2.66	4.0	2.0	2.33
	2.33	2.66	3.0	3.0	3.0	3.0	3.66	4.0	3.0	3.0	2.66	2.66	2.66	2.66	2.66	2.66	4.0	3.33	2.66	
	2.66	3.66	3.33	3.33	3.33	3.33	3.0	4.0	2.66	2.66	2.66	2.66	2.66	3.0	2.66	3.0	2.66	3.33	3.0	
	2.66	3.66	3.66	4.0	2.66	4.33	4.33	3.0	3.66	4.33	4.33	4.33	4.33	2.66	2.66	2.66	2.66	3.0	3.66	
	3.0	3.33	2.66	2.0	3.0	2.66	3.0	4.33	3.33	3.33	3.33	3.33	3.33	2.66	2.66	2.66	2.66	3.0	2.66	
	2.33	3.33	2.66	2.0	3.0	3.66	2.66	3.0	3.0	3.0	3.33	3.33	3.33	3.0	2.66	2.66	2.66	3.33	2.66	
Averages.....		2.877	3.055	2.888	2.933	2.955	2.955	3.167	3.122	3.044	2.844	2.733	2.728	2.806	2.696	2.933	3.066	2.823		

Recapitulation and reduction:		93. SHOULDER.			93. SIDE.			93. HIP.			93. BELLY.		94. SHOULDER.			94. SIDE.			
Maximum measurements {		B <sup>1</sup>	In centimillimeters.	In thousandths of inch.	B <sup>1</sup>	In centimillimeters.	In thousandths of inch.	B <sup>1</sup>	In centimillimeters.	In thousandths of inch.	B <sup>1</sup>	In centimillimeters.	In thousandths of inch.	B <sup>1</sup>	In centimillimeters.	In thousandths of inch.	B <sup>1</sup>	In centimillimeters.	In thousandths of inch.
Highest .....		4.33	1.7047	4.0	1.5748	5.0	1.9685	4.33	1.7047	4.66	1.8346	4.0	1.5748	4.0	1.5748	4.0	1.5748	3.66	1.4409
Minimum measurements {		2.0	0.7874	1.66	0.6535	2.33	0.9173	2.0	0.7874	2.33	0.9173	2.0	0.7874	2.33	0.9173	1.66	0.6535	2.33	0.9173
Lowest .....		2.0	0.7874	1.66	0.6535	2.33	0.9173	2.0	0.7874	2.33	0.9173	2.0	0.7874	2.0	0.7874	1.66	0.6535	2.0	0.7874
Average measurements {		2.877	1.1326	2.933	1.1547	3.167	1.2468	2.844	1.1196	2.728	1.0740	2.728	1.0740	2.806	1.1047	2.933	1.1547	3.066	1.2070
Average .....		2.940	1.1574	2.947	1.1602	3.111	1.2248	2.788	1.0976	2.743	1.0799	2.743	1.0799	2.696	1.0614	2.823	1.1114	2.940	1.1574
Measurements above average .....		46			52			38			25		25			51			
Measurements below average .....		44			38			52			35		65			39			



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		SOUTHDOWN.																		
Catalogue number of samples..		94. HIP.				91. DELLY.			95. SHOULDER.			95. SIDE.			95. HIP.			95. DELLY.		
Length of fiber in crimp.....		2 inches.				¾ Inch.			1¼ inches.			1⅞ inches.			1½ inches.			1⅞ inches.		
Number of crimps per inch....		—				—			14.			14.			12.			—		
Number of section .....		B <sup>1</sup>	B <sup>2</sup>	B <sup>3</sup>	B <sup>4</sup>	B <sup>1</sup>	B <sup>2</sup>	B <sup>3</sup>	B <sup>1</sup>	B <sup>2</sup>	B <sup>3</sup>	B <sup>1</sup>	B <sup>2</sup>	B <sup>3</sup>	B <sup>1</sup>	B <sup>2</sup>	B <sup>3</sup>	B <sup>1</sup>	B <sup>2</sup>	B <sup>3</sup>
Actual measurement in centimillimeters.	3.0	3.66	4.66	4.33	3.33	3.33	3.33	3.33	3.0	2.33	2.33	2.33	2.66	2.66	3.33	2.0	2.66	3.33	3.33	
	3.33	4.66	2.66	4.0	3.0	3.0	3.33	2.33	2.83	2.0	2.60	3.0	2.66	2.66	3.0	2.0	2.66	3.0	2.66	
	2.66	3.66	2.33	3.33	4.0	2.0	2.60	2.0	2.66	2.0	2.0	2.66	2.0	2.0	2.66	2.0	2.0	2.66	2.0	
	4.33	3.66	3.33	4.0	3.33	3.33	3.33	2.66	2.0	2.0	2.66	2.66	2.66	2.66	3.66	3.66	2.33	2.33	2.0	
	3.33	4.0	3.33	3.33	2.66	3.0	3.33	2.66	2.66	3.0	1.66	2.33	2.66	2.66	3.0	2.0	3.0	3.66	3.0	
	3.33	5.66	3.33	3.33	3.33	3.33	2.66	2.66	2.0	2.66	3.33	2.66	2.66	2.33	3.33	3.33	3.33	2.66	2.33	
	3.33	3.33	4.0	4.0	3.33	3.0	2.66	2.66	2.0	2.66	2.33	2.33	3.33	4.0	2.0	3.33	2.33	2.33	2.0	
	4.33	3.66	2.66	3.33	2.66	3.0	3.0	2.0	2.0	2.66	2.66	2.66	3.0	2.66	3.33	2.0	3.33	2.0	2.66	
	4.0	3.0	2.66	3.33	3.0	3.0	3.33	2.66	2.33	2.0	2.33	3.33	2.66	2.0	2.0	2.33	2.66	2.66	3.0	
	3.33	3.0	3.66	4.66	2.33	3.33	2.33	2.33	2.66	2.0	1.66	3.0	2.33	2.0	2.66	3.33	3.33	2.66	3.66	
	3.66	2.66	3.33	4.0	3.66	3.0	3.0	3.0	2.0	2.33	2.0	1.66	2.66	3.33	2.66	3.33	2.66	2.33	3.33	
	2.0	4.33	2.33	3.0	2.66	2.66	2.66	4.0	2.33	2.33	2.66	2.66	2.33	2.0	2.33	2.33	2.33	2.33	3.0	
	2.66	3.66	4.66	2.0	2.33	2.66	2.66	4.0	2.66	2.33	2.0	2.0	2.33	3.33	3.33	2.66	2.66	2.66	3.33	
	2.33	5.33	3.0	3.33	2.33	2.33	2.66	2.66	2.66	2.66	2.0	2.66	2.66	2.0	2.33	3.33	2.33	3.0	3.33	
	4.0	4.0	4.0	4.0	3.33	3.0	3.33	2.33	2.33	2.0	2.66	2.33	2.0	2.66	2.33	2.0	2.66	2.33	3.0	
	3.33	4.33	2.66	3.66	2.66	3.66	2.33	2.0	2.66	2.66	3.0	2.66	3.33	2.33	3.33	2.33	2.33	2.33	2.66	
	5.0	3.33	4.0	3.66	2.66	3.0	2.66	2.33	3.33	2.33	2.66	2.33	2.66	2.0	4.0	3.33	3.66	2.33	2.66	
	4.0	3.66	3.66	3.33	3.33	4.33	2.66	2.66	2.0	2.0	3.33	2.66	2.33	3.0	3.33	3.0	3.33	3.0	2.66	
	4.0	3.0	3.33	3.0	2.66	2.66	2.33	2.33	2.66	2.66	2.33	2.66	2.66	2.0	1.66	2.33	2.0	2.33	2.0	
	4.0	4.33	2.33	3.33	2.66	2.66	3.0	2.33	2.66	3.33	2.0	2.33	3.33	3.66	3.33	2.33	2.0	2.0	2.0	
2.66	4.0	3.33	3.33	2.66	3.33	2.66	2.0	2.0	2.0	2.0	2.66	2.33	3.33	4.0	2.33	3.3	3.3	2.0		
3.33	3.0	4.0	4.0	2.66	3.33	3.33	2.66	2.66	2.0	2.33	3.0	2.0	2.0	3.0	1.66	2.33	2.0	2.0		
3.33	3.33	4.33	3.0	3.33	2.66	3.0	2.66	3.33	3.0	2.0	3.0	3.33	2.33	3.33	4.0	2.33	2.66	2.66		
3.33	4.66	3.66	2.33	3.33	2.66	2.60	3.33	2.0	3.33	2.0	2.66	2.0	3.33	3.0	3.0	2.66	3.0	3.0		
3.66	3.0	4.33	2.33	1.66	3.33	3.0	2.33	2.33	2.33	2.33	2.33	2.66	3.33	2.33	2.33	2.66	2.66	2.66		
3.33	4.0	4.0	4.0	3.0	2.33	2.66	2.33	2.33	2.0	2.33	2.33	2.66	2.33	2.66	2.33	2.66	3.33	3.0		
3.66	3.33	3.66	3.66	2.66	2.66	3.0	2.66	2.33	2.33	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66	3.0		
3.33	2.66	4.0	4.0	3.33	2.33	2.66	2.0	3.33	2.00	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66	2.66		
3.0	3.33	3.33	2.0	3.33	3.0	3.0	2.33	2.66	2.66	2.66	2.66	2.66	2.33	2.33	2.0	3.33	2.0	3.33		
Averages .....	3.400	3.677	3.466	3.455	2.877	3.000	2.877	2.567	2.523	2.400	2.434	2.545	2.511	2.666	2.955	2.711	2.733	2.733	2.955	

Recapitulation and reductions:		No. of section.		In centimillimeters.		In thousandths of inch.		No. of section.		In centimillimeters.		In thousandths of inch.		No. of section.		In centimillimeters.		In thousandths of inch.	
Maximum measurements.	B <sup>1</sup>	5.0	1.9685	B <sup>1</sup>	4.0	1.5748	B <sup>1</sup>	4.0	1.5748	B <sup>1</sup>	3.33	1.3110	B <sup>1</sup>	4.66	1.8346	B <sup>1</sup>	4.0	1.5748	
	B <sup>2</sup>	5.66	2.2283	B <sup>2</sup>	4.33	1.7047	B <sup>2</sup>	3.33	1.3110	B <sup>2</sup>	3.33	1.3110	B <sup>2</sup>	4.0	1.5748	B <sup>2</sup>	3.66	1.4400	
	B <sup>3</sup>	4.66	1.8346	B <sup>3</sup>	3.33	1.3110	B <sup>3</sup>	3.33	1.3110	B <sup>3</sup>	3.33	1.3110	B <sup>3</sup>	4.0	1.5748	B <sup>3</sup>	3.33	1.3110	
	B <sup>4</sup>	4.66	1.8346																
Highest .....		5.66	2.2283		4.33	1.7047		4.0	1.5748		3.33	1.3110		4.66	1.8346		4.0	1.5748	
Minimum measurements.	B <sup>1</sup>	2.0	0.7874	B <sup>1</sup>	1.66	0.6535	B <sup>1</sup>	2.0	0.7874	B <sup>1</sup>	1.66	0.6535	B <sup>1</sup>	2.0	0.7874	B <sup>1</sup>	1.66	0.6535	
	B <sup>2</sup>	2.0	0.7874	B <sup>2</sup>	2.0	0.7874	B <sup>2</sup>	2.0	0.7874	B <sup>2</sup>	1.66	0.6535	B <sup>2</sup>	2.0	0.7874	B <sup>2</sup>	2.0	0.7874	
	B <sup>3</sup>	2.83	0.9173	B <sup>3</sup>	2.33	0.9173	B <sup>3</sup>	1.66	0.6535	B <sup>3</sup>	1.66	0.6535	B <sup>3</sup>	1.66	0.6535	B <sup>3</sup>	2.0	0.7874	
	B <sup>4</sup>	2.0	0.7874																
Lowest .....		2.0	0.7874		2.0	0.7874		1.66	0.6535		1.66	0.6535		1.66	0.6535		1.66	0.6535	
Average measurements.	B <sup>1</sup>	3.406	1.3401	B <sup>1</sup>	2.877	1.1326	B <sup>1</sup>	2.567	1.0106	B <sup>1</sup>	2.434	0.9582	B <sup>1</sup>	2.666	1.0496	B <sup>1</sup>	2.733	1.0759	
	B <sup>2</sup>	3.677	1.4476	B <sup>2</sup>	3.000	1.1811	B <sup>2</sup>	2.523	0.9983	B <sup>2</sup>	2.545	1.0019	B <sup>2</sup>	2.955	1.1633	B <sup>2</sup>	2.733	1.0759	
	B <sup>3</sup>	3.466	1.3645	B <sup>3</sup>	2.877	1.1326	B <sup>3</sup>	2.400	0.9448	B <sup>3</sup>	2.511	0.9886	B <sup>3</sup>	2.711	1.0673	B <sup>3</sup>	2.955	1.1633	
	B <sup>4</sup>	3.455	1.3602																
Average .....		3.501	1.3783		2.018	1.1488		2.496	0.9826		2.496	0.9826		2.777	1.0033		2.807	1.1051	
Measurements above average..			44			49		44			46			39				36	
Measurements below average..			46			41		46			44			51				54	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

SOUTHDOWN.																		
Catalogue number of samples..	132.			133.			134.			135.			136.			137.		
Length of fiber in crimp.....	1½ inches.			1½ inches.			1½ inches.			1½ inches.			1 inch.			1½ inches.		
Number of crimps per inch.....	—			—			—			—			—			—		
Number of section.....	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .
3.0	2.875	3.0	2.25	2.75	3.75	2.875	3.375	3.5	2.625	2.25	3.0	2.75	3.125	2.0	3.375	2.6	2.875	2.875
2.625	2.375	3.375	2.875	2.875	2.875	2.875	1.375	3.25	2.75	2.0	2.0	3.5	2.625	2.625	2.375	3.0	2.25	2.375
1.875	2.375	2.5	3.0	2.875	2.75	2.875	2.875	2.0	3.125	2.75	2.875	2.5	3.75	3.675	3.375	3.375	2.625	2.5
2.5	2.625	3.0	1.875	1.625	3.375	2.5	2.125	3.875	2.625	2.25	3.125	2.75	1.75	3.25	3.0	3.0	2.25	3.75
2.625	2.5	3.625	2.5	3.5	2.875	2.75	2.75	3.625	2.375	2.75	3.675	2.875	3.25	2.875	3.25	2.875	2.75	2.75
2.0	3.5	3.25	2.875	1.25	3.375	1.5	3.125	4.0	3.5	3.5	3.0	3.25	3.25	3.5	4.0	3.0	2.75	2.25
2.5	2.875	3.375	1.125	1.5	2.75	2.125	2.5	3.625	2.25	2.75	3.0	3.25	2.125	2.75	3.5	3.5	2.625	3.0
2.0	2.5	2.5	2.625	3.5	2.675	3.375	4.125	4.0	3.875	2.875	4.0	3.75	2.875	3.5	3.0	3.0	3.875	3.875
2.0	2.5	3.125	2.375	2.875	2.75	2.5	3.125	3.0	3.625	3.25	3.25	3.6	3.675	3.0	3.75	4.125	3.25	3.25
2.0	3.75	3.0	3.0	3.5	3.125	3.625	4.0	3.875	3.375	3.25	3.25	3.0	3.875	2.25	2.5	2.0	3.25	3.25
2.0	2.375	2.75	2.5	3.25	3.75	2.5	3.675	3.75	3.75	2.5	3.675	2.875	2.25	2.875	2.5	2.675	3.875	3.125
2.0	2.375	3.0	2.5	2.25	3.5	3.5	3.5	3.5	3.75	3.75	3.75	2.875	3.75	2.0	3.375	2.75	3.0	3.0
2.0	2.375	3.25	2.25	1.5	3.5	3.5	3.5	3.5	3.875	3.0	3.875	2.125	2.5	2.5	2.875	2.25	2.5	2.5
2.0	2.375	3.25	2.5	3.5	3.0	3.875	2.5	3.625	2.25	2.0	2.875	2.875	2.875	3.125	3.0	3.75	2.75	4.0
2.0	2.375	2.5	2.75	2.875	3.0	3.875	3.75	3.625	2.5	3.5	2.0	1.5	2.625	2.875	3.0	3.875	4.0	4.0
2.0	2.625	2.875	3.125	2.25	2.875	3.125	3.125	3.125	2.5	3.625	3.0	2.0	2.125	1.875	3.0	2.25	2.875	3.375
2.0	2.875	2.75	2.75	2.25	2.875	1.875	2.875	3.375	3.5	3.25	3.0	2.75	2.125	3.0	3.0	3.375	3.375	2.625
2.0	3.375	3.25	3.0	2.75	2.875	3.0	3.875	2.75	4.0	3.875	3.0	3.675	3.75	2.25	2.75	3.5	3.875	3.75
2.0	3.375	3.375	3.125	3.0	3.125	3.0	3.0	3.0	3.75	3.875	3.125	3.6	3.75	2.25	2.25	3.5	4.875	4.875
2.0	3.375	3.375	3.25	3.5	3.5	3.5	3.25	2.125	3.625	4.0	3.875	2.5	1.875	2.675	2.5	3.125	3.375	2.875
2.0	3.375	3.375	2.0	3.25	3.625	2.875	4.5	1.875	3.875	3.125	3.25	2.5	2.75	3.125	2.5	3.125	3.5	4.375
2.0	3.375	3.375	3.25	3.25	3.25	3.25	3.25	3.125	3.0	3.5	2.75	2.0	3.375	2.25	2.0	2.875	4.0	4.375
2.0	3.375	3.375	2.5	2.875	1.75	2.5	3.25	3.25	3.75	2.75	4.35	3.125	2.75	1.75	3.375	3.875	4.75	3.875
2.0	3.375	3.375	3.0	2.625	2.75	3.125	3.125	3.125	3.5	3.25	2.75	2.875	2.25	2.625	3.0	3.0	3.25	3.375
2.0	3.375	3.375	3.125	3.0	3.875	3.875	3.875	4.125	3.875	3.875	3.125	2.0	3.5	2.0	3.5	3.25	3.75	2.125
2.0	3.375	3.375	3.0	3.25	3.125	3.125	3.875	3.0	3.625	3.625	3.5	3.25	1.875	2.625	2.0	2.25	3.6	3.0
2.0	3.375	3.375	2.5	3.0	3.125	3.25	4.0	2.875	4.0	3.125	2.875	4.25	2.875	2.0	3.0	3.0	4.5	4.5
2.0	3.375	3.375	3.0	2.5	1.75	3.75	4.875	3.125	4.25	2.875	2.6	3.5	2.875	3.25	3.625	3.625	3.25	2.0
2.0	3.375	3.375	3.0	3.25	3.75	3.75	3.75	3.75	3.875	3.875	3.25	2.75	2.75	2.6	3.125	3.375	3.875	3.25
Averages.....	2.604	2.716	3.125	2.602	2.704	3.104	3.045	3.100	3.554	2.654	3.008	3.070	2.370	2.920	2.791	3.067	3.296	3.245

Recapitulation and reduction:	No. of section.			In centimillimeters.			In thousandths of inch.			No. of section.			In centimillimeters.			In thousandths of inch.		
	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .
Maximum measurements.	B <sup>1</sup>	3.875	1.8267	B <sup>1</sup>	3.25	1.2705	B <sup>1</sup>	4.375	1.7224	B <sup>1</sup>	4.0	1.6748	B <sup>1</sup>	3.75	1.4763	B <sup>1</sup>	4.0	1.5749
	B <sup>2</sup>	3.75	1.4763	B <sup>2</sup>	3.5	1.3779	B <sup>2</sup>	4.75	1.8700	B <sup>2</sup>	4.25	1.6732	B <sup>2</sup>	3.75	1.4763	B <sup>2</sup>	5.5	2.1653
	B <sup>3</sup>	4.0	1.5748	B <sup>3</sup>	3.675	1.5255	B <sup>3</sup>	4.25	1.6732	B <sup>3</sup>	4.25	1.6732	B <sup>3</sup>	3.875	1.5255	B <sup>3</sup>	4.875	1.9193
Highest.....		4.0	1.5748		3.875	1.5255		4.75	1.8700		4.25	1.6732		3.875	1.5255		3.6	2.1653
Minimum measurements.	B <sup>1</sup>	1.75	0.6889	B <sup>1</sup>	1.125	0.4429	B <sup>1</sup>	1.375	0.5413	B <sup>1</sup>	0.875	0.3444	B <sup>1</sup>	1.5	0.5905	B <sup>1</sup>	2.25	0.8858
	B <sup>2</sup>	2.125	0.8306	B <sup>2</sup>	1.25	0.4291	B <sup>2</sup>	1.575	0.7389	B <sup>2</sup>	2.0	0.7874	B <sup>2</sup>	1.75	0.6889	B <sup>2</sup>	2.0	0.7674
	B <sup>3</sup>	2.5	0.9612	B <sup>3</sup>	1.875	0.6413	B <sup>3</sup>	2.75	1.0828	B <sup>3</sup>	2.0	0.7874	B <sup>3</sup>	2.0	0.7674	B <sup>3</sup>	2.125	0.8306
Lowest.....		1.75	0.6889		1.125	0.4429		1.375	0.5413		0.875	0.3444		1.5	0.5905		2.0	0.7674
Average measurements.	B <sup>1</sup>	2.604	1.0251	B <sup>1</sup>	2.602	1.0469	B <sup>1</sup>	3.045	1.1968	B <sup>1</sup>	2.854	1.1236	B <sup>1</sup>	2.370	0.9368	B <sup>1</sup>	3.067	1.2153
	B <sup>2</sup>	2.716	1.0692	B <sup>2</sup>	2.704	1.0643	B <sup>2</sup>	3.100	1.2204	B <sup>2</sup>	3.068	1.3079	B <sup>2</sup>	3.920	1.1406	B <sup>2</sup>	3.296	1.2972
	B <sup>3</sup>	3.125	1.2903	B <sup>3</sup>	3.104	1.2229	B <sup>3</sup>	3.554	1.3992	B <sup>3</sup>	3.070	1.2098	B <sup>3</sup>	2.791	1.0998	B <sup>3</sup>	3.245	1.2775
Average.....		2.815	1.1062		2.823	1.1114		3.238	1.2728		2.906	1.1796		2.696	1.0614		3.200	1.2625
Measurements above average.....		43			55			53			52			41			47	
Measurements below average.....		47			35			37			38			49			43	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of samples..	SOUTHDOWN.																	
	138.			139.			140.			141.			142.			143.		
	1 1/4 inches.			2 inches.			1 1/2 inches.			1 3/4 inches.			1 inch.			1 1/2 inches.		
Number of crimps per inch....	—																	
Number of section.....	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .
Actual measurement in centimillimeters.	2.375	3.375	3.25	3.75	2.875	2.125	3.125	2.125	2.0	3.0	2.5	2.75	3.125	3.0	3.0	2.25	3.625	2.875
	2.5	3.125	2.6	2.875	2.625	3.875	2.625	2.875	2.5	3.125	2.75	2.25	2.25	2.25	1.875	3.125	2.625	2.875
	2.0	2.5	2.25	3.125	4.25	1.75	2.875	3.375	2.75	2.875	2.875	3.0	2.875	3.0	2.875	2.375	4.75	3.25
	2.375	8.125	2.125	3.625	3.875	1.875	2.875	3.75	2.625	2.375	3.75	2.625	2.375	2.125	2.875	2.125	2.6	3.625
	2.125	2.625	2.6	4.75	2.875	3.0	2.375	3.875	2.625	4.75	3.0	4.0	2.125	2.5	2.875	2.5	2.5	3.125
	2.125	2.75	2.0	3.75	2.0	2.375	2.125	3.25	2.0	3.75	2.75	2.75	2.625	1.75	2.375	3.0	4.125	3.125
	1.625	2.75	3.0	2.25	2.625	1.875	3.875	2.75	3.75	2.875	2.75	2.875	2.5	2.25	3.0	1.625	2.75	3.25
	2.375	2.75	2.375	2.625	3.25	3.375	3.6	4.25	2.375	2.75	3.25	3.5	2.375	2.25	2.625	2.625	2.125	2.5
	2.0	1.25	2.125	4.25	2.75	3.0	2.375	2.5	2.125	2.125	4.0	2.875	2.75	3.5	2.875	2.375	2.375	3.375
	2.125	2.125	2.125	2.5	4.0	1.625	3.625	3.375	2.0	3.25	3.125	2.5	2.5	2.5	2.375	5.0	5.0	2.5
	2.25	2.75	2.5	3.75	2.6	3.0	3.125	3.25	2.0	2.75	3.625	3.0	3.0	2.25	2.25	3.0	2.0	3.25
	2.5	2.375	2.5	2.375	1.625	1.875	3.5	2.875	2.75	3.625	3.25	1.5	2.25	3.5	3.0	3.375	3.25	3.0
	2.6	2.375	2.375	3.5	4.125	2.5	2.875	2.75	2.875	2.375	3.25	1.875	3.0	2.625	2.625	3.625	3.25	3.0
	2.6	3.125	3.75	2.375	2.5	3.25	2.625	2.75	2.625	2.375	5.0	2.875	3.25	2.75	2.0	3.6	2.625	2.75
	2.25	3.0	2.0	2.25	2.375	2.6	3.5	3.0	2.875	1.75	3.0	2.125	2.75	2.375	2.875	1.75	2.75	3.25
	2.75	2.375	2.375	2.6	3.5	2.0	2.25	2.875	2.25	3.375	2.75	2.875	2.5	3.375	2.75	3.375	2.75	2.875
	2.6	2.5	2.375	4.25	2.775	2.25	2.125	2.75	2.875	1.875	3.0	2.5	2.25	2.625	2.25	4.5	3.375	3.6
	2.5	2.6	2.375	4.25	2.125	2.375	3.375	2.375	2.25	3.875	3.0	2.875	3.0	3.0	2.125	4.25	2.75	3.5
	3.0	3.125	2.6	3.5	3.0	1.625	2.0	3.75	2.0	2.375	3.5	2.625	4.0	2.75	1.875	3.5	3.25	3.25
	2.625	2.75	3.25	2.25	3.0	1.625	3.25	3.75	2.25	3.5	2.875	1.875	3.0	3.5	2.375	2.625	3.625	3.5
2.875	3.375	2.625	2.75	2.25	3.0	2.375	3.0	1.75	3.6	2.75	2.375	3.0	2.5	2.0	3.75	3.125	3.375	
3.125	2.75	2.5	2.875	2.125	2.25	3.5	3.75	2.375	2.625	2.375	2.5	3.0	3.0	2.75	3.75	3.875	2.375	
2.5	2.875	2.375	3.6	2.375	3.5	3.5	2.75	2.625	2.75	3.0	2.625	2.875	3.0	1.25	2.75	3.6	2.75	
2.625	2.25	2.5	3.25	1.75	2.25	3.25	2.5	2.375	2.25	2.5	2.25	2.875	3.125	2.375	3.125	4.125	3.625	
2.875	2.375	1.75	3.375	2.5	1.875	3.0	2.875	1.875	2.375	3.25	3.0	2.5	2.375	2.5	3.125	2.625	3.25	
2.875	2.625	2.375	2.375	2.75	2.75	2.5	3.125	2.625	2.125	2.875	3.0	2.875	2.75	2.375	3.25	2.25	3.25	
3.5	3.0	2.625	4.25	2.5	1.875	2.5	2.75	2.125	2.5	3.25	2.75	2.75	2.625	3.125	3.5	3.25	3.0	
2.875	2.125	2.25	2.125	2.6	2.375	3.5	2.375	2.875	2.375	2.0	2.75	3.625	3.375	3.0	3.0	2.875	3.25	
3.375	2.875	3.0	1.75	4.75	1.625	2.375	3.25	2.75	3.5	3.25	2.5	3.125	2.5	3.125	3.0	2.25	3.25	
3.375	2.625	3.375	2.625	2.5	1.875	2.5	2.5	2.0	4.125	2.875	2.75	1.875	2.125	2.375	2.875	2.5	2.875	
Averages.....	2.550	2.670	2.520	3.041	2.821	2.375	2.900	2.037	2.412	2.891	3.020	2.583	2.779	2.745	2.553	2.804	3.066	3.191

Recapitulation and reduction:	N <sup>o</sup> . of section.	In centimillimeters.		N <sup>o</sup> . of section.	In centimillimeters.		N <sup>o</sup> . of section.	In centimillimeters.		N <sup>o</sup> . of section.	In centimillimeters.		N <sup>o</sup> . of section.	In centimillimeters.		N <sup>o</sup> . of section.	In centimillimeters.	
		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.						
Maximum measurements.	B <sup>1</sup>	3.6	1.3779	B <sup>1</sup>	4.75	1.8700	B <sup>1</sup>	3.875	1.6255	B <sup>1</sup>	4.75	1.8700	B <sup>1</sup>	4.00	1.5748	B <sup>1</sup>	5.000	1.9685
	B <sup>2</sup>	3.375	1.3287	B <sup>2</sup>	4.75	1.8700	B <sup>2</sup>	4.25	1.6732	B <sup>2</sup>	4.00	1.5748	B <sup>2</sup>	3.50	1.3770	B <sup>2</sup>	4.125	1.6240
	B <sup>3</sup>	3.75	1.4763	B <sup>3</sup>	3.875	1.5255	B <sup>3</sup>	3.75	1.4763	B <sup>3</sup>	4.00	1.5748	B <sup>3</sup>	3.125	1.2303	B <sup>3</sup>	5.000	1.9685
Highest.....		3.75	1.4763		4.75	1.8700		4.25	1.6732		4.75	1.8700		4.00	1.5748		5.000	1.9685
Minimum measurements.	B <sup>1</sup>	1.625	0.6397	B <sup>1</sup>	1.75	0.6889	B <sup>1</sup>	2.125	0.8366	B <sup>1</sup>	1.75	0.6889	B <sup>1</sup>	1.75	0.6889	B <sup>1</sup>	1.75	0.6889
	B <sup>2</sup>	1.25	0.4921	B <sup>2</sup>	1.625	0.6397	B <sup>2</sup>	2.125	0.8366	B <sup>2</sup>	2.00	0.7874	B <sup>2</sup>	1.875	0.7381	B <sup>2</sup>	2.25	0.8858
	B <sup>3</sup>	1.75	0.6889	B <sup>3</sup>	1.625	0.6397	B <sup>3</sup>	1.76	0.6889	B <sup>3</sup>	1.50	0.5905	B <sup>3</sup>	1.625	0.6397	B <sup>3</sup>	2.50	0.9842
Lowest.....		1.25	0.4921		1.625	0.6397		1.75	0.6889		1.50	0.5905		1.625	0.6397		1.75	0.6889
Average measurements..	B <sup>1</sup>	2.550	1.0089	B <sup>1</sup>	3.041	1.1972	B <sup>1</sup>	2.900	1.1417	B <sup>1</sup>	2.891	1.1381	B <sup>1</sup>	2.779	1.0940	B <sup>1</sup>	2.804	1.1039
	B <sup>2</sup>	2.670	1.0511	B <sup>2</sup>	2.821	1.1106	B <sup>2</sup>	2.037	0.9330	B <sup>2</sup>	3.020	1.1889	B <sup>2</sup>	2.745	1.0807	B <sup>2</sup>	3.066	1.2070
	B <sup>3</sup>	2.520	0.9921	B <sup>3</sup>	2.375	0.9350	B <sup>3</sup>	2.412	0.9496	B <sup>3</sup>	2.583	1.0169	B <sup>3</sup>	2.553	1.0051	B <sup>3</sup>	3.191	1.2662
Average.....		2.580	1.0157		2.745	1.0807		2.440	0.9641		2.831	1.1145		2.692	1.0598		3.020	1.1889
Measurements above average..		38			40			61			45			48			51	
Measurements below average..		52			50			29			45			42			39	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		SOUTHDOWN.																		
Catalogue number of samples..		144.			145.			146.			147.			148.			149.			
Length of fiber in crimp.....		1½ inches.			1½ inches.			1½ inches.			1½ inches.			1½ inches.			2 inches.			
Number of crimps per inch....		—			—			—			—			—			—			
Number of section.....		B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .
Actual measurement in centimillimeters.	2.875	3.625	2.875	3.75	3.75	2.125	2.75	3.0	3.0	1.75	3.75	2.6	2.625	3.25	3.25	2.375	3.0	2.0	2.75	
	2.5	2.875	3.0	4.25	2.875	2.375	4.125	2.25	2.125	2.875	3.0	2.6	3.0	4.0	2.75	2.125	2.125	2.125	3.0	2.75
	2.25	3.25	3.125	2.0	3.0	2.75	2.5	2.25	3.375	3.25	3.75	2.625	3.75	1.3	2.25	2.625	2.6	2.25	3.0	3.875
	3.6	3.625	5.0	3.25	2.875	2.75	2.6	2.625	2.875	2.875	2.375	2.225	3.875	4.0	2.75	2.5	2.875	3.0	2.875	2.875
	3.0	3.125	3.5	3.25	2.875	3.6	3.125	2.25	3.25	3.25	3.0	3.375	3.875	2.75	2.6	2.8	2.5	3.25	2.6	2.875
	3.0	3.125	4.25	3.0	3.125	3.0	2.875	3.125	2.25	2.25	2.25	2.125	3.25	2.75	3.125	3.0	2.6	2.625	2.0	3.0
	2.375	3.125	2.6	3.125	3.375	3.6	2.275	4.0	2.0	2.625	2.25	2.375	2.6	2.0	1.6	2.75	3.0	2.0	2.875	2.875
	3.0	2.6	3.6	2.0	3.6	2.75	2.6	2.6	3.6	3.875	1.875	1.375	3.125	2.75	2.25	3.0	3.0	3.125	2.675	2.675
	2.875	2.375	3.375	2.625	2.875	3.0	2.875	3.75	2.0	1.125	3.125	3.875	2.5	3.25	2.25	2.675	2.75	3.6	2.6	3.6
	3.0	3.0	2.8	4.0	3.75	3.0	3.25	2.675	2.75	1.575	1.575	1.75	3.875	4.125	1.625	4.0	3.625	2.375	2.875	2.875
	2.5	3.25	2.5	3.5	3.25	2.0	3.375	3.125	3.0	2.625	2.375	2.25	4.0	2.75	2.875	1.875	3.75	2.75	1.875	1.875
	2.875	3.25	2.0	3.375	3.625	3.0	3.0	2.625	3.0	2.625	2.875	2.25	2.875	2.25	2.75	3.125	2.625	2.25	2.0	2.6
	3.0	3.25	3.0	2.25	3.6	2.75	3.0	2.875	2.875	2.875	3.0	2.6	2.25	2.75	3.25	3.125	2.625	3.125	2.625	2.875
	2.0	2.625	2.75	3.125	3.875	3.75	4.5	2.625	2.125	1.5	2.75	2.625	2.75	2.75	4.6	2.6	3.625	2.875	1.625	2.875
	2.5	2.75	3.25	3.25	3.375	3.125	2.5	2.625	2.25	2.625	2.0	2.25	2.25	3.875	3.25	2.5	3.25	1.75	1.875	1.875
	3.875	2.75	2.875	3.75	3.125	3.25	2.875	3.125	2.75	2.875	2.875	2.0	3.625	2.125	3.25	3.0	3.625	2.875	1.875	3.875
	2.875	3.375	3.5	3.25	2.6	3.6	3.125	2.6	2.0	2.6	2.25	2.75	2.375	3.25	1.625	3.0	3.0	3.875	1.875	3.875
	3.125	2.75	3.5	3.375	2.5	2.75	2.625	3.0	2.25	2.75	3.125	3.75	2.25	2.375	3.25	2.6	2.6	2.6	2.6	2.6
	2.375	3.25	3.25	3.625	2.875	3.125	3.375	1.75	2.6	3.375	2.375	2.5	3.875	2.75	2.0	2.25	3.875	3.0	1.875	3.875
	2.875	3.625	3.6	3.0	3.25	2.75	3.375	4.375	3.375	2.25	2.6	4.0	4.875	2.375	1.625	2.25	2.625	2.125	2.625	1.625
2.5	3.125	3.375	2.875	2.875	3.375	2.75	3.0	3.6	2.0	3.0	3.125	4.75	2.75	2.25	3.0	3.25	3.375	4.125	4.125	
3.125	3.875	2.375	3.625	4.0	3.25	2.875	3.5	3.25	2.875	3.0	2.6	3.75	1.25	2.125	2.625	2.875	1.875	3.875	3.875	
2.75	3.6	2.75	2.875	3.6	3.75	3.25	2.5	3.0	2.0	2.375	2.125	2.6	2.875	2.6	3.0	2.625	2.0	2.6	2.6	
2.875	4.125	3.625	2.875	2.875	4.0	3.75	1.75	2.75	3.0	2.6	3.25	4.0	3.6	2.6	2.25	2.25	2.75	2.6	2.6	
1.75	3.625	3.25	3.75	3.6	3.5	2.75	3.0	2.75	3.375	2.125	2.125	2.6	2.0	3.0	2.375	3.375	1.5	3.375	3.375	
2.25	2.25	3.25	4.125	3.25	3.625	2.875	2.875	3.0	3.0	2.875	3.75	2.375	1.625	3.0	3.625	3.0	2.25	2.125	2.125	
2.625	3.25	3.0	2.875	2.875	3.125	2.875	3.25	3.25	2.6	3.875	2.6	2.625	2.625	1.75	2.625	2.875	2.25	2.0	2.0	
2.75	2.675	3.25	4.25	2.875	3.25	2.875	4.25	2.625	2.6	2.125	3.875	3.6	3.6	2.0	2.75	2.875	2.625	2.6	2.6	
3.375	2.25	3.25	2.6	3.25	3.375	2.875	2.25	2.5	2.625	3.75	2.125	3.25	3.625	2.875	2.875	2.125	3.125	3.125	3.125	
3.25	2.6	2.875	3.0	3.0	3.25	2.625	3.375	3.6	2.6	3.0	2.5	3.125	4.0	2.875	2.875	2.75	1.75	2.625	2.625	
Averages.....	2.904	3.062	3.151	3.606	2.145	2.041	2.904	2.933	2.712	2.654	2.708	2.629	3.145	3.912	2.678	2.783	2.800	2.420	2.661	2.661

Recapitulation and reduction:		No. of section.		In centimillimeters.		In thousandths of inch.		No. of section.		In centimillimeters.		In thousandths of inch.		No. of section.		In centimillimeters.		In thousandths of inch.	
Maximum measurements.	B <sup>1</sup>	3.50	1.3779	B <sup>1</sup>	4.25	1.6732	B <sup>1</sup>	4.500	1.7716	B <sup>1</sup>	3.875	1.5255	B <sup>1</sup>	4.875	1.9192	B <sup>1</sup>	4.500	1.7716	
	B <sup>2</sup>	4.125	1.6240	B <sup>2</sup>	4.00	1.5748	B <sup>2</sup>	4.875	1.7224	B <sup>2</sup>	3.750	1.4763	B <sup>2</sup>	4.125	1.6240	B <sup>2</sup>	3.875	1.5255	
	B <sup>3</sup>	5.00	1.9685	B <sup>3</sup>	4.00	1.5748	B <sup>3</sup>	3.600	1.3779	B <sup>3</sup>	4.000	1.5748	B <sup>3</sup>	3.750	1.4763	B <sup>3</sup>	3.625	1.4271	
Highest.....	5.00	1.9685	4.25	1.6732	4.500	1.7716	4.000	1.5748	4.875	1.9192	4.500	1.7716	4.500	1.7716	4.500	1.7716	4.500	1.7716	
Minimum measurements.	B <sup>1</sup>	2.00	0.7874	B <sup>1</sup>	2.00	0.7874	B <sup>1</sup>	2.50	0.8942	B <sup>1</sup>	1.500	0.5905	B <sup>1</sup>	2.25	0.8858	B <sup>1</sup>	1.675	0.7381	
	B <sup>2</sup>	2.25	0.8858	B <sup>2</sup>	2.50	0.8942	B <sup>2</sup>	2.25	0.8858	B <sup>2</sup>	1.875	0.7361	B <sup>2</sup>	1.25	0.4921	B <sup>2</sup>	2.125	0.8366	
	B <sup>3</sup>	2.00	0.7874	B <sup>3</sup>	2.00	0.7874	B <sup>3</sup>	2.00	0.7874	B <sup>3</sup>	1.375	0.5413	B <sup>3</sup>	1.50	0.5905	B <sup>3</sup>	1.600	0.5905	
Lowest.....	2.00	0.7874	2.00	0.7874	2.00	0.7874	2.00	0.7874	1.875	0.5413	1.25	0.4921	1.375	0.5413	1.375	0.5413			
Average measurements..	B <sup>1</sup>	2.804	1.1089	B <sup>1</sup>	3.066	1.2070	B <sup>1</sup>	2.904	1.1433	B <sup>1</sup>	2.654	1.0489	B <sup>1</sup>	3.145	1.2381	B <sup>1</sup>	2.783	1.0056	
	B <sup>2</sup>	3.063	1.2053	B <sup>2</sup>	3.145	1.2381	B <sup>2</sup>	2.933	1.1547	B <sup>2</sup>	2.708	1.0661	B <sup>2</sup>	2.912	1.1464	B <sup>2</sup>	2.800	1.1023	
	B <sup>3</sup>	3.151	1.2165	B <sup>3</sup>	3.041	1.1972	B <sup>3</sup>	2.712	1.0677	B <sup>3</sup>	2.629	1.0260	B <sup>3</sup>	2.678	1.0543	B <sup>3</sup>	2.420	0.9327	
Average.....	3.005	1.1830	3.064	1.2141	2.840	1.1210	2.669	1.0484	2.911	1.1460	2.667	1.0499							
Measurements above average..	41	51	44	29	40	55													
Measurements below average..	69	39	46	52	50	65													



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of samples..	HAMPSHIRE.							OXFORDDOWN.							
	162.				163.			64. SHOULDER.			64. SIDE.			64. HIP.	
	2½ inches.				2½ inches.			3 inches.			2½ inches.			2¾ inches.	
	—				—			—			—			—	
Number of section.....	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².
Actual measurement in centimillimeters.	3.5	3.125	3.75	3.625	2.75	2.875	2.5	4.66	5.0	5.33	3.33	5.0	5.33	5.33	6.0
	3.125	3.875	4.25	3.5	3.25	4.375	5.375	4.66	4.66	5.0	4.0	3.33	5.0	3.33	4.0
	4.0	3.5	3.875	3.5	2.875	2.75	2.375	4.0	4.0	4.06	4.0	3.33	4.33	5.66	5.33
	2.875	3.5	3.0	3.75	2.875	3.875	2.5	4.0	5.0	5.33	5.33	5.0	3.66	4.66	6.66
	2.875	4.25	2.125	3.75	3.125	2.75	3.25	4.33	5.33	4.66	3.66	5.0	4.0	4.66	6.33
	2.625	3.875	3.25	3.0	2.25	2.875	4.5	4.0	4.66	4.33	4.66	3.66	6.33	5.66	5.66
	2.75	4.75	3.25	3.625	2.375	2.5	2.0	3.60	4.66	4.0	5.66	5.33	6.33	5.66	4.0
	3.625	3.5	3.25	3.5	2.75	2.625	4.75	4.33	5.33	4.66	3.33	5.0	2.66	4.33	5.33
	4.0	3.375	4.625	2.25	3.0	3.0	2.5	4.0	4.0	4.06	4.0	4.33	4.0	5.66	4.0
	3.5	4.25	1.75	2.375	3.125	3.0	3.875	4.66	3.66	4.66	3.66	4.60	5.0	4.66	4.0
	3.25	3.75	3.875	2.125	3.375	3.125	3.5	4.66	5.0	4.33	4.33	4.33	4.33	4.66	5.66
	2.875	3.5	3.5	2.375	3.25	2.875	1.875	3.66	4.66	4.66	4.0	5.33	3.66	5.33	4.5
	3.125	2.75	4.25	2.5	4.25	4.5	3.25	3.60	4.66	3.66	2.33	4.66	3.0	5.33	5.33
	2.375	3.75	4.0	4.5	2.875	2.625	2.75	4.0	4.66	3.66	5.0	4.66	5.0	4.33	6.06
	2.0	2.5	2.75	3.75	2.75	3.0	2.5	3.33	4.66	4.66	4.0	5.33	5.33	4.66	3.33
	3.5	3.125	3.875	2.125	3.75	3.25	4.25	4.33	4.33	4.0	6.33	4.0	4.0	5.166	5.66
	3.375	3.75	3.25	1.75	4.75	3.875	3.125	4.66	4.5	4.06	5.33	4.66	4.0	4.33	5.0
	3.875	3.5	4.0	2.75	3.875	3.5	3.5	4.66	4.33	4.0	4.66	5.0	3.33	5.166	4.66
	3.125	3.5	2.75	3.75	4.125	2.0	2.5	4.0	4.66	4.0	5.0	4.0	5.33	4.66	5.66
	3.25	3.5	3.5	1.625	3.25	3.375	5.625	5.33	4.66	4.0	3.33	4.0	4.0	5.33	4.5
	3.25	5.375	4.0	3.5	2.875	2.375	4.25	5.33	3.66	4.0	3.33	4.0	4.66	5.33	4.66
	2.375	3.75	3.375	1.875	2.75	3.125	3.125	5.33	4.66	4.0	4.0	4.0	4.33	5.66	4.66
	3.375	3.25	3.25	2.875	4.0	3.75	3.375	4.33	6.0	6.0	4.5	6.33	5.0	5.33	4.5
	3.625	3.625	3.625	3.25	4.0	3.375	2.875	4.33	4.0	6.0	4.0	4.63	4.33	6.33	4.5
	3.875	3.125	3.5	3.25	2.5	4.625	4.0	5.33	6.33	4.66	4.0	4.06	5.0	5.33	5.0
3.25	2.375	3.75	3.0	3.125	4.875	2.5	4.0	4.5	4.66	3.33	5.66	3.66	5.5	5.0	
3.5	4.5	3.75	2.5	3.375	4.375	4.125	5.33	4.5	5.0	5.33	3.33	4.66	3.33	5.0	
2.875	4.375	3.625	2.0	2.875	3.625	2.25	4.33	4.0	4.0	3.66	3.66	4.0	6.66	5.0	
3.375	4.0	3.125	3.25	3.125	3.875	4.0	4.33	4.06	4.0	3.66	4.5	4.66	5.33	5.166	
2.625	2.0	3.875	3.375	3.125	4.0	3.25	4.0	4.833	4.33	4.0	3.33	2.833	5.166	4.5	
Averages.....	3.195	3.600	3.475	2.966	3.179	3.341	3.341	4.388	4.718	4.522	4.208	4.491	4.391	5.068	5.008

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.						
Maximum measurements.	B¹	4.0	1.6748	B¹	4.75	1.8700	B¹	5.33	2.0984	B¹	6.33	2.4921	B¹	6.66	2.6220
	B²	5.375	2.1161	B²	4.875	1.9192	B²	6.00	2.3622	B²	6.33	2.4921	B²	6.66	2.6220
	B³	4.625	1.8197	B³	5.625	2.2145	B³	6.00	2.3622	B³	6.33	2.4921			
	B⁴	4.5	1.7716												
Highest.....		5.875	2.1161		5.625	2.2145		6.00	2.3622		6.33	2.4921		6.66	2.6220
Minimum measurements.	B¹	2.0	0.7874	B¹	2.25	0.8858	B¹	3.33	1.8110	B¹	2.33	0.9173	B¹	3.33	1.3110
	B²	2.0	0.7874	B²	2.0	0.7874	B²	3.66	1.4409	B²	3.33	1.3110	B²	3.33	1.3110
	B³	1.75	0.6889	B³	1.875	0.7381	B³	3.66	1.4409	B³	2.833	1.1153			
	B⁴	1.625	0.6397												
Lowest.....		1.625	0.6397		1.875	0.7381		3.33	1.3110		2.33	0.9173		3.33	1.3110
Average measurements.	B¹	3.195	1.2578	B¹	3.179	1.2515	B¹	4.388	1.7275	B¹	4.208	1.6566	B¹	5.068	1.9952
	B²	3.600	1.4173	B²	3.341	1.3153	B²	4.718	1.8574	B²	4.491	1.7681	B²	5.008	1.9716
	B³	3.475	1.3681	B³	3.341	1.3153	B³	4.622	1.7803	B³	4.391	1.7287			
	B⁴	2.966	1.1677												
Average.....		3.309	1.3027		3.287	1.2940		4.542	1.7881		4.363	1.7177		5.038	1.9334
Measurements above average.....		06			36			47			41			31	
Measurements below average.....		54			51			43			49			20	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

OXFORDDOWN.															
Catalogue number of samples..	64. BELLY.			65. SHOULDER.		65. SIDE.		65. HIP.			65. BELLY.		66. SHOULDER.		
Length of fiber in crimp .....	1½ inches.			1½ inches.		2 inches.		1½ inches.			2½ inches.		2½ inches.		
Number of crimps per inch .....	—			—		—		—			—		—		
Number of section .....	B¹.	B².	B³.	B¹.	B².	B¹.	B².	B¹.	B².	B³.	B¹.	B².	B¹.	B².	B³.
Actual measurement in centimillimeters.	4.33	4.66	4.33	4.33	3.33	4.0	4.0	3.0	4.0	3.66	4.0	4.0	3.33	3.66	3.33
	3.33	5.0	4.66	3.33	3.33	5.33	4.66	3.66	3.0	4.66	2.66	5.33	4.0	3.33	2.33
	4.33	4.66	5.33	3.33	3.33	4.33	4.0	3.33	4.0	3.66	4.0	6.0	3.33	3.66	4.0
	4.0	4.66	4.0	3.66	4.66	4.66	3.33	3.0	3.66	3.66	4.0	3.66	2.66	4.0	2.66
	4.0	4.0	5.0	4.66	4.0	3.0	3.0	4.0	3.33	5.66	3.0	4.66	4.0	3.33	3.33
	4.33	4.66	4.66	5.66	4.0	4.0	3.33	3.33	4.0	5.33	3.0	4.66	3.33	3.66	3.33
	4.0	3.66	4.66	4.33	4.0	4.66	4.66	3.66	2.66	4.33	3.0	4.0	4.66	5.0	5.33
	4.0	3.66	4.66	4.0	4.0	3.33	3.33	2.66	5.33	5.33	4.0	4.0	4.0	3.33	4.0
	4.66	3.33	5.0	4.0	3.33	3.33	2.66	3.33	4.0	4.0	3.33	3.66	3.66	4.0	3.33
	4.33	4.0	4.0	3.66	2.66	3.0	4.0	4.33	3.33	3.33	3.33	4.0	4.66	3.66	3.33
	3.33	5.0	4.0	3.0	4.0	4.33	3.33	6.33	3.33	3.33	3.0	4.66	4.66	2.33	3.66
	4.66	5.0	3.66	3.33	4.33	3.66	4.33	3.33	3.66	3.33	2.66	3.66	4.0	2.33	4.0
	3.33	3.33	4.33	4.0	3.0	3.66	4.0	3.33	3.66	3.33	2.66	3.66	4.0	3.33	4.0
	4.66	5.33	5.0	4.0	5.33	2.66	6.0	4.33	4.0	6.0	4.0	3.0	3.66	3.0	4.0
	4.0	4.0	5.33	5.0	5.66	4.0	4.66	4.66	4.66	4.66	3.33	2.66	4.0	2.66	4.0
	4.0	4.0	4.0	4.0	3.33	3.66	4.0	2.66	6.0	4.0	3.0	3.0	3.66	5.0	4.0
	3.66	3.66	4.0	4.0	3.66	3.66	4.66	5.33	3.33	5.33	3.33	4.0	3.66	5.0	3.66
	3.33	4.66	2.66	3.33	5.0	2.66	3.33	3.33	5.0	5.33	4.33	4.66	3.33	2.66	3.33
	4.66	4.66	5.33	4.66	3.66	4.33	3.66	3.0	4.66	3.66	4.33	4.66	3.33	3.166	4.33
	4.66	4.0	4.33	5.0	3.33	3.33	4.66	5.33	3.33	6.0	4.0	4.33	3.66	4.33	3.66
	3.0	5.33	4.66	5.0	5.0	3.66	3.66	6.0	4.33	3.33	4.66	3.0	3.33	3.33	3.66
	3.33	4.33	4.66	2.0	4.33	4.33	3.0	3.0	4.0	3.66	4.0	2.66	4.0	3.66	2.0
	4.0	5.0	5.33	2.0	5.33	3.33	3.66	3.33	4.0	6.66	3.33	4.0	3.66	4.33	4.0
	3.33	3.33	3.33	4.66	3.0	3.0	6.66	4.0	5.33	4.66	4.33	4.0	3.33	4.0	4.5
	4.33	4.66	4.0	3.66	2.66	3.0	2.66	5.33	3.33	3.33	2.66	2.66	3.166	4.66	4.66
	4.33	4.66	4.0	3.0	4.0	3.33	4.0	5.0	2.66	3.66	2.66	3.33	3.33	3.33	3.33
	4.0	4.66	5.0	3.33	4.9	4.33	5.33	3.33	3.66	4.0	3.0	2.66	3.66	2.5	3.5
	4.0	3.0	4.33	5.0	3.66	5.33	4.0	3.33	2.66	2.66	3.0	4.0	3.66	3.66	3.33
	4.0	4.0	4.0	4.33	3.66	4.0	3.66	3.0	3.0	5.0	3.66	3.33	4.33	3.33	3.0
	4.0	4.66	2.66	3.66	5.33	4.0	4.833	5.0	2.0	3.0	3.5	3.0	4.0	3.33	3.66
Averages .....	4.022	4.322	4.377	3.922	3.963	3.796	4.035	3.841	3.897	4.284	3.464	3.785	3.774	3.574	3.653

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:															
Maximum measurements	B¹	4.66	1.8346	B²	5.66	2.2283	B³	5.33	2.0684	B¹	6.33	2.4921	B²	4.66	1.8346
	B²	5.33	2.0984	B³	5.66	2.2283	B¹	6.66	2.6220	B²	6.0	2.3622	B³	6.0	2.3621
	B³	6.0	2.3622												
Highest .....		6.0	2.3622		5.66	2.2283		6.66	2.6220		6.66	2.6220		6.0	2.3621
Minimum measurements.	B¹	3.0	1.1811	B²	2.0	0.7874	B³	2.66	1.0472	B¹	2.66	1.0472	B²	2.66	1.0472
	B²	3.0	1.1811	B³	2.66	1.0472	B¹	2.66	1.0472	B²	2.66	1.0472	B³	2.66	1.0472
	B³	2.66	1.0472												
Lowest .....		2.66	1.0472		2.0	0.7874		2.66	1.0472		2.66	1.0472		2.66	1.0472
Average measurements.	B¹	4.022	1.5834	B²	3.922	1.5440	B³	3.796	1.4944	B¹	3.841	1.5122	B²	3.464	1.3637
	B²	4.322	1.7015	B³	3.963	1.5602	B¹	4.035	1.5885	B²	3.897	1.5342	B³	3.785	1.4901
	B³	4.377	1.7332								4.284	1.6866			
Average .....		4.240	1.6692		3.942	1.5519		3.915	1.5413		4.007	1.5775		3.624	1.4267
Measurements above average .....		46			33			31			29			31	
Measurements below average .....		44			27			29			61			29	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		OXFORDDOWN.																			
Catalogue number of samples ..		66. SIDE.				66. HIP.			66. BELLY.			67. SHOULDER.			67. SIDE.			67. HIP.			
Length of fiber in crimp .....		3½ inches.				3¼ inches.			2¾ inches.			3 inches.			2¾ inches.			2½ inches.			
Number of crimps per inch ....		—				—			—			—			—			—			
Number of section .....		B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	
Actual measurement in centimillimeters.		3.33	4.66	3.66	2.66	5.0	4.66	4.66	3.0	3.0	4.0	5.33	5.33	4.66	6.0	6.06	4.0	5.66	6.0	3.66	3.66
		3.0	3.66	3.66	3.33	4.33	3.66	4.66	3.33	3.33	3.33	5.33	5.33	6.0	6.33	6.0	5.33	3.33	5.33	3.33	4.33
		3.66	4.0	5.33	2.66	2.66	4.66	4.33	2.66	4.0	3.66	5.33	5.33	6.0	5.33	7.0	5.66	5.33	4.0	3.66	4.33
		4.0	2.66	4.33	3.33	2.66	4.0	5.33	4.0	3.0	3.66	5.0	3.66	4.66	4.66	5.33	3.66	6.0	5.66	4.66	4.66
		4.0	3.66	3.66	3.0	5.0	4.0	3.33	3.33	5.33	4.0	7.33	4.0	5.33	4.66	4.66	5.33	7.66	4.33	5.00	5.33
		2.66	4.66	4.0	3.66	3.33	3.33	4.66	4.0	4.33	3.66	4.33	5.33	5.33	5.0	4.33	4.66	6.0	3.33	4.66	6.66
		4.0	4.0	5.33	4.33	3.33	3.33	4.66	3.33	2.66	4.33	5.0	4.0	4.0	4.66	4.0	5.66	6.0	5.33	6.66	5.0
		4.0	4.0	3.33	4.66	2.66	4.66	4.0	3.33	4.0	4.0	6.66	4.66	4.66	4.0	5.66	3.33	5.0	4.66	4.66	4.66
		3.66	3.33	6.0	4.66	2.66	3.33	2.66	4.0	3.33	3.33	2.66	4.0	4.0	5.33	3.66	5.0	3.33	3.33	4.66	5.33
		4.33	4.0	4.66	3.66	4.0	4.33	3.33	3.66	4.33	3.66	5.33	4.33	5.33	4.0	5.0	5.66	6.0	4.0	4.0	4.66
		3.66	4.0	3.33	4.66	3.66	3.33	5.0	3.33	3.66	3.33	5.0	5.33	5.33	5.33	7.0	4.0	4.33	4.0	4.33	6.0
		3.33	3.33	4.0	5.0	4.0	4.66	4.66	4.0	3.66	3.33	5.33	7.0	6.60	4.0	6.33	5.33	5.0	4.33	4.33	4.66
		4.66	4.0	3.33	4.66	4.0	4.0	2.66	3.33	4.0	4.66	5.33	2.66	5.33	5.33	4.66	6.33	4.0	4.33	4.33	3.33
		5.33	3.66	5.33	5.33	3.66	4.0	2.66	3.33	2.66	3.33	5.33	5.33	4.66	5.33	5.0	4.66	4.0	4.0	4.0	5.0
		4.0	4.66	6.0	4.33	3.33	4.00	5.33	3.33	3.33	2.5	3.33	4.0	5.0	4.33	4.33	4.33	6.0	5.33	4.0	5.66
		3.33	3.0	3.33	3.0	4.0	3.66	4.66	3.66	4.0	3.0	4.0	2.66	2.66	3.66	5.33	7.33	4.66	4.66	4.33	5.0
		3.60	4.33	4.0	3.66	4.66	3.33	6.0	3.66	3.33	3.66	4.66	6.33	4.0	4.33	4.66	5.66	5.0	4.0	4.0	4.0
		4.0	3.33	4.33	4.0	3.66	3.33	2.66	3.66	3.33	3.66	3.33	6.33	4.0	4.66	4.33	4.33	5.33	5.33	6.66	5.66
		5.33	3.33	4.66	6.0	5.0	4.0	2.0	4.0	4.0	2.66	6.0	5.33	4.66	5.66	3.33	6.66	5.0	5.33	5.33	5.66
		4.33	3.33	4.0	3.66	4.33	4.0	3.33	4.0	4.0	4.0	4.66	5.33	6.0	5.66	6.33	5.33	5.33	5.33	5.33	3.66
	5.33	4.0	4.0	3.66	5.33	4.0	5.33	4.0	4.0	3.66	4.66	5.33	5.33	6.166	4.66	5.33	3.66	5.33	5.33	5.33	
	4.0	4.5	4.33	5.0	6.33	4.0	2.33	4.166	3.33	3.33	5.0	4.33	3.33	6.166	6.33	4.0	4.66	4.0	3.33	3.66	
	3.66	4.66	3.33	3.33	4.66	4.66	4.0	3.0	3.33	3.33	4.0	5.0	5.0	6.166	6.33	4.0	6.0	5.5	2.833	4.66	
	4.66	4.833	4.0	3.66	5.0	3.0	5.33	3.5	3.66	3.166	5.33	3.0	4.0	4.33	5.33	5.0	5.66	4.66	4.66	4.66	
	4.0	3.33	4.66	3.66	3.33	3.66	2.66	3.33	3.66	3.833	4.66	6.0	4.166	6.33	3.66	5.33	4.833	3.166	4.33	4.33	
	4.0	4.166	4.5	3.166	2.66	4.0	5.0	4.0	3.33	3.33	3.833	5.833	4.5	5.0	4.5	4.33	6.5	4.166	7.0	4.66	
	4.0	3.166	3.33	5.0	4.66	3.33	2.66	3.833	4.166	3.5	4.166	5.0	4.0	4.66	4.0	4.0	4.5	5.33	5.33	5.33	
	3.66	3.166	4.0	5.0	4.0	3.33	4.0	4.0	4.0	4.0	5.33	4.0	4.66	4.66	5.33	4.5	4.5	5.33	4.66	4.66	
	4.5	3.66	5.66	3.833	4.0	4.0	4.833	4.0	3.66	3.33	3.33	4.33	4.66	5.66	5.66	5.33	4.0	6.0	4.66	4.66	
	4.83	3.33	4.0	3.33	3.66	4.66	2.66	3.33	4.0	3.33	6.66	3.0	5.33	5.33	5.66	4.33	4.5	4.0	4.0	6.166	
Average .....		4.013	3.813	4.236	3.906	3.952	3.941	3.970	3.603	3.747	3.452	4.873	4.781	4.708	5.263	4.935	5.191	4.813	4.469	4.863	

		No. of section.			In centimillimeters.			In thousandths of inch.			No. of section.			In centimillimeters.			In thousandths of inch.		
Recapitulation and reductions:																			
Maximum measurements.	B <sup>1</sup>	5.33	2.0984	B <sup>1</sup>	5.33	2.0984	B <sup>1</sup>	4.166	1.6401	B <sup>1</sup>	7.33	2.8858	B <sup>1</sup>	7.0	2.7550	B <sup>1</sup>	6.66	2.6220	
	B <sup>2</sup>	4.833	1.9027	B <sup>2</sup>	5.0	1.9685	B <sup>2</sup>	5.33	2.0984	B <sup>2</sup>	7.0	2.7559	B <sup>2</sup>	7.0	2.7559	B <sup>2</sup>	6.66	2.6220	
	B <sup>3</sup>	6.0	2.3622	B <sup>3</sup>	6.0	2.3622	B <sup>3</sup>	4.66	1.8346	B <sup>3</sup>	6.66	2.6220	B <sup>3</sup>	7.66	3.0157	B <sup>3</sup>	7.0	2.7550	
	B <sup>4</sup>	6.0	2.3622																
Highest .....		6.0	2.3622		6.0	2.3622		5.33	2.0984		7.33	2.8858		7.66	3.0157		7.0	2.7550	
Minimum measurements.	B <sup>1</sup>	2.66	1.0472	B <sup>1</sup>	2.66	1.0472	B <sup>1</sup>	2.66	1.0472	B <sup>1</sup>	2.66	1.0472	B <sup>1</sup>	3.66	1.4409	B <sup>1</sup>	3.33	1.3110	
	B <sup>2</sup>	2.66	1.0472	B <sup>2</sup>	2.66	1.0472	B <sup>2</sup>	2.66	1.0472	B <sup>2</sup>	2.66	1.0472	B <sup>2</sup>	3.33	1.3110	B <sup>2</sup>	3.166	1.2464	
	B <sup>3</sup>	3.33	1.3110	B <sup>3</sup>	2.0	0.7874	B <sup>3</sup>	2.33	0.9173	B <sup>3</sup>	2.66	1.0472	B <sup>3</sup>	3.66	1.4409	B <sup>3</sup>	3.33	1.3110	
	B <sup>4</sup>	2.66	1.0472																
Lowest .....		2.66	1.0472		2.0	0.7874		2.33	0.9173		2.66	1.0472		3.33	1.3110		3.166	1.2464	
Average measurements.	B <sup>1</sup>	4.013	1.5799	B <sup>1</sup>	3.952	1.5550	B <sup>1</sup>	3.603	1.4185	B <sup>1</sup>	4.873	1.9185	B <sup>1</sup>	5.263	2.0720	B <sup>1</sup>	4.813	1.8948	
	B <sup>2</sup>	3.813	1.5011	B <sup>2</sup>	3.041	1.5515	B <sup>2</sup>	3.747	1.4751	B <sup>2</sup>	4.781	1.8822	B <sup>2</sup>	4.085	1.9429	B <sup>2</sup>	4.469	1.7594	
	B <sup>3</sup>	4.236	1.6677	B <sup>3</sup>	3.979	1.5685	B <sup>3</sup>	3.452	1.3690	B <sup>3</sup>	4.708	1.8535	B <sup>3</sup>	5.191	2.0436	B <sup>3</sup>	4.862	1.9141	
	B <sup>4</sup>	3.996	1.5732																
Average .....		4.014	1.5803		3.957	1.5578		3.600	1.4173		4.787	1.8646		5.129	2.0192		4.714	1.8559	
Measurements above average ..		42			54			51			45			47			41		
Measurements below average ..		78			36			39			45			43			49		



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		OXFORDDOWN.																	
Catalogue number of samples..		67. BELLY.			107.						108.						150.		
Length of fiber in crimp.....		3 inches.			—						—						2½ inches.		
Number of crimps per inch....		—			—						—						—		
Number of section.....		B <sup>1</sup> .	D <sup>2</sup> .	D <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>5</sup> .	B <sup>6</sup> .	D <sup>1</sup> .	D <sup>2</sup> .	D <sup>3</sup> .	D <sup>4</sup> .	D <sup>5</sup> .	D <sup>6</sup> .	B <sup>1</sup> .	D <sup>2</sup> .	D <sup>3</sup> .
Actual measurement in centimillimeters.	5.23	4.0	5.0	3.75	4.5	3.25	3.5	4.75	2.6	2.6	3.5	2.75	4.6	4.0	3.5	5.5	5.975	3.6	
	4.66	5.33	5.66	3.5	3.5	3.75	3.5	4.5	3.5	2.25	2.5	3.5	3.75	4.5	3.0	3.625	0.0	7.125	
	5.33	4.66	4.33	3.75	2.0	4.0	3.25	4.6	4.0	3.75	2.5	4.75	2.75	4.25	3.25	4.0	6.6	5.375	
	4.66	4.66	5.33	3.5	5.75	4.0	3.25	4.0	4.5	2.75	2.5	4.25	4.6	4.75	4.0	6.5	4.75	4.0	
	4.0	4.0	4.0	3.25	3.5	3.5	3.0	4.75	4.5	2.25	2.5	4.0	4.25	3.25	4.25	5.125	4.0	3.625	
	5.33	5.33	5.33	4.0	3.25	3.0	2.25	3.0	3.0	2.0	2.75	3.0	3.0	4.75	2.0	6.75	4.025	3.5	
	5.66	4.66	4.66	3.0	4.5	3.5	3.75	4.0	4.6	2.0	2.5	2.75	3.5	4.0	2.0	5.5	3.375	4.0	
	4.66	6.0	5.66	2.5	3.5	4.75	4.0	2.0	4.6	3.25	2.75	3.5	4.0	3.0	4.0	2.875	4.5	3.25	
	3.33	3.33	4.33	2.5	3.5	2.75	3.0	3.5	4.0	2.5	3.5	4.0	4.75	3.0	3.25	3.25	5.5	5.5	
	5.66	5.0	4.0	3.75	3.0	4.0	4.25	4.75	4.5	2.25	2.75	2.25	4.0	4.0	3.25	3.5	3.5	4.125	
	4.66	5.0	6.0	3.5	4.5	3.5	5.25	3.25	5.25	2.25	3.5	3.0	3.0	4.0	3.0	4.25	4.375	6.0	
	4.66	5.33	4.0	4.0	4.5	3.5	4.25	4.5	5.25	2.75	3.75	2.5	3.0	4.0	2.75	5.0	5.375	4.375	
	4.66	5.0	5.0	4.0	4.0	4.25	4.25	4.25	4.5	2.25	2.75	3.5	3.0	4.0	4.5	4.0	4.375	3.25	
	4.0	7.33	7.66	4.25	3.5	3.0	4.5	4.5	2.25	3.25	4.6	3.0	4.5	4.5	4.5	4.675	4.5	3.125	
	4.66	4.66	5.0	3.0	4.25	2.5	4.0	4.5	4.0	4.0	4.5	3.0	3.0	3.25	5.25	5.625	4.5	5.625	
	5.33	6.33	4.66	3.75	3.0	3.75	3.0	4.5	4.5	4.0	4.5	3.5	3.0	4.5	2.25	3.625	2.875	3.625	
	4.66	5.33	4.66	4.25	3.25	3.5	4.75	4.5	4.0	4.5	4.5	4.0	4.0	4.5	2.25	2.875	4.375	4.5	
	5.66	5.33	6.0	4.5	3.5	2.75	2.5	2.75	3.0	3.0	3.0	4.0	4.5	4.5	4.0	4.25	4.5	3.875	
	4.0	5.33	4.0	2.25	4.5	3.0	3.5	2.5	4.25	3.0	3.25	4.0	4.5	3.25	3.5	4.5	4.25	5.75	
	4.66	3.33	5.0	4.5	4.0	3.25	2.75	4.5	4.25	2.75	4.5	4.0	3.0	3.25	4.0	7.0	7.125	4.025	
6.0	4.66	3.66	3.75	2.5	4.5	3.5	4.5	3.25	2.75	3.5	4.0	3.0	2.25	4.5	6.0	6.0	5.0		
4.33	6.0	3.0	2.75	4.25	3.5	4.75	4.5	2.5	3.25	2.5	3.75	3.5	4.0	2.25	5.0	4.0	5.0		
5.33	5.33	4.66	3.25	4.0	4.0	3.0	5.0	4.0	3.5	4.25	2.5	3.5	3.5	2.75	4.25	5.0	5.375		
4.33	5.33	6.0	4.0	3.5	4.5	4.75	4.5	4.75	3.75	3.5	4.0	3.5	4.0	3.25	3.75	4.375	4.25		
4.0	4.33	5.166	2.5	2.0	3.5	4.5	4.5	4.75	3.5	4.0	3.5	4.0	3.5	4.0	3.75	3.5	4.675		
5.33	5.33	4.33	3.5	4.0	2.5	5.0	4.5	4.0	3.5	4.0	4.25	4.25	2.75	2.75	4.875	6.75	5.5		
4.5	7.0	4.66	3.5	4.0	5.0	4.0	3.5	2.0	3.25	3.0	4.0	3.5	4.5	3.5	2.75	6.75	4.125		
4.5	3.66	5.166	3.5	3.25	3.5	3.25	3.75	4.5	3.0	4.0	4.0	4.5	3.75	3.25	3.25	5.75	5.125		
4.33	4.66	4.0	3.75	3.5	3.25	3.5	3.0	4.5	2.5	4.25	3.75	2.75	3.25	3.0	3.25	4.75	5.0		
4.0	4.66	3.33	3.5	3.75	2.5	3.0	2.5	3.5	3.0	4.0	3.75	5.0	3.0	2.5	3.875	3.25	6.125		
Averages.....	4.740	5.113	4.941	3.550	3.616	3.691	3.858	3.801	3.583	3.141	3.500	3.691	3.791	3.825	3.825	4.655	4.963	4.787	

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	
Recapitulation and reduction:													
Maximum measurements.	B <sup>1</sup>	6.0	2.3622	B <sup>1</sup>	4.5	1.7716	B <sup>1</sup>	4.5	1.7716	B <sup>1</sup>	7.0	2.7350	
	B <sup>2</sup>	7.33	2.8858	B <sup>2</sup>	5.75	2.2637	B <sup>2</sup>	4.5	1.7716	B <sup>2</sup>	7.125	2.8651	
	B <sup>3</sup>	7.66	3.0157	B <sup>3</sup>	5.0	1.9685	B <sup>3</sup>	4.75	1.8700	B <sup>3</sup>	7.125	2.8651	
Highest.....		7.66	3.0157		5.75	2.2637		5.25	2.0669		7.125	2.8651	
	Minimum measurements.	B <sup>1</sup>	3.33	1.3110	B <sup>1</sup>	2.25	0.8858	B <sup>1</sup>	2.25	0.8818	B <sup>1</sup>	2.75	1.0826
		B <sup>2</sup>	3.33	1.3110	B <sup>2</sup>	2.0	0.7874	B <sup>2</sup>	2.0	0.7874	B <sup>2</sup>	2.875	1.1318
B <sup>3</sup>		3.66	1.4400	B <sup>3</sup>	2.5	0.9842	B <sup>3</sup>	2.5	0.9842	B <sup>3</sup>	3.25	1.2795	
Lowest.....		3.33	1.3110		2.0	0.7874		2.0	0.7874		2.75	1.0826	
	Average measurements.	B <sup>1</sup>	4.740	1.8661	B <sup>1</sup>	3.550	1.3976	B <sup>1</sup>	3.141	1.2666	B <sup>1</sup>	4.650	1.8307
		B <sup>2</sup>	5.113	2.0129	B <sup>2</sup>	3.616	1.4236	B <sup>2</sup>	3.500	1.3770	B <sup>2</sup>	4.983	1.9618
B <sup>3</sup>		4.941	1.9452	B <sup>3</sup>	3.691	1.4531	B <sup>3</sup>	3.691	1.4531	B <sup>3</sup>	4.787	1.8840	
Average.....		4.931	1.9413		2.743	1.4736		3.628	1.4283		4.860	1.8021	
	Measurements above average..	44		97			89			44			
	Measurements below average..	46		83			91			46			



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		OXFORDDOWN.																
Catalogue number of samples..		151.			152.				153.					154.				
Length of fiber in crimp.....		2 inches.			2 1/4 inches.				2 1/2 inches.					2 3/4 inches.				
Number of crimps per inch....		—			—				—					—				
Number of section.....		B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>5</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>5</sup> .
Actual measurement of centimillimeters.	4.25	4.875	4.625	5.0	3.75	3.25	4.75	2.875	3.25	2.875	4.0	3.875	3.125	4.625	5.0	5.0	5.0	4.75
	3.0	3.875	6.5	4.875	4.75	3.0	3.25	3.75	1.875	2.5	4.5	2.5	3.5	4.5	4.0	5.5	5.5	4.5
	5.25	3.625	3.0	4.0	3.75	5.25	4.125	3.75	3.25	4.0	3.5	5.125	4.5	4.875	4.5	2.875	2.875	4.25
	7.0	3.675	3.5	5.0	6.0	4.0	3.0	3.125	5.5	3.0	3.75	3.25	3.5	3.75	5.125	2.875	3.375	3.375
	5.0	3.625	2.125	3.25	3.25	5.25	5.375	3.5	3.375	3.875	3.875	4.25	3.25	4.625	0.0	5.125	4.375	3.625
	3.375	3.0	6.0	4.75	4.75	0.5	3.5	3.25	3.0	3.25	4.75	3.125	4.5	5.375	5.375	3.5	5.0	5.0
	2.875	2.625	2.75	4.25	5.0	4.75	6.375	4.125	3.75	4.0	3.75	4.0	6.75	3.125	4.25	6.75	4.875	3.875
	4.25	4.625	3.5	3.5	3.375	5.0	4.875	2.75	5.75	3.25	3.875	4.25	4.5	6.5	4.5	4.0	4.625	4.0
	2.5	2.75	2.375	3.375	4.0	4.375	4.125	3.5	3.25	3.125	4.25	3.0	4.625	4.25	5.5	5.875	3.875	3.875
	3.375	4.125	8.0	4.0	3.0	4.25	3.75	3.375	3.375	2.75	4.375	4.5	4.5	5.75	4.75	5.0	5.0	5.0
	5.875	7.625	3.75	4.625	5.5	4.75	0.0	3.5	3.75	2.875	3.125	3.625	3.5	4.875	3.875	4.875	4.875	4.25
	3.0	3.125	4.0	5.25	2.25	3.75	4.25	3.625	4.125	3.375	2.875	4.0	4.0	4.875	5.25	5.25	6.125	6.125
	4.375	3.375	2.0	3.625	6.875	4.75	3.625	4.25	4.25	3.25	3.75	5.75	6.0	3.5	5.5	4.0	5.625	5.625
	3.5	5.0	5.875	2.75	3.375	3.0	5.125	3.375	3.0	3.75	4.0	3.875	5.75	3.625	4.125	4.5	6.75	6.75
	3.625	2.875	2.875	5.625	4.75	6.0	3.625	2.5	4.5	3.25	4.25	3.75	2.75	3.75	4.375	5.125	4.5	4.5
	2.375	5.5	3.25	3.625	4.25	5.0	3.75	2.875	4.0	3.75	3.75	4.125	5.25	5.75	5.75	6.625	3.75	3.75
	2.5	3.5	4.875	3.75	3.75	2.375	2.875	5.0	5.0	3.75	4.25	3.0	4.875	4.875	5.0	4.0	6.125	6.125
	4.375	2.5	2.75	3.5	3.375	4.0	2.875	4.75	2.5	4.0	3.75	3.75	3.5	4.0	3.5	4.75	7.0	7.0
	2.5	3.375	2.875	3.75	4.75	3.5	5.25	4.375	3.75	3.5	3.625	3.625	4.125	3.75	4.75	6.375	3.875	3.875
	2.75	2.75	3.25	4.25	3.75	3.5	5.125	2.25	3.5	3.625	4.125	4.5	4.25	4.75	4.5	5.0	3.875	3.875
2.75	3.875	4.5	4.125	5.5	6.0	3.75	3.5	3.5	3.375	3.125	5.625	4.125	4.5	3.875	4.5	4.625	4.625	
4.875	5.25	2.75	2.75	6.5	6.25	5.875	2.75	3.125	3.0	5.125	4.25	3.875	4.375	4.0	5.0	3.75	3.75	
6.375	4.375	4.0	3.125	5.125	4.0	3.875	2.875	4.125	5.125	4.125	4.0	4.0	5.5	5.75	3.125	6.0	6.0	
5.0	5.0	4.125	4.875	6.75	4.75	5.0	3.0	3.0	4.875	3.25	2.75	4.25	5.25	6.25	4.75	6.75	6.75	
4.875	3.75	3.25	5.0	5.0	3.875	5.125	4.0	4.0	4.5	3.5	5.125	4.625	5.375	6.25	4.625	3.375	3.375	
5.125	4.5	2.0	3.5	3.5	3.875	3.75	3.25	4.125	4.125	4.75	4.625	3.125	4.125	6.25	5.125	3.75	3.75	
3.25	5.0	5.5	4.75	3.125	3.75	4.125	3.5	3.625	3.875	3.75	4.375	6.75	4.625	3.5	6.125	4.75	4.75	
3.5	2.75	5.75	3.5	5.5	3.75	5.5	4.5	4.5	4.0	3.625	2.5	5.5	5.0	5.125	6.125	5.0	5.0	
3.375	2.0	3.5	4.875	4.25	4.25	3.75	4.0	4.0	3.125	4.0	3.0	3.5	4.625	4.5	4.125	4.875	4.875	
4.5	3.25	4.0	4.625	2.75	4.75	3.5	3.5	2.375	3.875	4.0	3.5	5.25	5.125	5.375	5.125	6.25	6.25	
Averages.....	3.978	4.066	3.725	4.083	4.425	4.868	4.206	3.540	3.703	3.550	3.936	3.795	4.504	4.650	4.701	4.850	4.808	

Recapitulation and reduction:		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Maximum measurements.	B <sup>1</sup>	7.0	2.7559	B <sup>1</sup>	5.625	2.2145	B <sup>1</sup>	5.0	1.9685	B <sup>1</sup>	6.75	2.6574	
	B <sup>2</sup>	7.625	3.0019	B <sup>2</sup>	6.875	2.7066	B <sup>2</sup>	5.75	2.2637	B <sup>2</sup>	0.0	2.3622	
	B <sup>3</sup>	6.5	2.5590	B <sup>3</sup>	6.25	2.4066	B <sup>3</sup>	5.125	2.0177	B <sup>3</sup>	6.25	2.4066	
				B <sup>4</sup>	6.375	2.5098	B <sup>4</sup>	5.125	2.0177	B <sup>4</sup>	6.625	2.6082	
Highest.....		7.625	3.0019		6.875	2.7066		5.75	2.2637		7.0	2.7550	
Minimum measurements.	B <sup>1</sup>	2.5	0.9842	B <sup>1</sup>	3.5	1.3779	B <sup>1</sup>	2.25	0.8858	B <sup>1</sup>	3.125	1.2308	
	B <sup>2</sup>	2.5	0.9842	B <sup>2</sup>	8.0	1.1811	B <sup>2</sup>	1.875	0.7381	B <sup>2</sup>	3.125	1.2303	
	B <sup>3</sup>	2.0	0.7874	B <sup>3</sup>	2.375	0.9350	B <sup>3</sup>	2.875	1.1318	B <sup>3</sup>	3.5	1.3779	
				B <sup>4</sup>	2.375	0.9350	B <sup>4</sup>	2.875	1.1318	B <sup>4</sup>	3.125	1.2303	
Lowest.....		2.0	0.7874		2.375	0.9350		1.875	0.7381		3.125	1.2303	
Average measurements.	B <sup>1</sup>	3.978	1.5661	B <sup>1</sup>	4.083	1.6074	B <sup>1</sup>	3.540	1.3936	B <sup>1</sup>	4.504	1.7792	
	B <sup>2</sup>	4.066	1.6007	B <sup>2</sup>	4.425	1.7421	B <sup>2</sup>	3.703	1.4578	B <sup>2</sup>	4.650	1.8907	
	B <sup>3</sup>	3.725	1.4665	B <sup>3</sup>	4.363	1.7255	B <sup>3</sup>	3.550	1.3970	B <sup>3</sup>	4.701	1.8862	
				B <sup>4</sup>	4.206	1.6913	B <sup>4</sup>	3.936	1.5498	B <sup>4</sup>	4.850	1.9094	
Average.....		3.923	1.5444		4.040	1.5929		3.704	1.4582		4.720	1.8582	
Measurements above average.....		87			63			79			73		
Measurements below average.....		58			57			71			78		



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of samples..		OXFORDDOWN.																								
		155.				156.				157.				158.				159.								
		3 inches.				3 1/2 inches.				3 1/2 inches.				3 1/2 inches.				3 inches.								
Number of crimps per inch....																										
Number of section.....		B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	
Actual measurement in centimillimeters.	2.6	4.25	2.128	2.5	4.375	4.0	3.026	4.75	4.375	4.375	3.25	4.5	4.125	4.0	5.25	5.375	3.026	4.25	2.375	2.5	3.75	3.6	4.75	2.375	2.5	3.75
	4.375	3.5	5.0	2.0	3.0	5.375	4.0	5.0	2.75	4.375	3.875	4.125	5.0	4.0	3.5	3.75	4.75	4.875	4.25	3.75	3.0	4.25	4.0	4.375	3.75	
	4.0	4.25	2.375	3.5	4.25	4.25	4.5	4.25	4.5	4.25	2.75	5.0	4.75	4.25	4.25	4.75	3.026	3.75	3.625	3.75	4.375	4.25	4.375	4.25	4.875	
	2.375	3.5	4.5	2.875	0.25	4.375	4.0	3.75	3.125	4.125	2.75	4.025	3.25	3.25	3.875	4.25	5.25	4.25	3.026	2.625	2.625	4.375	4.375	3.875	3.875	
	2.25	3.875	3.75	2.5	4.25	4.75	6.0	4.25	4.75	3.75	3.0	3.75	4.0	4.25	4.0	4.5	3.875	3.0	3.5	3.75	3.0	3.75	4.0	4.0	4.5	
	4.0	3.0	4.5	2.875	2.5	3.25	4.375	0.25	4.75	3.5	2.0	2.375	4.25	4.25	4.25	5.375	5.025	4.25	3.25	5.0	4.0	4.25	3.375	3.375	3.375	
	2.625	4.25	2.375	1.75	3.375	5.0	0.0	5.0	4.0	4.875	3.5	3.375	3.75	4.25	3.75	4.25	3.375	4.5	3.5	4.75	2.0	4.25	2.375	3.375	3.375	
	2.25	4.0	2.5	4.0	3.5	3.5	4.5	5.5	3.25	3.5	4.0	4.125	4.0	4.5	4.5	3.875	4.675	4.0	4.25	3.025	4.5	4.25	4.5	4.25	4.25	
	2.875	3.75	2.25	2.0	4.875	4.0	4.5	5.25	4.125	4.0	4.75	2.875	4.0	4.25	4.875	4.875	5.5	4.5	3.875	4.0	3.5	3.75	4.5	4.5	5.25	
	2.375	3.5	3.75	3.375	4.125	2.875	4.0	0.125	3.0	3.5	3.875	4.375	4.125	4.5	4.125	4.0	4.0	4.75	4.5	4.125	4.0	4.75	4.5	4.125	2.0	4.25
	2.5	3.875	3.375	3.375	4.0	2.75	4.5	3.0	4.0	3.125	3.375	4.375	4.875	4.875	5.0	4.75	4.375	4.875	5.0	4.0	4.5	3.75	4.5	2.75	4.375	
	3.0	3.5	3.025	3.375	3.875	3.25	4.0	3.5	4.125	2.5	4.0	3.5	4.125	4.25	4.0	4.0	4.25	4.5	4.25	2.5	4.0	5.25	4.0	5.25	4.375	
	2.75	4.0	1.5	3.375	3.75	4.25	5.25	3.875	2.375	4.0	4.25	5.0	4.5	4.5	3.025	4.25	4.5	4.0	4.0	4.0	4.0	3.5	4.25	4.0	4.0	
	2.875	4.0	3.25	3.875	4.375	0.0	4.0	4.875	3.875	2.5	3.5	4.125	4.0	4.0	4.0	4.5	3.875	3.875	4.675	4.675	4.375	4.25	4.25	4.25	4.125	
	2.5	4.5	1.0	4.025	5.125	5.0	4.25	5.5	3.875	4.125	4.25	4.5	4.5	3.75	4.875	5.5	5.75	3.75	3.25	2.875	3.25	2.875	4.0	4.25	4.25	
	3.25	3.625	4.5	3.375	4.5	4.25	4.5	5.5	4.375	3.75	3.025	2.125	4.0	4.75	4.125	0.0	4.25	4.5	2.5	3.5	4.5	4.5	4.5	4.5	4.375	
	3.375	3.375	4.25	3.375	3.125	5.0	4.25	5.25	3.875	3.5	3.5	3.875	3.875	3.025	4.875	4.5	4.875	4.75	4.25	4.125	4.25	5.0	5.0	5.0	4.375	
	3.0	3.375	3.75	3.375	3.875	4.025	5.5	4.375	3.0	3.5	3.125	3.75	4.375	4.875	3.75	5.0	3.875	3.875	3.875	3.875	4.5	4.0	4.0	4.0	4.0	
	4.75	3.875	2.75	3.0	3.5	4.5	4.0	5.0	2.5	3.875	2.75	3.0	4.75	3.875	3.875	4.875	3.875	3.0	4.5	3.875	3.025	3.75	3.75	3.75	3.75	
	2.875	3.25	2.875	2.375	5.025	4.025	5.0	0.0	3.75	4.25	4.25	4.375	4.0	4.25	5.25	3.875	3.875	3.875	3.875	3.875	3.25	3.25	2.75	2.5	2.5	
	2.75	3.0	2.375	4.0	4.5	3.375	5.125	0.0	4.025	3.375	2.75	5.75	4.75	4.75	4.75	5.125	3.25	3.5	4.5	4.75	5.5	4.5	4.75	5.5	5.5	
	2.5	1.75	5.0	3.0	5.0	5.375	4.5	3.375	3.5	3.75	4.125	3.5	4.025	4.75	4.25	4.375	4.025	4.75	4.25	4.375	2.375	4.375	3.025	5.0	4.25	
	3.75	3.75	3.375	3.25	4.125	4.375	4.125	2.5	3.375	2.75	3.875	3.875	4.5	3.875	3.875	4.0	4.125	3.0	3.025	3.0	3.025	4.5	3.75	3.75	3.75	
	4.25	2.025	3.875	4.0	4.5	4.25	4.125	5.875	2.875	4.0	2.875	4.0	5.25	5.0	4.0	4.875	4.025	4.75	4.25	4.375	2.025	4.25	3.875	5.25	3.125	
	2.5	2.75	3.875	4.0	3.0	4.75	4.125	3.5	4.75	4.0	2.75	3.025	4.25	5.875	5.0	5.375	2.375	5.025	4.75	4.25	3.75	4.5	4.5	4.5	4.75	
2.5	4.25	1.5	2.025	4.75	4.5	4.025	5.0	3.5	4.375	3.5	3.375	3.875	4.375	4.5	5.5	2.875	2.875	2.875	2.875	2.875	2.75	3.25	3.75	3.5		
2.75	3.0	4.0	3.25	4.25	5.5	5.5	5.0	4.25	3.25	2.875	3.75	3.125	3.25	3.25	3.875	3.75	3.125	4.25	4.5	3.875	3.875	3.125	3.125	4.025		
2.75	4.5	3.25	2.125	4.875	4.75	3.75	4.0	3.875	2.875	3.875	3.875	4.25	3.875	3.875	4.0	4.875	4.0	4.25	4.375	4.0	4.25	3.75	4.25	4.25		
2.025	3.375	1.75	3.5	5.0	4.875	4.375	5.375	3.75	3.025	4.0	4.125	4.75	5.375	4.875	5.5	3.125	4.375	3.125	4.25	3.125	3.5	3.5	3.5	4.75		
Averages.....	3.375	3.591	3.445	3.116	4.233	4.596	4.574	4.884	3.783	3.716	3.564	4.012	4.250	4.520	4.501	4.710	3.566	3.623	3.323	3.963	4.208					

Recapitulation and reduction:	No. of section.		In centimillimeters.		In thousandths of inch.	
	B <sup>1</sup>	B <sup>2</sup>	B <sup>1</sup>	B <sup>2</sup>	B <sup>1</sup>	B <sup>2</sup>
Maximum measurements.	B <sup>1</sup>	4.75	1.8700	B <sup>1</sup>	6.25	2.4600
	B <sup>2</sup>	5.0	2.3022	B <sup>2</sup>	8.0	2.5022
	B <sup>3</sup>	4.625	1.8208	B <sup>3</sup>	6.125	2.4114
Highest.....		6.0	2.3022		6.25	2.4600
Minimum measurements.	B <sup>1</sup>	1.5	0.5942	B <sup>1</sup>	2.5	0.9942
	B <sup>2</sup>	1.25	0.8858	B <sup>2</sup>	3.25	1.2795
	B <sup>3</sup>	1.5	0.5905	B <sup>3</sup>	3.625	1.4271
Lowest.....		1.5	0.5905		3.625	1.4271
Average measurements..	B <sup>1</sup>	3.275	1.2993	B <sup>1</sup>	4.233	1.6663
	B <sup>2</sup>	3.591	1.4137	B <sup>2</sup>	4.596	1.7370
	B <sup>3</sup>	3.445	1.3562	B <sup>3</sup>	4.574	1.8047
	B <sup>4</sup>	3.110	1.3267	B <sup>4</sup>	4.884	1.9228
Averages.....		3.356	1.3212		4.539	1.7870
Measurements above average..		64			54	
Measurements below average..		56			66	

Recapitulation and reduction:	No. of section.		In centimillimeters.		In thousandths of inch.	
	B <sup>1</sup>	B <sup>2</sup>	B <sup>1</sup>	B <sup>2</sup>	B <sup>1</sup>	B <sup>2</sup>
Maximum measurements.	B <sup>1</sup>	4.75	1.8700	B <sup>1</sup>	6.25	2.4600
	B <sup>2</sup>	4.75	1.9192	B <sup>2</sup>	8.0	2.5022
	B <sup>3</sup>	4.75	1.8700	B <sup>3</sup>	6.0	2.4114
Highest.....		5.0	1.9685		5.0	1.9685
Minimum measurements.	B <sup>1</sup>	2.375	0.9850	B <sup>1</sup>	2.5	0.9842
	B <sup>2</sup>	2.5	0.9842	B <sup>2</sup>	2.5	0.9842
	B <sup>3</sup>	2.0	0.7874	B <sup>3</sup>	2.125	0.8366
Lowest.....		2.0	0.7874		2.0	0.7874
Average measurements..	B <sup>1</sup>	2.783	1.4680	B <sup>1</sup>	3.783	1.4680
	B <sup>2</sup>	3.716	1.4629	B <sup>2</sup>	3.716	1.4629
	B <sup>3</sup>	3.564	1.3992	B <sup>3</sup>	3.564	1.3992
	B <sup>4</sup>	4.012	1.5705	B <sup>4</sup>	4.012	1.5705
Averages.....		3.768	1.4826		3.768	1.4826
Measurements above average..		60			60	
Measurements below average..		73			73	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of samples..	OXFORDDOWN.										MERINO.											
	160.				161.						8.				0.				10.			
	2½ inches.				3¼ inches.						—				—				2½ inches.			
Length of fiber in crimp.....	—				—						—				—				—			
Number of crimps per inch....	—				—						—				—				—			
Number of section.....	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.	B⁵.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.	
5.375	5.25	3.5	3.75	2.875	3.5	3.25	2.25	2.375	2.375	3.5	2.625	2.0	2.0	1.75	2.25	2.25	2.0	2.0	1.875	2.0	2.5	
3.875	3.0	4.5	4.5	3.375	3.75	3.75	4.5	3.625	2.5	3.25	2.125	2.75	1.875	2.0	2.625	2.375	1.75	1.625	1.75	1.625	1.625	
4.5	4.75	5.375	5.0	2.375	4.5	3.25	3.0	2.75	2.25	2.75	2.0	2.0	2.376	1.75	2.5	2.0	2.0	1.5	1.5	1.5	1.25	
2.75	4.125	4.375	3.5	3.0	4.25	8.125	3.25	2.25	2.75	2.0	2.0	2.875	2.0	2.5	2.75	2.25	1.875	1.625	1.625	2.375	2.375	
3.0	4.25	5.0	4.625	3.625	4.75	3.0	2.75	3.875	2.875	2.5	2.75	2.0	1.75	2.5	1.875	2.75	1.75	1.875	1.375	1.875	1.875	
4.0	4.0	4.375	4.25	3.5	3.0	4.0	3.0	3.125	3.25	2.0	2.75	2.5	1.875	1.875	2.0	2.375	2.0	1.875	2.125	2.5	2.5	
4.5	4.75	4.25	3.125	3.875	3.875	3.75	3.5	2.375	3.25	2.875	2.5	2.5	2.875	2.75	2.0	1.875	2.0	1.5	2.0	1.25	1.25	
4.25	3.75	5.125	3.375	3.25	4.125	3.6	3.5	1.75	2.5	2.25	2.5	2.375	2.375	1.75	2.5	2.375	2.0	2.0	1.75	2.5	2.5	
5.75	3.75	4.375	3.0	4.25	4.25	4.375	3.125	2.75	3.375	2.625	2.0	2.5	2.25	2.625	2.5	2.0	2.0	1.75	1.75	2.25	2.25	
4.75	4.25	5.25	5.5	3.375	4.375	3.25	3.5	4.25	2.625	2.25	2.25	2.25	2.0	2.25	2.375	2.0	2.0	1.875	1.875	2.5	2.5	
3.0	4.125	4.0	3.5	3.375	3.0	3.25	3.375	5.125	2.75	2.375	2.5	2.0	1.75	2.75	2.5	2.0	2.25	2.125	2.0	1.25	1.25	
3.75	4.625	5.25	4.5	3.25	3.125	3.5	3.5	2.25	1.875	2.125	2.25	1.125	2.625	1.875	1.125	2.5	2.0	1.5	2.0	2.375	2.375	
4.5	4.125	2.375	3.25	3.125	4.0	4.125	3.875	3.25	3.0	2.875	2.75	2.5	2.0	2.75	2.0	2.25	2.0	1.875	1.875	1.75	1.75	
3.25	4.0	4.25	5.375	2.835	2.75	4.75	2.875	3.0	2.5	3.375	2.5	2.0	2.375	1.75	1.875	4.375	2.0	1.625	2.0	2.0	2.0	
3.0	2.5	3.125	3.125	3.0	2.5	3.5	3.125	3.75	3.75	2.75	3.375	2.0	2.75	2.375	2.25	2.25	2.375	2.375	1.75	1.75	1.75	
6.0	4.0	4.0	6.0	3.0	2.875	4.75	3.75	2.875	2.75	2.75	2.375	2.875	2.25	1.75	2.5	2.75	2.0	2.0	2.0	2.0	2.0	
3.75	4.25	4.25	3.5	3.0	3.625	2.875	3.125	1.25	2.875	2.875	2.0	2.25	2.0	2.25	1.75	3.375	1.875	2.0	1.75	2.25	2.25	
4.125	3.75	4.25	5.375	4.125	3.125	2.625	2.25	3.375	3.5	2.375	2.75	2.625	2.5	2.125	1.125	2.0	1.25	1.75	2.25	1.75	1.75	
4.5	3.5	3.25	4.0	4.5	3.5	3.5	5.0	3.875	3.0	2.125	2.375	2.875	2.375	2.25	2.375	1.5	2.25	2.25	2.0	2.0	2.0	
5.375	2.5	4.0	4.875	3.75	3.25	3.375	2.875	3.5	3.875	2.5	1.75	1.875	2.5	2.25	2.375	1.125	2.375	1.75	2.0	2.375	2.375	
5.5	2.875	5.5	2.25	4.0	3.25	3.75	4.5	3.125	2.75	3.5	2.0	2.5	2.375	2.25	2.375	2.375	2.0	2.0	1.875	2.375	2.375	
4.875	3.5	4.125	2.125	4.625	3.25	2.0	3.375	4.0	2.75	3.25	2.5	2.0	2.0	2.375	2.375	1.625	2.25	1.5	1.875	2.0	2.0	
5.0	4.25	3.5	3.875	3.75	4.625	3.75	2.875	2.125	2.5	3.0	2.0	2.25	2.0	2.75	2.375	2.375	2.5	1.875	1.375	2.0	2.0	
4.0	4.0	6.25	5.75	3.75	4.25	4.25	3.75	4.0	2.375	3.0	2.375	2.75	1.875	2.0	2.0	2.375	2.5	2.0	1.75	2.0	2.0	
4.75	4.375	3.375	4.875	4.125	2.5	4.25	2.875	4.25	2.5	3.0	2.0	2.375	1.875	2.375	2.5	2.25	1.75	1.625	1.875	2.0	2.0	
3.875	5.0	4.25	3.0	3.25	4.5	3.375	2.75	2.375	2.75	2.5	2.0	2.25	2.5	2.125	2.25	2.0	2.0	2.25	2.0	1.25	1.25	
2.75	3.875	4.75	5.5	3.5	4.75	3.375	4.25	4.375	3.375	2.5	2.5	2.0	1.875	2.875	3.0	1.125	2.375	1.75	1.5	1.75	1.75	
3.875	4.5	3.75	5.375	4.0	3.0	2.5	1.75	1.5	2.625	2.5	2.125	2.5	1.875	2.25	3.5	2.5	1.875	1.75	2.0	2.25	2.25	
4.125	4.25	3.75	2.75	4.75	3.75	3.0	4.25	3.875	2.5	2.875	2.25	2.75	2.0	2.0	2.75	1.5	2.0	1.875	1.875	1.25	1.25	
4.75	5.25	5.0	2.375	4.0	3.5	3.25	4.125	3.0	3.0	2.5	2.0	2.25	2.125	2.875	2.375	1.75	2.0	1.5	1.25	1.875	1.875	
Averages .....	4.250	4.040	4.304	4.050	3.565	3.708	3.500	3.354	3.133	2.835	2.605	2.320	2.350	2.166	2.258	2.358	2.241	2.062	1.829	1.825	2.108	

Recapitulation and reduction:	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Maximum measurements.	B¹	6.0	2.3622	B¹	4.75	1.8700	B¹	3.875	1.5255	B¹	2.875	1.1318	B¹	2.500	0.9842
	B²	5.25	2.0669	B²	4.75	1.8700	B²	3.500	1.3779	B²	2.875	1.1318	B²	2.375	0.9350
	B³	6.25	2.4606	B³	4.75	1.8700	B³	3.375	1.3267	B³	3.500	1.3779	B³	2.250	0.8853
	B⁴	5.75	2.2637	B⁴	5.0	1.9685	B⁴	3.875	1.1318	B⁴	4.375	1.7224	B⁴	2.500	0.9842
Highest .....		6.25	2.4606		5.125	2.0177		3.875	1.5215		4.375	1.7224		2.5	0.9842
Minimum measurements.	B¹	2.75	1.0826	B¹	2.375	0.9350	B¹	1.875	0.7381	B¹	1.75	0.6889	B¹	1.750	0.6889
	B²	2.5	0.9842	B²	2.5	0.9842	B²	2.000	0.7874	B²	1.75	0.6889	B²	1.500	0.5905
	B³	2.375	0.9350	B³	2.0	0.7874	B³	1.750	0.6889	B³	1.75	0.6889	B³	1.250	0.4921
	B⁴	2.125	0.8366	B⁴	2.25	0.8856	B⁴	1.875	0.7581	B⁴	1.50	0.5905	B⁴	1.225	0.6397
Lowest .....		2.125	0.8366		1.25	0.4921		1.750	0.6889		1.50	0.5905		1.250	0.4921
Average measurements..	B¹	4.250	1.6732	B¹	3.565	1.4035	B¹	2.825	1.1122	B¹	2.166	0.8527	B¹	2.062	0.8118
	B²	4.040	1.5905	B²	3.708	1.4598	B²	2.605	1.0492	B²	2.258	0.8889	B²	1.829	0.7200
	B³	4.304	1.6944	B³	3.500	1.3779	B³	2.329	0.9169	B³	2.358	0.9283	B³	1.825	0.7185
	B⁴	4.050	1.5944	B⁴	3.354	1.3204	B⁴	2.350	0.9251	B⁴	2.241	0.8622	B⁴	2.108	0.8299
Average .....		4.161	1.6381		3.452	1.3590		2.542	1.0007		2.255	0.8877		1.956	0.7700
Measurements above average..		60			75			49			53			68	
Measurements below average..		60			75			71			67			52	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of samples..	MERINO.																				
	11.				12.				13.				21.				22.				
	3 inches.				3½ inches.				3 inches.				3¼ inches.				3½ inches.				
	22.				20.				20.				20.				20.				
Number of section .....	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.	
Actual measurement in centimillimeters.	1.5	2.125	1.75	2.125	1.75	2.0	2.6	2.25	2.0	1.5	2.5	1.5	1.875	2.875	1.0	2.125	2.375	2.875	2.5	2.375	
	2.0	1.75	1.75	2.375	1.875	3.0	1.75	2.0	1.375	1.75	2.0	1.5	1.75	2.0	1.875	2.25	1.875	2.5	2.6	1.875	
	2.25	2.0	2.75	2.375	2.125	2.125	2.75	2.0	1.625	2.0	1.875	1.875	1.25	2.0	1.75	1.75	2.0	2.0	2.25	1.875	
	2.125	1.875	1.875	1.875	2.0	1.625	1.5	2.0	2.5	1.25	2.0	2.125	1.75	1.125	1.875	2.25	2.125	2.125	2.0	1.875	
	3.0	2.0	2.0	2.0	2.0	2.25	2.5	2.0	1.75	1.375	1.75	2.0	1.625	1.75	2.0	2.0	1.75	2.5	2.0	2.0	2.75
	1.75	2.875	2.25	2.125	2.25	2.0	1.75	2.5	2.6	2.0	1.875	2.125	1.75	1.625	1.75	1.875	1.875	1.875	2.25	2.0	2.25
	1.625	2.375	2.0	2.625	2.0	1.625	2.75	3.25	2.0	2.5	2.25	1.875	2.125	2.875	1.75	1.625	2.25	1.6	2.0	2.0	2.25
	1.875	2.125	1.5	2.25	2.0	1.5	2.6	2.5	2.25	1.625	1.75	1.75	1.875	1.75	2.0	2.0	2.875	1.875	2.125	2.0	2.125
	2.25	1.875	2.375	2.0	2.0	1.5	2.25	2.25	1.025	1.625	2.0	1.875	2.0	2.125	1.625	2.25	2.0	1.625	2.0	1.025	2.0
	2.0	1.875	2.0	2.0	2.0	1.75	2.375	1.625	3.25	1.25	1.875	1.75	1.875	2.0	1.625	2.875	1.875	1.625	1.75	1.625	2.25
	1.625	1.5	1.75	2.875	2.375	1.75	2.375	2.25	2.375	2.0	1.75	2.375	1.875	2.0	1.75	1.875	1.75	2.0	1.75	2.0	2.25
	2.25	2.0	2.0	2.875	2.375	2.375	1.75	2.375	2.25	1.625	1.75	2.375	1.875	2.0	1.75	1.875	1.75	2.0	1.75	2.0	2.25
	1.875	1.625	2.875	1.875	2.25	2.0	2.75	2.5	1.625	1.625	1.875	1.875	1.875	2.625	1.75	1.875	1.875	1.5	1.75	1.75	2.25
	1.5	1.625	2.25	1.75	2.0	2.0	2.0	2.75	2.25	1.625	1.75	2.375	1.875	2.125	2.0	2.125	2.25	1.875	1.75	1.5	2.375
	1.875	2.0	2.75	1.6	2.0	1.625	3.0	2.0	1.5	2.25	1.875	2.0	1.5	1.875	1.675	2.0	2.875	1.75	2.125	2.75	2.675
	1.875	2.5	2.875	2.0	1.5	2.5	2.375	2.875	1.5	2.25	1.875	1.6	1.5	1.625	1.625	2.0	1.75	1.625	2.25	1.875	3.0
	2.0	2.25	1.875	2.25	1.5	1.875	2.875	3.0	1.375	1.625	2.125	1.625	1.625	1.875	2.125	2.0	1.625	1.875	2.0	2.0	2.0
	2.125	1.875	1.5	1.5	2.0	1.625	2.125	2.0	1.625	1.75	2.125	2.0	1.75	2.0	2.0	2.0	2.0	2.0	1.75	2.0	2.375
	2.5	2.0	1.75	2.0	1.875	1.875	1.875	1.75	1.625	2.35	1.875	1.75	1.5	1.875	1.875	2.0	1.875	2.0	2.0	2.0	2.0
	1.6	1.75	2.25	3.875	1.875	1.5	1.875	2.375	2.0	2.0	1.75	1.75	2.0	2.0	1.625	1.875	2.0	2.875	1.875	2.0	2.25
	2.875	2.0	2.0	1.875	1.75	1.625	2.25	2.0	2.375	1.875	2.25	1.875	2.0	2.0	1.5	2.6	1.5	1.6	1.875	2.0	2.125
	2.375	1.875	2.0	2.0	2.375	2.125	2.75	2.0	1.25	1.75	2.0	1.75	1.5	2.375	2.0	2.0	2.0	1.75	2.0	2.0	2.0
	2.25	1.5	2.0	2.5	2.0	1.625	1.75	1.75	1.5	1.75	1.875	1.5	1.5	1.875	1.5	2.35	1.875	2.375	1.875	2.0	2.375
	3.0	1.5	2.0	3.75	2.5	2.0	2.75	2.25	1.875	2.0	1.875	2.125	1.875	1.75	1.875	2.125	2.0	2.0	2.0	2.0	2.125
	1.875	1.625	2.125	1.875	1.875	1.875	2.875	2.875	1.6	1.375	2.0	2.0	1.875	1.875	2.25	2.0	1.875	2.25	2.25	2.0	2.0
1.75	1.8	2.125	3.25	1.375	1.6	3.375	3.0	1.875	2.0	1.875	1.875	1.5	1.5	2.375	1.875	2.0	1.875	1.875	2.25	2.25	
2.0	1.625	2.0	1.625	1.75	2.0	2.875	2.0	1.75	1.875	1.875	1.5	2.0	1.75	2.125	2.0	1.875	1.875	1.625	1.875	1.625	
2.0	1.75	2.0	1.625	1.875	1.5	1.75	2.0	2.375	2.0	1.375	1.875	2.25	2.0	1.75	2.0	1.875	1.875	1.625	1.875	1.625	
1.75	1.875	1.625	1.5	2.6	1.5	2.0	2.25	1.625	1.75	2.25	1.5	1.625	1.75	2.25	1.5	2.0	2.0	2.0	2.0	1.675	
2.5	2.0	2.0	2.0	2.0	2.5	1.75	1.875	1.875	1.75	1.875	2.0	1.625	1.875	2.0	2.0	2.0	1.6	1.75	1.875	1.625	
Averages.....	2.029	1.887	2.054	2.229	1.016	1.975	2.337	2.278	1.658	1.837	1.979	1.864	1.874	1.870	2.064	2.062	1.900	1.958	2.682	2.187	

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.		No. of section.	In centimillimeters.		In thousandths of inch.		No. of section.	In centimillimeters.		In thousandths of inch.	
		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.					
Maximum measurements	B¹	2.500	0.9842	B¹	2.500	0.9842	B¹	2.5	0.9842	B¹	2.375	0.9350	B¹	2.625	1.0834	
	B²	2.500	0.9442	B²	2.600	1.1811	B²	2.25	0.8858	B²	2.875	0.9350	B²	2.6	0.9842	
	B³	2.875	1.1318	B³	3.875	1.3287	B³	2.5	0.9842	B³	2.5	0.9842	B³	2.6	0.9842	
	B⁴	3.875	1.3287	B⁴	3.250	1.2795	B⁴	2.25	0.8858	B⁴	2.5	0.9842	B⁴	2.0	1.1811	
Highest.....		3.375	1.3287		3.375	1.3287		2.5	0.9842		2.5	0.9842		3.0	1.1811	
Minimum measurements	B¹	1.500	0.5905	B¹	1.375	0.5413	B¹	1.25	0.4921	B¹	1.125	0.4629	B¹	1.5	0.5905	
	B²	1.500	0.5905	B²	1.500	0.5905	B²	1.50	0.5905	B²	1.5	0.5905	B²	1.5	0.5905	
	B³	1.500	0.5905	B³	1.625	0.6397	B³	1.375	0.5413	B³	1.0	0.3937	B³	1.6	0.5905	
	B⁴	1.500	0.5905	B⁴	1.625	0.6397	B⁴	1.5	0.5905	B⁴	1.5	0.5905	B⁴	1.625	0.6397	
Lowest.....		1.500	0.5905		1.375	0.5413		1.25	0.4921		1.0	0.3937		1.5	0.5905	
Average measurements..	B¹	2.029	0.7928	B¹	1.916	0.7549	B¹	1.658	0.6527	B¹	1.874	0.7377	B¹	1.900	0.7480	
	B²	1.889	0.7436	B²	1.975	0.7775	B²	1.837	0.7232	B²	1.870	0.7362	B²	1.958	0.7708	
	B³	2.054	0.8066	B³	2.337	0.9200	B³	1.979	0.7791	B³	2.064	0.7889	B³	2.682	0.8196	
	B⁴	2.229	0.8775	B⁴	2.273	0.8948	B⁴	1.804	0.7102	B⁴	2.062	0.8118	B⁴	2.187	0.8610	
Average.....		2.050	0.8070		2.125	0.8366		1.820	0.7165		1.952	0.7685		2.081	0.7966	
Measurements above average.....		44			49			63			64			39		
Measurements below average.....		76			66			57			56			81		



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of samples..	MERINO.																
	23.				26.			72.				28.			29.		
	2½ inches.				2½ inches.			28½ inches.				2½ inches.			2½ inches.		
	26.				22.			22.				25.			25.		
Number of section .....	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B¹.	B².	B³.
Actual measurement in centimillimeters.	2.0	1.75	1.875	1.875	2.75	1.875	1.875	1.75	1.75	2.375	1.5	1.75	1.625	1.875	1.875	2.625	2.25
	1.875	1.75	2.0	1.875	1.875	2.0	1.5	1.5	2.25	2.25	1.5	1.25	2.5	2.25	1.625	2.5	3.0
	1.5	1.75	1.875	2.125	2.125	1.875	1.875	1.75	1.625	2.625	1.5	1.375	2.0	1.625	1.5	3.25	2.375
	1.625	2.0	2.125	2.0	1.75	2.375	2.125	2.0	2.0	2.625	2.625	1.875	2.375	1.75	1.625	2.0	2.25
	1.375	2.0	1.75	1.625	2.0	2.75	2.375	2.0	2.25	2.375	1.25	1.375	1.625	1.75	2.375	2.0	2.75
	1.375	1.5	1.75	1.625	2.5	2.375	1.875	1.375	2.125	1.875	1.625	1.625	1.375	2.0	2.0	2.0	2.25
	1.875	2.0	1.875	2.0	2.875	2.375	1.875	1.625	1.625	2.625	1.375	2.375	2.25	2.25	1.5	2.25	2.0
	1.75	2.0	1.5	1.875	1.625	2.375	1.625	2.0	2.875	2.0	2.875	1.25	1.375	1.75	2.75	2.125	2.375
	2.0	1.5	1.875	2.5	1.75	1.75	1.875	1.75	2.375	2.0	2.875	1.375	1.125	1.625	2.25	2.875	1.75
	1.875	2.0	2.0	2.125	1.75	1.875	3.0	1.75	2.375	1.75	1.75	1.625	1.375	1.625	1.625	1.75	2.875
	1.5	2.0	2.0	2.25	2.125	2.125	1.75	1.5	1.875	1.75	1.625	1.75	1.5	2.0	1.75	2.0	2.25
	1.5	1.875	1.875	1.75	1.875	1.875	1.75	1.625	1.875	2.375	2.375	1.75	1.5	2.0	1.75	2.0	2.01
	1.875	2.25	2.125	1.875	1.75	1.875	2.25	1.75	2.875	2.25	2.25	2.25	1.5	1.75	1.75	2.0	2.25
	1.875	1.875	1.75	1.75	1.75	2.0	1.875	1.875	2.0	2.0	2.25	2.25	2.025	2.0	2.5	1.875	2.875
	1.625	1.125	1.625	2.0	2.0	2.875	1.875	1.5	1.625	2.875	1.625	1.375	1.875	1.625	1.25	2.0	1.125
	1.75	1.875	1.625	2.0	1.875	1.75	1.375	1.75	1.875	2.25	1.875	1.75	1.875	2.0	1.5	2.0	2.375
	1.875	2.0	1.625	2.25	1.75	1.75	1.875	2.0	2.0	1.875	1.5	1.375	1.625	1.875	1.5	2.5	2.375
	1.125	1.625	1.5	2.0	1.5	2.25	2.625	1.75	1.875	1.875	1.875	1.75	1.25	2.5	1.5	1.875	2.01
	1.875	1.75	1.875	1.875	1.5	2.0	1.875	2.0	1.875	1.625	1.875	1.5	1.375	1.25	1.875	2.25	2.75
	2.25	1.875	2.0	1.5	1.375	1.625	2.5	1.875	2.25	2.375	1.5	1.375	1.75	2.0	1.75	2.0	1.875
1.375	1.75	1.875	1.75	1.375	1.625	2.125	2.375	2.0	2.20	2.25	1.375	1.75	1.875	1.75	2.25	2.25	
1.75	1.875	1.75	1.875	1.375	2.0	2.125	1.5	1.75	2.375	2.0	1.375	1.625	1.75	1.375	1.875	2.5	
2.0	1.75	1.5	2.25	1.75	2.375	2.5	1.875	2.125	2.875	1.875	1.625	1.875	2.0	1.625	2.5	2.0	
1.625	1.875	1.75	2.125	1.75	2.0	1.75	2.125	2.0	2.0	1.375	1.5	2.25	2.25	1.375	1.375	1.875	
2.0	1.875	1.875	1.875	2.0	1.875	2.5	1.875	2.375	2.0	1.875	1.375	1.875	1.875	2.125	2.0	2.5	
1.5	1.75	1.5	2.125	1.75	2.5	2.25	1.5	1.875	2.875	3.0	1.5	2.0	1.75	1.75	2.5	2.375	
2.25	1.75	1.875	1.75	1.625	2.0	2.375	1.625	2.0	2.5	2.875	1.5	1.5	1.875	1.875	2.5	3.5	
1.875	1.875	1.5	1.5	1.5	1.75	2.25	1.6	2.25	1.875	1.375	1.875	2.0	1.5	1.625	2.0	2.25	
1.875	1.875	2.0	1.75	1.875	8.0	1.5	1.875	2.25	2.75	1.875	1.375	1.5	1.625	1.75	2.5	2.375	
2.0	1.875	1.75	1.5	2.0	1.75	1.75	2.25	2.25	1.875	2.25	1.375	1.75	2.875	1.625	2.25	2.375	
Averages.....	1.741	1.829	1.800	1.912	1.850	2.087	2.029	1.754	2.062	2.228	1.804	1.486	1.854	1.945	1.720	2.266	2.283

Recapitulation and reduction :	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Maximum measurements.	B¹	2.25	0.9858	B¹	2.875	1.1318	B¹	2.875	0.9350	B¹	2.375	0.9350	B¹	2.25	0.8858
	B²	2.375	0.9350	B²	2.875	1.1318	B²	2.875	1.1318	B²	2.5	0.8842	B²	3.25	1.2795
	B³	2.125	0.8366	B³	3.0	1.1811	B³	2.875	1.1318	B³	2.875	1.1318	B³	3.5	1.3770
	B⁴	2.25	0.8858	B⁴	.....	.....	B⁴	2.875	1.1318	B⁴	.....	.....	B⁴	.....	.....
Highest.....		2.375	0.9850		8.0	1.1811		2.875	1.1318		2.875	1.1318		3.25	1.2795
Minimum measurements.	B¹	1.125	0.4429	B¹	1.375	0.5413	B¹	1.375	0.5413	B¹	1.25	0.4921	B¹	1.25	0.4921
	B²	1.125	0.4429	B²	1.625	0.6397	B²	1.625	0.6397	B²	1.25	0.4921	B²	1.375	0.5413
	B³	1.5	0.5905	B³	1.375	0.5413	B³	1.625	0.6397	B³	1.5	0.5905	B³	1.75	0.6889
	B⁴	1.5	0.5905	B⁴	.....	.....	B⁴	.....	.....	B⁴	.....	.....	B⁴	.....	.....
Lowest.....		1.125	0.4429		1.375	0.5413		1.375	0.5413		1.25	0.4921		1.25	0.4921
Average measurements..	B¹	1.741	0.6854	B¹	1.850	0.7288	B¹	1.754	0.8905	B¹	1.486	0.5850	B¹	1.720	0.6771
	B²	1.829	0.7200	B²	2.087	0.8116	B²	2.062	0.8118	B²	1.854	0.7290	B²	2.266	0.8921
	B³	1.800	0.7086	B³	2.029	0.7887	B³	2.228	0.8771	B³	1.945	0.7069	B³	2.283	0.8988
	B⁴	1.912	0.7527	B⁴	.....	.....	B⁴	1.804	0.7102	B⁴	.....	.....	B⁴	.....	.....
Average.....		1.820	0.7165		1.988	0.7826		1.902	0.7724		1.761	0.6933		2.080	0.8224
Measurements above average.....		69			39			56			35			42	
Measurements below average.....		51			51			64			53			48	







TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of samples..	MERINO.																		
	41. NECK.			41. SIDE.			41. HIP.			41. BELLY.				45. NECK, TOP OF FOLD.			45. NECK, BETWEEN FOLD.		
	1½ inches.			1½ inches.			1½ inches.			1½ inches.				1½ inches.			1½ inches.		
	16.			16.			16.			14.				16.			10.		
Number of section.....	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B¹.	B².	B³.
Actual measurement in centimillimeters.	2.0	2.0	1.76	1.75	2.3	1.50	2.5	2.0	2.5	2.5	1.75	2.5	2.0	1.50	1.75	2.0	2.5	2.0	1.5
	2.25	2.25	1.75	2.0	2.5	1.5	2.0	2.25	2.0	2.5	2.0	1.25	1.75	1.75	3.0	1.75	2.0	2.0	2.0
	2.5	2.75	1.75	2.0	2.5	1.6	2.0	2.25	2.0	2.5	2.25	2.25	2.25	1.75	2.0	2.0	1.75	2.5	2.25
	1.75	2.5	1.50	2.0	2.0	2.0	1.75	1.5	1.75	1.75	2.0	2.0	2.0	2.25	2.0	3.25	2.5	3.0	1.75
	1.50	2.25	1.50	1.75	2.0	2.0	2.0	2.0	2.5	2.75	1.25	1.25	1.5	2.5	2.0	3.0	2.0	2.25	3.25
	2.0	1.75	2.0	2.0	2.0	2.25	1.75	2.0	1.75	2.75	2.6	1.75	2.25	2.25	2.25	3.5	2.0	2.75	2.25
	2.25	2.5	2.5	1.75	2.25	1.5	1.75	2.0	2.0	1.5	1.6	1.5	2.0	3.0	4.0	3.0	3.0	2.0	1.75
	1.75	2.0	2.0	1.50	2.0	1.75	1.75	2.0	2.0	1.5	2.0	2.5	2.0	2.0	2.75	2.0	1.75	2.0	2.75
	2.25	2.25	1.75	2.0	2.25	1.75	2.0	1.75	2.0	2.0	2.25	1.5	2.0	2.0	2.25	3.25	2.75	3.0	1.75
	2.5	2.0	2.0	2.0	2.6	1.75	1.75	1.75	3.0	2.5	2.0	2.0	2.5	2.0	2.0	2.0	2.0	2.0	1.75
	2.0	2.75	2.25	1.75	2.5	1.5	2.5	3.0	2.0	2.25	2.0	1.5	1.75	1.75	2.6	2.5	2.5	2.5	2.25
	2.25	3.0	2.25	1.75	2.25	2.0	2.0	2.25	2.25	2.25	1.5	1.75	2.0	2.0	1.75	3.0	2.0	2.25	3.0
	2.0	2.25	2.0	2.5	2.5	2.0	1.75	2.75	2.0	1.75	2.0	2.0	2.0	1.75	1.5	2.0	2.0	2.75	2.25
	1.50	2.5	2.25	2.0	2.0	1.5	2.5	3.0	2.0	1.5	2.25	2.5	2.0	2.75	2.0	3.25	2.25	2.5	2.25
	1.50	2.25	2.25	2.0	1.75	2.25	2.0	2.0	2.0	2.75	1.5	1.75	1.75	2.0	2.25	2.0	1.75	1.5	2.0
	2.0	2.25	1.50	2.0	2.25	2.0	2.0	2.0	2.5	1.5	2.5	2.0	2.0	1.75	2.5	3.0	2.5	2.25	2.0
	2.0	2.5	1.75	2.0	2.25	2.6	1.75	2.25	2.0	1.75	2.0	2.0	2.0	2.0	2.5	3.5	3.0	3.25	1.75
	2.25	2.5	2.25	1.75	1.75	2.0	2.0	2.0	2.0	1.75	2.0	2.75	1.75	1.75	2.0	2.25	2.25	2.25	2.5
	1.75	2.0	2.25	2.0	2.0	3.0	2.0	2.0	2.0	2.25	2.5	2.25	1.5	2.0	2.5	2.25	3.0	3.0	2.5
	2.5	1.50	2.0	1.75	1.5	1.75	2.5	2.75	2.75	2.75	2.0	1.5	2.0	1.5	2.0	2.25	3.5	2.0	2.0
	2.25	2.25	2.0	1.75	1.75	2.0	2.25	1.75	1.75	1.75	2.0	1.5	2.5	2.0	1.75	2.5	2.5	2.5	2.0
	2.5	1.50	2.0	2.0	2.0	1.75	1.75	1.75	2.25	1.5	1.75	2.5	2.0	2.0	2.0	1.75	1.5	2.5	2.0
	2.25	2.25	2.0	1.75	1.75	1.5	2.25	2.0	2.25	1.75	2.0	2.0	2.0	1.75	3.0	2.5	2.0	2.5	2.5
	2.0	2.0	2.25	1.75	2.75	1.75	1.75	2.0	2.25	2.0	1.25	2.25	2.75	2.25	2.25	2.75	2.25	3.0	1.75
	2.5	1.75	2.0	2.25	1.75	2.5	1.75	1.75	2.0	2.0	2.25	1.25	1.25	1.5	1.75	2.5	3.5	1.5	1.25
2.75	2.0	2.0	2.25	2.25	1.75	1.75	2.0	3.0	2.0	1.5	2.0	4.0	1.5	1.5	2.5	1.75	2.5	1.5	
1.75	2.0	1.75	1.75	2.0	1.6	2.5	2.5	3.0	2.0	1.5	2.5	1.5	2.0	2.0	2.0	2.5	2.25	1.25	
2.0	2.0	2.5	2.0	1.75	2.25	2.0	2.0	2.5	2.0	2.25	3.0	2.5	1.5	2.5	2.5	2.25	2.0	2.0	
2.25	2.0	2.0	2.0	2.0	2.25	2.25	2.25	2.5	2.25	2.5	2.25	2.25	1.5	3.0	1.75	2.25	2.25	2.5	
2.25	2.25	2.5	2.0	1.75	1.75	1.75	2.5	2.0	2.5	1.5	1.5	1.5	2.0	2.0	2.25	2.5	2.0	2.15	
Averages.....	2.108	2.158	2.00	1.941	2.108	1.883	2.033	2.266	2.125	2.016	2.033	2.033	1.891	2.191	2.291	2.416	2.341	2.358	2.116

Recapitulation and reduction:	41. NECK.			41. SIDE.			41. HIP.			41. BELLY.				45. NECK, TOP OF FOLD.			45. NECK, BETWEEN FOLD.		
	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	
Maximum measurements.	B¹	2.75	1.0826	B¹	2.5	0.9842	B¹	2.5	0.0842	B¹	2.75	1.0826	B¹	3.0	1.1811	B¹	3.25	1.2795	
	B²	3.0	1.1811	B²	2.75	1.0820	B²	3.0	1.1811	B²	3.0	1.1811	B²	4.0	1.5748	B²	3.25	1.2795	
	B³	2.5	0.9842	B³	3.0	1.1811	B³	2.75	1.0826	B³	4.0	1.5745	B³	3.5	1.8779	B³	3.25	1.2795	
Highest.....	3.0	0.1811	3.0	1.1811	3.0	1.1811	3.0	1.1811	4.0	1.5748	4.0	1.5748	3.25	1.2795	3.25	1.2795			
Minimum measurements.	B¹	1.5	0.5905	B¹	1.5	0.5905	B¹	1.75	0.6889	B¹	1.25	0.4021	B¹	1.5	0.5905	B¹	1.75	0.6889	
	B²	1.5	0.5905	B²	1.75	0.6889	B²	1.5	0.5905	B²	1.5	0.6905	B²	1.5	0.5905	B²	1.5	0.5905	
	B³	1.6	0.5905	B³	1.5	0.5905	B³	1.5	0.5905	B³	1.25	0.4921	B³	1.5	0.5905	B³	1.25	0.4921	
	B⁴	1.5	0.5905	B⁴	1.5	0.5905	B⁴	1.5	0.5905	B⁴	1.5	0.5905	B⁴	1.5	0.5905	B⁴	1.25	0.4921	
Lowest.....	1.5	0.5905	1.5	0.5905	1.6	0.6905	1.25	0.4921	1.25	0.4921	1.5	0.5905	1.25	0.4921					
Average measurements.	B¹	2.108	0.8299	B¹	1.041	0.7641	B¹	2.033	0.8003	B¹	2.016	0.7936	B¹	2.191	0.8625	B¹	2.341	0.9216	
	B²	2.158	0.8496	B²	2.108	0.8299	B²	2.266	0.8921	B²	2.033	0.8009	B²	2.291	0.9019	B²	2.358	0.9283	
	B³	2.00	0.7874	B³	1.883	0.7413	B³	2.125	0.8306	B³	2.033	0.8009	B³	2.416	0.9511	B³	2.116	0.8930	
	B⁴	1.891	0.7444	B⁴	1.891	0.7444	B⁴	1.891	0.7444	B⁴	1.891	0.7444	B⁴	1.891	0.7444	B⁴	1.891	0.7444	
Average.....	2.088	0.8220	1.077	0.7783	2.141	0.8429	1.993	0.7846	2.296	0.9039	2.271	0.8940							



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of samples..	MERINO.																	
	45. SIDE.			45. HIP.			45. BELLY.			46. SHOULDER.			46. SIDE.			46. HIP.		
	1½ inches.			1¼ inches.			1¼ inches.			1½ inches.			1½ inches.			1½ inches.		
Length of fiber in crimp.....	20.			12.			16.			20.			20.			20.		
Number of crimps per inch...	20.			12.			16.			20.			20.			20.		
Number of section.....	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.
Actual measurement in centimillimeters.	2.0	2.0	2.5	2.75	3.0	3.0	2.75	2.25	1.5	1.75	2.0	2.0	2.0	2.0	2.25	2.0	1.75	1.5
	2.5	1.5	3.0	3.75	2.75	2.75	2.5	2.25	2.25	1.75	1.75	2.0	1.75	2.0	1.75	2.25	2.25	2.0
	2.5	2.75	2.25	3.75	2.5	2.75	2.625	2.5	2.75	1.75	1.5	2.0	2.0	2.0	1.75	2.0	2.0	2.25
	2.5	2.75	2.5	3.75	3.25	3.0	2.0	1.75	2.5	1.75	2.25	2.75	3.0	3.25	1.5	1.75	2.5	2.5
	3.0	1.5	1.25	3.0	3.25	2.5	2.25	3.0	2.0	1.75	2.0	2.25	2.75	2.0	1.5	2.0	2.0	2.5
	1.75	2.5	2.5	2.25	2.5	1.5	2.75	1.5	2.75	1.75	2.25	1.75	1.75	2.0	1.75	1.75	2.25	2.0
	2.25	2.5	2.0	2.75	2.5	2.0	1.75	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.25	2.25	2.0	3.0
	2.0	2.25	2.25	3.5	2.75	3.25	2.5	2.5	2.5	2.25	2.0	2.25	2.0	2.0	1.75	1.75	2.0	2.5
	2.0	2.5	2.75	3.75	1.75	2.5	2.5	2.5	2.0	1.5	1.75	2.0	2.5	1.5	1.5	1.5	2.0	2.0
	2.5	1.5	1.5	3.75	3.25	2.5	2.5	2.0	2.25	1.75	2.0	2.5	1.75	2.0	1.75	2.0	1.75	2.0
	2.5	3.75	2.0	2.25	2.75	2.25	2.5	2.0	2.5	2.5	2.0	2.25	1.25	2.0	2.25	1.25	3.0	2.25
	2.5	1.5	2.25	3.0	2.25	1.75	2.0	2.25	2.5	2.25	2.25	3.0	1.75	1.5	2.0	2.0	1.75	1.75
	1.75	1.75	2.5	2.5	3.25	3.0	1.75	2.25	2.0	1.75	1.75	2.5	1.75	2.5	2.5	1.75	2.25	1.5
	2.0	2.25	3.0	4.25	3.25	2.5	2.0	3.0	1.75	2.0	2.0	1.75	1.75	2.0	1.75	2.5	1.75	2.25
	2.5	1.5	3.0	2.25	3.0	2.0	2.5	2.25	2.5	1.75	2.0	2.25	2.0	1.5	1.75	1.75	1.5	1.5
	2.0	2.25	2.25	2.75	3.5	2.5	1.75	2.0	2.25	2.0	2.0	2.0	1.5	2.0	1.75	2.25	2.5	2.5
	2.0	2.25	2.25	2.25	3.5	3.5	2.25	2.5	2.0	2.25	2.25	2.0	2.0	2.0	1.5	2.0	2.0	1.5
	2.25	2.25	2.5	4.0	3.0	3.0	2.25	2.0	1.75	2.5	2.0	2.0	2.0	2.5	1.75	2.5	1.75	1.5
	2.0	2.0	2.25	4.0	2.5	2.5	2.0	2.0	2.0	2.0	2.0	2.25	1.75	2.0	1.5	2.0	2.0	3.25
	2.0	2.0	3.0	2.5	3.5	3.25	2.0	2.0	2.5	2.0	1.25	2.0	2.5	2.5	1.5	3.0	2.0	2.0
	2.5	0.0	1.5	2.5	2.5	2.5	3.0	2.0	2.0	2.5	2.0	1.75	2.0	2.0	1.5	2.25	2.0	1.75
	2.75	2.25	2.5	4.0	2.0	2.0	2.5	1.75	1.25	2.5	2.75	2.5	2.0	2.0	2.25	2.75	1.75	2.0
	2.0	2.0	2.5	2.5	2.5	2.0	2.25	2.0	2.0	2.25	2.5	1.75	2.5	2.0	2.0	2.5	2.0	1.75
	2.25	2.0	2.5	3.5	2.25	2.25	2.25	2.0	1.5	2.75	2.25	1.5	1.75	2.25	2.0	1.75	2.0	2.0
	2.25	3.0	2.25	4.0	2.25	2.25	2.25	2.25	2.5	2.25	2.5	2.0	1.75	2.0	1.75	2.0	1.75	2.25
2.0	2.0	1.75	2.25	4.0	1.75	2.25	2.0	2.5	1.5	2.75	2.25	1.25	2.0	1.75	1.5	1.75	3.25	
2.75	3.0	2.75	2.25	3.75	2.5	2.5	2.0	1.5	1.25	2.0	3.5	2.0	2.5	2.5	1.5	2.0	2.0	
3.0	1.25	3.0	2.75	2.75	3.0	2.0	2.5	2.25	1.75	3.0	2.0	2.5	1.75	2.25	2.0	2.0	2.0	
1.75	3.25	2.0	3.5	3.25	2.5	2.0	2.5	1.5	2.5	2.5	2.0	1.5	1.75	3.0	1.75	3.0	2.0	
2.75	2.25	1.75	2.75	3.5	2.75	2.5	2.75	1.75	2.0	2.0	2.25	2.0	3.0	1.75	2.0	2.0	2.5	
Averages.....	2.283	2.233	2.366	3.066	2.791	2.541	2.2458	2.1916	2.0833	2.050	2.125	2.175	1.991	2.091	1.891	2.041	2.116	2.116

Recapitulation and reductions:	No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.		No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.		No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.	
		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.						
Maximum measurements.	B¹	3.0	1.1811	B¹	4.25	1.6732	B¹	2.75	1.0826	B¹	2.75	1.0826	B¹	3.0	1.1811	B¹	3.0	1.1811
	B²	3.75	1.4763	B²	4.0	1.5748	B²	3.0	1.1811	B²	3.0	1.1811	B²	3.75	1.4763	B²	3.0	1.1811
	B³	3.0	1.1811	B³	3.5	1.3779	B³	2.75	1.0826	B³	3.5	1.3779	B³	3.0	1.1811	B³	3.25	1.2795
Highest.....		3.75	1.4763		4.25	1.6732		3.0	1.1811		3.5	1.3779		3.75	1.4763		3.25	1.2795
Minimum measurements.	B¹	1.75	0.6889	B²	2.25	0.8858	B¹	1.75	0.6889	B¹	1.25	0.4921	B¹	1.25	0.4921	B¹	1.25	0.4921
	B²	1.25	0.4921	B²	1.75	0.6889	B²	1.5	0.5905	B²	1.25	0.4921	B²	1.5	0.5905	B²	1.5	0.5905
	B³	1.25	0.4921	B³	1.5	0.5905	B³	1.25	0.4921	B³	1.25	0.4921	B³	1.5	0.5905	B³	1.5	0.5905
Lowest.....		1.25	0.4921		1.5	0.5905		1.25	0.4921		1.25	0.4921		1.25	0.4921		1.25	0.4921
Average measurements..	B¹	2.283	0.8988	B¹	3.066	1.2070	B¹	2.2458	0.8838	B¹	2.050	0.8070	B¹	1.991	0.7838	B¹	2.041	0.8035
	B²	2.233	0.8791	B²	2.791	1.0998	B²	2.1916	0.8628	B²	2.125	0.8366	B²	2.091	0.8232	B²	2.116	0.8330
	B³	2.366	0.9314	B³	2.541	1.0003	B³	2.0833	0.8200	B³	2.175	0.8562	B³	1.891	0.7444	B³	2.116	0.8330
Average.....		2.294	0.9031		2.799	1.1019		2.1735	0.8555		2.116	0.8330		1.991	0.7838		2.091	0.8232



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of samples..	MERINO.																	
	46. BELLY.			47. SHOULDER.			47. SIDE.			47. HIP.			47. BELLY.			48. SHOULDER. (top of fold.)		
	1 7/8 inches.			1 1/2 inches.			1 1/8 inches.			1 3/8 inches.			1 1/4 inches.			1 1/2 inches.		
	20.			20.			20.			20.			20.			16.		
Number of section .....	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .
2.5	2.75	2.0	2.25	2.25	2.5	2.0	1.75	2.0	3.25	3.5	2.0	2.25	2.25	2.0	1.75	2.5	1.75	2.0
1.75	1.5	2.75	2.0	2.75	2.25	2.0	2.5	2.25	2.5	1.5	2.0	1.75	2.5	2.0	1.75	2.0	1.75	2.0
1.5	2.5	2.0	2.0	2.25	2.25	2.25	2.5	1.75	3.25	2.5	2.5	2.75	2.0	2.0	2.5	2.5	3.25	2.5
2.0	3.0	2.5	2.5	2.25	1.5	2.5	2.0	1.75	2.25	1.75	1.75	2.25	2.0	2.5	2.5	3.0	2.75	2.0
2.25	1.75	2.5	2.5	2.25	2.0	2.0	3.0	2.0	2.75	2.0	2.75	2.25	2.0	2.5	2.75	1.75	2.25	2.0
1.75	1.5	2.5	2.0	2.25	2.0	2.25	1.75	2.0	2.0	2.25	2.0	2.0	2.0	2.5	2.0	2.5	2.75	2.25
1.5	2.0	2.0	2.0	2.25	2.0	2.0	1.75	2.0	2.75	2.5	1.75	2.25	2.5	2.25	2.25	2.25	2.0	2.5
1.75	2.0	2.5	1.75	2.75	1.75	1.75	2.0	2.25	2.0	2.0	2.0	2.25	2.0	2.5	2.25	2.5	1.75	2.0
1.75	2.75	1.75	2.5	2.0	2.0	2.0	2.5	2.0	2.0	1.5	2.25	2.5	2.0	2.0	2.25	2.5	3.0	1.75
1.5	1.75	2.0	2.25	2.5	2.0	2.25	2.75	2.0	1.75	2.5	3.0	2.0	2.0	1.75	3.0	2.25	2.5	1.75
2.0	2.0	2.75	2.25	2.0	2.0	2.0	2.25	2.5	3.25	3.0	2.25	3.0	2.5	2.0	2.25	2.5	2.5	2.5
1.75	2.0	1.5	2.0	2.75	2.5	3.25	2.0	2.5	2.0	3.0	3.0	1.5	2.75	2.25	2.0	2.5	2.75	2.25
2.25	2.0	1.75	3.0	2.0	2.0	2.0	2.25	1.75	2.5	2.25	2.25	2.25	3.0	3.0	2.25	3.0	3.0	2.0
1.75	1.75	3.25	2.0	2.25	2.25	2.5	3.0	2.25	3.0	3.0	2.5	2.0	2.0	2.5	2.25	2.0	3.0	2.0
2.0	2.5	2.25	2.0	2.0	2.0	1.75	2.5	2.0	2.0	2.5	2.0	2.0	2.0	2.0	1.75	1.75	2.25	1.75
2.5	2.75	2.75	2.25	2.5	1.75	2.0	2.0	1.75	2.25	2.25	2.25	2.25	2.25	1.75	2.75	1.75	2.0	2.25
1.75	1.75	2.0	2.0	1.75	3.0	2.0	1.75	1.75	2.0	2.5	1.5	2.75	2.75	2.0	1.75	3.5	2.5	2.5
1.75	2.0	2.5	2.5	2.25	1.75	2.75	2.0	1.75	2.5	1.75	2.0	2.75	3.0	2.25	2.0	2.75	2.0	1.75
1.75	2.25	1.75	2.5	1.75	2.25	2.75	2.0	2.75	3.0	2.0	2.0	2.75	3.25	2.25	2.5	2.75	2.0	3.25
1.5	2.0	2.0	2.25	2.25	2.5	2.0	1.75	2.0	2.0	2.25	2.0	2.75	2.0	1.5	2.25	2.0	1.25	1.75
2.0	1.5	2.5	1.75	2.25	2.0	1.75	2.0	1.75	2.25	2.25	2.5	2.0	2.25	2.0	2.25	3.75	1.5	1.5
2.5	2.0	2.0	2.0	2.5	2.5	2.0	2.25	2.0	2.0	1.75	2.0	2.25	2.25	2.5	2.0	3.0	2.0	2.0
1.75	2.0	2.0	1.75	2.5	2.0	3.0	1.75	1.75	1.5	2.25	2.5	2.0	2.5	2.0	3.0	2.5	1.5	1.5
2.0	2.5	1.5	2.75	3.0	2.5	2.0	2.0	2.0	2.5	2.25	3.5	2.25	3.5	2.25	2.25	3.0	2.5	1.25
1.75	1.75	2.0	2.0	2.75	2.0	1.75	2.5	1.75	2.5	2.5	1.5	2.5	2.0	2.25	2.25	4.5	2.5	2.5
2.75	2.5	2.25	2.5	2.0	1.75	3.0	2.0	1.75	2.25	2.25	3.0	3.25	3.0	2.5	1.75	2.0	1.5	1.5
2.5	2.0	1.75	2.75	2.0	1.75	2.75	1.75	2.25	1.75	2.75	2.25	2.25	2.0	2.5	1.75	2.25	2.5	2.5
2.0	2.0	1.25	1.25	2.75	1.75	2.25	2.0	1.75	2.0	2.0	2.0	2.25	2.25	2.5	2.25	1.5	1.5	2.5
2.25	2.0	1.75	2.5	2.25	1.75	2.75	2.0	2.0	2.5	2.5	2.25	2.25	2.5	2.0	2.5	2.75	2.5	3.25
1.75	2.25	3.0	2.0	2.5	2.75	2.0	3.0	2.25	2.25	2.0	2.0	2.0	2.5	3.0	2.0	3.50	2.5	1.5
Averages .....	1.963	2.100	2.200	2.191	2.308	2.100	2.241	2.166	2.083	2.341	2.300	2.241	2.400	2.458	2.225	2.291	2.525	2.108

Recapitulation and reductions:	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.						
Maximum measurements.	B <sup>1</sup>	2.75	1.0826	B <sup>1</sup>	3.0	1.1811	B <sup>1</sup>	3.25	1.2795	B <sup>1</sup>	3.25	1.2795	B <sup>1</sup>	3.5	1.3779	B <sup>1</sup>	3.5	1.3779
	B <sup>2</sup>	3.0	1.1811	B <sup>2</sup>	3.0	1.1811	B <sup>2</sup>	3.0	1.1181	B <sup>2</sup>	3.5	1.3779	B <sup>2</sup>	3.0	1.1811	B <sup>2</sup>	4.5	1.7716
	B <sup>3</sup>	3.0	1.1811	B <sup>3</sup>	3.0	1.1811	B <sup>3</sup>	2.75	1.0826	B <sup>3</sup>	3.5	1.3779	B <sup>3</sup>	3.0	1.1811	B <sup>3</sup>	3.25	1.2795
Highest .....		3.0	1.1811		3.0	1.1811		3.25	1.2795		3.5	1.3779		3.5	1.3799		4.5	1.7716
Minimum measurements.	B <sup>1</sup>	1.5	0.5905	B <sup>1</sup>	1.25	0.4921	B <sup>1</sup>	1.75	0.6889	B <sup>1</sup>	1.5	0.5905	B <sup>1</sup>	1.75	0.6889	B <sup>1</sup>	1.5	0.5905
	B <sup>2</sup>	1.5	0.5905	B <sup>2</sup>	1.75	0.6889	B <sup>2</sup>	1.75	0.5889	B <sup>2</sup>	1.5	0.5905	B <sup>2</sup>	1.75	0.6889	B <sup>2</sup>	1.25	0.4921
	B <sup>3</sup>	1.25	0.4921	B <sup>3</sup>	1.5	0.5905	B <sup>3</sup>	1.75	0.6889	B <sup>3</sup>	1.5	0.5905	B <sup>3</sup>	1.75	0.6889	B <sup>3</sup>	1.25	0.4921
Lowest .....		1.25	0.4921		1.25	0.4921		1.75	0.6889		1.5	0.5905		1.75	0.6889		1.25	0.4921
Average measurements.	B <sup>1</sup>	1.963	0.7807	B <sup>1</sup>	2.191	0.8625	B <sup>1</sup>	2.241	0.8822	B <sup>1</sup>	2.341	0.9216	B <sup>1</sup>	2.400	0.9448	B <sup>1</sup>	2.291	0.8019
	B <sup>2</sup>	2.100	0.8267	B <sup>2</sup>	2.308	0.9086	B <sup>2</sup>	2.166	0.8527	B <sup>2</sup>	2.300	0.9055	B <sup>2</sup>	2.458	0.9677	B <sup>2</sup>	2.525	0.9040
	B <sup>3</sup>	2.200	0.8661	B <sup>3</sup>	2.100	0.8287	B <sup>3</sup>	2.083	0.8200	B <sup>3</sup>	2.241	0.8322	B <sup>3</sup>	2.225	0.8759	B <sup>3</sup>	2.108	0.8299
Average .....		2.094	0.8244		2.199	0.8657		2.163	0.8515		2.294	0.9031		2.361	0.9295		2.374	0.9340







TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		MERINO.																		
Catalogue number of samples..		51. HIP.			51. BELLY.			52. SHOULDER.			52. SIDE.			52. HIP.			52. BELLY.			
Length of fiber in crimp .....		1½ inches.			1¾ inches.			1⅞ inches.			1¾ inches.			1¾ inches.			1⅞ inches.			
Number of crimps per inch.....		10.			16.			22.			22½.			20.			20.			
Number of section.....		B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	
Actual measurement in centimillimeters.	3.25	4.0	2.0	1.75	2.5	2.25	1.5	1.75	1.25	1.75	1.5	2.75	1.75	2.0	1.75	1.5	2.25	1.5	1.5	
	2.0	1.25	2.25	2.25	2.75	2.0	2.5	1.75	1.5	1.75	1.5	1.5	1.5	1.5	2.0	1.75	2.5	1.5	1.75	
	3.0	3.0	2.25	2.0	2.5	2.0	2.0	1.75	2.0	1.25	2.0	1.5	2.5	2.25	1.5	1.5	1.5	1.5	1.75	
	2.0	1.75	2.0	1.5	2.75	2.0	2.0	2.25	1.75	1.5	1.5	2.0	1.75	1.75	1.5	2.0	2.0	2.0	2.0	2.0
	1.5	2.25	2.0	2.25	2.0	2.25	1.5	2.0	2.0	1.75	1.0	1.5	2.5	1.75	1.75	2.5	1.5	1.5	1.75	1.75
	1.75	2.25	3.5	3.0	2.25	2.0	1.75	2.0	1.75	2.0	1.5	1.75	2.25	1.75	2.0	2.0	2.0	2.0	2.0	2.0
	1.75	2.0	2.5	2.75	2.25	2.25	1.5	1.75	1.25	1.5	1.5	1.5	1.5	1.75	1.5	2.5	1.75	2.5	1.75	2.0
	2.25	2.5	2.25	2.5	2.5	1.75	1.5	1.75	1.5	1.5	1.5	1.75	2.0	2.25	2.0	2.0	2.0	1.5	2.0	2.0
	2.0	2.25	2.0	2.5	2.0	2.0	1.75	1.75	1.5	1.75	1.5	1.5	2.25	2.0	2.0	1.75	1.5	1.5	1.75	1.5
	1.5	2.0	2.5	1.5	2.25	1.25	1.5	1.75	1.75	1.5	2.5	2.0	1.75	2.0	1.5	1.75	2.0	1.75	2.0	1.75
	2.25	2.5	2.0	2.0	2.0	1.5	1.75	1.75	1.5	1.5	1.5	1.75	2.0	2.0	2.0	2.5	2.0	2.0	2.0	2.0
	1.75	2.25	2.25	2.5	2.5	1.75	2.5	2.0	2.0	1.75	1.5	1.75	1.75	2.0	2.5	2.0	2.25	1.5	1.5	1.5
	2.5	2.5	2.5	3.25	2.5	1.75	1.5	2.0	1.5	1.5	1.75	1.75	2.25	1.5	1.5	2.0	1.75	2.0	1.75	1.75
	1.75	2.5	2.0	2.75	2.5	1.75	1.5	1.75	1.75	1.5	2.25	2.0	2.5	2.0	2.0	1.5	1.75	1.75	1.75	1.75
	2.25	2.5	2.0	2.0	2.0	1.75	2.0	1.75	2.0	1.5	1.75	2.0	1.75	1.75	2.0	1.75	1.5	3.25	2.25	2.25
	2.0	1.75	1.75	2.25	2.25	2.0	2.0	2.0	2.0	1.5	1.75	1.75	1.75	2.25	1.75	1.5	2.0	2.25	2.25	2.25
	1.75	1.5	2.75	2.0	1.75	2.25	1.75	1.5	1.25	1.5	1.75	2.25	1.5	2.0	1.75	1.75	1.5	1.5	1.25	2.25
	1.75	2.5	2.0	2.75	2.5	2.25	1.5	1.75	1.5	1.75	1.5	2.0	1.5	2.0	1.75	2.0	1.25	2.25	2.25	2.25
	2.25	1.75	1.5	2.0	2.5	2.0	1.75	1.75	1.0	1.25	1.5	1.5	1.5	2.25	1.5	2.25	1.5	2.25	1.5	1.5
	1.75	2.0	1.75	3.0	2.25	2.0	1.75	1.75	1.0	2.5	1.75	2.25	2.25	1.5	2.0	2.0	1.5	2.0	1.5	2.0
	2.0	1.75	2.0	2.0	1.75	2.0	1.5	2.0	1.75	1.25	1.75	1.75	2.0	2.0	1.75	2.0	1.5	1.75	2.0	2.0
	2.0	2.0	1.75	2.0	1.75	2.5	1.75	1.5	1.5	2.0	1.75	1.75	1.75	2.25	1.75	1.5	1.5	1.5	1.5	1.5
	2.25	2.0	2.0	2.5	3.0	2.5	1.5	1.5	1.5	1.5	2.0	1.75	1.75	2.0	1.75	2.0	1.75	2.0	1.75	1.75
	2.25	2.0	2.5	2.5	2.25	2.0	1.75	1.75	1.25	1.5	2.0	1.75	1.5	2.5	2.0	1.75	2.0	1.75	2.0	1.5
	2.0	2.25	2.0	2.0	2.5	1.75	1.75	1.75	1.75	2.0	1.75	1.75	1.5	2.0	2.0	1.75	2.0	1.75	2.0	1.5
	1.25	2.25	2.5	2.0	2.25	2.0	2.0	1.5	2.0	2.0	2.0	1.75	1.5	1.75	1.75	1.5	2.0	1.5	2.0	1.5
	1.75	2.5	1.75	2.0	2.0	2.0	1.5	1.5	1.5	1.75	1.25	2.25	1.5	1.75	2.25	2.0	2.5	2.0	2.5	2.25
	2.0	2.0	2.25	2.25	2.25	2.5	2.0	1.75	1.5	2.0	1.75	1.75	1.5	1.75	1.5	1.5	2.0	1.5	2.0	1.25
3.0	2.0	2.5	2.25	3.0	1.75	1.75	1.5	1.5	1.5	1.5	2.0	1.75	1.75	2.0	1.75	2.0	1.75	2.0	1.5	
Averages .....	2.033	2.216	2.175	2.291	2.308	2.016	1.758	1.791	1.650	1.658	1.708	1.791	1.875	1.058	1.775	1.866	1.816	1.800		

Recapitulation and reduction:		51. HIP.			51. BELLY.			52. SHOULDER.			52. SIDE.			52. HIP.			52. BELLY.		
Maximum measurements.		B¹	In centimillimeters.	In thousandths of inch.	B¹	In centimillimeters.	In thousandths of inch.	B¹	In centimillimeters.	In thousandths of inch.	B¹	In centimillimeters.	In thousandths of inch.	B¹	In centimillimeters.	In thousandths of inch.	B¹	In centimillimeters.	In thousandths of inch.
Highest.....		4.0	1.5748	3.25	1.2795	2.5	0.9842	2.75	1.0820	2.5	0.842	2.5	0.842	3.25	1.2795	2.5	0.9842	3.25	1.2795
Minimum measurements.		1.25	0.4921	1.5	0.5905	1.5	0.5905	1.25	0.3937	1.5	0.5905	1.5	0.5905	1.25	0.4921	1.5	0.5905	1.25	0.4921
Lowest.....		1.25	0.4921	1.25	0.4921	1.25	0.4921	1.0	0.3937	1.5	0.5905	1.25	0.4921	1.25	0.4921	1.25	0.4921	1.25	0.4921
Average measurements.		2.033	0.8003	2.291	0.9019	1.758	0.6921	1.658	0.6527	1.708	0.6724	1.875	0.7381	1.866	0.7346	1.816	0.7149	1.800	0.7080
Average.....		2.141	0.8429	2.205	0.8681	1.733	0.6822	1.716	0.6755	1.869	0.7358	1.808	0.7118						
Measurements above average.....		40		48		56		52		42		50							
Measurements below average.....		50		42		34		38		48		40							



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		MERINO.																		
Catalogue number of samples..		53. SHOULDER.			53. SHOULDER, TOP OF FOLD.			53. SHOULDER, BETWEEN FOLD.			53. SIDE.			53. HIP.			53. HIP, TOP OF FOLD.			
Length of fiber in crimp.....		1 1/2 inches.			1 1/4 inches.			1 inch.			3/4 inches.			1 1/4 inches.			3/4 inch.			
Number of crimps per inch....		22			—			20			22			20			14			
Number of section.....		B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	
Actual measurement in centimillimeters.	2.5	2.25	2.0	2.25	3.0	1.75	3.0	2.0	1.75	2.0	2.0	1.5	1.5	1.75	1.5	2.5	3.0	4.0		
	2.25	2.0	2.25	2.5	2.5	2.0	1.5	2.25	1.75	2.0	2.25	2.0	1.5	1.75	2.0	2.0	2.5	2.5	2.0	
	2.0	2.25	1.75	2.75	2.25	2.25	1.75	1.75	2.0	1.5	2.0	1.5	1.5	1.75	2.0	1.5	1.75	2.0	2.0	
	2.0	2.25	2.0	2.5	2.0	1.5	1.75	2.0	2.0	1.5	2.0	1.5	1.5	1.75	2.0	2.0	2.0	2.0	2.0	
	1.75	1.75	1.75	2.25	2.5	2.25	2.25	2.25	2.0	1.5	2.0	1.5	1.5	1.75	2.0	1.5	1.75	2.0	2.0	2.0
	1.5	2.0	2.0	2.0	2.25	2.5	2.5	1.75	1.5	1.75	1.5	1.5	1.5	1.75	2.0	2.0	2.0	2.0	2.0	2.0
	1.75	2.25	2.0	2.25	2.5	2.5	1.75	1.75	1.5	1.75	1.5	1.5	1.5	1.75	2.0	2.0	2.0	2.0	2.0	2.0
	2.0	2.0	2.0	1.75	3.0	1.5	1.75	1.5	1.5	1.75	1.5	1.5	1.5	1.75	2.0	2.0	2.0	2.0	2.0	2.0
	2.0	1.75	2.0	2.5	2.75	1.75	1.75	1.75	1.5	1.75	1.5	1.5	1.5	1.75	2.0	2.0	2.0	2.0	2.0	2.0
	1.5	1.5	2.0	2.25	2.25	1.75	1.75	1.75	1.5	1.75	1.5	1.5	1.5	1.75	2.0	2.0	2.0	2.0	2.0	2.0
	2.0	2.25	1.5	2.25	2.25	3.0	1.75	1.75	1.5	1.75	1.5	1.5	1.5	1.75	2.0	2.0	2.0	2.0	2.0	2.0
	2.0	2.0	1.75	2.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
	1.75	1.75	1.75	2.25	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
	2.0	1.5	1.75	2.25	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
	2.0	1.5	1.75	2.25	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
	2.0	1.5	1.75	2.25	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
	2.0	1.5	1.75	2.25	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
	2.0	1.5	1.75	2.25	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
	Averages.....	1.801	1.966	1.833	2.258	2.441	2.250	1.825	1.975	1.750	1.775	1.958	1.718	1.758	1.683	1.650	2.583	2.725	2.516	

Recapitulation and reduction:		No. of section.		In centimillimeters.		In thousandths of inch.		No. of section.		In centimillimeters.		In thousandths of inch.		No. of section.		In centimillimeters.		In thousandths of inch.	
Maximum measurements.	B <sup>1</sup>	2.50	0.9842	B <sup>1</sup>	3.5	1.3779	B <sup>1</sup>	3.0	1.1811	B <sup>1</sup>	2.25	0.8858	B <sup>1</sup>	2.25	0.8858	B <sup>1</sup>	3.0	1.9685	
	B <sup>2</sup>	2.25	0.8858	B <sup>2</sup>	4.0	1.5748	B <sup>2</sup>	2.5	0.9842	B <sup>2</sup>	2.5	0.9842	B <sup>2</sup>	2.25	0.8858	B <sup>2</sup>	4.25	1.6732	
	B <sup>3</sup>	2.25	0.8858	B <sup>3</sup>	3.5	1.3779	B <sup>3</sup>	2.75	1.0826	B <sup>3</sup>	2.25	0.8858	B <sup>3</sup>	2.0	0.7874	B <sup>3</sup>	4.0	1.5748	
Highest.....		2.50	0.9842		4.0	1.5748		3.0	1.1811		2.5	0.9842		2.25	0.8858		3.0	1.9685	
Minimum measurements.	B <sup>1</sup>	1.50	0.5905	B <sup>1</sup>	1.75	0.6889	B <sup>1</sup>	1.25	0.4921	B <sup>1</sup>	1.50	0.5905	B <sup>1</sup>	1.25	0.4921	B <sup>1</sup>	1.25	0.6889	
	B <sup>2</sup>	1.50	0.5905	B <sup>2</sup>	2.0	0.7874	B <sup>2</sup>	1.50	0.5905	B <sup>2</sup>	1.50	0.5905	B <sup>2</sup>	1.0	0.3937	B <sup>2</sup>	1.25	0.4921	
	B <sup>3</sup>	1.50	0.5905	B <sup>3</sup>	1.50	0.5905	B <sup>3</sup>	1.25	0.4921	B <sup>3</sup>	1.25	0.4921	B <sup>3</sup>	1.0	0.3937	B <sup>3</sup>	1.75	0.6889	
Lowest.....		1.50	0.5905		1.50	0.5905		1.25	0.4921		1.25	0.4921		1.0	0.3937		1.25	0.4921	
Average measurements..	B <sup>1</sup>	1.801	0.7444	B <sup>1</sup>	2.258	0.8889	B <sup>1</sup>	1.825	0.7185	B <sup>1</sup>	1.775	0.6968	B <sup>1</sup>	1.758	0.6921	B <sup>1</sup>	2.583	1.0109	
	B <sup>2</sup>	1.966	0.7740	B <sup>2</sup>	2.411	0.9610	B <sup>2</sup>	1.975	0.7775	B <sup>2</sup>	1.958	0.7708	B <sup>2</sup>	1.683	0.6625	B <sup>2</sup>	2.725	1.0728	
	B <sup>3</sup>	1.833	0.7216	B <sup>3</sup>	2.250	0.8858	B <sup>3</sup>	1.750	0.6889	B <sup>3</sup>	1.710	0.6753	B <sup>3</sup>	1.650	0.6496	B <sup>3</sup>	2.516	0.9905	
Average.....		1.896	0.7404		2.316	0.9118		1.850	0.7283		1.810	0.7149		1.697	0.6681		2.608	1.0267	
Measurements above average..		51			37			42			41			50			37		
Measurements below average..		39			53			48			49			46			53		



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of samples..	MERINO.																			
	53. HIP, BETWEEN FOLD.			53. BELLY, A.			53. BELLY, D.			54. SHOULDER, TOP OF FOLD.			54. SHOULDER, BETWEEN FOLD.			54. HIP, TOP FOLD.				
	3/8 inch.			1 1/4 inches.			1 inch.			3/8 inch.			1 1/8 inches.			3/8 inch.				
	16.			20.			20.			14.			—			—				
Number of section.....			B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .
2.25	1.75	2.5	1.5	3.0	1.75	1.75	2.0	2.5	3.5	3.25	2.5	2.0	1.5	2.0	5.0	3.0	2.5			
2.5	2.5	2.0	2.0	2.0	2.25	2.0	2.25	1.75	2.25	2.25	2.5	2.0	1.5	1.25	5.0	4.0	3.0			
2.25	1.75	2.0	1.75	2.25	1.75	1.75	1.75	2.5	2.0	2.0	2.25	2.0	2.5	1.75	3.25	3.25	3.5			
1.75	2.25	1.5	2.0	1.75	1.25	2.25	1.75	2.25	2.75	2.0	2.25	2.5	2.25	1.5	3.5	3.0	4.0			
2.0	1.75	2.0	1.75	2.25	1.75	1.5	1.75	1.75	2.0	1.75	2.0	2.0	2.0	2.0	3.5	3.5	2.75			
2.75	3.5	1.75	2.25	1.5	2.25	2.0	2.0	1.75	2.5	2.25	2.5	2.5	1.75	2.5	2.75	2.25	2.5			
1.75	2.25	1.5	2.0	1.5	2.5	1.75	1.75	1.5	3.0	2.5	2.5	2.0	1.5	2.0	2.0	3.25	2.0			
2.0	2.25	1.75	1.75	1.75	1.5	2.0	1.5	1.75	2.5	2.0	2.5	2.0	2.5	3.5	3.5	2.25	2.25			
1.75	1.5	1.75	2.0	1.5	2.0	2.0	1.5	2.0	3.0	2.5	2.5	2.25	2.0	1.75	3.0	2.5	3.0			
2.0	1.75	1.5	1.5	1.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.25	2.0	2.0	2.0	2.25	2.0			
1.75	2.25	2.0	1.5	2.0	2.0	2.0	2.0	3.0	2.25	2.5	2.0	1.75	1.5	1.75	2.5	3.5	3.0			
1.75	2.25	1.75	1.75	1.5	1.75	1.75	2.0	2.25	2.25	2.0	2.0	1.75	1.75	1.75	3.0	3.5	2.5			
2.0	2.0	1.75	1.5	1.5	1.75	2.5	2.0	1.5	3.0	2.0	2.5	2.0	2.25	1.5	2.25	2.75	2.75			
2.5	2.0	1.75	1.5	2.25	1.75	2.5	2.0	2.0	2.0	2.5	2.0	2.0	2.5	2.0	1.75	2.5	2.0			
2.0	2.0	2.0	2.0	1.75	2.0	1.75	1.75	1.75	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
1.75	2.0	1.5	1.5	1.75	1.5	1.75	1.5	2.0	3.75	2.0	2.0	2.5	2.0	1.75	3.25	2.5	3.0			
2.5	1.75	2.25	1.5	2.0	2.0	1.5	2.5	2.0	2.5	2.0	2.0	2.5	2.0	2.0	3.25	2.5	2.0			
1.75	2.0	1.5	2.0	2.5	1.5	2.0	2.5	2.0	2.5	2.5	2.0	2.5	2.0	2.0	2.0	2.0	2.0			
2.0	2.5	1.75	1.5	2.0	1.75	2.0	2.0	2.5	2.75	2.0	2.0	2.0	2.25	2.0	3.0	2.75	2.25			
2.0	2.25	1.75	1.75	2.0	2.0	2.0	2.0	2.0	2.5	2.0	2.25	2.25	2.25	2.0	3.0	2.0	2.75			
2.5	2.5	1.25	1.75	1.5	2.25	2.0	2.0	2.0	3.0	4.0	2.25	2.25	2.25	2.0	3.5	2.75	2.25			
3.0	2.0	2.0	1.75	2.0	2.0	2.0	2.0	2.25	2.25	2.0	2.5	2.5	1.5	1.75	3.0	3.0	2.5			
2.5	2.0	2.25	2.0	2.0	1.5	1.75	1.75	1.75	3.5	2.0	2.5	2.25	2.25	2.25	3.0	3.0	3.25			
2.0	2.5	2.0	1.5	2.0	2.0	2.0	1.75	1.75	1.75	2.25	3.0	2.25	2.25	2.25	3.0	4.0	3.0			
2.25	2.25	1.5	2.0	1.5	1.5	2.0	2.0	2.0	2.5	2.25	3.0	2.75	2.5	1.75	2.5	4.5	2.25			
1.5	2.25	1.75	2.0	1.5	1.75	1.75	1.75	2.0	2.0	3.75	3.0	2.0	1.75	1.5	3.25	3.25	2.5			
2.5	2.0	2.0	1.75	1.5	2.0	2.0	2.0	2.0	2.5	2.0	2.5	2.0	2.0	1.75	3.0	2.75	3.5			
2.0	2.5	2.25	2.25	1.75	1.75	1.75	2.25	2.25	3.25	2.5	2.25	2.25	1.75	2.0	3.25	2.25	3.25			
2.25	2.25	2.0	1.75	2.0	2.0	1.75	2.0	2.0	4.0	2.0	2.0	2.25	2.25	1.5	2.75	2.25	2.5			
1.75	1.75	1.75	1.5	1.5	2.0	2.0	2.25	1.75	2.75	2.5	2.5	2.25	2.25	1.5	3.25	2.0	2.25			
Averages.....	2.108	2.141	1.833	1.775	1.000	1.833	1.925	2.066	2.050	2.708	2.316	2.517	2.106	1.938	1.925	3.000	3.025	2.683		

Recapitulation and reduction:	No. of section.			No. of section.			No. of section.			No. of section.			No. of section.		
	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In centimillimeters.	In thousandths of inch.	
Maximum measurements.	B <sup>1</sup> 3.0	1.1811	B <sup>1</sup> 2.25	0.8858	B <sup>1</sup> 2.50	0.9842	B <sup>1</sup> 4.0	1.5748	B <sup>1</sup> 2.75	1.0826	B <sup>1</sup> 5.0	1.0685			
	B <sup>2</sup> 3.5	1.3779	B <sup>2</sup> 2.25	0.8858	B <sup>2</sup> 2.75	1.0826	B <sup>2</sup> 4.0	1.5748	B <sup>2</sup> 2.50	0.8642	B <sup>2</sup> 4.5	1.7716			
	B <sup>3</sup> 2.5	0.9842	B <sup>3</sup> 2.50	0.9842	B <sup>3</sup> 3.0	1.1811	B <sup>3</sup> 3.0	1.1811	B <sup>3</sup> 3.0	1.1811	B <sup>3</sup> 4.0	1.5748			
Highest.....	3.5	1.3779	2.5	0.9342	3.0	1.1811	4.0	1.5748	3.0	1.1811	5.0	1.9685			
Minimum measurements.	B <sup>1</sup> 1.50	0.5905	B <sup>1</sup> 1.50	0.5905	B <sup>1</sup> 1.50	0.5905	B <sup>1</sup> 1.75	0.6889	B <sup>1</sup> 1.25	0.4921	B <sup>1</sup> 1.75	0.6889			
	B <sup>2</sup> 1.50	0.5905	B <sup>2</sup> 1.50	0.5905	B <sup>2</sup> 1.75	0.6889	B <sup>2</sup> 1.75	0.6889	B <sup>2</sup> 1.50	0.5905	B <sup>2</sup> 2.0	0.7874			
	B <sup>3</sup> 1.25	0.4921	B <sup>3</sup> 1.50	0.5905	B <sup>3</sup> 1.50	0.5905	B <sup>3</sup> 2.0	0.7874	B <sup>3</sup> 1.25	0.4921	B <sup>3</sup> 2.0	0.7874			
Lowest.....	1.25	0.4921	1.50	0.5905	1.50	0.5905	1.75	0.6889	1.25	0.4921	1.75	0.6889			
Average measurements.	B <sup>1</sup> 2.108	0.8299	B <sup>1</sup> 1.775	0.6988	B <sup>1</sup> 1.925	0.7578	B <sup>1</sup> 2.708	1.0661	B <sup>1</sup> 2.166	0.8527	B <sup>1</sup> 3.000	1.1811			
	B <sup>2</sup> 2.141	0.8429	B <sup>2</sup> 1.000	0.7480	B <sup>2</sup> 2.066	0.8133	B <sup>2</sup> 2.316	0.9118	B <sup>2</sup> 1.933	0.7610	B <sup>2</sup> 3.025	1.1909			
	B <sup>3</sup> 1.833	0.7216	B <sup>3</sup> 1.833	0.7216	B <sup>3</sup> 2.050	0.8970	B <sup>3</sup> 2.517	0.9909	B <sup>3</sup> 1.925	0.7578	B <sup>3</sup> 2.683	1.0562			
Average.....	2.027	0.7980	1.836	0.7228	2.013	0.7925	2.514	0.9807	2.008	0.7905	2.902	1.1425			
Measurements above average.....	31			40			20			34			46		
Measurements below average.....	59			50			61			56			44		



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of samples..	MERINO.																	
	54. HIP, BETWEEN FOLD.			54. BELLY.			55. SHOULDER, TOP OF FOLD.			55. SHOULDER, BETWEEN FOLD.			55. SIDE.			55. HIP, TOP OF FOLD.		
	1 inch.			1 inch.			1 1/16 inch.			1 1/16 inch.			1 1/16 inch.			1 1/2 inch.		
Length of fiber in crimp.....	14.			—			14.			20.			20.			16.		
Number of crimps per inch....	14.			—			14.			20.			20.			16.		
Number of section.....	B <sup>1</sup>	B <sup>2</sup>	B <sup>3</sup>	B <sup>1</sup>	B <sup>2</sup>	B <sup>3</sup>	B <sup>1</sup>	B <sup>2</sup>	B <sup>3</sup>	B <sup>1</sup>	B <sup>2</sup>	B <sup>3</sup>	B <sup>1</sup>	B <sup>2</sup>	B <sup>3</sup>	B <sup>1</sup>	B <sup>2</sup>	B <sup>3</sup>
Actual measurement in centimillimeters.	2.0	2.5	2.0	2.5	1.25	2.5	2.5	2.25	3.5	1.5	2.25	1.5	2.75	2.5	1.5	2.75	3.0	2.25
Averages.....	2.108	2.316	2.200	2.358	1.875	2.091	2.091	2.766	2.608	2.008	2.075	1.941	1.858	2.000	1.725	2.291	2.458	2.158
Recapitulation and reduction:	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Maximum measurements.	B <sup>1</sup>	3.0	1.1811	B <sup>1</sup>	3.5	1.3779	B <sup>1</sup>	3.75	1.4763	B <sup>1</sup>	2.75	1.0826	B <sup>1</sup>	2.75	1.0826	B <sup>1</sup>	2.75	1.0826
Highest.....	B <sup>2</sup>	3.25	1.2795	B <sup>2</sup>	3.25	1.2775	B <sup>2</sup>	4.0	1.5748	B <sup>2</sup>	2.75	1.0826	B <sup>2</sup>	2.5	0.9842	B <sup>2</sup>	4.0	1.5748
Minimum measurements.	B <sup>3</sup>	3.5	1.3779	B <sup>3</sup>	5.0	1.1811	B <sup>3</sup>	3.5	1.3779	B <sup>3</sup>	3.0	1.1811	B <sup>3</sup>	2.75	1.0826	B <sup>3</sup>	4.25	1.6732
Lowest.....	B <sup>1</sup>	1.5	0.5905	B <sup>1</sup>	1.75	0.6889	B <sup>1</sup>	2.0	0.7874	B <sup>1</sup>	1.25	0.4921	B <sup>1</sup>	1.25	0.4921	B <sup>1</sup>	1.75	0.6889
Average measurements.	B <sup>2</sup>	1.25	0.4921	B <sup>2</sup>	1.25	0.4921	B <sup>2</sup>	2.0	0.7874	B <sup>2</sup>	1.5	0.5905	B <sup>2</sup>	1.5	0.5905	B <sup>2</sup>	1.75	0.6889
Average.....	B <sup>3</sup>	1.5	0.5905	B <sup>3</sup>	1.5	0.5905	B <sup>3</sup>	1.0	0.3937	B <sup>3</sup>	1.5	0.5905	B <sup>3</sup>	1.5	0.5905	B <sup>3</sup>	1.5	0.5905
Measurements above average.....	B <sup>1</sup>	2.108	0.8299	B <sup>1</sup>	2.358	0.9283	B <sup>1</sup>	2.591	1.0200	B <sup>1</sup>	2.008	0.7905	B <sup>1</sup>	1.858	0.7314	B <sup>1</sup>	2.291	0.9019
Measurements below average.....	B <sup>2</sup>	2.316	0.9118	B <sup>2</sup>	1.875	0.7389	B <sup>2</sup>	2.766	1.0889	B <sup>2</sup>	2.075	0.8169	B <sup>2</sup>	2.0	0.7874	B <sup>2</sup>	2.458	0.9677
	B <sup>3</sup>	2.2	0.8691	B <sup>3</sup>	2.091	0.8232	B <sup>3</sup>	2.008	0.7905	B <sup>3</sup>	1.941	0.7641	B <sup>3</sup>	1.725	0.6791	B <sup>3</sup>	2.158	0.8496
	2.208		0.8692	2.108		0.8299	2.455		0.9667	2.008		0.7905	1.861		0.7326	2.291		0.9019
	44		46	36		54	47		43	22		68	39		51	31		59



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		MERINO.																	
Catalogue number of samples..		55. HIP, BETWEEN FOLD.			55. BELLY.			56. NECK, TOP OF FOLD.			56. SHOULDER, BETWEEN FOLD.			56. SIDE.			56. HIP, TOP OF FOLD.		
Length of fiber in crimp.....		1½ inches.			1⅝ inches.			1¾ inches.			1⅞ inches.			1 inch.			1 inch.		
Number of crimps per inch....		20.			20.			16.			20.			20.			16.		
Number of section .....		B¹	B²	B³	B¹	B²	B³	B¹	B²	B³	B¹	B²	B³	B¹	B²	B³	B¹	B²	B³
Actual measurement in centimillimeters.	1.25	2.0	1.75	2.0	2.25	1.75	2.5	3.25	2.25	2.25	2.0	1.75	2.25	2.25	2.75	4.25	3.0	3.0	
	1.25	2.25	1.75	2.0	2.25	1.75	2.75	2.6	2.0	2.75	2.25	1.25	3.0	2.0	2.0	2.5	2.25	2.75	
	2.25	2.5	2.25	1.75	2.0	1.75	2.0	2.0	2.25	2.0	2.5	2.0	1.25	2.0	2.0	1.75	2.5	4.0	
	2.0	2.0	1.75	2.0	2.25	2.0	2.5	2.5	2.0	2.5	2.25	1.5	2.25	2.5	1.75	2.0	2.5	1.75	
	2.25	1.75	2.0	2.5	2.25	1.5	2.25	2.0	2.5	2.0	3.0	1.75	2.0	2.0	1.25	2.75	3.75	1.75	
	2.0	1.75	2.0	3.0	2.5	1.5	2.75	3.0	3.0	1.5	2.5	2.25	3.0	2.5	3.25	2.25	2.0	2.0	
	1.25	1.75	1.75	2.0	2.0	1.75	3.0	2.6	3.0	2.25	2.0	1.0	2.75	2.0	2.0	2.5	2.0	1.5	
	1.75	2.0	1.75	1.75	2.0	2.25	3.5	2.5	2.0	2.0	2.25	1.5	2.5	1.5	1.25	2.25	2.5	2.5	
	1.75	2.25	1.5	2.5	2.0	1.75	2.0	2.0	3.0	2.5	2.25	2.0	2.0	2.5	1.5	1.5	2.5	1.75	
	2.0	2.0	1.75	2.5	2.0	1.5	2.75	2.0	2.5	1.75	3.0	2.0	2.0	2.0	2.5	2.0	2.0	1.75	
	2.25	1.75	2.0	2.0	2.0	1.75	3.25	1.5	2.0	3.0	1.75	1.75	2.25	2.25	2.5	2.5	3.0	1.5	
	2.0	2.0	1.75	2.25	1.75	1.75	3.0	2.5	2.5	3.0	2.5	1.75	2.0	2.5	2.25	1.75	2.0	1.5	
	1.75	2.0	2.0	2.0	3.0	1.5	3.5	3.0	2.25	2.0	2.5	2.25	2.25	2.5	1.5	3.5	2.5	2.0	
	1.75	2.0	2.0	2.25	2.0	1.5	2.25	1.5	2.0	2.0	2.25	2.0	3.0	2.0	2.25	2.0	3.25	1.75	
	2.0	2.5	1.75	2.0	2.0	2.25	1.5	2.75	2.75	3.0	2.0	1.25	1.5	2.5	2.0	1.5	3.0	2.5	
	2.25	1.75	1.75	2.25	1.75	1.75	2.25	3.5	2.5	1.5	2.0	1.75	1.75	1.75	2.75	2.25	3.75	2.5	
	1.75	1.75	1.5	2.5	2.0	1.75	2.75	2.25	2.25	2.0	2.75	2.0	2.0	2.0	2.0	2.0	2.6	2.0	
	2.0	1.75	1.5	2.0	1.75	1.5	2.5	2.25	2.25	1.75	3.25	2.0	2.0	2.0	2.25	1.75	2.0	3.75	
	2.25	2.0	1.5	2.25	2.0	1.75	2.75	3.0	1.5	2.0	2.5	1.5	3.0	2.0	2.5	2.5	2.75	1.5	
	1.5	2.0	2.0	2.25	2.0	1.75	2.0	1.25	2.5	2.0	2.0	1.5	2.5	2.0	2.0	2.5	2.5	3.25	
	2.25	1.75	1.5	2.25	2.0	1.5	3.5	2.75	2.0	1.5	1.5	1.25	2.5	1.5	1.5	2.25	2.0	2.25	
	2.0	2.0	1.5	2.25	2.5	1.75	3.5	2.0	2.0	1.75	2.25	1.75	2.5	2.0	2.25	2.5	2.25	2.0	
	2.0	1.5	2.25	1.75	2.25	2.25	2.5	2.0	2.0	1.75	2.25	1.75	1.75	2.5	2.0	1.75	2.25	2.75	
	3.0	2.0	2.0	3.0	2.25	1.75	3.0	3.25	3.25	2.5	1.75	1.5	2.0	1.25	3.0	3.0	2.0	2.0	
	2.25	2.0	1.75	2.0	2.5	1.75	3.25	3.25	2.0	2.25	2.0	1.5	3.25	2.25	2.5	2.25	2.5	2.0	
2.25	2.5	1.75	2.0	1.75	2.0	2.0	2.5	1.75	2.0	2.5	1.75	2.75	2.5	1.75	2.5	2.0	1.75		
2.0	2.0	2.25	2.0	2.5	1.75	2.0	2.25	2.25	1.75	2.75	2.0	2.25	1.75	2.0	2.0	3.25	1.5		
1.75	2.0	1.25	1.75	2.25	2.5	3.0	2.0	2.75	2.0	2.5	1.75	2.25	2.0	1.5	3.25	2.0	2.5		
1.75	2.25	2.0	2.0	1.75	2.0	2.0	3.0	3.25	2.25	1.75	1.75	2.75	2.5	1.75	3.0	2.75	2.0		
2.25	2.0	1.75	2.25	3.25	2.25	1.75	3.0	2.75	2.0	2.25	1.5	2.0	2.25	2.0	3.0	2.0	1.5		
Averages.....		1.950	1.975	1.800	2.166	2.166	1.783	2.650	2.466	2.366	2.133	2.225	1.683	2.341	2.166	1.950	2.633	2.441	2.016

		55. HIP, BETWEEN FOLD.			55. BELLY.			56. NECK, TOP OF FOLD.			56. SHOULDER, BETWEEN FOLD.			56. SIDE.			56. HIP, TOP OF FOLD.		
Recapitulation and reduction:		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Maximum measurements.	B¹	3.0	1.1811	3.0	1.1811	3.5	1.3779	3.0	1.1811	3.0	1.1811	3.25	1.2705	3.0	1.1811	4.25	1.6732		
	B²	2.75	1.0826	3.25	1.2795	3.5	1.3779	3.0	1.1811	3.0	1.1811	3.0	1.1811	3.0	1.1811	4.0	1.5748		
	B³	2.25	0.8858	2.25	0.8858	3.25	1.2795	3.25	1.2795	2.25	0.8858	2.75	1.0826	2.75	1.0826	3.75	1.4763		
Highest.....		3.0	1.1811	3.25	1.2795	3.5	1.3779	3.0	1.1811	3.0	1.1811	3.0	1.1811	3.0	1.1811	4.0	1.5748		
Minimum measurements.	B¹	1.25	0.4921	1.75	0.6889	1.75	0.6889	1.5	0.5905	1.5	0.5905	1.75	0.6889	1.75	0.6889	1.5	0.5905		
	B²	1.5	0.5905	1.75	0.6889	1.25	0.4921	1.25	0.4921	1.5	0.5905	1.25	0.4921	1.25	0.4921	1.75	0.6889		
	B³	1.25	0.4921	1.5	0.5905	1.5	0.5905	1.0	0.3937	1.0	0.3937	1.25	0.4921	1.25	0.4921	1.5	0.5905		
Lowest.....		1.25	0.4921	1.5	0.5905	1.25	0.4921	1.0	0.3937	1.0	0.3937	1.25	0.4921	1.25	0.4921	1.5	0.5905		
Average measurements.	B¹	1.950	0.7677	2.166	0.8527	2.650	1.0433	2.133	0.8397	2.133	0.8397	2.341	0.9216	2.166	0.8527	2.633	1.0366		
	B²	1.975	0.7775	2.166	0.8527	2.466	0.9708	2.225	0.8759	2.225	0.8759	2.166	0.8527	2.166	0.8527	2.441	0.9610		
	B³	1.8	0.7086	1.783	0.7019	2.366	0.9314	1.683	0.6625	1.683	0.6625	1.950	0.7677	1.950	0.7677	2.016	0.7936		
Average.....		1.908	0.7511	2.038	0.8023	2.494	0.9818	2.013	0.7925	2.013	0.7925	2.152	0.8472	2.152	0.8472	2.363	0.9303		
Measurements above average..		49		32		50		32		32		44		44		42			
Measurements below average..		41		58		40		58		58		46		46		48			



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		MERINO.																		
Catalogue number of samples..		56. HIP, BETWEEN FOLD.			56. BELLY.			57. SHOULDER, TOP OF FOLD.			57. SHOULDER, BETWEEN FOLD.			57. HIP.			57. BELLY.			
Length of fiber in crimp.....		¾ inch.			⅞ inch.			¾ inch.			1 1/16 inch.			¾ inch.			¾ inch.			
Number of crimps per inch....		20.			20.			—			20.			20.			20.			
Number of section.....		B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	
Actual measurement in centimillimeters.	2.25	2.5	2.0	2.25	2.25	1.75	2.75	1.75	2.0	1.5	2.25	2.25	1.5	2.25	2.0	2.0	2.5	2.5	2.5	
	2.25	2.5	2.25	2.25	2.25	1.5	2.25	2.25	2.0	1.5	2.0	1.5	2.0	1.75	2.0	2.0	2.0	2.0	2.0	
	2.0	4.0	0	2.5	5	2.5	2.25	2.0	1.75	2.5	2.25	2.0	2.0	2.25	2.0	2.25	2.25	2.25	2.25	
	2.5	2.0	1.5	1.75	2.25	1.6	3.25	2.5	2.75	1.75	1.75	1.75	1.75	2.5	2.25	2.25	2.25	1.75	2.0	
	2.0	2.0	2.0	2.25	2.25	1.25	2.5	2.0	2.25	2.5	2.0	2.5	2.0	2.5	2.0	2.25	2.0	2.0	2.0	2.75
	2.5	2.25	1.5	2.0	0	2.0	3.25	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.75	2.25	2.0	2.25	1.75	3.0
	2.25	2.5	0	2.5	2.25	2.25	2.5	2.5	1.75	2.25	1.8	2.0	2.25	2.0	2.5	2.0	2.5	2.0	2.0	2.0
	2.5	1.5	0	2.0	5	2.25	4.25	2.25	2.25	2.0	2.5	1.5	2.25	2.0	2.5	2.25	2.0	2.25	1.75	1.75
	2.75	4.0	0	2.25	0	1.5	1.75	2.5	2.5	2.0	2.0	2.0	2.0	2.0	2.0	1.75	2.0	2.0	2.0	1.25
	2.75	3.75	2.0	2.25	2.25	1.5	2.5	1.5	4.75	1.25	1.5	1.5	1.5	1.5	2.5	2.5	2.6	2.75	2.6	2.0
	2.25	2.25	1.5	1.75	2.25	1.5	2.75	2.75	1.5	1.25	2.5	2.5	2.0	1.75	1.6	1.75	1.6	2.0	2.0	2.0
	1.75	2.0	2.0	2.0	0	1.75	1.75	2.75	1.5	2.5	2.5	2.0	2.5	2.0	2.0	1.75	1.6	2.0	2.25	2.0
	2.5	2.5	2.0	2.0	0	2.25	2.0	2.5	2.5	1.75	2.5	2.5	2.75	1.75	2.5	2.5	2.5	2.5	2.5	1.75
	1.75	2.5	2.25	1.5	2.5	2.25	4.0	3.25	2.0	2.25	2.5	3.0	2.25	3.0	1.25	2.5	1.25	2.5	2.5	1.75
	3.0	2.25	2.25	2.5	5	1.75	1.75	0	2.5	2.25	5	1.5	2.75	2.5	1.5	2.5	2.5	2.25	2.25	1.5
	3.0	2.5	1.75	2.75	1.75	2.0	2.5	2.75	2.0	1.75	2.5	2.5	2.75	2.5	2.5	2.25	1.25	2.5	2.25	2.0
	1.75	2.25	2.75	2.0	2.25	2.0	2.0	2.0	2.0	2.0	5	2.25	2.75	2.25	2.75	2.25	2.0	2.75	2.5	2.0
	2.25	1.75	2.5	2.25	2.0	2.0	1.75	1.75	2.5	2.5	1.75	2.0	2.75	2.0	2.75	1.75	1.5	2.5	2.5	1.25
	2.0	2.0	2.0	1.75	1.5	2.75	2.25	2.25	1.75	2.25	2.75	2.0	1.75	2.25	1.5	2.25	2.5	2.25	2.25	2.0
	2.25	2.25	2.5	2.0	2.0	1.75	2.5	2.25	2.5	1.75	2.25	2.75	2.25	1.75	2.0	1.75	2.0	2.5	2.5	2.0
	2.0	2.0	2.0	2.5	2.0	1.75	2.0	3.0	1.75	2.75	1.75	1.25	1.75	1.6	1.75	1.6	1.75	2.5	2.5	1.75
	2.5	2.25	2.75	2.5	1.75	1.75	2.5	2.0	3.25	2.5	2.0	2.75	2.5	2.0	2.25	2.0	2.25	1.25	2.75	2.25
	2.0	2.5	2.5	2.5	2.0	1.5	2.25	1.5	1.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
	2.75	2.5	2.0	2.0	2.0	1.75	2.25	2.25	2.0	2.0	2.25	2.0	2.25	2.5	2.0	1.75	2.0	2.0	2.0	2.0
	2.5	2.5	2.5	2.5	1.75	1.5	2.25	2.0	4.0	1.75	1.75	2.0	1.75	2.0	2.0	2.0	2.0	2.0	2.6	1.5
2.5	3.0	1.75	2.75	2.0	2.0	2.25	2.0	1.5	2.75	1.75	1.75	1.75	1.6	2.0	2.0	2.0	2.0	2.0	2.0	
2.0	1.75	1.5	2.5	2.0	1.5	1.75	2.25	3.0	3.0	1.75	2.25	2.25	2.25	2.25	1.5	2.0	2.0	2.0	2.0	
2.0	2.0	1.0	2.0	2.0	1.75	2.25	2.5	3.0	3.0	2.25	2.25	2.25	2.25	2.25	2.0	2.0	2.0	2.0	2.0	
2.5	1.5	2.0	2.5	2.0	1.5	1.5	2.0	2.0	2.0	1.75	2.25	1.75	2.5	2.5	2.5	2.5	2.5	2.0	2.0	
2.5	2.5	1.25	2.0	2.5	1.5	1.75	2.5	4.5	1.75	2.5	2.5	2.5	1.5	1.75	1.75	2.0	2.25	2.25	2.0	
Average.....	2.316	2.450	2.000	2.200	2.133	1.816	2.408	2.416	2.301	2.175	2.183	2.001	2.275	2.183	1.966	2.216	2.258	2.000		

Recapitulation and reduction:		No. of section.			In centimillimeters.			In thousandths of inch.										
		B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .								
Maximum measurements.	B <sup>1</sup> .	3.0	1.1811	B <sup>1</sup> .	2.75	1.0826	B <sup>1</sup> .	4.25	1.6732	B <sup>1</sup> .	3.5	1.3779	B <sup>1</sup> .	3.0	1.1811	B <sup>1</sup> .	2.75	1.0826
	B <sup>2</sup> .	4.0	1.5748	B <sup>2</sup> .	2.5	0.9842	B <sup>2</sup> .	3.75	1.4763	B <sup>2</sup> .	2.75	1.0826	B <sup>2</sup> .	2.25	1.2793	B <sup>2</sup> .	2.0	1.1811
	B <sup>3</sup> .	2.75	1.0826	B <sup>3</sup> .	2.75	1.0826	B <sup>3</sup> .	4.75	1.8700	B <sup>3</sup> .	3.0	1.1811	B <sup>3</sup> .	2.25	1.2793	B <sup>3</sup> .	2.0	1.1811
Highest.....		4.0	1.5748		2.75	1.0826		4.75	1.8700		3.5	1.3779		2.25	1.2793		3.0	1.1811
Minimum measurements.	B <sup>1</sup> .	1.75	0.6889	B <sup>1</sup> .	1.5	0.5905	B <sup>1</sup> .	1.5	0.5905	B <sup>1</sup> .	1.25	0.4921	B <sup>1</sup> .	1.5	0.5905	B <sup>1</sup> .	1.25	0.4921
	B <sup>2</sup> .	1.5	0.5905	B <sup>2</sup> .	1.5	0.5905	B <sup>2</sup> .	1.5	0.5905	B <sup>2</sup> .	1.5	0.5905	B <sup>2</sup> .	1.5	0.5905	B <sup>2</sup> .	1.75	0.6889
	B <sup>3</sup> .	1.0	0.3937	B <sup>3</sup> .	1.5	0.5905	B <sup>3</sup> .	1.5	0.5905	B <sup>3</sup> .	1.5	0.5905	B <sup>3</sup> .	1.25	0.4921	B <sup>3</sup> .	1.25	0.4921
Lowest.....		1.0	0.3937		1.5	0.5905		1.5	0.5905		1.25	0.4921		1.25	0.4921		1.25	0.4921
Average measurements.	B <sup>1</sup> .	2.316	0.9118	B <sup>1</sup> .	2.200	0.8661	B <sup>1</sup> .	2.408	0.9490	B <sup>1</sup> .	2.175	0.8561	B <sup>1</sup> .	2.275	0.8950	B <sup>1</sup> .	2.216	0.8724
	B <sup>2</sup> .	2.450	0.9645	B <sup>2</sup> .	2.133	0.8397	B <sup>2</sup> .	2.416	0.9511	B <sup>2</sup> .	2.183	0.8594	B <sup>2</sup> .	2.183	0.8594	B <sup>2</sup> .	2.258	0.8889
	B <sup>3</sup> .	2.000	0.7874	B <sup>3</sup> .	1.616	0.7149	B <sup>3</sup> .	2.301	0.9413	B <sup>3</sup> .	2.091	0.8232	B <sup>3</sup> .	1.966	0.7740	B <sup>3</sup> .	2.000	0.7874
Average.....		2.255	0.8877		2.049	0.8066		2.405	0.9468		2.149	0.8400		2.141	0.8429		2.158	0.8406
Measurements above average.....		35			37			38			44			43			39	
Measurements below average.....		65			53			52			46			47			51	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of samples..		MERINO.																	
		58. SHOULDER, TOP FOLD.			58. SHOULDER, NOT ON FOLD.			58. HIP, CROSSING FOLD.			58. HIP, NOT ON FOLD.			58. BELLY.			68. SHOULDER.		
Length of fiber in crimp.....		1½ inches.			1¼ inches.			1 inch.			1½ inches.			1½ inches.			1½ inches.		
Number of crimps per inch....		16.			20.			16.			20.			20.			20.		
Number of section.....		B¹	B²	B³	B¹	B²	B³	B¹	B²	B³	B¹	B²	B³	B¹	B²	B³	B¹	B²	B³
Actual measurement in centimillimeters.	2.25	2.5	2.25	2.5	1.75	1.75	3.25	1.75	4.0	2.0	1.5	2.0	1.75	2.5	2.0	2.0	3.83	2.33	
	2.0	2.75	2.25	2.75	2.75	2.0	2.75	3.5	4.0	2.0	2.75	2.0	1.5	1.75	2.75	2.0	2.66	2.66	
	2.25	2.0	2.5	2.0	2.0	1.75	2.0	2.0	4.25	2.5	2.0	2.5	1.75	2.5	2.0	2.0	2.0	2.33	
	2.0	2.0	3.0	1.75	2.25	2.25	2.25	2.25	4.0	2.0	2.0	2.0	1.5	1.75	1.75	2.0	2.5	2.0	
	2.25	2.5	3.0	1.5	2.0	1.75	2.25	2.25	4.0	3.25	2.25	2.0	2.0	2.5	2.0	2.0	2.0	2.66	
	2.0	4.0	1.75	1.75	1.75	2.5	2.0	3.25	4.0	2.0	2.0	2.0	1.5	2.0	2.0	2.0	2.0	2.66	
	1.75	3.0	2.5	2.25	1.5	1.75	1.75	2.5	2.75	2.0	2.0	2.0	1.5	2.5	2.0	1.75	2.0	2.33	
	2.25	2.0	2.0	2.25	2.5	1.75	2.0	3.0	3.0	2.75	2.5	1.75	2.6	1.75	2.5	2.0	1.66	2.66	
	2.0	2.25	1.75	2.0	1.75	2.25	2.5	3.0	3.0	2.75	1.75	1.75	1.75	1.75	2.25	2.0	1.66	2.66	
	2.25	1.75	2.25	2.25	2.0	1.75	2.0	2.0	2.5	2.5	2.0	1.75	1.25	2.25	1.75	1.75	1.66	2.66	
	1.75	1.75	3.0	1.5	3.0	2.25	2.25	3.25	2.25	3.5	2.0	2.5	1.75	2.25	1.5	2.0	1.66	2.0	
	1.75	3.0	3.0	2.25	2.0	2.25	2.75	2.0	3.5	2.0	3.5	2.0	1.75	2.5	2.0	2.25	2.66	2.33	
	1.5	2.5	1.75	1.75	2.5	1.75	2.5	1.75	2.0	2.0	1.75	2.25	1.75	2.25	1.5	1.75	2.0	2.0	
	1.5	2.5	1.5	2.5	2.0	2.0	2.0	2.0	1.75	2.5	2.0	2.25	3.5	2.25	2.0	2.25	2.0	2.0	
	2.75	2.0	3.5	2.25	2.25	1.75	1.75	2.6	2.5	2.0	2.5	2.0	1.75	2.25	2.0	2.0	2.0	2.33	
	1.75	2.0	1.5	2.0	1.75	2.0	2.0	1.75	1.75	2.25	1.5	2.0	2.0	2.0	2.0	2.0	2.0	2.66	
	2.75	2.75	2.0	2.25	1.75	2.0	2.5	2.6	3.0	2.5	2.5	1.5	1.5	2.0	2.25	1.75	2.0	2.33	
	2.5	2.0	2.25	2.5	2.0	1.75	2.25	2.5	2.5	2.5	2.5	1.75	2.0	2.0	2.25	1.5	2.0	1.66	
	2.25	2.75	1.75	1.75	1.75	2.25	1.75	2.5	2.5	3.0	2.75	2.25	3.0	2.0	2.0	2.0	2.0	2.33	
	2.0	2.0	2.0	1.75	2.0	2.25	2.5	3.0	3.5	2.6	2.0	2.75	1.75	1.75	1.75	2.5	3.33	2.0	
2.0	2.5	2.0	1.75	2.0	1.5	1.75	3.0	3.75	2.25	1.5	2.0	2.0	2.0	2.0	2.0	2.0	2.66		
2.5	1.5	2.25	1.75	3.0	1.5	2.25	4.0	3.5	2.75	2.25	1.75	2.25	2.0	2.0	2.0	2.66	2.0		
2.0	2.0	2.25	1.75	2.5	1.5	2.0	3.0	2.0	1.5	2.0	2.25	1.5	1.5	1.75	2.0	2.33	2.0		
2.25	2.5	1.5	2.5	2.0	2.25	2.0	2.5	4.5	2.0	1.75	1.75	2.0	2.0	1.5	1.5	2.66	2.5		
2.0	2.75	1.75	2.25	1.5	2.25	2.5	2.5	3.25	2.25	1.75	2.5	2.5	2.5	2.25	2.0	2.33	2.66		
2.25	2.25	2.75	2.25	1.75	2.0	2.25	3.5	5.0	2.5	2.25	2.0	2.0	2.0	2.0	2.0	.....	.....		
2.0	2.0	2.0	1.75	1.75	2.0	4.0	2.6	3.75	2.25	2.25	2.0	2.0	2.0	1.75	1.75	.....	.....		
1.75	1.75	2.5	2.25	1.75	2.0	2.5	2.5	3.0	2.0	2.25	2.0	2.0	2.0	3.0	1.75	.....	.....		
2.5	2.0	2.0	2.0	1.5	2.6	2.25	3.0	3.5	2.0	2.5	2.0	2.0	2.0	2.5	2.5	.....	.....		
2.0	2.25	2.0	2.25	2.0	2.5	2.25	2.5	2.25	2.0	1.75	2.5	2.5	2.5	2.25	2.5	.....	.....		
Averages.....		2.091	2.341	2.216	2.066	2.050	1.975	2.408	2.691	2.808	2.208	2.110	1.966	2.058	2.175	1.966	2.220	2.346	2.252

Recapitulation and reduction:		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Maximum measurements	B¹	2.75	1.0826	B¹	2.75	1.0826	B¹	4.0	1.5748	B¹	2.75	1.0826	B¹	2.5	0.9842	B¹	3.33	1.2110	
	B²	4.0	1.5748	B²	3.0	1.1811	B²	4.25	1.6732	B²	3.5	1.3779	B²	3.0	1.1811	B²	3.83	1.5078	
	B³	3.5	1.3779	B³	2.5	0.9842	B³	5.0	1.9685	B³	2.75	1.0826	B³	2.5	0.9842	B³	2.66	1.0472	
Highest.....		4.0	1.5748		3.0	1.1811		5.0	1.9685		3.5	1.3779		3.0	1.1811		3.83	1.5078	
Minimum measurements	B¹	1.5	0.5905	B¹	1.5	0.5905	B¹	1.75	0.6889	B¹	1.5	0.5905	B¹	1.5	0.5905	B¹	1.66	0.6535	
	B²	1.5	0.5905	B²	1.5	0.5905	B²	1.75	0.6889	B²	1.5	0.5905	B²	1.5	0.5905	B²	1.66	0.6535	
	B³	1.5	0.5905	B³	1.5	0.5905	B³	1.75	0.6889	B³	1.25	0.4921	B³	1.5	0.5905	B³	1.66	0.6535	
Lowest.....		1.5	0.5905		1.5	0.5905		1.75	0.6889		1.25	0.4921		1.5	0.5905		1.66	0.6535	
Average measurements..	B¹	2.091	0.8232	B¹	2.066	0.8133	B¹	2.408	0.9519	B¹	2.208	0.8692	B¹	2.058	0.8102	B¹	2.220	0.8740	
	B²	2.341	0.9216	B²	2.050	0.8070	B²	2.691	1.0594	B²	2.116	0.8330	B²	2.175	0.8562	B²	2.346	0.9236	
	B³	2.216	0.8724	B³	1.975	0.7775	B³	2.808	1.1055	B³	1.966	0.7740	B³	1.966	0.7740	B³	2.252	0.8866	
Average.....		2.216	0.8724		2.090	0.7992		2.685	1.0873		2.096	0.8251		2.066	0.8133		2.272	0.8944	
Measurements above average..		45			34			37			38			30			38		
Measurements below average..		45			56			53			52			60			37		



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		MERINO.																	
Catalogue number of samples..		68. SIDE.			68. HIP.			68. BELLY.			69. SHOULDER.			69. SIDE.			69. HIP.		
Length of fiber in crimp.....		1½ inches.			1½ inches.			1 inch.			1½ inches.			1½ inches.			1½ inches.		
Number of crimps per inch....		20.			16.			20.			20.			20.			16.		
Number of section .....		B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .
Actual measurement in centimillimeters.	2 0	2.33	4.66	2.0	4.66	2.0	2.33	2.33	3.33	2.0	2.166	2.33	1.66	2.66	3.33	2.33	2.33	2.33	2.33
	2 106	2.33	2.166	2.66	2.66	2.0	2.0	2.33	2.33	2.33	2.0	2.166	2.66	2.5	2.33	2.5	2.33	2.5	2.33
	3 33	2.0	3.33	2.66	4.0	2.0	2.66	3.0	2.66	2.0	2.33	2.66	2.0	3.0	2.33	2.33	2.0	2.33	2.0
	2 5	2.0	2.66	2.166	2.5	2.66	2.33	2.0	3.0	1.66	2.5	3.0	2.33	2.33	2.66	2.66	3.0	2.66	3.0
	2 33	2.0	2.33	2.166	2.66	4.66	2.0	2.33	2.0	2.33	2.33	3.0	2.0	2.66	2.0	2.33	2.0	2.33	2.0
	2 66	2 83	2.166	2.0	3.0	2.66	2.66	3.0	3.166	2.0	2.66	2.0	2.66	2.0	2.66	2.33	2.0	3.33	2.33
	2 5	2.0	2.66	2.5	2.166	3.0	2.0	2.66	2.66	2.33	2.0	2.66	2.33	3.0	1.66	3.0	1.66	3.0	2.66
	3 0	2 33	2.33	3.66	2.33	3.33	2.0	2.0	2.66	1.66	2.0	2.33	2.66	3.33	2.0	2.0	2.33	2.0	3.66
	2 66	2 33	2.0	2.166	4.0	4.0	3.0	2.0	2.0	2.33	2.0	1.833	1.66	4.0	3.0	2.66	2.33	2.0	2.66
	2 5	4 66	2.66	3.66	2.0	3.0	2.66	3.0	2.0	2.66	2.66	2.0	2.33	2.66	1.66	2.66	2.33	2.0	2.66
	2 166	3 0	2.0	3.96	2.66	3.0	2.0	2.66	2.66	2.0	2.33	2.0	2.166	1.33	2.0	3.0	2.5	5.25	2.33
	2 33	2 33	2.66	2.0	2.33	3.33	2.33	3.0	2.66	2.33	2.66	1.66	1.33	2.33	3.66	5.66	2.33	2.33	2.33
	2 33	2 0	2.66	2.0	3.0	3.33	2.0	2.0	2.66	1.66	2.00	2.30	3.0	2.166	2.66	2.0	2.66	3.66	3.66
	2 0	2 0	2.66	2.5	4.33	2.0	2.0	2.0	2.166	2.66	1.66	2.0	2.33	2.33	2.66	2.66	1.66	2.0	2.66
	2 66	2 833	1.66	2.5	4.0	2.0	2.66	2.33	3.0	2.0	2.66	2.33	2.66	2.0	3.33	3.0	2.66	2.33	2.33
	2 0	2 66	2.33	2.833	2.0	2.0	2.0	2.33	2.0	2.166	3.0	2.33	2.33	3.33	2.0	1.66	2.33	2.0	2.66
	2 0	3 33	2.33	2.833	2.33	3.33	2.33	2.33	3.0	1.66	2.166	2.66	2.833	2.5	2.33	2.33	3.33	2.0	2.66
	2 0	2 5	2.66	2.66	2.66	2.33	2.33	2.33	3.0	2.0	2.5	2.0	2.0	3.0	1.66	2.33	2.33	3.66	3.66
	2 33	2 66	2.33	2.66	3.0	2.0	2.0	2.0	2.0	2.33	2.0	2.0	4.0	1.66	2.0	2.66	2.33	2.66	2.66
	2 33	2 0	2.33	4.0	3.33	2.66	2.0	2.166	2.33	2.0	3.0	2.0	2.0	2.66	2.66	2.66	3.0	5.66	5.66
1 833	2 0	2.0	3.0	3.0	1.66	3.33	3.33	2.33	2.0	2.33	1.33	1.833	1.833	2.33	2.166	2.33	2.66	2.66	
3 0	2 66	3.5	2.66	2.66	3.33	2.0	2.66	3.66	3.33	1.66	2.33	2.66	2.33	2.33	2.0	2.0	2.33	2.0	
2 66	2 5	2.66	3.166	3.33	3.0	2.5	2.0	2.33	2.0	2.833	2.66	2.33	2.66	3.33	2.33	2.66	1.833	1.833	
2 33	2 5	2.0	2.0	2.0	2.33	2.0	2.66	2.33	2.0	2.5	2.66	1.66	2.66	3.0	2.5	2.66	2.0	2.66	
2 0	3 0	2.33	3.0	2.33	3.66	1.66	2.33	2.33	3.0	2.0	2.0	2.66	2.33	2.5	2.0	2.0	2.66	2.66	
Averages .....	2 384	2 511	2 522	2 671	3 010	2 577	2 271	2 431	2 582	2 177	2 313	2 249	2 323	2 544	2 416	2 593	2 473	2 526	

Recapitulation and reduction:		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Maximum measurements.	B <sup>1</sup>	3.33	1.3110	1.5748	B <sup>1</sup>	3.33	1.3110	B <sup>1</sup>	3.33	1.3110	B <sup>1</sup>	4.0	1.5748	B <sup>1</sup>	5.66	2.2283
	B <sup>2</sup>	4.66	1.8346	1.8346	B <sup>2</sup>	3.33	1.3110	B <sup>2</sup>	3.0	1.1811	B <sup>2</sup>	4.0	1.5748	B <sup>2</sup>	3.66	1.4409
	B <sup>3</sup>	4.66	1.8346	1.8346	B <sup>3</sup>	3.66	1.4409	B <sup>3</sup>	3.0	1.1811	B <sup>3</sup>	3.66	1.4409	B <sup>3</sup>	3.66	1.4409
Highest .....		4.66	1.8346	1.8346		3.66	1.4509		3.33	1.3110		4.0	1.5748		5.66	2.2283
Minimum measurements.	B <sup>1</sup>	1.833	0.7216	0.7874	B <sup>1</sup>	1.66	0.6535	B <sup>1</sup>	1.66	0.6535	B <sup>1</sup>	1.33	0.5236	B <sup>1</sup>	1.66	0.6535
	B <sup>2</sup>	2.0	0.7874	0.7874	B <sup>2</sup>	2.0	0.7874	B <sup>2</sup>	1.66	0.6535	B <sup>2</sup>	1.33	0.5236	B <sup>2</sup>	1.66	0.6535
	B <sup>3</sup>	1.66	0.6535	0.6535	B <sup>3</sup>	2.0	0.7874	B <sup>3</sup>	1.33	0.5236	B <sup>3</sup>	1.66	0.6535	B <sup>3</sup>	1.833	0.7216
Lowest .....		1.66	0.6535	0.6535		1.66	0.6535		1.33	0.5236		1.33	0.5236		1.66	0.6535
Average measurements.	B <sup>1</sup>	2.384	0.9385	1.0515	B <sup>1</sup>	2.271	0.8940	B <sup>1</sup>	2.177	0.8570	B <sup>1</sup>	2.323	0.9145	B <sup>1</sup>	2.593	1.0208
	B <sup>2</sup>	2.511	0.9886	1.1850	B <sup>2</sup>	2.431	0.9570	B <sup>2</sup>	2.313	0.9106	B <sup>2</sup>	2.544	0.9015	B <sup>2</sup>	2.473	0.9736
	B <sup>3</sup>	2.522	0.9929	1.0145	B <sup>3</sup>	2.582	1.0165	B <sup>3</sup>	2.249	0.8854	B <sup>3</sup>	2.416	0.9511	B <sup>3</sup>	2.526	0.9944
Average .....		2.472	0.9732	1.0834		2.428	0.9559		2.246	0.8842		2.427	0.9555		2.530	0.9960
Measurements above average.		33				28			37			33			29	
Measurements below average.		42				43			38			42			46	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		MERINO.																		
Catalogue number of sample..		69. BELLY.			70. SHOULDER.			70. SIDE.			70. HIP.			70. BELLY.			71. SHOULDER.			
Length of fiber in crimp .....		1½ inches.			1½ inches.			1½ inches.			1½ inches.			1½ inches.			1½ inches.			
Number of crimps per inch .....		20.			20.			20.			20.			20.			20.			
Number of section .....		B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	
Actual measurement in centimillimotors.	2.0	2.33	2.66	3.0	3.0	2.66	1.5	2.33	3.0	2.0	3.0	2.0	2.5	1.75	3.0	2.5	2.0	2.25	2.25	
	2.33	2.33	2.0	2.33	2.33	2.0	2.0	2.0	1.66	2.25	3.0	1.75	2.5	1.75	2.25	2.25	2.25	2.25	2.25	
	2.33	2.33	2.66	2.166	2.66	2.0	2.0	2.0	2.66	1.66	2.25	2.25	2.0	2.0	2.25	2.5	2.0	2.25	2.0	
	2.33	2.33	2.66	2.0	2.66	2.0	1.66	1.66	1.66	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.5	2.75	3.0
	2.33	2.33	2.66	1.33	2.0	2.0	2.0	2.0	1.833	2.33	2.0	2.0	1.75	1.75	2.5	2.5	1.75	2.5	2.5	1.75
	2.33	2.66	2.33	2.166	2.66	2.33	1.66	3.0	3.0	2.0	2.0	1.75	2.0	2.5	2.5	2.0	2.0	2.25	2.0	2.0
	2.0	2.33	2.33	2.0	2.66	2.0	1.66	2.0	1.66	2.0	1.66	2.0	2.25	1.75	3.25	2.0	4.0	1.75	2.5	2.0
	2.0	2.66	2.66	1.66	1.66	2.5	2.0	1.66	2.0	1.66	2.0	1.75	1.75	2.0	2.25	2.0	2.0	2.0	3.5	2.5
	2.66	2.33	2.66	2.66	2.66	2.33	2.0	2.0	3.0	2.33	1.75	2.5	2.25	2.0	2.25	2.0	2.0	2.0	2.0	2.5
	2.33	2.0	2.33	3.33	2.166	2.0	3.0	2.0	2.0	2.0	2.25	3.5	2.0	2.0	2.5	3.0	3.0	2.5	2.0	2.5
	1.66	2.0	2.33	2.166	2.0	2.66	1.833	1.5	2.66	2.25	2.0	2.0	2.0	2.0	3.5	1.75	2.25	2.0	2.0	2.5
	2.33	2.33	2.33	3.0	2.0	1.66	1.66	1.5	2.66	2.0	2.25	2.25	2.25	2.0	2.25	2.0	3.0	2.75	2.5	2.5
	2.33	2.166	2.66	1.66	2.0	2.66	2.66	1.66	2.66	2.5	1.75	2.50	2.25	2.5	2.25	2.5	2.25	2.5	2.25	2.25
	2.66	2.66	2.33	2.0	1.66	2.0	1.833	3.0	3.0	2.5	2.0	2.25	2.25	4.0	2.25	2.25	2.25	2.75	2.0	2.0
	2.0	2.166	2.66	1.66	1.66	1.833	1.5	1.66	2.33	2.0	2.0	3.25	1.75	2.75	2.0	2.0	2.0	2.25	2.25	2.25
	2.33	2.0	2.33	2.0	1.66	3.0	3.0	2.0	2.33	2.25	2.0	2.0	2.0	2.5	2.5	2.5	2.5	2.5	2.5	2.25
	2.0	2.33	2.66	1.86	2.0	2.0	1.833	2.33	2.66	2.0	3.25	1.375	3.25	2.5	2.0	2.25	2.25	2.5	2.5	2.25
	2.66	2.0	2.66	1.86	2.33	1.66	1.833	2.66	2.0	1.5	2.5	2.125	3.25	2.25	1.5	2.0	2.0	2.25	2.25	2.25
	2.66	2.166	2.0	2.0	2.0	1.66	2.0	2.66	2.0	2.5	1.75	1.75	2.0	3.75	2.625	2.25	2.0	2.0	2.5	2.0
	2.33	2.0	2.33	1.5	2.0	2.0	1.66	2.33	2.0	2.25	2.0	1.75	1.5	3.25	4.0	1.75	2.75	2.5	2.5	2.5
2.66	2.66	2.66	1.5	2.33	2.66	2.0	1.66	1.5	2.75	2.0	2.0	2.0	2.75	1.875	2.0	3.5	2.5	2.5	2.5	
2.33	2.66	3.0	2.0	2.0	2.0	2.66	1.33	2.0	1.75	2.0	1.75	2.5	3.25	2.0	1.75	2.25	2.5	2.5	2.5	
2.66	2.0	2.66	1.66	2.0	2.0	1.66	3.33	1.5	2.5	2.0	2.0	3.0	2.5	3.375	2.5	3.375	2.5	2.25	2.25	
1.66	2.0	2.66	2.0	1.66	1.00	2.0	2.0	1.833	2.375	2.25	2.0	3.0	3.0	3.25	2.5	3.25	2.5	2.0	2.0	
2.0	2.66	2.66	1.66	2.5	2.33	1.66	2.0	2.0	2.0	3.5	1.5	1.5	2.75	2.5	2.5	2.5	2.5	2.0	2.25	
Averages .....	2.276	2.297	2.515	1.993	2.213	2.153	1.997	2.190	2.110	2.145	2.290	1.910	2.230	2.610	2.455	2.290	2.420	2.280		

		No. of section.			No. of section.			No. of section.			No. of section.			No. of section.		
		In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	
Recapitulation and reduction:	Maximum measurements.	B¹	2.66	1.0472	B¹	3.33	1.3110	B¹	3.0	1.1811	B¹	2.75	1.0826	B¹	3.25	1.2795
		B²	2.36	1.0472	B²	3.0	1.1811	B²	3.33	1.3110	B²	3.5	1.3779	B²	4.0	1.5748
		B³	3.0	1.1811	B³	3.0	1.1811	B³	3.0	1.1811	B³	3.25	1.2795	B³	4.0	1.6748
Highest .....		3.0	1.1811		3.33	1.3110		3.33	1.3110		3.5	1.3779		4.0	1.5748	
Minimum measurements.	Lowest .....	B¹	1.66	0.6535	B¹	1.33	0.5236	B¹	1.5	0.5905	B¹	1.5	0.5905	B¹	1.5	0.5905
		B²	2.0	0.7874	B²	1.66	0.6535	B²	1.33	0.6236	B²	1.75	0.6889	B²	1.75	0.6889
		B³	2.0	0.7874	B³	1.66	0.6535	B³	1.5	0.5905	B³	1.375	0.5413	B³	1.5	0.5905
Average measurements.		1.66	0.6535		1.33	0.5236		1.33	0.5236		1.375	0.5413		1.5	0.5905	
Average .....	Average .....	B¹	2.276	0.8960	B¹	1.093	0.7846	B¹	1.997	0.7862	B¹	2.145	0.8444	B¹	2.230	0.8779
		B²	2.297	0.9043	B²	2.213	0.8712	B²	2.190	0.8622	B²	2.290	0.9015	B²	2.610	1.0275
		B³	2.515	0.9901	B³	2.153	0.8476	B³	2.110	0.8307	B³	1.910	0.7519	B³	2.455	0.9667
Average .....		2.363	0.9303		2.119	0.8342		2.099	0.8263		2.115	0.8326		2.431	0.9570	
Measurements above average.		27		28		25		29		35		29		40		
Measurements below average.		48		47		50		46		40		46		40		



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		MERINO.																	
Catalogue number of samples..		71. SIDE.			71. HIP.			71. BELLY.			72. SHOULDER.			72. SIDE.			72. HIP.		
Length of fiber in crimp .....		1½ inches.			1½ inches.			1½ inches.			1½ inches.			1½ inches.			1 inch.		
Number of crimps per inch .....		20.			20.			16.			20.			20.			16.		
Number of section.....		B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.
Actual measurement in centimillimeters.	2.0	2.25	2.25	3.25	2.25	2.25	2.25	2.25	2.0	2.75	1.75	2.5	2.5	2.0	2.0	2.75	2.0	2.5	2.25
	2.25	2.0	2.5	2.0	2.0	2.0	2.5	3.0	2.25	1.75	2.5	2.5	1.75	2.0	2.0	2.5	2.0	2.5	3.25
	2.0	2.25	2.0	2.0	2.25	2.0	2.5	1.75	1.75	2.0	2.0	2.0	1.75	1.875	2.0	2.25	2.0	2.5	2.0
	1.75	1.75	2.0	2.0	2.0	3.0	2.5	2.75	2.5	2.25	2.0	1.75	2.5	2.5	2.25	1.75	5.0	2.0	2.5
	2.25	2.25	2.0	2.5	2.5	2.75	2.5	2.75	2.0	2.0	1.5	1.75	2.0	2.0	3.0	2.25	2.25	1.5	2.25
	2.0	2.0	2.0	2.25	3.0	2.0	2.25	2.75	2.5	2.0	2.0	2.0	2.0	1.75	2.5	2.5	2.75	2.25	2.5
	2.0	2.0	2.0	3.0	3.0	2.0	1.75	2.75	2.5	2.5	1.5	1.75	2.0	2.0	2.25	1.75	2.5	2.0	2.25
	2.0	2.0	2.5	1.50	2.0	2.0	2.0	2.5	3.0	2.0	2.0	2.125	2.0	2.0	2.25	2.5	2.0	2.5	2.25
	2.25	3.0	2.0	2.5	2.0	3.5	2.0	2.75	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0
	1.5	2.25	2.25	2.0	2.25	1.5	1.75	3.0	2.0	2.0	2.25	2.0	2.0	2.0	2.5	2.5	2.25	2.75	2.0
	2.0	2.0	2.25	2.25	2.5	2.0	2.25	2.5	2.5	2.0	2.0	2.5	2.5	2.0	2.5	2.0	2.25	2.25	2.0
	2.0	2.5	2.0	2.25	2.5	2.25	2.25	2.0	2.75	2.0	2.125	2.0	2.0	2.0	2.25	2.0	2.25	2.0	2.0
	1.75	2.5	2.5	2.25	2.25	2.25	2.5	2.25	2.75	2.0	2.0	2.0	2.25	2.0	1.5	2.5	2.5	2.25	3.0
	2.0	2.5	2.5	2.5	2.5	2.0	2.5	1.75	2.5	2.275	2.5	1.75	1.75	2.5	2.0	2.0	2.0	2.0	2.5
	1.5	2.5	1.75	2.0	2.25	2.25	2.25	2.25	2.0	2.0	2.5	1.75	2.5	2.0	2.0	2.0	2.0	2.25	1.75
	1.5	2.5	2.5	2.5	2.5	3.0	1.75	2.5	2.0	2.5	2.0	1.50	1.75	2.0	2.0	2.0	2.0	2.25	3.0
	2.0	2.25	2.0	2.25	2.5	2.0	1.75	2.0	2.2	2.0	2.5	2.0	2.0	2.0	2.0	2.25	2.0	2.0	2.5
	2.0	1.75	2.25	1.75	2.0	2.0	1.75	3.0	2.25	2.25	2.5	2.25	2.25	2.0	2.25	1.5	2.25	2.50	2.5
	2.25	2.0	1.75	1.75	2.25	2.25	3.0	2.5	1.75	2.25	1.75	2.0	2.0	2.0	2.5	1.5	2.0	2.50	2.75
	2.0	2.5	3.50	3.0	2.0	1.5	2.0	2.0	2.5	1.625	2.25	2.25	1.5	2.0	2.0	2.0	2.5	2.0	2.25
2.0	2.375	1.75	2.0	2.5	2.5	2.5	2.0	2.0	2.75	2.0	2.5	1.75	2.0	2.0	2.0	2.5	2.0	2.25	
1.75	1.75	2.0	3.0	2.5	2.0	2.5	2.75	2.25	2.0	2.0	2.25	2.0	2.0	2.0	2.0	1.75	1.25	1.5	
1.50	2.5	2.25	2.25	2.5	2.5	1.75	2.0	2.5	2.5	2.0	1.75	2.0	2.0	2.0	1.75	2.25	2.0	2.5	
1.75	2.0	2.0	1.5	3.0	2.75	2.0	2.5	3.0	2.25	2.25	2.0	1.5	2.0	1.75	2.75	1.5	2.0	2.0	
2.0	2.75	3.0	2.0	2.0	2.0	2.0	3.5	2.75	2.0	2.0	2.0	1.75	1.5	2.0	1.5	2.5	2.0	2.0	
Averages .....	1.920	2.245	2.220	2.250	2.350	2.250	2.330	2.460	2.360	2.105	2.175	2.020	2.005	2.130	2.070	2.410	2.080	2.330	

		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.		
Recapitulation and reduction:																		
Maximum measurements.	B¹	2.25	0.8858	D¹	3.25	1.2795	D¹	3.0	1.1811	B³	2.75	1.0826	B¹	2.5	0.9842	B¹	5.0	1.9685
	B²	3.0	1.1811	B²	3.0	1.811	B²	3.5	1.3779	B²	2.5	0.9842	D²	2.5	0.9842	B²	2.5	0.9842
	B³	3.0	1.1811	B³	3.5	1.3779	B³	3.0	1.1811	B³	2.5	0.9842	B³	2.75	1.0826	B³	3.0	1.1811
Highest.....		3.0	1.1811		3.5	1.3779		3.5	1.3779		2.75	1.0826		2.75	1.0826		5.0	1.9685
Minimum measurements.	B¹	1.5	0.5905	B¹	1.5	0.5905	B¹	1.75	0.6889	B¹	1.625	0.6307	B¹	1.5	0.5905	B¹	1.5	0.5905
	B²	1.75	0.6889	B²	2.0	0.7874	B²	1.75	0.6889	B²	1.5	0.5905	B²	1.5	0.5905	B²	1.25	0.4921
	B³	1.75	0.6889	B³	1.5	0.5905	B³	1.75	0.6889	B³	1.75	0.6889	B³	1.5	0.5905	B³	1.5	0.5905
Lowest.....		1.5	0.5905		1.5	0.5905		1.75	0.6889		1.5	0.5905		1.5	0.5905		1.25	0.4921
Average measurements.	B¹	1.920	0.7559	B¹	2.250	0.8858	D¹	2.330	0.9173	B¹	2.105	0.8287	B¹	2.005	0.7893	D¹	2.410	0.9488
	B²	2.245	0.8838	B²	2.350	0.9251	B²	2.460	0.9685	B²	2.175	0.8562	B²	2.130	0.8385	B²	2.080	0.8188
	B³	2.220	0.8740	B³	2.250	0.8858	B³	2.360	0.9291	B³	2.020	0.7952	B³	2.070	0.8149	B³	2.330	0.9173
Average.....		2.128	0.8377		2.283	0.8988		2.383	0.9381		2.100	0.8267		2.068	0.8141		2.270	0.8936
Measurements above average.....		31			26			41			31			25			29	
Measurements below average.....		44			49			34			44			50			46	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		MERINO.																	
Catalogue number of samples..		72. BELLY.			73. SHOULDER.			73. SIDE.			73. HIP.			73. BELLY.			74. SHOULDER.		
Length of fiber in crimp .....		1½ inches.			1¾ inches.			1¾ inches.			1¼ inches.			1½ inches.			1¾ inches.		
Number of crimps per inch....		20.			20.			20.			16.			20.			10.		
Number of section.....		B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .
Actual measurement in centimillimeters.		2.25	3.25	2.75	1.75	2.25	1.75	2.25	3.0	1.75	3.25	1.75	2.25	1.75	3.0	3.0	4.	2.25	2.0
Average .....		2.330	2.630	2.450	2.070	2.130	2.150	2.110	2.240	2.210	2.440	1.760	2.360	2.060	2.470	2.490	2.520	2.580	2.380
Recapitulation and reductions:		No. of section.		In centimillimeters.		In thousandths of inch.		No. of section.		In centimillimeters.		In thousandths of inch.		No. of section.		In centimillimeters.		In thousandths of inch.	
Maximum measurements.		B <sup>1</sup>	3.00	1.1811	B <sup>1</sup>	3.0	1.1811	B <sup>1</sup>	2.75	1.0826	B <sup>1</sup>	4.25	1.6732	B <sup>1</sup>	3.25	1.2795	B <sup>1</sup>	4.00	1.5748
Highest .....		B <sup>2</sup>	3.25	1.2795	B <sup>2</sup>	3.5	1.3779	B <sup>2</sup>	3.00	1.1811	B <sup>2</sup>	2.50	0.9842	B <sup>2</sup>	4.25	1.6732	B <sup>2</sup>	4.00	1.5748
Minimum measurements.		B <sup>3</sup>	3.00	1.1811	B <sup>3</sup>	3.0	1.1811	B <sup>3</sup>	2.75	1.0826	B <sup>3</sup>	3.50	1.3779	B <sup>3</sup>	3.25	1.2795	B <sup>3</sup>	4.00	1.5748
Lowest .....		B <sup>1</sup>	1.50	0.5905	B <sup>1</sup>	1.50	0.5905	B <sup>1</sup>	1.50	0.5905	B <sup>1</sup>	1.75	0.6889	B <sup>1</sup>	1.25	0.4921	B <sup>1</sup>	1.50	0.5905
Average measurements.		B <sup>2</sup>	2.00	0.7874	B <sup>2</sup>	1.50	0.5905	B <sup>2</sup>	1.75	0.6889	B <sup>2</sup>	1.50	0.5905	B <sup>2</sup>	2.00	0.7874	B <sup>2</sup>	1.875	0.7381
Average .....		B <sup>3</sup>	2.00	0.7874	B <sup>3</sup>	1.50	0.5905	B <sup>3</sup>	1.50	0.5905	B <sup>3</sup>	1.25	0.4921	B <sup>3</sup>	1.75	0.6889	B <sup>3</sup>	1.50	0.5905
Measurements above average.		B <sup>1</sup>	2.330	0.9173	B <sup>1</sup>	2.070	0.8149	B <sup>1</sup>	2.110	0.8307	B <sup>1</sup>	2.440	0.9603	B <sup>1</sup>	2.060	0.8110	B <sup>1</sup>	2.520	0.992
Measurements below average.		B <sup>2</sup>	2.030	1.0364	B <sup>2</sup>	2.130	0.8385	B <sup>2</sup>	2.240	0.8818	B <sup>2</sup>	1.760	0.6929	B <sup>2</sup>	2.470	0.9724	B <sup>2</sup>	2.580	1.0157
		B <sup>3</sup>	2.450	0.9645	B <sup>3</sup>	2.150	0.8464	B <sup>3</sup>	2.210	0.8700	B <sup>3</sup>	2.360	0.9291	B <sup>3</sup>	2.490	0.9803	B <sup>3</sup>	2.380	0.9370
Average .....		2.470		0.9724	2.116		0.8330	2.186		0.8606	2.186		0.8606	2.340		0.9212	2.487		0.9791
Measurements above average.		49			31			40			35			35			44		
Measurements below average.		26			44			35			40			40			31		



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of samples..	MERINO.																	
	74. SIDE.			74. HIP.			74. BELLY.			75. SHOULDER.			75. SIDE.			75. HIP.		
	1½ inches.			1½ inches.			1½ inches.			1½ inches.			1½ inches.			1½ inches.		
Length of fiber in crimp.....	16.			14.			20.			16.			20.			16.		
Number of crimps per inch....	16.			14.			20.			16.			20.			16.		
Number of section.....	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.
Actual measurement in centimillimeters.	1.75	2.5	2.75	4.5	2.5	2.5	2.25	4.0	2.0	2.0	2.5	2.25	2.0	2.75	2.5	2.75	2.75	2.0
	2.5	2.25	3.0	2.0	2.25	2.5	1.75	3.25	2.5	2.375	2.75	2.25	2.5	2.5	2.5	2.5	2.5	2.5
	2.5	2.0	2.0	2.25	2.25	2.5	2.0	2.75	2.25	2.5	2.0	2.25	2.0	2.25	2.0	3.0	2.0	2.5
	1.5	2.0	2.5	2.0	2.25	2.5	2.0	2.25	2.75	2.0	3.0	2.5	2.25	2.5	2.0	2.75	3.0	2.0
	2.25	2.0	2.0	2.25	3.0	2.0	1.5	2.0	2.75	3.0	2.25	2.75	1.75	2.0	1.5	2.25	2.25	2.0
	3.0	3.0	2.25	3.25	2.25	1.5	2.5	1.75	2.5	2.25	2.5	2.75	2.0	2.25	2.5	2.25	2.25	2.0
	2.0	2.5	2.0	1.75	2.25	5.0	1.75	2.25	3.25	2.25	2.5	2.0	2.75	2.5	2.25	2.5	2.025	1.75
	2.5	2.75	2.0	3.25	2.5	2.0	3.0	3.0	2.25	2.25	2.75	2.25	1.75	2.5	2.0	1.5	2.5	2.0
	3.5	2.25	2.25	1.5	2.25	2.25	2.0	2.0	2.25	2.25	1.5	3.0	3.25	2.25	2.5	3.0	3.0	2.0
	2.0	2.5	3.25	2.0	3.0	2.0	2.0	2.5	2.5	2.0	2.25	2.0	1.75	2.0	3.25	2.25	2.75	2.25
	2.75	2.25	2.0	2.5	2.0	2.25	2.25	2.25	2.5	2.5	2.75	2.75	2.5	2.875	3.0	3.0	2.5	2.0
	2.0	3.5	3.0	3.5	2.25	1.75	2.0	2.5	2.75	2.0	2.0	2.5	2.5	2.25	2.5	2.25	3.5	2.0
	2.0	2.25	2.0	2.25	2.5	2.0	3.5	2.0	2.25	3.0	2.0	2.25	2.0	1.75	2.5	2.25	2.5	1.75
	2.5	2.0	2.5	2.5	3.5	1.75	2.25	2.0	2.25	2.0	2.25	2.25	2.75	2.25	2.25	2.0	2.75	1.75
	2.0	3.5	2.75	2.5	2.25	2.25	2.0	2.25	2.25	2.0	2.25	2.0	1.75	2.0	1.75	2.25	2.25	2.25
	3.0	3.25	2.25	2.5	2.25	2.75	2.25	2.5	2.5	2.5	2.5	2.25	3.0	2.125	2.25	2.25	2.25	2.0
	2.0	2.5	2.5	1.75	2.0	2.0	3.75	2.0	2.25	2.0	2.25	2.5	1.5	2.25	2.0	3.0	2.75	2.25
	2.25	2.75	2.25	2.0	2.25	2.25	2.25	2.75	2.0	2.75	2.25	2.0	1.75	2.5	2.25	1.5	2.5	2.0
	2.0	2.75	2.5	2.25	3.0	1.5	2.25	3.25	2.0	2.25	2.0	2.0	2.25	2.25	2.0	1.5	2.5	2.0
	2.0	2.0	2.0	2.0	6.0	2.5	2.25	2.0	1.75	2.0	2.5	2.5	1.75	2.5	2.5	1.75	2.5	2.0
2.5	1.5	2.25	2.5	3.75	2.0	2.0	2.0	2.25	2.25	2.0	2.5	2.5	2.5	2.5	2.5	2.5	2.75	
2.5	2.0	3.0	2.0	3.75	3.0	2.25	3.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.75	2.75	2.25	
2.25	2.0	2.5	2.0	2.25	2.25	2.5	2.5	3.5	3.5	2.0	2.0	2.0	2.25	2.25	2.5	2.75	2.0	
2.5	2.5	1.75	2.5	2.75	1.75	2.25	2.0	2.75	2.25	2.25	2.25	2.25	2.25	2.25	3.0	2.75	2.5	
2.0	2.5	2.25	2.25	2.25	2.0	3.0	2.25	2.25	2.5	2.25	2.25	2.25	2.25	2.25	3.0	2.25	3.25	
Averages.....	2.350	2.480	2.380	2.390	2.720	2.300	2.300	2.460	2.410	2.345	2.390	2.360	2.200	2.320	2.270	2.480	2.705	2.180

Recapitulation and reductions:	74. SIDE.			74. HIP.			74. BELLY.			75. SHOULDER.			75. SIDE.			75. HIP.		
	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Maximum measurements.	B¹	3.50	1.8779	B¹	4.50	1.7716	B¹	3.75	1.4763	B¹	3.50	1.3779	B¹	3.75	1.4763	B¹	3.75	1.4763
	B²	3.50	1.8779	B²	6.00	2.3623	B²	4.00	1.5748	B²	3.00	1.1811	B²	3.75	1.4763	B²	3.50	1.3779
	B³	3.25	1.2795	B³	5.00	1.9685	B³	3.25	1.2795	B³	3.00	1.1811	B³	3.25	1.2795	B³	3.25	1.2795
Highest.....		3.50	1.8779		0.00	2.3623		4.00	1.5748		3.50	1.3779		3.75	1.4763		3.75	1.4763
Minimum measurements.	B¹	1.50	0.5905	B¹	1.50	0.5905	B¹	1.50	0.5905	B¹	2.00	0.7874	B¹	1.50	0.5905	B¹	1.50	0.5905
	B²	1.50	0.5905	B²	2.00	0.7874	B²	1.75	0.6889	B²	1.50	0.5905	B²	1.75	0.6889	B²	2.25	0.8858
	B³	1.75	0.6889	B³	1.500	0.5905	B³	1.75	0.6889	B³	1.75	0.6889	B³	1.50	0.5905	B³	1.75	0.6889
Lowest.....		1.50	0.5905		1.50	0.5905		1.50	0.5905		1.50	0.5905		1.50	0.5905		1.50	0.5905
Average measurements.	B¹	2.350	0.9251	B¹	2.390	0.9409	B¹	2.300	0.9055	B¹	2.345	0.9232	B¹	2.200	0.8661	B¹	2.480	0.9763
	B²	2.480	0.9763	B²	2.720	1.0768	B²	2.460	0.9685	B²	2.390	0.9409	B²	2.320	0.9133	B²	2.705	1.0649
	B³	2.380	0.9370	B³	2.300	0.9053	B³	2.410	0.9488	B³	2.360	0.9291	B³	2.270	0.8936	B³	2.180	0.8582
Average.....		2.403	0.9460		2.470	0.9724		2.390	0.9409		2.365	0.9311		2.263	0.8909		2.455	0.9667
Measurements above average.....		35			30			29			37			29			39	
Measurements below average.....		40			45			46			38			46			36	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of samples..		MERINO.																
		75. BELLY.			76. SHOULDER.		76. SIDE.			76. HIP.			76. BELLY.			77. SHOULDER.		
		1½ inches.			1½ inches.		1½ inches.			1½ inches.			1½ inches.			1½ inches.		
		20.			16.		20.			16.			20.			20.		
Number of section.....		B¹.	B².	B³.	B¹.	B².	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.
Actual measurement in centimillimeters.		2.25	2.0	4.0	2.0	2.75	2.25	1.75	2.0	2.0	2.5	1.75	3.0	2.0	2.25	1.5	2.25	2.25
		1.75	2.25	2.5	2.0	2.0	2.0	1.75	2.0	2.375	2.0	2.25	1.875	2.5	2.0	1.5	2.0	2.5
		2.5	2.0	2.75	1.75	2.875	1.875	2.5	1.5	2.0	2.5	2.75	2.5	2.25	2.0	2.0	2.0	2.3
		2.75	2.5	2.5	2.0	2.0	2.25	2.0	1.625	2.0	2.25	1.75	2.5	2.5	2.25	2.0	2.0	2.0
		1.75	2.0	2.5	2.0	2.125	1.5	1.75	2.0	3.25	2.0	2.25	2.0	2.5	2.0	2.0	1.75	2.0
		2.0	3.0	2.5	1.75	2.5	2.25	1.75	2.25	1.75	2.0	2.0	3.0	2.0	2.0	2.0	1.75	1.5
		2.5	2.5	2.0	3.25	2.75	2.0	1.5	1.75	1.75	2.0	2.0	2.5	2.5	2.75	2.0	1.625	2.125
		2.5	3.0	2.5	2.25	2.25	1.5	1.75	2.0	2.0	2.5	1.5	2.5	2.75	3.0	1.5	2.5	2.5
		2.25	2.5	2.25	2.0	3.125	1.75	2.25	2.0	2.25	2.0	2.0	2.5	4.0	2.0	2.0	2.0	2.0
		3.0	2.25	2.0	1.5	2.25	1.75	2.0	1.75	2.0	2.0	1.75	3.0	2.5	2.5	2.25	2.0	2.0
		2.5	2.25	3.75	2.75	2.25	2.5	2.5	2.0	2.5	1.75	3.0	2.5	2.5	3.0	1.5	1.625	2.0
		3.0	2.5	2.5	2.25	2.75	2.25	2.5	2.0	1.75	3.0	1.75	2.5	3.0	2.5	2.0	2.0	2.0
		2.75	3.5	2.0	2.25	2.5	2.25	2.5	2.75	2.5	2.5	2.75	2.5	2.25	2.0	1.75	1.5	2.5
		1.75	3.0	2.75	1.75	1.875	2.0	2.0	2.75	3.0	4.0	1.5	2.25	2.25	2.0	1.75	1.75	1.75
		3.75	3.25	3.0	2.25	2.0	2.0	2.75	2.0	2.0	2.0	2.75	2.25	3.5	2.5	1.5	1.5	1.5
		1.25	3.0	2.25	1.75	3.875	2.0	2.25	1.5	2.0	2.75	1.75	2.0	3.0	2.5	2.0	2.25	1.5
		3.0	2.5	1.5	2.0	2.125	2.0	2.0	1.75	2.25	1.5	2.25	2.5	2.75	2.0	1.5	2.0	2.0
		2.75	2.5	2.25	2.25	2.0	2.5	2.0	1.75	2.5	3.0	3.0	2.5	2.5	2.5	1.75	1.75	2.0
		2.25	2.5	2.0	2.0	1.875	2.5	2.5	1.75	3.0	2.0	2.0	2.5	2.5	2.25	2.0	2.0	1.5
		3.0	2.0	2.0	2.0	2.25	1.75	2.0	2.125	2.0	2.0	2.0	3.0	2.0	2.0	2.0	2.0	2.0
	1.5	2.0	2.0	2.5	2.75	1.75	1.75	2.75	2.0	2.0	2.0	2.5	2.25	2.0	1.75	2.0	2.25	
	1.75	2.5	2.0	1.75	2.75	2.0	1.5	2.5	3.0	2.5	2.5	2.5	3.25	2.25	1.75	2.5	2.0	
	2.75	2.25	2.0	1.5	2.0	1.75	2.0	2.5	2.125	2.5	2.5	3.0	2.25	2.0	1.75	2.25	1.5	
	1.5	2.75	2.25	2.25	2.5	1.75	2.5	2.0	2.125	1.875	1.75	2.0	2.5	2.0	2.0	2.0	2.25	
	2.0	2.25	2.5	2.5	1.875	2.0	2.5	2.25	2.25	2.0	1.5	2.75	2.25	3.0	2.0	2.0	1.75	
Averages.....		2.351	2.410	2.410	2.090	2.400	2.06	2.100	2.010	2.255	2.285	2.110	2.485	2.580	2.290	1.830	1.980	1.975

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.						
Maximum measurements.	B¹	3.75	1.4763	B¹	3.250	1.2795	B¹	2.75	1.0820	B¹	3.25	1.2795	B¹	3.00	1.1811	B¹	2.25	0.8858
	B²	3.25	1.2795	B²	3.875	1.5255	B²	2.75	1.0826	B²	4.00	1.5748	B²	4.00	1.5748	B²	2.25	0.8858
	B³	4.00	1.5748	B³	3.875	1.5255	B³	2.75	1.0826	B³	3.00	1.1811	B³	3.00	1.1811	B³	2.50	0.9842
Highest.....		4.00	1.5748		3.875	1.5255		2.75	1.0826		4.00	1.5748		4.00	1.5748		2.50	0.9842
Minimum measurements.	B¹	1.25	0.4921	B¹	1.50	0.5905	B¹	1.50	0.5905	B¹	1.75	0.6689	B¹	1.875	0.7381	B¹	1.50	0.5905
	B²	2.00	0.7874	B²	1.875	0.7381	B²	1.50	0.5905	B²	1.50	0.5905	B²	2.00	0.7874	B²	1.50	0.5905
	B³	1.50	0.5905	B³	1.50	0.5905	B³	1.50	0.5905	B³	1.50	0.5905	B³	2.00	0.7874	B³	1.50	0.5905
Lowest.....		1.25	0.4921		1.50	0.5905		1.50	0.5905		1.50	0.5905		1.875	0.7381		1.50	0.5905
Average measurements..	B¹	2.351	0.9255	B¹	2.090	0.8228	B¹	2.060	0.8110	B¹	2.255	0.8877	B¹	2.485	0.9789	B¹	1.830	0.7204
	B²	2.510	0.9881	B²	2.400	0.9448	B²	2.100	0.8267	B²	2.285	0.8996	B²	2.580	1.0157	B²	1.980	0.7795
	B³	2.410	0.9488	B³	2.400	0.9448	B³	2.040	0.8051	B³	2.110	0.8307	B³	2.290	0.9015	B³	1.975	0.7775
Average.....		2.423	0.9539		2.245	0.8838		2.066	0.8133		2.16	0.8724		2.451	0.9649		1.928	0.7590
Measurements above average.....		40			25			26			32			44			48	
Measurements below average.....		35			25			49			43			51			27	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		MERINO.																	
Catalogue number of samples..		77. SIDE.			77. HIP.			77. BELLY.			78. SHOULDER.			78. SIDE.			78. HIP.		
Length of fiber in crimp.....		1 1/4 inches.			1 inch.			1 1/4 inch.			1 1/4 inches.			1 1/4 inches.			1 1/4 inches.		
Number of crimps per inch....		20.			20.			20.			20.			20.			16.		
Number of section.....		B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .
Actual measurement in centimillimeters.	1.5	2.25	2.0	1.5	2.25	3.0	1.75	2.25	1.5	1.75	2.0	2.25	2.25	1.75	2.5	2.25	1.75	1.75	2.75
	2.25	2.0	2.0	2.0	4.25	2.5	1.75	1.75	1.75	2.25	3.0	2.0	2.5	2.25	2.0	2.5	2.0	1.75	2.25
	1.5	2.0	2.0	1.25	1.5	4.25	3.5	3.0	2.0	1.75	2.25	2.0	2.0	2.25	2.0	2.25	1.75	2.5	2.25
	1.75	2.0	1.5	2.5	2.6	2.75	1.5	2.0	2.5	1.75	2.25	2.6	2.25	2.25	2.0	2.0	2.0	3.0	3.0
	2.0	2.5	1.5	1.75	2.5	1.75	1.75	2.25	3.0	2.25	2.25	2.25	2.25	2.125	2.5	2.75	2.5	2.25	2.5
	2.0	2.0	2.25	2.25	2.0	2.0	1.75	2.0	1.25	2.25	2.5	1.5	2.0	2.6	3.0	2.0	2.0	2.25	1.75
	1.75	2.0	1.75	2.75	3.0	3.25	2.0	2.25	2.25	2.25	2.25	2.25	2.25	2.25	2.5	2.5	2.75	2.5	2.0
	2.0	1.5	2.0	2.0	2.0	2.75	1.75	2.0	2.25	2.25	2.5	2.5	2.0	2.0	2.5	3.0	2.0	3.25	2.75
	1.75	1.5	1.5	1.75	1.5	3.25	1.75	1.75	1.75	2.25	2.0	2.5	2.5	2.5	2.0	2.5	3.0	2.25	1.75
	1.5	2.0	2.0	1.75	3.5	2.0	1.75	1.75	2.0	2.5	2.5	2.5	2.5	2.5	2.0	2.5	2.0	2.5	2.0
	1.5	2.25	1.5	1.75	2.25	2.25	2.5	2.25	2.0	2.25	2.0	2.25	2.0	2.0	1.75	1.75	2.0	2.0	2.25
	2.25	2.25	2.5	2.25	2.0	2.25	1.5	1.75	2.0	2.0	2.25	2.0	2.25	2.0	2.0	2.0	2.0	2.5	2.6
	2.0	2.25	2.25	2.5	2.75	1.75	2.0	1.75	1.75	1.75	2.5	2.5	2.25	2.0	2.0	1.75	2.0	2.0	2.6
	1.375	1.75	2.25	2.6	2.0	2.0	3.25	1.75	1.75	1.75	2.25	2.5	1.625	2.25	2.5	1.75	2.25	2.5	2.75
	1.5	1.5	1.25	1.75	2.25	1.75	1.75	2.5	2.25	2.25	2.0	1.75	2.0	1.75	2.25	2.0	2.25	2.6	2.25
	2.0	2.5	3.0	1.5	2.25	3.25	2.0	2.25	2.25	2.0	2.25	2.0	2.25	2.0	2.25	3.0	2.25	2.0	1.75
	1.75	2.0	2.25	2.25	2.25	2.25	1.75	2.25	2.25	1.75	1.75	2.5	2.0	2.0	2.25	2.0	2.5	2.25	3.25
	2.5	2.0	1.75	1.75	1.5	2.5	1.75	1.5	2.0	2.0	2.0	1.75	1.75	2.25	2.5	2.25	2.0	2.0	2.5
	1.75	2.0	1.5	2.0	2.25	1.5	2.0	1.75	1.5	2.0	2.5	2.75	1.5	2.25	1.25	3.0	2.0	2.0	2.6
	1.5	1.75	1.75	2.0	2.0	2.25	2.25	2.75	2.5	3.0	2.0	2.5	2.0	2.0	2.0	2.25	2.0	2.5	2.25
1.75	2.25	1.5	1.5	3.25	2.0	1.75	1.75	2.0	1.75	1.5	2.0	1.25	1.25	2.25	3.0	2.5	2.25	1.75	
1.25	1.5	1.5	2.25	2.0	2.0	1.75	2.5	1.5	2.0	2.5	2.0	2.0	2.0	2.5	4.0	2.75	2.25	2.5	
2.0	2.25	2.0	2.0	2.0	2.0	2.25	3.0	1.75	1.75	2.5	3.0	1.75	1.75	2.75	2.25	2.25	2.25	2.25	
1.5	2.25	2.0	1.75	2.25	1.5	1.5	1.25	1.5	1.75	2.5	2.25	1.75	1.75	1.5	2.5	2.25	2.25	1.75	
1.75	2.5	2.5	1.75	2.25	2.0	1.5	1.5	2.25	1.5	2.25	1.5	2.0	2.0	2.75	2.25	2.25	2.25	3.5	
Averages.....	1.775	2.070	1.920	1.960	2.290	2.350	1.910	2.000	1.980	2.050	2.260	2.200	2.015	2.250	2.310	2.330	2.370	2.400	

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:																		
Maximum measurements.	B <sup>1</sup>	2.5	0.9842	B <sup>1</sup>	2.75	1.0826	B <sup>1</sup>	2.5	1.3770	B <sup>1</sup>	3.0	1.1811	B <sup>1</sup>	2.5	0.9842	B <sup>1</sup>	3.0	1.1811
	B <sup>2</sup>	2.5	0.9842	B <sup>2</sup>	4.25	1.6732	B <sup>2</sup>	3.5	1.3770	B <sup>2</sup>	3.0	1.1811	B <sup>2</sup>	3.25	1.2705	B <sup>2</sup>	3.25	1.2705
	B <sup>3</sup>	3.0	1.1811	B <sup>3</sup>	4.25	1.6732	B <sup>3</sup>	3.0	1.1811	B <sup>3</sup>	3.0	1.1811	B <sup>3</sup>	4.00	1.5748	B <sup>3</sup>	3.50	1.3770
Highest.....		3.0	1.1811		4.25	1.6732		3.5	1.3770		3.0	1.1811		4.00	1.5748		3.50	1.3770
Minimum measurements.	B <sup>1</sup>	1.5	0.5005	B <sup>1</sup>	1.25	0.4921	B <sup>1</sup>	1.5	0.5005	B <sup>1</sup>	1.5	0.5005	B <sup>1</sup>	1.25	0.4921	B <sup>1</sup>	1.75	0.6889
	B <sup>2</sup>	1.5	0.5005	B <sup>2</sup>	1.5	0.5005	B <sup>2</sup>	1.25	0.4921	B <sup>2</sup>	1.5	0.5005	B <sup>2</sup>	1.75	0.6889	B <sup>2</sup>	1.75	0.6889
	B <sup>3</sup>	1.25	0.4921	B <sup>3</sup>	1.5	0.5005	B <sup>3</sup>	1.25	0.4921	B <sup>3</sup>	1.5	0.5005	B <sup>3</sup>	1.25	0.4921	B <sup>3</sup>	1.75	0.6889
Lowest.....		1.25	0.4921		1.25	0.4921		1.25	0.4921		1.5	0.5005		1.25	0.4921		1.75	0.6889
Average measurements.	B <sup>1</sup>	1.775	0.6888	B <sup>1</sup>	1.900	0.7716	B <sup>1</sup>	1.910	0.7510	B <sup>1</sup>	2.050	0.8070	B <sup>1</sup>	3.015	0.7093	B <sup>1</sup>	2.330	0.6173
	B <sup>2</sup>	2.070	0.8149	B <sup>2</sup>	2.290	0.9015	B <sup>2</sup>	2.000	0.7874	B <sup>2</sup>	2.200	0.8897	B <sup>2</sup>	2.250	0.8858	B <sup>2</sup>	2.370	0.8736
	B <sup>3</sup>	1.920	0.7559	B <sup>3</sup>	2.350	0.9251	B <sup>3</sup>	1.980	0.7795	B <sup>3</sup>	2.200	0.8661	B <sup>3</sup>	2.310	0.9094	B <sup>3</sup>	2.400	0.9448
Average.....		1.921	0.7562		2.200	0.8661		1.963	0.7728		2.170	0.8543		2.101	0.8625		2.366	0.8314
Measurements above average.....		42			37			38			42			38			36	
Measurements below average.....		33			38			37			33			37			42	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		MERINO.																	
Catalogue number of samples..		78. BELLY.			79. SHOULDER.			79. SIDE.			79. HIP, BETWEEN FOLD.			79. HIP, TOP OF FOLD.			79. BELLY.		
Length of fiber in crimp.....		1 1/8 inches.			1 1/4 inches.			1 1/2 inches.			1 3/4 inches.			1 7/8 inches.			1 7/8 inches.		
Number of crimps per inch....		20.			20.			20.			16.			14.			20.		
Number of section.....		B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .
Actual measurement in centimillimeters.		1.5	2.5	2.0	1.75	2.25	2.25	2.0	2.0	1.5	2.0	2.0	1.75	2.25	2.75	2.0	1.75	3.0	1.75
Averages .....		2.040	2.170	2.050	1.990	2.050	2.050	1.990	2.000	2.020	2.200	2.580	2.230	2.300	2.690	2.880	2.095	2.270	2.100
		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:		B <sup>1</sup>	2.5	0.9842	B <sup>1</sup>	2.25	0.8858	B <sup>1</sup>	2.75	1.0826	B <sup>1</sup>	2.75	1.0826	B <sup>1</sup>	3.75	1.4763	B <sup>1</sup>	3.0	1.1811
Maximum measurements.		B <sup>2</sup>	3.0	1.1811	B <sup>2</sup>	2.50	0.9842	B <sup>2</sup>	2.75	1.0826	B <sup>2</sup>	4.00	1.5748	B <sup>2</sup>	4.50	1.7716	B <sup>2</sup>	3.0	1.1810
Highest .....		B <sup>3</sup>	2.5	0.9842	B <sup>3</sup>	4.25	1.6732	B <sup>3</sup>	2.5	1.3779	B <sup>3</sup>	3.50	1.3779	B <sup>3</sup>	4.00	1.5748	B <sup>3</sup>	2.75	1.0821
Minimum measurements.		B <sup>1</sup>	1.5	0.5905	B <sup>1</sup>	1.50	0.5905	B <sup>1</sup>	1.50	0.5905	B <sup>1</sup>	1.75	0.6889	B <sup>1</sup>	1.75	0.6889	B <sup>1</sup>	1.75	0.6889
Lowest .....		B <sup>2</sup>	1.75	0.6898	B <sup>2</sup>	1.25	0.4921	B <sup>2</sup>	1.50	0.5905	B <sup>2</sup>	2.00	0.7874	B <sup>2</sup>	1.75	0.6889	B <sup>2</sup>	1.75	0.6889
Average measurements.		B <sup>3</sup>	1.25	0.4921	B <sup>3</sup>	1.5	0.5905	B <sup>3</sup>	1.50	0.5905	B <sup>3</sup>	1.50	0.5905	B <sup>3</sup>	1.75	0.6889	B <sup>3</sup>	1.50	0.5905
Average .....		B <sup>1</sup>	2.040	0.8031	B <sup>1</sup>	1.990	0.7834	B <sup>1</sup>	1.990	0.7834	B <sup>1</sup>	2.200	0.8897	B <sup>1</sup>	2.300	0.9291	B <sup>1</sup>	2.005	0.8248
Measurements above average.		B <sup>2</sup>	2.170	0.8543	B <sup>2</sup>	2.050	0.8070	B <sup>2</sup>	2.060	0.8110	B <sup>2</sup>	2.580	1.0157	B <sup>2</sup>	2.690	1.0390	B <sup>2</sup>	2.270	0.8936
Measurements below average.		B <sup>3</sup>	2.050	0.8070	B <sup>3</sup>	2.050	0.8070	B <sup>3</sup>	2.020	0.7952	B <sup>3</sup>	2.230	0.8770	B <sup>3</sup>	2.880	1.1338	B <sup>3</sup>	2.100	0.8267
		2.686			2.030			2.023			2.357			3.643			2.155		
		0.8212			0.7992			0.7964			0.9279			1.0405			0.8464		
		34			24			27			37			32			35		
		41			51			48			38			43			40		



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of samples..	MERINO.																	
	80. SHOULDER.			80. SIDE.			80. HIP.			80. BELLY.			81. SHOULDER.			81. SIDE.		
	1½ inches.			1½ inches.			1½ inches.			1½ inches.			1½ inches.			1½ inches.		
Length of fiber in crimp.....	20.			22.			22.			20.			20.			16.		
Number of crimps per inch....	20.			22.			22.			20.			20.			16.		
Number of section.....	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .
Actual measurement in centimillimeters.	1.75	2.25	2.0	1.75	2.0	1.75	1.75	1.75	1.5	2.0	2.0	1.75	1.75	2.0	1.75	2.0	2.25	2.0
	1.25	2.25	1.75	2.0	2.5	1.25	1.5	2.25	1.5	2.0	2.0	2.25	2.25	2.5	2.0	2.25	2.25	2.25
	2.0	2.0	2.0	1.5	1.5	3.5	2.0	1.75	2.0	2.0	2.25	2.0	2.25	2.5	2.5	2.25	2.25	1.75
	1.75	1.5	1.5	2.0	1.75	2.0	1.75	1.5	1.5	2.0	2.5	2.0	2.75	2.0	2.0	2.0	2.5	2.5
	1.5	1.5	1.625	1.5	2.0	1.25	1.5	2.5	1.75	1.75	2.5	2.0	2.0	2.5	1.75	1.5	2.0	2.25
	2.0	2.0	1.25	2.0	2.0	1.25	1.75	1.5	2.0	2.0	2.0	1.75	1.75	2.5	2.25	2.75	2.25	2.25
	1.75	2.0	1.875	2.0	2.0	1.25	2.0	1.75	2.0	2.0	2.0	2.25	1.75	2.0	2.0	1.75	2.0	1.75
	2.25	1.75	2.0	1.25	2.0	1.25	1.75	2.0	2.0	2.0	1.75	1.75	2.5	2.25	2.0	2.5	2.0	2.25
	1.25	1.75	1.75	1.75	2.0	1.5	2.25	2.0	1.5	2.0	2.0	2.0	2.0	1.75	2.0	2.0	2.5	2.75
	2.0	1.75	1.5	2.0	2.25	1.75	1.25	1.75	2.0	2.0	2.25	1.75	2.0	2.5	1.5	2.0	1.75	2.25
	1.75	2.0	1.75	2.0	2.0	1.25	2.0	2.25	1.5	2.0	2.25	1.5	2.0	2.25	2.25	1.75	2.0	1.75
	1.5	1.5	1.75	2.0	2.0	1.5	2.0	2.0	1.5	2.0	2.0	1.5	2.0	2.25	1.75	1.75	2.5	2.0
	1.25	1.75	2.0	2.0	2.25	2.5	2.0	2.5	1.75	2.5	2.5	1.75	2.5	1.75	2.0	2.5	2.0	2.0
	1.5	1.5	2.0	1.25	2.0	1.25	1.75	2.5	1.5	1.75	2.25	2.0	1.75	2.5	1.5	1.75	2.25	1.75
	1.5	2.5	1.75	2.0	1.75	1.75	1.75	2.25	2.0	2.25	2.75	2.0	2.0	2.0	1.5	2.25	2.0	2.5
	1.75	2.25	1.5	1.5	1.75	1.5	2.0	2.75	1.5	1.75	2.5	2.5	2.25	2.25	2.25	2.5	2.5	2.0
	1.75	2.0	1.25	1.5	2.25	1.5	1.75	2.25	1.5	1.75	2.0	2.5	2.0	2.25	2.0	2.25	2.0	2.0
	2.0	1.5	1.5	1.25	1.75	1.25	2.0	2.0	1.75	2.25	2.75	1.75	2.75	2.0	1.75	1.75	2.5	2.25
	1.5	2.0	1.75	1.75	1.75	1.25	1.75	2.0	2.25	2.0	2.0	2.25	2.25	1.75	1.5	2.25	2.0	2.5
	2.0	1.75	1.5	1.25	1.75	1.75	1.75	2.0	1.5	1.5	2.25	2.5	2.5	2.5	2.5	2.0	2.5	2.25
1.75	2.25	2.0	1.5	2.25	1.5	2.0	2.0	1.5	2.0	2.25	2.25	1.75	2.0	2.25	2.0	2.0	2.0	
1.75	2.25	2.0	1.5	2.5	1.5	1.75	2.0	1.5	2.0	2.0	2.0	2.0	3.0	1.75	1.5	2.25	2.25	
1.75	2.25	1.5	1.75	2.0	1.25	2.0	2.0	1.5	2.25	2.0	2.5	2.0	2.5	2.5	1.75	3.25	1.75	
2.0	2.0	1.75	1.75	1.5	1.25	1.5	2.0	1.5	2.25	2.0	2.0	2.0	2.75	2.25	2.0	1.75	2.25	
1.5	1.75	1.75	1.5	2.0	1.5	2.5	2.0	1.5	2.5	2.5	2.75	1.75	2.5	2.25	1.5	2.0	2.5	
Averages.....	1.710	1.920	1.680	1.770	2.000	1.490	1.840	2.050	1.730	2.040	2.300	2.040	2.130	2.380	1.900	2.010	2.190	2.240

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.						
Maximum measurements.	B <sup>1</sup>	2.25	0.8858	B <sup>1</sup>	2.00	0.7874	B <sup>1</sup>	2.00	0.7874	B <sup>1</sup>	2.50	0.9842	B <sup>1</sup>	2.75	1.0826	B <sup>1</sup>	2.75	1.0826
	B <sup>2</sup>	2.25	0.8858	B <sup>2</sup>	2.50	0.9842	B <sup>2</sup>	2.75	1.0826	B <sup>2</sup>	3.00	1.1811	B <sup>2</sup>	3.00	1.1811	B <sup>2</sup>	3.25	1.2795
	B <sup>3</sup>	2.00	0.7874	B <sup>3</sup>	3.50	1.3779	B <sup>3</sup>	2.25	0.8858	B <sup>3</sup>	2.75	1.0826	B <sup>3</sup>	2.50	0.942	B <sup>3</sup>	2.50	1.3779
Highest.....		2.25	0.8858		3.50	1.3779		2.75	1.0826		3.00	1.1811		3.00	1.1811		3.50	1.3779
Minimum measurements.	B <sup>1</sup>	1.25	0.4921	B <sup>1</sup>	1.25	0.4921	B <sup>1</sup>	1.25	0.4921	B <sup>1</sup>	1.50	0.5905	B <sup>1</sup>	1.75	0.6889	B <sup>1</sup>	1.50	0.5905
	B <sup>2</sup>	1.50	0.5905	B <sup>2</sup>	1.50	0.5905	B <sup>2</sup>	1.50	0.5905	B <sup>2</sup>	1.75	0.6889	B <sup>2</sup>	1.75	0.6889	B <sup>2</sup>	1.75	0.6889
	B <sup>3</sup>	1.25	0.4921	B <sup>3</sup>	1.25	0.4921	B <sup>3</sup>	1.50	0.5905	B <sup>3</sup>	1.50	0.5905	B <sup>3</sup>	1.50	0.5905	B <sup>3</sup>	1.75	0.6889
Lowest.....		1.25	0.4921		1.25	0.4921		1.25	0.4921		1.50	0.5905		1.50	0.5905		1.50	0.5905
Average measurements..	B <sup>1</sup>	1.710	0.6732	B <sup>1</sup>	1.770	0.6968	B <sup>1</sup>	1.840	0.7244	B <sup>1</sup>	2.040	0.8031	B <sup>1</sup>	2.130	0.8385	B <sup>1</sup>	2.010	0.7913
	B <sup>2</sup>	1.920	0.7559	B <sup>2</sup>	2.000	0.7874	B <sup>2</sup>	2.050	0.8070	B <sup>2</sup>	2.300	0.9055	B <sup>2</sup>	2.280	0.8976	B <sup>2</sup>	2.190	0.8622
	B <sup>3</sup>	1.680	0.6614	B <sup>3</sup>	1.490	0.5866	B <sup>3</sup>	1.730	0.6811	B <sup>3</sup>	2.040	0.8031	B <sup>3</sup>	1.990	0.7834	B <sup>3</sup>	2.240	0.8818
Average.....		1.770	0.6968		1.753	0.6901		1.873	0.7374		2.726	0.8379		2.133	0.8397		2.146	0.8448
Measurements above average.....		29			29			37			34			35			39	
Measurements below average.....		46			46			38			41			40			36	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		MERINO.																	
Catalogue number of samples..		81. HIP.			81. BELLY.			82. SHOULDER.			82. SIDE.			82. HIP.			82. BELLY.		
Length of fiber in crimp.....		1 1/8 inches.			1 1/8 inches.			1 1/8 inches.			1 1/8 inches.			1 1/8 inches.			1 1/8 inches.		
Number of crimps per inch....		16.			20.			20.			20.			20.			20.		
Number of section.....		B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .
Actual measurement in centimillimeters.		2.5	2.25	2.75	2.75	1.75	2.75	1.75	2.75	1.75	2.5	2.0	2.0	2.5	2.0	2.25	2.5	2.75	2.5
		2.0	1.75	2.0	2.0	3.0	2.5	2.0	2.5	2.5	2.5	2.5	2.5	2.0	1.5	1.75	2.25	2.0	2.5
		3.25	2.5	2.25	2.25	2.0	2.0	1.75	2.5	2.0	2.25	2.75	1.5	2.0	2.25	2.0	3.0	2.0	2.0
		2.5	3.0	2.25	3.0	2.0	2.0	2.25	1.75	1.75	2.25	2.5	2.0	2.0	1.75	2.25	2.0	2.5	2.0
		3.0	3.0	2.0	2.5	2.0	2.5	2.5	2.0	2.25	2.5	2.75	2.5	2.25	2.0	2.25	2.25	2.5	2.75
		2.0	3.0	3.25	1.5	2.0	2.5	2.5	2.5	2.0	2.25	2.0	1.75	2.5	2.25	2.25	2.5	2.0	2.75
		2.75	1.5	2.0	2.25	2.25	2.25	2.5	2.0	2.0	2.75	2.25	2.0	2.5	2.5	1.75	2.0	2.25	2.5
		2.75	3.0	2.25	2.25	2.25	2.25	2.5	2.25	1.75	2.5	1.75	2.25	2.5	2.0	2.0	2.75	2.75	2.0
		1.25	2.0	2.25	2.0	2.25	2.0	1.5	2.0	2.5	2.75	2.5	1.5	2.25	2.25	2.5	2.0	2.25	2.5
		1.75	2.0	2.0	2.0	2.0	1.75	2.5	1.5	2.5	3.0	2.5	2.75	2.25	2.0	2.0	2.25	2.0	2.0
		2.0	2.0	2.5	2.0	2.5	2.0	1.5	2.25	1.75	2.0	2.25	2.5	3.0	1.75	2.0	3.25	2.5	3.25
		3.0	3.5	2.0	2.0	2.25	2.75	2.5	2.5	2.25	1.75	2.0	3.0	2.5	2.0	2.25	3.5	2.5	2.5
		2.0	2.25	2.25	2.5	2.25	2.25	2.25	2.25	2.0	2.75	2.5	2.5	3.5	2.5	2.5	3.5	2.5	2.5
		3.0	2.0	2.0	2.5	3.0	1.75	2.5	2.0	1.5	2.25	1.75	2.75	2.25	2.0	2.25	2.5	2.5	2.5
		3.5	2.75	2.25	2.25	2.0	2.0	2.0	2.5	2.0	2.75	2.25	2.5	3.0	1.75	2.5	3.0	2.75	2.0
		1.5	3.0	2.5	2.0	2.5	2.0	2.5	2.0	2.0	2.25	2.25	2.0	2.75	2.0	2.5	2.5	2.5	2.75
		1.5	3.0	1.5	2.5	2.5	3.0	1.5	2.25	2.0	3.0	2.0	2.75	3.0	2.5	2.0	2.25	2.5	2.5
		2.0	2.5	3.0	2.5	2.25	2.0	2.25	2.5	2.0	1.75	2.0	2.0	2.75	1.75	2.5	2.75	2.25	2.25
		1.75	2.25	3.0	2.5	2.25	2.0	1.5	2.5	1.5	2.5	2.25	2.75	3.5	2.0	2.75	2.75	2.25	2.5
		2.75	2.0	1.75	2.0	2.25	1.75	2.5	1.75	1.5	2.5	2.0	2.0	1.75	2.0	2.25	3.0	2.25	2.25
		2.25	2.75	2.25	2.25	2.25	2.5	2.5	1.75	2.25	2.25	2.5	2.5	1.5	2.0	2.5	2.5	3.25	2.25
		1.5	2.0	2.0	1.75	2.25	2.25	2.5	1.75	2.0	2.25	2.25	2.5	2.0	2.5	2.25	2.25	3.5	2.25
		1.5	2.25	2.0	2.0	2.0	2.5	1.5	1.75	2.0	3.0	1.75	2.0	2.0	1.5	1.25	2.5	2.0	2.25
		1.75	2.0	1.75	2.25	2.0	2.0	2.75	2.25	2.0	2.5	2.25	1.75	2.5	1.75	2.0	2.0	2.5	3.25
		2.0	2.0	3.0	2.0	2.25	2.0	3.25	2.0	2.0	2.0	1.5	2.25	2.5	2.25	2.25	3.25	3.25	2.5
Averages.....		2.270	2.410	2.270	2.260	2.240	2.190	2.070	2.150	2.030.	2.430	2.200	2.260	2.400	2.080	2.180	2.630	2.500	2.410
Recapitulation and reduction:		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Maximum measurements.		B <sup>1</sup>	3.50	1.3779	B <sup>1</sup>	3.00	1.1811	B <sup>1</sup>	3.25	1.2795	B <sup>1</sup>	3.00	1.1811	B <sup>1</sup>	3.50	1.3779	B <sup>1</sup>	3.50	1.3779
		B <sup>2</sup>	3.50	1.3779	B <sup>2</sup>	3.00	1.1811	B <sup>2</sup>	2.75	1.0826	B <sup>2</sup>	2.75	1.0826	B <sup>2</sup>	2.50	0.9842	B <sup>2</sup>	3.50	1.3779
		B <sup>3</sup>	3.25	1.2795	B <sup>3</sup>	3.00	1.1811	B <sup>3</sup>	2.50	0.9842	B <sup>3</sup>	3.00	1.1811	B <sup>3</sup>	2.75	1.0826	B <sup>3</sup>	3.25	1.2795
Highest.....			3.50	1.3779		3.00	1.1811		3.25	1.2795		3.00	1.1811		3.50	1.3779		3.50	1.3779
Minimum measurements.		B <sup>1</sup>	1.25	0.4921	B <sup>1</sup>	1.50	0.5905	B <sup>1</sup>	1.50	0.5905	B <sup>1</sup>	1.75	0.6889	B <sup>1</sup>	1.50	0.5905	B <sup>1</sup>	2.00	0.7874
		B <sup>2</sup>	1.50	0.5905	B <sup>2</sup>	1.75	0.6889	B <sup>2</sup>	1.50	0.5905	B <sup>2</sup>	1.50	0.5905	B <sup>2</sup>	1.50	0.5905	B <sup>2</sup>	2.00	0.7874
		B <sup>3</sup>	1.50	0.5905	B <sup>3</sup>	1.75	0.6889	B <sup>3</sup>	1.50	0.5905	B <sup>3</sup>	1.50	0.5905	B <sup>3</sup>	1.25	0.4921	B <sup>3</sup>	2.00	0.7874
Lowest.....			1.25	0.4921		1.50	0.5905		1.50	0.5905		1.50	0.5905		1.25	0.4921		2.00	0.7874
Average measurements.		B <sup>1</sup>	2.270	0.8986	B <sup>1</sup>	2.660	1.0472	B <sup>1</sup>	2.070	0.8149	B <sup>1</sup>	2.430	0.9566	B <sup>1</sup>	2.400	0.9448	B <sup>1</sup>	2.630	1.0354
		B <sup>2</sup>	2.410	0.9488	B <sup>2</sup>	2.240	0.8818	B <sup>2</sup>	2.150	0.8464	B <sup>2</sup>	2.200	0.8161	B <sup>2</sup>	2.080	0.8188	B <sup>2</sup>	2.500	0.9842
		B <sup>3</sup>	2.270	0.8936	B <sup>3</sup>	2.100	0.8622	B <sup>3</sup>	2.030	0.7992	B <sup>3</sup>	2.260	0.8897	B <sup>3</sup>	2.180	0.8582	B <sup>3</sup>	2.410	0.9488
Average.....			2.316	0.9118		2.230	0.8779		2.063	0.8290		2.206	0.9089		2.220	0.8740		2.513	0.9893
Measurements above average.....			28			43			36			34			43			21	
Measurements below average.....			47			42			39			41			52			55	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		MERINO.														
Catalogue number of samples..		83. SHOULDER.			83. SIDE.			83. HIP.			83. BELLY.			84. SHOULDER.		
Length of fiber in crimp .....		1¼ inches.			1½ inches.			1¾ inches.			1¼ inches.			1½ inches.		
Number of crimps per inch .....		20.			20.			16.			20.			22.		
Number of section .....		B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.
Actual measurement in centimillimeters.	2.5	2.0	2.0	1.5	2.25	2.25	2.5	2.5	3.25	3.0	4.25	2.5	2.5	1.5	1.875	
	2.5	2.5	2.0	1.75	2.0	2.5	1.75	2.25	2.5	2.5	3.5	2.25	1.75	2.0	1.75	
	2.75	2.25	1.5	1.75	2.5	2.5	2.0	2.25	1.75	1.25	2.0	2.25	1.5	2.75	1.75	
	2.25	2.25	2.0	1.75	2.75	2.0	3.5	3.25	2.0	1.75	3.0	2.25	2.75	1.75	1.75	
	2.0	2.0	1.75	2.25	2.75	1.75	1.0	2.25	2.25	3.0	3.0	2.25	2.75	1.75	2.5	
	2.25	1.75	2.0	2.0	1.75	2.0	1.5	2.5	2.0	2.0	2.25	1.75	2.0	2.0	1.75	
	2.0	3.5	2.5	2.0	1.75	1.75	2.25	2.25	2.75	2.0	2.25	3.75	2.25	2.25	1.5	
	2.0	2.5	1.75	1.75	1.75	2.0	4.5	2.5	2.0	3.0	3.0	3.5	2.25	1.75	2.0	
	2.0	2.0	2.25	1.75	2.5	2.0	3.0	3.0	3.0	2.0	2.75	2.25	2.0	1.75	1.5	
	2.0	2.0	3.0	3.0	2.5	1.75	2.75	2.75	1.5	2.5	2.75	3.0	1.5	1.5	1.75	
	2.0	2.0	1.75	1.5	1.75	2.0	2.5	2.5	2.25	1.75	2.5	1.75	1.5	1.5	1.5	
	1.75	2.5	1.75	2.5	2.5	2.75	2.5	2.0	2.25	2.5	2.75	2.0	2.0	1.5	1.75	
	2.0	2.0	2.0	1.75	4.0	1.75	2.5	1.75	2.5	3.5	3.5	1.75	2.0	2.0	2.25	
	2.25	2.5	2.0	1.875	2.0	2.5	2.25	3.0	2.0	3.5	3.5	2.25	1.75	2.25	1.75	
	2.25	2.0	2.0	1.75	2.0	2.5	2.5	2.5	2.0	3.25	1.75	3.25	2.0	2.5	1.5	
	1.5	2.25	1.5	1.5	2.0	1.75	2.5	1.5	2.0	2.0	4.75	2.25	2.0	1.5	1.75	
	2.5	3.0	1.5	1.75	2.0	2.0	2.25	1.75	2.5	2.0	2.25	2.25	2.25	2.25	2.0	
	1.5	2.0	2.0	1.75	3.0	1.75	2.5	2.5	2.25	2.5	2.75	1.5	2.75	1.5	2.0	
	2.0	2.5	2.0	1.875	2.0	2.25	2.5	2.5	3.0	2.0	2.0	2.25	2.0	2.0	1.5	
	1.5	2.0	2.5	2.0	4.0	1.75	4.0	1.75	3.5	2.0	3.0	2.0	3.5	2.5	1.625	
	1.5	2.0	2.25	1.75	2.5	2.0	5.25	1.5	2.0	2.0	1.5	2.5	2.0	3.0	1.75	
	1.75	2.0	1.75	2.5	2.0	2.5	2.25	1.75	2.0	2.75	2.25	1.75	2.25	2.5	2.0	
	2.0	2.25	1.75	1.5	2.0	2.5	2.25	1.75	2.75	1.75	2.25	1.75	2.0	1.75	1.5	
	2.5	2.0	2.0	2.5	2.0	2.25	2.5	1.75	1.5	3.0	3.0	1.5	1.5	1.75	1.5	
	2.25	2.0	1.5	2.5	2.5	2.25	3.0	1.75	1.5	2.0	4.0	3.0	1.5	2.0	2.25	
Averages .....	2.130	2.230	1.920	1.920	2.350	2.100	2.540	2.310	2.300	2.340	2.840	2.320	2.100	1.900	1.790	

		83. SHOULDER.			83. SIDE.			83. HIP.			83. BELLY.			84. SHOULDER.		
Recapitulation and reductions:		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Maximum measurements	B¹	3.00	1.1811	B¹	3.00	1.1811	B¹	5.25	2.0669	B¹	3.50	1.3779	B¹	3.50	1.3779	
	B²	3.50	1.3779	B²	4.00	1.5748	B²	4.50	1.7716	B²	4.75	1.8700	B²	3.00	1.1811	
	B³	3.00	1.1811	B³	2.50	0.9842	B³	3.50	1.3779	B³	3.75	1.4763	B³	2.50	0.9842	
Highest .....		3.50	1.3779		4.00	1.5748		5.25	2.0669		4.75	1.8700		3.50	1.3779	
Minimum measurements	B¹	1.50	0.5905	B¹	1.50	0.5905	B¹	1.00	0.3937	B¹	1.25	0.4921	B¹	1.50	0.5905	
	B²	1.75	0.6889	B²	1.75	0.6889	B²	1.50	0.5905	B²	1.50	0.5905	B²	1.50	0.5905	
	B³	1.50	0.5905	B³	1.75	0.6889	B³	1.50	0.5905	B³	1.50	0.5905	B³	1.50	0.5905	
Lowest .....		1.50	0.5905		1.50	0.5905		1.00	0.3937		1.25	0.4921		1.50	0.5905	
Average measurements	B¹	2.130	0.8385	B¹	1.920	0.7559	B¹	2.540	0.9999	B¹	2.340	0.9212	B¹	2.100	0.8267	
	B²	2.230	0.8779	B²	2.350	0.9251	B²	2.310	0.9094	B²	2.840	1.1181	B²	1.960	0.7716	
	B³	1.920	0.7559	B³	2.100	0.8267	B³	2.300	0.9055	B³	2.320	0.9133	B³	1.790	0.7082	
Average .....		2.093	0.8240		2.123	0.8358		2.383	0.9381		2.500	0.9842		1.953	0.7688	
Measurements above average .....		28			28			35			27+			37		
Measurements below average .....		47			47			40			41+			38		



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		MERINO.																	
Catalogue number of samples..		84. SHOULDER A (17 MONTHS' GROWTH).						84. SIDE.			84. HIP.			85. SHOULDER.			85. SIDE.		
Length of fiber in crimp .....		3½ inches.						1 inch.			1 inch.			1½ inches.			1½ inches.		
Number of crimps per inch....		22.						22.			20.			22.			22.		
Number of section.....		B¹	B²	B³	B⁴	B⁵	B⁶	B¹	B²	B³	B¹	B²	B³	B¹	B²	B³	B¹	B²	B³
Actual measurement in centimillimeters.		2.0	1.75	2.0	2.0	2.0	2.0	2.25	2.0	2.0	2.0	3.5	2.0	2.0	1.5	1.5	1.5	1.75	2.0
		2.25	2.0	1.5	2.0	2.0	1.75	2.25	1.5	2.25	2.75	1.75	2.25	2.0	1.5	1.5	2.0	2.25	2.25
		2.0	2.0	2.0	1.5	2.5	2.5	2.75	1.75	2.75	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
		2.0	1.75	2.25	2.0	1.75	2.25	1.5	1.75	1.5	2.0	2.5	1.5	2.0	2.5	2.5	2.25	1.75	1.75
		3.0	2.0	1.75	2.5	1.5	2.0	1.5	1.75	1.5	2.0	2.25	2.25	2.25	1.75	1.75	2.25	1.75	1.5
		2.0	2.0	1.75	1.75	2.0	1.75	2.0	2.0	2.0	2.0	2.25	2.5	1.75	3.5	1.75	1.75	1.75	1.75
		2.25	1.75	1.75	1.5	2.0	2.0	2.0	2.0	2.0	2.0	1.25	2.25	1.75	2.0	1.75	2.0	2.0	2.0
		2.25	2.75	2.0	2.25	1.5	1.75	3.0	2.0	1.75	2.0	1.75	2.25	2.5	1.75	1.75	2.0	2.25	2.0
		2.0	1.5	2.0	1.5	2.0	2.5	3.5	1.75	2.5	2.0	2.0	2.0	1.5	3.5	1.75	1.25	2.0	2.0
		2.0	2.0	1.5	1.75	2.25	2.25	2.0	1.5	2.0	1.5	2.25	3.0	1.75	2.0	1.75	1.75	1.75	1.75
		2.0	2.0	1.75	2.0	2.25	2.0	1.5	2.0	2.0	2.0	1.5	2.25	2.0	1.5	1.75	1.5	1.75	2.0
		1.5	1.25	1.5	3.0	2.0	1.75	2.0	2.5	1.75	2.0	1.5	1.75	1.5	2.375	1.75	2.0	2.0	2.0
		2.0	2.0	2.25	3.0	2.0	2.5	2.25	1.75	2.25	2.0	2.0	2.0	2.0	1.75	2.0	2.0	2.75	2.0
		1.75	2.0	1.75	1.5	1.5	1.75	2.25	1.5	2.5	2.0	2.0	2.0	2.0	2.0	1.5	1.5	1.75	2.25
		3.75	2.25	1.75	2.0	2.5	2.0	1.75	1.5	2.5	2.5	2.5	2.5	2.0	2.0	1.5	1.75	1.75	1.5
		1.75	2.0	1.5	3.0	1.75	2.0	3.5	1.5	1.5	2.25	2.75	1.75	1.75	3.0	1.75	1.5	1.75	2.0
		2.25	2.0	1.75	2.0	2.75	2.0	2.25	1.75	1.75	2.0	3.0	3.0	3.0	3.0	1.75	1.5	1.75	1.75
		2.25	2.25	1.75	2.0	2.0	1.5	1.5	2.0	2.0	2.5	4.0	1.75	1.5	1.5	2.0	1.75	2.0	1.75
		2.75	2.0	1.5	1.75	2.25	2.5	2.0	2.0	2.0	2.0	2.25	2.0	2.0	2.0	2.0	2.0	2.0	1.75
		2.0	2.0	1.5	1.875	2.25	2.0	1.5	1.75	1.75	2.25	2.5	1.5	1.75	2.0	1.75	2.0	1.75	2.0
	2.0	2.25	1.75	2.25	1.75	2.0	2.0	2.25	2.25	1.75	2.0	2.0	1.5	1.75	1.75	2.0	1.75	2.0	
	1.75	1.75	2.25	2.25	2.5	2.0	2.0	1.5	2.0	3.0	2.75	2.5	1.5	2.0	1.75	2.0	1.75	2.0	
	2.0	1.75	2.25	2.0	2.25	3.0	2.0	1.5	2.5	1.75	2.75	1.5	1.5	2.25	1.75	1.75	2.0	1.5	
	2.0	2.0	2.0	2.0	2.0	1.75	2.25	1.5	2.0	2.5	2.75	2.75	2.0	1.5	1.75	2.0	1.75	2.0	
	1.5	1.75	2.25	2.25	2.5	2.0	2.0	1.5	1.75	2.0	2.25	2.25	1.5	1.75	2.0	1.5	2.0	2.0	
Averages .....		2.120	1.950	1.830	2.045	2.100	2.110	2.140	1.780	1.990	2.230	2.250	2.125	1.720	1.790	1.870	1.850	1.870	1.710

		84. SHOULDER A			84. SIDE			84. HIP			85. SHOULDER			85. SIDE		
Recapitulation and reduction:		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Maximum measurements.	B¹		3.75	1.4763	B¹	3.50	1.3779	B¹	3.00	1.1811	B¹	2.00	0.7874	B¹	2.25	0.8858
	B²		2.75	1.0820	B²	2.50	0.9842	B²	4.00	1.5748	B²	2.25	0.8358	B²	2.25	0.8858
	B³		2.50	0.9842	B³	2.50	0.9842	B³	3.50	1.3779	B³	2.75	1.0826	B³	2.50	0.9842
	B⁴		3.00	1.1811												
	B⁵		3.00	1.1811												
Highest.....			3.75	1.4763		3.50	1.3779		4.00	1.5748		2.75	1.0826		2.50	0.9842
Minimum measurements.	B¹		1.50	0.5905	B¹	1.50	0.5905	B¹	1.60	0.5905	B¹	1.50	0.5905	B¹	1.50	0.5905
	B²		1.25	0.4921	B²	1.50	0.5905	B²	1.50	0.5905	B²	1.50	0.5905	B²	1.50	0.5905
	B³		1.50	0.6905	B³	1.25	0.4921	B³	1.60	0.5905	B³	1.25	0.4921	B³	1.25	0.4921
	B⁴		1.50	0.6905												
	B⁵		1.50	0.6905												
Lowest.....			1.25	0.4921		1.25	0.4921		1.50	0.5905		1.25	0.4921		1.25	0.4921
Average measurements.	B¹		2.120	0.8346	B¹	2.140	0.8425	B¹	2.230	0.8770	B¹	1.720	0.6771	B¹	1.850	0.7283
	B²		1.950	0.7677	B²	1.780	0.7007	B²	2.250	0.8358	B²	1.290	0.7047	B²	1.870	0.7362
	B³		1.830	0.7204	B³	1.990	0.7834	B³	2.125	0.8366	B³	1.870	0.7862	B³	1.710	0.6732
	B⁴		2.045	0.8051												
	B⁵		2.100	0.8267												
Average.....			2.026	0.7976		1.970	0.7755		2.201	0.8665		1.703	0.7659		1.810	0.7125
Measurements above average..				43			43			34			27			32
Measurements below average..				107			32			41			48			43



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

MERINO.																		
Catalogue number of samples..	85. HIP.			85. BELLY.			86. SHOULDER.			86. SIDE.			86. HIP.			86. BELLY.		
Length of fiber in crimp.....	1½ inches.			1½ inches.			1½ inches.			1¼ inches.			1¼ inches.			1½ inches.		
Number of crimps per inch....	20.			20.			22.			22.			22.			20.		
Number of section.....	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.
Actual measurement in centimillimeters.	1.5	1.75	1.125	2.25	2.0	1.75	2.25	2.0	1.75	2.25	2.0	1.75	2.25	2.0	1.75	2.0	2.5	2.0
	1.5	1.75	1.25	2.0	1.75	1.75	2.25	1.875	1.75	2.5	1.75	2.0	2.25	2.0	1.75	2.0	2.25	2.5
	1.75	2.0	1.0	2.25	2.5	1.75	2.25	2.0	1.5	2.0	2.0	3.0	1.5	2.25	2.00	2.25	1.75	2.0
	1.75	2.5	1.75	2.5	2.0	1.75	2.0	2.5	2.25	2.0	2.5	1.5	2.0	2.5	1.75	2.25	2.5	2.5
	2.25	2.5	1.5	1.5	1.5	1.75	1.5	1.75	1.5	2.0	2.0	2.5	1.5	2.75	1.75	2.0	2.5	1.75
	2.0	1.5	1.5	2.0	2.0	2.25	2.0	1.75	2.0	1.75	1.75	2.25	2.0	2.0	1.5	2.25	2.25	2.0
	2.5	2.0	1.75	2.5	3.75	2.0	1.25	2.25	1.75	2.0	2.5	2.0	2.5	2.5	2.0	2.0	2.0	2.5
	2.5	1.5	1.5	2.5	1.5	1.0	2.0	1.0	1.5	2.0	2.5	2.25	1.75	2.25	2.5	2.25	2.25	2.0
	1.75	1.75	1.5	2.0	1.75	1.5	1.5	2.0	1.75	2.5	2.0	2.0	1.5	2.5	2.0	2.0	2.5	2.0
	2.0	1.5	1.5	2.0	3.5	1.5	2.0	1.5	1.75	2.25	2.0	2.0	1.5	2.25	1.75	2.25	2.5	2.5
	1.5	1.5	1.5	1.75	2.0	2.25	1.5	2.0	2.0	3.0	2.0	2.0	1.25	2.0	2.0	2.0	2.25	2.5
	2.0	2.0	2.25	1.25	1.75	2.0	1.75	2.25	1.5	2.0	1.75	1.75	1.75	2.25	2.0	1.75	2.25	3.0
	1.5	2.0	1.75	1.75	1.5	1.5	2.0	2.25	1.5	1.5	2.25	3.5	1.5	2.25	1.5	2.25	1.75	2.25
	2.0	3.0	2.75	2.0	2.5	2.25	1.75	1.5	1.5	1.75	2.5	1.75	1.75	2.25	1.75	2.0	2.5	2.25
	2.0	2.0	1.5	2.0	1.25	1.5	1.5	3.5	1.25	2.0	2.0	1.75	2.25	2.5	3.0	2.0	2.0	2.5
	2.0	2.0	1.5	2.5	2.25	1.5	1.5	2.25	2.25	1.75	2.5	2.0	1.5	2.0	2.0	2.25	2.0	2.0
	2.5	1.5	2.25	1.5	1.25	1.25	1.75	2.25	2.5	1.0	1.75	2.75	1.5	2.0	3.0	2.0	2.5	2.0
	2.25	2.0	1.75	1.75	1.75	2.25	1.5	1.75	1.75	2.0	2.25	3.0	1.5	2.0	3.25	2.0	2.0	2.0
	1.75	2.25	1.0	1.0	1.75	1.75	2.0	2.0	1.75	2.0	2.25	2.5	1.5	2.25	2.75	2.0	2.0	2.25
	2.25	1.5	1.5	2.0	2.0	1.75	2.0	2.0	1.5	2.0	2.0	2.0	2.0	3.5	2.0	2.0	2.0	2.0
2.25	1.75	1.75	2.0	1.75	2.0	1.5	2.0	2.0	1.75	2.0	1.75	2.0	2.0	2.0	2.0	2.5	2.25	
2.0	2.0	2.0	1.5	2.25	1.0	1.25	1.5	2.25	2.0	2.0	2.5	1.75	2.0	2.0	2.0	2.0	2.25	
2.0	2.0	1.5	1.5	2.75	1.25	1.75	2.25	1.5	2.5	1.5	2.0	2.0	3.0	1.75	2.0	2.0	2.0	
1.75	2.0	1.75	2.0	2.5	1.5	1.75	1.75	2.0	1.5	2.0	2.5	2.0	2.25	2.0	2.0	2.0	1.5	
1.75	2.0	1.75	1.5	2.0	3.0	1.5	1.75	1.0	2.0	1.75	2.0	2.25	2.5	2.25	2.0	2.0	2.5	
Averages.....	1.920	1.960	1.635	1.890	1.980	1.700	1.700	2.075	1.720	2.030	2.120	2.160	1.850	2.300	2.040	2.130	2.220	2.180

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:																		
Maximum measurements.	B¹	2.50	0.9842	B¹	2.50	0.9842	B¹	2.25	0.8858	B¹	3.00	1.1811	B¹	2.75	1.0826	B¹	2.50	0.9842
	B²	2.00	1.1811	B²	2.75	1.4763	B²	2.50	1.3779	B²	2.75	1.0826	B²	3.50	1.3779	B²	2.50	0.9842
	B³	2.75	1.0826	B³	3.00	1.1811	B³	2.25	0.8858	B³	3.50	1.3779	B³	3.25	1.2795	B³	3.00	1.1811
Highest.....		3.00	1.1811		3.75	1.4763		3.50	1.3779		3.50	1.3779		3.50	1.3779		3.00	1.1811
Minimum measurements.	B¹	1.50	0.5905	B¹	1.25	0.4921	B¹	1.50	0.5905	B¹	1.50	0.5905	B¹	1.50	0.5905	B¹	1.75	0.6889
	B²	1.50	0.5905	B²	1.25	0.4921	B²	1.00	0.3937	B²	1.50	0.5905	B²	2.00	0.7874	B²	1.75	0.6889
	B³	1.00	0.3937	B³	1.00	0.3937	B³	1.00	0.3937	B³	1.50	0.5905	B³	1.50	0.5905	B³	1.50	0.5905
Lowest.....		1.00	0.3937		1.00	0.3937		1.00	0.3937		1.50	0.5905		1.50	0.5905		1.50	0.5905
Average measurements.	B¹	1.920	0.7559	B¹	1.890	0.7440	B¹	1.700	0.6929	B¹	2.030	0.7992	B¹	1.850	0.7283	B¹	2.130	0.8385
	B²	1.960	0.7716	B²	1.980	0.7705	B²	2.075	0.8169	B²	2.130	0.8385	B²	2.360	0.9291	B²	2.220	0.8740
	B³	1.635	0.6436	B³	1.790	0.7047	B³	1.720	0.6771	B³	2.120	0.8346	B³	2.040	0.8031	B³	2.180	0.8582
Average.....		1.838	0.7236		1.886	0.7425		1.851	0.7287		2.103	0.8279		2.083	0.8200		2.176	0.8566
Measurements above average..		35			37			32			27			27			37	
Measurements below average..		40			38			43			48			48			38	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		MERINO.																	
Catalogue number of samples..		87. SHOULDER.			87. SIDE.			87. HIP.			87. BELLY.			88. SHOULDER.			88. SIDE.		
Length of fiber in crimp .....		1½ inches.			1¾ inches.			1¾ inches.			1½ inches.			1½ inches.			1¾ inches.		
Number of crimps per inch ....		22.			22.			22.			20.			20.			20.		
Number of section .....		B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.
Actual measurement in centi- millimeters.	2.0	1.75	1.75	2.5	2.0	1.75	2.5	2.0	2.5	2.0	1.75	1.75	2.0	2.5	2.0	1.5	2.0	1.75	
	2.0	1.75	2.25	2.0	1.75	2.5	2.5	2.5	2.5	2.5	2.75	1.75	2.0	2.0	1.75	1.5	2.0	2.0	
	2.5	2.25	2.0	2.5	2.5	2.25	2.75	1.5	2.25	2.0	2.0	2.0	2.0	2.25	1.5	2.25	2.5	1.75	
	1.75	2.25	2.0	2.125	2.5	3.25	2.0	2.75	2.25	2.9	2.0	2.25	2.0	2.0	2.5	1.5	1.75	1.5	
	1.75	2.0	2.0	2.0	2.5	2.0	2.0	2.5	2.25	1.75	1.875	2.0	2.5	1.75	2.0	1.75	2.0	1.75	
	1.75	2.75	2.0	2.25	2.5	2.25	2.5	2.5	2.5	1.75	2.5	2.0	2.25	2.0	1.75	2.5	2.25	1.75	
	2.5	2.0	2.5	2.0	2.75	2.0	1.75	2.5	2.25	2.0	2.5	1.75	1.75	1.75	1.75	1.75	2.5	2.0	
	1.75	1.75	2.0	2.0	1.75	1.75	2.25	2.5	1.5	1.75	1.75	1.75	1.75	2.55	1.75	1.5	2.5	2.0	
	2.0	1.75	2.0	2.0	2.0	2.0	1.75	2.5	2.25	1.75	1.75	1.75	2.25	1.75	1.75	1.75	1.25	1.75	
	2.25	2.5	2.0	2.5	3.0	2.0	1.75	1.75	2.0	1.75	2.0	1.5	3.0	1.75	2.0	1.5	2.5	1.75	
	2.25	2.5	2.0	1.5	2.75	2.25	2.25	2.0	1.75	2.0	1.75	2.0	2.0	2.5	1.75	2.0	2.5	2.0	
	2.6	2.25	1.75	2.0	1.75	2.0	2.5	3.0	2.0	2.25	2.0	1.75	1.75	2.25	2.0	1.75	1.25	2.0	
	2.5	1.75	2.25	2.25	2.0	2.0	2.5	3.0	2.75	2.0	2.0	1.75	2.0	1.75	1.75	1.5	2.5	2.0	
	2.0	1.75	2.25	2.0	2.5	2.0	2.0	2.75	2.0	2.0	2.75	2.0	2.0	2.0	1.75	2.5	1.75	2.25	
	2.0	2.5	2.0	2.0	2.25	2.0	2.0	2.0	2.0	1.75	2.0	2.0	2.0	2.0	1.5	1.5	1.75	2.0	
	2.5	3.0	2.0	2.5	2.5	2.25	2.0	2.0	1.5	1.75	2.0	2.25	2.25	1.5	1.75	1.75	1.5	1.75	
	2.0	2.0	2.0	2.75	3.0	2.5	2.0	2.0	2.25	1.75	1.5	1.75	2.0	2.0	2.0	1.5	1.75	2.0	
	1.75	2.0	2.0	2.25	2.5	2.25	2.0	2.0	2.25	2.0	2.0	2.0	1.75	1.75	2.0	1.75	2.0	2.0	
	2.25	2.5	1.5	1.5	2.25	2.26	2.0	2.25	2.0	2.0	1.75	1.75	2.75	1.75	1.5	1.5	2.0	2.5	
	2.0	2.0	1.75	2.25	2.25	1.75	1.75	2.5	2.0	1.5	1.75	1.5	1.75	1.5	1.375	3.25	1.75	2.5	
	1.75	2.0	2.0	1.5	2.6	1.75	2.25	2.0	2.0	1.75	2.25	1.5	2.0	1.75	1.25	1.6	2.5	2.0	
	2.0	2.25	1.75	2.5	2.5	1.5	2.0	2.0	1.75	2.0	1.75	1.5	2.0	2.25	2.0	2.25	1.75	2.0	
	1.75	2.0	1.75	2.25	2.25	2.0	2.0	2.0	2.0	1.75	2.25	2.0	2.0	2.25	1.75	1.75	2.0	2.0	
	2.0	2.25	2.0	2.0	2.0	2.25	1.5	2.25	2.25	2.0	2.25	2.0	2.5	1.25	1.75	2.5	1.75	1.75	
	2.0	2.0	2.0	2.5	2.25	2.6	3.0	1.75	2.25	2.0	2.0	2.0	1.75	1.5	2.0	2.5	2.0	2.5	
	Averages.....	2.060	2.140	1.970	2.145	2.340	2.120	2.140	2.270	2.110	1.890	2.035	1.860	2.150	1.790	1.825	2.020	2.000	1.910

Recapitulation and reduction:		87. SHOULDER.			87. SIDE.			87. HIP.			87. BELLY.			88. SHOULDER.			88. SIDE.		
		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Maximum measurements.	B¹	2.5	0.9842	B¹	2.75	1.0826	B¹	3.0	1.1811	B¹	2.5	0.9842	B¹	3.0	1.1811	B¹	3.25	1.2795	
	B²	3.0	1.1811	B²	3.0	1.1811	B²	3.0	1.1811	B²	2.75	1.0826	B²	2.5	0.9842	B²	2.6	0.9842	
	B³	2.25	0.8858	B³	3.25	1.2795	B³	2.75	1.0826	B³	2.25	0.8858	B³	2.5	0.9842	B³	2.5	0.9842	
Highest.....		3.0	1.1811		3.25	1.2795		3.0	1.1811		2.75	1.0826		3.0	1.1811		3.25	1.2795	
Minimum measurements.	B¹	1.75	0.6889	B¹	1.5	0.5905	B¹	1.5	0.5905	B¹	1.5	0.5905	B¹	1.75	0.6889	B¹	1.25	0.4921	
	B²	1.75	0.6889	B²	1.75	0.6889	B²	1.6	0.5905	B²	1.5	0.5905	B²	1.5	0.5905	B²	1.5	0.5905	
	B³	1.5	0.5905	B³	1.5	0.5905	B³	1.5	0.5905	B³	1.5	0.5905	B³	1.25	0.4721	B³	1.5	0.5905	
Lowest.....		1.5	0.5905		1.5	0.5905		1.5	0.5905		1.5	0.5905		1.25	0.4921		1.25	0.4921	
Average measurements..	B¹	2.06	0.811	B¹	2.145	0.8444	B¹	2.14	0.8425	B¹	1.890	0.7440	B¹	2.15	0.8464	B¹	2.02	0.7952	
	B²	2.14	0.8425	B²	2.340	0.9212	B²	2.27	0.8956	B²	2.035	0.8011	B²	1.79	0.7047	B²	2.0	0.7874	
	B³	1.07	0.7755	B³	2.120	0.8346	B³	2.11	0.8307	B³	1.860	0.7322	B³	1.825	0.7185	B³	1.91	0.7519	
Average.....		2.056	0.8094		2.201	0.8665		2.173	0.8555		1.928	0.7500		1.921	0.7562		1.976	0.7779	
Measurements above average..			23			41			36			40			37			43	
Measurements below average..			52			34			39			35			38			32	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		MERINO.																	
Catalogue number of samples..		88. HIP.			88. BELLY.			89. SHOULDER..			89. SIDE.			89. HIP.			89. BELLY.		
Length of fiber in crimp .....		1½ inches.			1½ inches.			1¾ inches.			1½ inches.			1½ inches.			1½ inches.		
Number of crimps per inch ....		20			20			20			20			20			20		
Number of section.....		B¹	B²	B³	B¹	B²	B³	B¹	B²	B³	B¹	B²	B³	B¹	B²	B³	B¹	B²	B³
Actual measurement in centi-millimeters.	1.75	2.25	2.0	2.25	2.25	3.25	1.75	1.5	2.0	2.25	2.0	1.75	2.0	2.25	1.75	1.75	1.0	2.5	2.5
	1.25	2.5	1.5	1.75	2.25	1.75	1.5	2.5	1.75	1.5	2.25	2.0	2.0	2.0	1.75	2.25	1.75	2.0	2.75
	1.75	1.75	1.75	1.625	2.5	2.25	1.5	2.25	1.75	2.25	2.0	2.0	1.5	2.0	2.0	2.0	2.0	1.75	2.75
	1.75	2.25	2.0	2.0	1.75	4.0	2.5	2.5	2.0	2.75	3.0	2.0	1.75	2.25	2.5	1.75	1.75	1.75	2.0
	1.75	2.25	2.0	2.25	2.5	2.5	2.0	2.25	2.25	1.5	2.25	4.0	2.25	2.25	1.75	2.5	2.5	2.75	2.0
	2.0	1.75	2.0	1.75	1.5	2.5	2.0	1.5	1.75	1.75	1.5	1.75	1.75	1.75	1.75	1.625	2.5	2.0	2.0
	1.5	2.75	2.0	2.0	2.5	2.75	1.75	2.5	2.35	1.5	2.0	1.75	2.0	1.75	1.75	1.75	2.5	2.25	1.75
	2.25	2.5	1.75	2.25	1.5	3.25	1.75	1.5	1.75	1.75	1.75	1.75	2.0	1.75	2.0	2.0	1.75	2.5	2.0
	2.0	2.25	1.75	2.75	4.75	1.75	1.75	1.25	2.0	2.0	2.0	2.0	2.0	2.0	2.5	1.0	2.0	1.75	2.75
	1.75	2.0	1.75	1.5	1.5	2.0	2.0	2.0	2.0	1.5	2.0	2.25	2.0	2.0	2.25	2.0	2.25	1.75	2.5
	2.0	2.0	2.5	2.25	2.5	2.0	1.75	1.75	2.25	1.75	2.25	2.25	1.75	2.0	2.25	1.75	2.0	2.0	2.5
	2.0	1.75	2.25	1.75	1.75	2.5	1.75	1.75	2.25	2.0	2.0	2.25	1.75	2.0	2.25	1.75	1.25	1.75	2.5
	2.0	1.75	2.5	1.75	1.5	1.75	2.0	1.5	2.0	2.0	2.0	3.25	2.0	1.75	2.25	2.5	2.25	1.75	1.75
	1.75	1.75	2.5	1.75	2.25	2.0	1.75	2.0	1.75	1.75	1.75	1.75	2.25	1.75	3.0	1.75	1.75	1.75	2.0
	2.0	2.25	2.25	2.0	2.0	2.75	2.0	1.75	2.75	2.25	1.75	1.75	2.0	2.25	1.75	1.75	1.75	2.0	1.875
	2.25	2.25	1.5	1.5	2.25	2.0	2.25	2.25	1.5	1.75	1.75	2.75	2.25	2.25	2.0	2.5	2.0	2.0	1.5
	1.5	2.5	1.5	1.75	1.75	1.5	1.75	2.0	2.0	2.0	1.75	2.0	1.75	2.0	1.75	2.0	2.0	2.0	2.0
	2.0	2.0	2.0	2.25	2.25	2.5	2.0	1.75	2.0	1.75	2.25	2.75	1.75	1.5	2.0	1.75	2.0	1.75	2.5
	2.0	2.5	2.5	2.25	2.25	2.0	2.0	2.25	2.25	2.25	2.0	2.5	2.0	2.0	2.0	1.75	2.5	1.75	2.0
	1.75	2.5	2.25	1.75	2.0	2.5	1.75	2.0	2.0	1.5	2.0	1.75	2.0	2.5	2.0	2.0	1.75	2.0	2.0
1.5	2.25	1.75	1.75	2.5	2.5	2.5	2.0	2.0	2.25	2.25	1.5	1.75	1.75	1.5	1.75	1.75	1.5	1.75	
2.0	1.0	1.75	1.75	2.5	1.75	1.625	2.75	2.5	1.75	2.0	1.5	2.0	1.75	2.0	1.75	2.0	1.25	2.0	
1.25	1.5	2.25	2.0	2.0	1.75	1.75	1.75	1.5	1.75	1.75	2.0	2.0	1.75	2.0	1.75	2.0	1.75	1.8	
1.5	1.6	2.75	2.75	2.5	2.0	2.0	1.75	2.0	1.75	1.5	1.75	1.75	1.75	2.0	2.0	2.0	2.25	1.5	
1.5	1.5	2.0	2.25	2.0	2.75	2.0	2.25	1.75	2.0	1.5	2.0	1.75	1.75	1.75	1.5	1.75	2.0	2.0	
Averages .....	1.820	2.076	2.050	2.085	2.815	2.300	1.855	2.133	2.020	1.850	2.120	2.110	1.900	1.900	1.950	1.9050	2.004	2.000	

		88. HIP.			88. BELLY.			89. SHOULDER..			89. SIDE.			89. HIP.			89. BELLY.		
Recapitulation and reduction :		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Maximum measurements.	B¹	2.25	0.8858	B¹	3.75	1.4783	B¹	2.50	0.9642	B¹	2.25	0.8858	B¹	2.50	0.9642	B¹	2.50	0.9642	
	B²	2.75	1.0626	B²	4.75	1.8700	B²	2.75	1.0626	B²	3.00	1.1811	B²	3.25	1.2775	B²	3.00	1.1811	
	B³	2.70	1.0626	B³	4.00	1.5748	B³	3.25	1.2795	B³	4.00	1.5748	B³	4.00	1.5748	B³	3.00	1.1811	
Highest .....		2.75	1.0626		4.75	1.8700		3.25	1.2795		4.00	1.5748		3.25	1.2795		3.00	1.1811	
Minimum measurements.	B¹	1.25	0.4921	B¹	1.50	0.5905	B¹	1.50	0.5905	B¹	1.50	0.5905	B¹	1.50	0.5905	B¹	1.25	0.4921	
	B²	1.00	0.3937	B²	1.50	0.5905	B²	1.25	0.4921	B²	1.50	0.5905	B²	1.50	0.5905	B²	1.50	0.5905	
	B³	1.50	0.5905	B³	1.50	0.5905	B³	1.50	0.5905	B³	1.50	0.5905	B³	1.25	0.4921	B³	1.50	0.5905	
Lowest .....		1.00	0.3937		1.50	0.5905		1.25	0.4921		1.50	0.5905		1.25	0.4921		1.25	0.4921	
Average measurements..	B¹	1.820	0.7165	B¹	2.085	0.8208	B¹	1.855	0.7303	B¹	1.850	0.7283	B¹	1.900	0.7710	B¹	1.905	0.7499	
	B²	2.070	0.8149	B²	2.815	0.8114	B²	2.133	0.8397	B²	2.120	0.8346	B²	1.900	0.7710	B²	2.004	0.8125	
	B³	2.050	0.8070	B³	2.300	0.9055	B³	2.020	0.7952	B³	2.110	0.8307	B³	1.950	0.7677	B³	2.000	0.8120	
Average .....		1.950	0.7795		2.233	0.8791		2.004	0.7889		2.020	0.7976		1.950	0.7700		2.000	0.7999	
Measurements above average .....			43			86			19			19			42			20	
Measurements below average .....			32			39			56			56			33			55	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of samples..		MERINO.																				
		90. SHOULDER.			90. SIDE.			90. HIP.			90. BELLY.			96.				97.				
		1½ inches.			1½ inches.			1¾ inches.			1½ inches.			2 inches.				2½ inches.				
		20.			20.			20.			20.			30.				30.				
Number of section.....		B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B¹.	B².	B³.	B⁴.	
Actual measurement in centimillimeters.		2.5	3.0	1.25	3.5	2.5	1.25	2.0	2.0	2.0	2.0	2.25	3.0	1.25	1.5	1.75	1.25	1.0	1.5	1.0	1.5	1.5
		2.5	2.0	1.75	2.0	2.75	2.0	2.0	1.75	2.75	2.25	2.25	2.25	1.5	1.5	1.5	1.5	1.25	1.5	1.75	1.75	2.0
		1.5	2.0	2.5	2.25	2.75	2.0	3.0	2.75	1.5	2.75	1.25	2.0	1.5	1.5	1.5	1.75	1.0	1.5	1.75	2.5	2.5
		2.25	4.0	1.25	2.0	2.5	2.5	2.25	2.5	3.0	2.0	2.0	2.5	1.5	1.75	1.5	1.5	1.25	1.5	1.75	2.0	2.0
		2.0	2.5	2.25	2.0	2.0	2.25	1.75	2.0	2.25	1.75	2.0	2.5	2.25	2.25	2.25	1.75	1.0	1.5	1.5	2.0	2.0
		2.0	2.25	2.25	1.5	2.5	2.25	2.0	2.0	2.5	2.25	2.0	2.5	2.25	2.25	2.25	1.75	1.0	1.5	1.5	2.0	2.0
		2.75	2.0	2.5	2.0	2.5	2.0	2.25	2.0	1.75	2.0	2.25	2.0	1.75	1.75	2.5	2.0	1.0	1.75	2.0	2.0	2.75
		2.0	2.5	2.0	2.5	2.0	2.25	1.75	2.5	1.5	3.0	2.0	3.25	1.5	1.5	3.25	1.25	1.0	1.5	1.5	1.5	1.5
		2.0	2.0	2.0	2.75	2.75	2.0	2.25	2.0	2.25	2.0	2.75	2.0	1.5	1.25	2.75	2.0	1.0	2.0	1.25	1.75	1.75
		2.5	2.75	2.0	2.0	2.25	2.0	2.0	2.25	2.75	1.75	3.5	2.5	1.25	1.5	2.0	1.25	1.0	1.5	1.75	1.75	1.75
		1.75	2.75	1.5	2.25	2.0	3.0	1.75	2.75	2.25	2.0	2.0	2.0	1.0	1.5	2.0	1.5	1.0	2.0	2.0	2.0	1.75
		2.0	2.25	2.0	2.0	2.75	2.0	1.75	3.0	2.0	1.75	2.0	2.25	1.5	1.5	2.25	1.5	1.25	1.5	1.75	1.5	1.5
		2.75	2.5	2.5	2.75	2.0	2.0	2.5	3.0	1.75	3.0	3.75	2.0	1.25	1.25	1.75	1.25	1.0	1.75	1.5	2.25	2.25
		2.5	2.5	2.5	2.25	2.5	1.75	2.25	2.25	1.5	2.5	2.0	2.25	1.25	1.25	1.75	1.25	1.125	2.0	2.25	2.00	2.00
		2.0	2.0	2.0	2.5	2.5	2.25	2.25	2.25	2.0	1.75	3.0	2.75	1.5	1.5	1.75	1.25	1.0	1.75	1.5	2.0	2.0
		2.0	2.0	1.5	2.0	2.5	2.75	2.5	2.5	1.75	1.75	3.5	1.75	1.5	1.5	1.25	1.75	1.25	1.5	1.0	1.75	1.75
		2.0	3.25	2.5	3.25	2.5	2.25	1.75	3.0	2.5	2.5	2.5	2.5	1.25	1.75	1.25	2.0	1.0	2.0	1.5	1.5	1.5
		1.75	1.75	1.75	2.25	2.5	2.5	2.0	2.0	2.0	2.5	2.5	2.5	1.25	1.25	1.75	1.5	1.25	1.5	1.5	1.5	1.5
		3.0	2.0	1.5	2.5	1.75	2.75	2.0	2.75	2.0	1.75	2.0	2.0	1.5	1.5	1.25	1.75	1.25	1.75	1.75	1.5	1.5
		2.25	1.75	2.25	2.25	2.25	2.0	2.25	2.0	2.0	2.0	2.75	2.75	1.5	1.5	1.5	1.25	1.25	1.0	1.5	2.0	2.0
		2.5	2.0	1.5	2.0	2.0	2.0	2.25	2.75	2.5	2.5	3.0	3.0	1.375	1.5	1.5	1.25	1.5	1.0	1.0	1.75	1.75
		3.0	2.0	3.0	2.5	1.75	1.75	2.25	2.25	2.0	1.5	2.5	2.25	1.75	1.5	1.75	1.5	1.0	1.5	1.25	1.5	1.5
		2.75	2.25	2.5	2.0	2.25	2.25	2.55	1.0	1.75	2.0	2.75	2.0	1.5	1.25	2.0	1.25	1.0	1.5	1.25	1.5	1.5
		2.0	2.0	1.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.25	1.5	1.5	1.0	1.0	1.0	1.5	1.25	2.0	2.0
		1.5	1.75	2.25	2.25	2.0	2.25	2.25	1.75	2.25	2.25	2.0	3.0	1.375	1.5	1.75	1.5	1.0	1.5	1.0	1.75	1.75
Averages.....		2.270	2.310	2.020	2.200	2.270	2.230	2.140	2.340	2.100	2.130	2.490	2.410	1.40	1.45	1.525	1.516	1.070	1.667	1.431	1.800	1.800

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.						
Maximum measurements.	B¹	3.00	1.1811	B¹	3.50	1.3779	B¹	3.00	1.1811	B¹	3.00	1.1311	B¹	1.75	0.6889
	B²	4.00	1.5748	B²	2.75	1.0826	B²	3.00	1.1811	B²	3.75	1.4763	B²	1.75	0.6889
	B³	3.00	1.1811	B³	3.00	1.1811	B³	3.00	1.1811	B³	3.25	1.2795	B³	2.00	0.7874
Highest.....		4.00	1.5748		3.50	1.3779		3.00	1.1811		3.75	1.4763		2.00	0.7874
Minimum measurements.	B¹	1.50	0.5905	B¹	1.50	0.5905	B¹	1.75	0.6889	B¹	1.50	0.5905	B¹	1.00	0.3937
	B²	1.75	0.6889	B²	1.75	0.6889	B²	1.75	0.6889	B²	1.25	0.4921	B²	1.25	0.4921
	B³	1.25	0.4921	B³	1.25	0.4921	B³	1.50	0.5905	B³	1.75	0.6889	B³	1.09	0.3937
Lowest.....		1.25	0.4921		1.25	0.4921		1.50	0.5905		1.25	0.4921		1.09	0.3937
Average measurements..	B¹	2.270	0.8936	B¹	2.290	0.9015	B¹	2.140	0.8425	B¹	2.130	0.8385	B¹	1.400	0.5511
	B²	2.310	0.9094	B²	2.270	0.8996	B²	2.340	0.9212	B²	2.490	0.9808	B²	1.450	0.5765
	B³	2.020	0.7952	B³	2.290	0.8779	B³	2.100	0.8267	B³	2.410	0.9488	B³	1.625	0.6993
Average.....		2.200	0.8061		2.263	0.8909		2.198	0.8633		1.343	0.9224		1.472	0.5795
Measurements above average..		36			26			36			32			84	
Measurements below average..		39			40			39			43			36	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		MERINO.																			
Catalogue number of samples..		98.				99.					99 A.					100.					
Length of fiber in crimp.....		1½ inches.				2¼ inches.					2½ inches.					1¾ inches.					
Number of crimps per inch....		30.				26.					30.					30.					
Number of section .....		B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.	B⁵.	B¹.	B².	B³.	B⁴.	B⁵.	B¹.	B².	B³.	B⁴.	B⁵.	
Actual measurement in centimillimeters.	1.0	1.25	2.0	1.5	1.75	1.5	2.0	2.0	1.75	1.25	1.5	1.75	2.0	1.75	1.75	1.75	1.25	1.25	2.0	2.0	
	1.25	1.75	2.0	2.0	1.5	1.5	1.5	1.25	1.75	1.25	1.5	1.75	1.5	2.0	1.5	1.5	1.5	1.5	2.0	2.0	
	1.0	2.0	1.5	2.0	1.75	1.25	1.5	1.75	3.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.75	1.25	2.0
	1.0	1.25	2.5	2.0	1.75	1.25	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	1.75	2.0	1.5	1.5	1.5	1.5	1.5	1.6	1.5	1.5	1.75	1.5	1.75	1.25	1.5	1.25	1.5	1.5	1.5	1.5	1.5
	1.0	1.5	1.75	1.75	1.5	1.5	1.5	1.5	2.0	2.0	1.75	1.5	1.75	1.5	1.75	1.5	1.75	1.5	1.5	1.5	1.5
	1.5	1.75	2.0	2.0	2.0	1.5	2.0	1.75	1.75	1.5	1.5	2.0	2.0	1.75	1.75	1.5	1.75	1.5	1.5	1.75	2.0
	1.5	1.5	2.0	1.5	1.5	1.5	1.5	1.5	2.0	1.75	1.75	1.75	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.75
	1.5	2.0	2.0	2.0	1.5	1.5	1.5	1.5	2.0	1.75	1.75	1.5	1.0	1.75	1.75	1.5	1.25	1.25	1.5	1.75	2.0
	1.5	2.25	1.5	1.75	1.0	2.0	1.75	1.75	1.75	1.5	1.5	2.0	1.5	2.0	1.5	1.75	1.5	1.5	1.75	1.25	1.5
	1.75	1.75	1.5	2.0	1.5	1.5	1.5	1.5	1.75	2.0	1.25	2.75	1.75	1.5	1.5	1.25	1.25	1.5	1.5	1.5	1.5
	1.5	1.75	1.5	2.0	1.5	2.0	1.5	2.0	1.75	1.25	1.25	1.5	1.5	1.75	1.5	1.5	1.0	1.5	1.5	1.5	1.5
	1.25	2.0	2.0	1.25	1.5	1.75	1.75	2.0	2.0	1.0	1.0	1.5	1.75	1.5	1.5	1.0	1.0	1.0	1.0	1.5	1.5
	1.5	1.75	1.25	1.75	1.25	1.75	1.5	1.5	1.75	1.5	1.25	1.25	1.5	1.75	1.75	1.75	2.0	1.5	1.5	1.5	1.75
	1.0	2.25	2.0	1.5	1.5	1.5	1.5	1.5	2.0	2.0	1.75	1.25	1.25	1.75	1.75	2.0	1.25	1.5	1.5	1.5	1.5
	1.0	1.5	2.0	2.0	1.5	1.5	1.5	1.5	2.0	2.25	2.0	1.25	1.75	1.5	1.75	1.75	1.25	1.75	1.75	1.5	1.5
	1.5	1.75	2.0	2.0	1.5	1.5	1.5	1.5	2.0	2.0	2.0	1.25	1.5	1.75	1.5	1.5	1.5	1.25	1.5	1.5	1.5
	1.5	2.0	2.0	2.0	1.5	1.5	1.5	1.5	1.75	1.5	1.5	1.5	1.5	1.25	1.75	1.5	1.0	1.5	1.5	1.5	1.75
	1.25	2.0	2.0	2.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.25	1.75	1.75	1.25	1.25	1.75	2.0	1.5
	1.25	2.0	1.75	2.0	1.5	1.25	1.5	1.25	2.0	1.5	1.25	1.25	1.75	1.5	1.75	1.5	1.0	1.5	1.5	1.5	1.5
	1.25	1.75	1.25	1.5	1.75	1.5	1.5	1.5	2.0	1.25	1.5	1.75	1.75	1.5	1.5	1.0	1.0	1.5	1.75	1.5	2.25
	1.25	1.75	2.0	1.5	1.0	2.0	1.75	3.0	2.0	1.25	1.5	1.5	1.75	1.5	1.5	1.25	1.5	1.5	1.5	1.5	1.5
	1.25	1.5	2.0	2.25	1.25	1.75	1.25	1.75	2.0	1.5	1.75	1.75	1.75	1.75	1.75	1.5	1.5	1.5	1.5	1.5	1.5
	1.25	2.0	2.0	2.25	1.5	1.5	1.5	1.5	2.0	1.5	1.5	1.5	1.75	1.75	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	1.5	1.5	1.75	1.75	1.75	2.0	1.0	2.0	2.0	1.25	1.75	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.25	1.5
1.0	2.0	1.5	1.5	1.0	1.75	1.25	2.0	2.0	1.5	1.5	1.5	1.5	1.0	2.0	1.75	1.5	1.5	1.5	1.75	1.5	
1.0	2.0	2.0	1.75	1.5	1.75	2.25	1.5	2.25	0.75	1.5	1.5	1.5	1.25	1.5	1.25	2.0	1.75	1.5	1.5	1.5	
1.75	1.5	2.0	1.75	1.5	2.0	1.5	1.5	2.25	1.5	1.5	1.5	1.5	1.25	1.5	1.5	1.5	1.5	1.5	1.5	1.5	
1.25	2.0	1.5	2.0	2.0	2.0	2.0	1.5	1.0	1.5	1.5	1.5	1.75	1.5	1.25	1.5	1.5	1.5	1.5	1.5	1.5	
Averages .....	1.316	1.800	1.825	1.808	1.508	1.606	1.725	1.800	1.825	1.350	1.550	1.725	1.506	1.675	1.400	1.508	1.525	1.541	1.641		

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:												
Maximum measurements.	B¹	1.75	0.6889	B¹	2.0	0.7874	B¹	1.75	0.6890	B¹	2.0	0.7874
	B²	1.25	0.8858	B²	2.0	0.7874	B²	2.0	0.7874	B²	1.75	0.7874
	B³	1.5	0.9942	B³	2.25	0.8858	B³	2.25	0.8858	B³	2.0	0.7874
	B⁴	1.25	0.8858	B⁴	2.25	0.8858	B⁴	2.0	0.7874	B⁴	2.25	0.8858
Highest .....		2.5	0.9642		2.25	0.8858		2.25	0.8858		2.25	0.8858
Minimum measurements.	B¹	1.0	0.3937	B¹	1.0	0.3937	B¹	0.75	0.2972	B¹	1.0	0.3937
	B²	1.25	0.4921	B²	1.25	0.4921	B²	1.25	0.4921	B²	1.25	0.4921
	B³	1.25	0.4921	B³	1.0	0.3937	B³	1.5	0.5905	B³	1.0	0.3937
	B⁴	1.25	0.4921	B⁴	1.25	0.4921	B⁴	1.0	0.3937	B⁴	1.0	0.3937
Lowest .....		1.0	0.3937		1.0	0.3937		0.75	0.2972		1.0	0.3937
Average measurements..	B¹	1.316	0.5181	B¹	1.508	0.5936	B¹	1.350	0.5314	B¹	1.400	0.5511
	B²	1.800	0.7080	B²	1.606	0.6539	B²	1.550	0.6102	B²	1.508	0.5936
	B³	1.825	0.7185	B³	1.725	0.6791	B³	1.725	0.6701	B³	1.525	0.6063
	B⁴	1.808	0.7118	B⁴	1.800	0.7086	B⁴	1.566	0.5165	B⁴	1.541	0.6066
Average .....		1.687	0.6641		1.704	0.6708		1.573	0.6192		1.523	0.5996
Measurements above average..		68			70			57			32	
Measurements below average..		52			71			93			118	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		MERINO.																	
Catalogue number of samples..		101.					102.				103.					104.			
Length of fiber in crimp .....		2½ inches.					1¾ inches.				2¾ inches.					1¾ inches.			
Number of crimps per inch....		30.					30.				25.					25.			
Number of section.....		B¹.	B².	B³.	B⁴.	B⁵.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.	B⁵.	B¹.	B².	B³.	B⁴.
Actual measurement in centimillimeters.	1.75	1.75	1.5	1.5	1.5	1.75	1.25	1.5	1.5	2.0	1.5	2.75	2.25	2.5	1.25	2.0	1.5	1.5	
	1.5	1.5	1.5	1.75	1.5	1.5	1.5	1.25	2.0	1.75	2.0	1.75	2.0	3.0	2.0	2.5	2.25	2.0	
	1.25	1.5	1.5	1.75	1.5	1.5	1.75	1.25	1.5	1.25	1.5	1.5	3.0	2.0	3.5	1.5	2.5	2.25	
	1.25	1.75	1.75	1.5	1.5	1.5	1.5	1.05	1.75	1.5	2.0	1.5	2.25	2.0	2.0	2.0	2.0	1.5	
	1.5	1.25	1.75	1.25	1.25	1.25	1.5	1.25	1.75	1.5	2.0	1.5	2.5	2.0	2.25	1.75	2.25	1.75	
	1.5	1.5	1.5	2.0	1.5	1.75	1.5	1.5	1.5	1.5	1.25	2.5	2.0	2.0	2.25	1.5	2.5	2.0	
	1.75	1.5	1.75	1.5	1.75	1.25	1.25	1.75	1.5	1.5	1.5	1.5	2.5	2.0	2.25	2.25	2.0	1.75	
	1.5	1.5	1.5	1.5	1.75	2.0	1.25	1.5	1.5	2.0	1.5	2.5	2.0	2.0	2.0	1.5	1.75	2.0	
	1.5	1.5	1.75	1.5	1.5	1.75	1.5	1.5	1.75	2.25	2.25	2.0	2.0	2.0	1.75	2.25	1.5	1.5	
	1.0	1.5	1.5	1.5	1.5	2.0	1.5	1.5	1.5	1.75	1.5	1.5	2.0	2.0	2.0	1.75	2.0	1.75	
	1.25	1.75	1.5	1.5	1.0	2.0	1.0	1.75	1.5	1.5	1.5	1.5	2.25	2.25	2.0	2.25	1.75	1.5	
	1.5	1.75	1.5	1.5	1.25	1.0	2.0	1.75	1.75	1.5	1.5	1.5	2.25	2.25	2.0	1.75	1.75	1.5	
	1.25	1.75	1.25	1.5	1.5	2.25	1.5	1.5	2.0	1.5	1.25	2.0	1.75	2.0	1.75	2.0	1.75	1.75	
	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.25	2.0	1.5	1.25	1.5	2.0	2.0	1.75	
	1.5	1.5	1.5	1.5	1.5	2.0	1.0	1.25	1.75	1.75	1.75	1.75	2.25	2.0	2.0	2.0	1.75	1.75	
	1.5	1.75	1.75	1.75	1.5	1.5	1.5	1.5	1.75	1.5	2.0	1.75	2.25	2.0	1.5	1.75	1.75	2.0	
	1.5	1.75	2.0	1.5	1.5	1.5	1.3	2.5	1.75	1.75	1.5	1.5	1.75	1.75	1.75	1.75	1.75	1.5	
	1.5	1.25	1.5	1.5	1.5	1.25	1.75	2.0	1.75	2.0	1.75	2.0	1.75	2.25	2.0	1.5	3.0	2.5	
	1.25	1.5	1.5	1.25	1.5	1.25	1.75	1.5	1.5	1.5	1.5	1.75	1.75	1.75	1.5	1.5	2.25	2.25	
	1.5	1.5	1.5	1.5	1.5	1.5	1.25	1.5	1.75	1.5	1.25	1.5	1.75	1.75	1.5	1.5	1.5	1.75	
1.25	1.75	1.3	1.75	1.5	1.3	1.25	1.75	1.5	1.5	1.25	1.75	1.5	1.75	1.5	2.0	2.0	1.75		
1.5	1.6	1.75	1.5	1.25	1.3	1.3	1.75	1.75	2.0	1.75	2.0	2.0	2.0	2.0	1.5	1.5	1.75		
1.5	1.5	1.75	1.3	1.5	1.5	1.75	1.25	2.0	1.5	1.75	2.0	1.25	1.75	1.75	2.0	2.0	1.75		
1.5	1.5	1.75	1.5	1.5	1.5	1.5	1.25	2.0	1.25	1.5	1.75	2.0	1.75	2.0	1.5	2.0	1.75		
1.5	1.6	1.5	1.75	1.25	1.5	1.5	1.5	1.5	1.5	1.5	2.0	2.25	1.75	1.75	1.75	1.75	1.5		
1.25	1.75	1.75	1.5	1.75	1.5	1.5	1.5	1.75	1.75	1.75	2.5	2.0	2.0	2.0	1.75	1.75	1.5		
1.25	1.5	1.25	1.5	1.5	2.0	2.25	1.75	1.75	1.5	1.5	2.5	1.75	1.75	2.0	2.5	2.5	1.5		
1.0	1.5	1.25	1.75	1.75	1.5	1.25	1.75	2.0	1.75	1.25	2.25	1.75	2.0	1.5	2.0	2.0	1.5		
1.5	1.5	1.25	1.5	1.25	1.5	1.5	1.5	2.0	2.0	1.5	1.5	2.0	2.0	1.75	1.75	1.75	1.25		
1.5	1.5	1.5	1.25	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.75	2.0	2.0	1.75	2.0	1.5		
Averages .....		1.425	1.550	1.558	1.541	1.475	1.625	1.438	1.633	1.683	1.783	1.630	2.150	1.991	1.983	1.816	1.975	1.866	1.666

		101.			102.			103.			104.		
Recapitulation and reduction:		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Maximum measurements.	B¹	1.75	0.6889	B¹	2.25	0.8858	B¹	2.0	0.7874	B¹	2.5	0.9842	
	B²	1.75	0.6889	B²	2.25	0.8858	B²	1.75	0.6889	B²	3.0	1.1811	
	B³	2.0	0.7874	B³	2.5	0.9842	B³	3.0	1.1811	B³	2.5	0.9842	
	B⁴	2.0	0.7874	B⁴	2.0	0.7874	B⁴	3.0	1.1811	B⁴	2.5	0.9842	
	B⁵	1.75	0.6889				B⁵	3.5	1.3779				
Highest .....		2.0	0.7874		2.5	0.9842		3.5	1.3779		3.0	1.1811	
Minimum measurements.	B¹	1.1	0.3937	B¹	1.0	0.3937	B¹	1.25	0.4921	B¹	1.25	0.4921	
	B²	1.25	0.4921	B²	1.0	0.3937	B²	1.25	0.4921	B²	1.5	0.5905	
	B³	1.25	0.4921	B³	1.25	0.4921	B³	1.5	0.5905	B³	1.5	0.5905	
	B⁴	1.25	0.4921	B⁴	1.0	0.3937	B⁴	1.25	0.4921	B⁴	1.25	0.4921	
	B⁵	1.0	0.3937				B⁵	1.5	0.5905				
Lowest .....		1.0	0.3937		1.0	0.3937		1.25	0.4921		1.25	0.4921	
Average measurements.	B¹	1.425	0.5610	B¹	1.625	0.6397	B¹	1.733	0.6322	B¹	1.816	0.7149	
	B²	1.550	0.6102	B²	1.438	0.5739	B²	1.600	0.6299	B²	1.975	0.7775	
	B³	1.558	0.6138	B³	1.633	0.6429	B³	2.150	0.8404	B³	1.866	0.7346	
	B⁴	1.541	0.6066	B⁴	1.683	0.6625	B⁴	1.991	0.7838	B⁴	1.666	0.6559	
	B⁵	1.475	0.5807				B⁵	1.983	0.7807				
Average .....		1.500	0.5840		1.599	0.6295		1.891	0.7444		1.830	0.7201	
Measurements above average .....													
Measurements below average .....			32			47			70			44	
			118			73			74			76	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of samples..	MERINO.												SPANISH MERINO.			
	104. A.				102.		103.			236.			1.			
	2½ inches.				1½ inches.		1¼ inches.			2¼ inches.			1½ inches.			
Length of fiber in crimp.....	25.				28.		26.			22.			25.			
Number of crimps per inch....	25.				28.		26.			22.			25.			
Number of section .....	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .
1.25	2.25	1.25	1.25	1.375	1.5	1.875	1.125	1.5	2.25	2.75	2.75	2.25	2.25	2.0	2.25	2.0
1.6	2.0	1.5	2.25	1.75	1.5	1.5	2.0	1.5	2.0	1.575	1.75	2.0	1.75	2.0	1.75	1.75
1.75	1.25	1.75	1.75	1.125	1.75	1.8	1.875	1.625	1.75	2.125	1.875	1.75	2.0	1.75	1.75	1.75
1.25	1.75	1.5	2.6	1.75	1.75	1.875	1.5	2.125	1.875	1.75	2.25	1.875	1.75	1.75	1.75	1.75
1.25	1.5	2.25	1.5	1.875	1.75	1.5	1.5	1.75	1.75	1.75	1.75	2.0	2.0	2.0	2.0	2.0
2.0	1.75	2.75	2.0	1.75	1.75	1.75	2.0	1.875	2.025	2.875	2.375	2.0	2.0	2.0	2.0	2.0
1.25	1.5	2.0	1.5	1.5	1.25	1.5	1.875	2.0	2.0	1.875	1.875	2.0	2.0	2.0	2.0	2.0
1.25	2.25	1.75	1.75	1.625	1.5	1.625	1.625	1.625	2.0	1.5	2.0	1.875	1.75	1.75	1.5	1.5
1.25	1.75	1.75	2.25	1.75	1.625	1.5	1.875	1.75	1.875	1.875	2.75	2.375	2.0	2.0	1.75	1.5
1.25	1.75	1.5	1.5	1.5	1.75	1.875	1.875	1.5	1.625	1.75	1.875	1.75	1.6	1.75	2.5	1.5
2.0	1.75	2.0	2.0	1.75	1.25	1.625	1.875	1.75	2.25	2.0	1.75	1.25	1.25	2.0	1.5	2.0
1.75	2.25	2.0	2.0	1.375	1.5	1.6	1.875	1.375	1.875	2.5	1.675	1.75	1.75	2.0	2.25	1.6
1.25	1.75	2.5	2.0	2.0	1.375	1.6	1.625	1.75	1.625	2.0	2.25	1.75	1.75	2.0	2.0	2.25
1.0	1.75	1.5	2.0	1.875	1.375	1.5	1.5	2.375	1.875	1.875	1.875	1.5	1.5	2.0	2.0	2.0
1.25	1.5	2.0	1.75	1.25	1.125	1.75	1.625	2.375	1.875	2.125	2.5	1.75	1.75	2.0	2.0	2.0
1.5	1.75	1.5	2.0	1.5	1.375	1.5	1.875	1.75	1.75	2.0	1.875	1.25	1.25	2.0	2.0	2.0
1.75	1.25	2.0	2.5	1.875	1.5	1.875	1.75	1.625	2.125	1.875	2.0	1.75	1.75	2.0	2.0	2.25
1.25	1.5	1.5	2.25	2.0	1.375	1.625	1.625	2.625	2.0	2.625	2.0	2.0	2.0	2.0	2.0	2.0
1.25	1.5	1.75	2.0	1.5	1.875	1.75	1.25	1.625	2.0	2.0	1.875	2.0	1.75	2.0	2.0	2.0
1.5	1.75	1.5	2.0	1.75	1.25	1.6	1.875	1.375	1.875	1.5	2.0	1.75	1.75	2.0	2.0	2.0
1.25	1.75	2.0	1.75	1.875	1.375	1.5	1.6	1.375	1.75	1.25	1.75	1.25	2.0	1.75	2.0	2.0
1.5	1.75	2.0	2.0	1.5	1.375	1.25	1.6	1.375	1.625	1.75	1.75	1.75	1.75	2.0	2.0	2.0
1.75	1.5	2.0	2.0	1.5	1.5	1.5	1.75	1.6	1.5	2.0	2.75	1.5	1.5	2.0	2.0	1.75
1.25	1.5	2.25	2.25	1.125	1.625	1.375	2.6	1.875	2.375	2.0	1.75	1.5	1.5	1.75	1.75	1.5
1.25	1.5	2.0	2.0	1.125	1.75	1.25	2.125	1.625	1.75	1.6	1.75	2.0	1.75	2.0	2.0	1.6
1.5	1.75	1.5	2.25	2.0	1.875	1.75	1.875	1.6	1.75	2.0	3.375	1.0	1.0	1.75	1.75	1.5
1.75	2.0	2.5	1.75	2.0	1.875	1.875	1.925	1.75	1.875	2.875	1.75	2.0	2.0	2.0	2.25	2.0
1.6	2.25	2.0	2.0	1.75	1.75	1.125	1.375	1.5	2.0	2.75	2.125	1.5	1.5	2.0	1.6	1.75
1.5	1.75	1.5	2.0	1.275	1.625	1.5	1.5	2.5	1.5	1.625	1.875	1.5	2.0	2.0	1.6	1.5
1.5	1.5	1.75	2.25	1.625	1.5	1.5	1.375	1.5	2.25	1.75	2.25	2.0	2.0	1.5	1.6	1.5
Averages.....	1.441	1.733	1.858	2.000	1.568	1.543	1.518	1.658	1.083	1.083	2.046	2.088	1.750	1.991	1.850	1.816

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.		No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.		No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.	
		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.						
Maximum measurements.	B <sup>1</sup>	2.0	0.7874	B <sup>1</sup>	2.0	0.7874	B <sup>1</sup>	1.875	0.7381	B <sup>1</sup>	2.625	1.0334	B <sup>1</sup>	2.25	0.8858			
	B <sup>2</sup>	2.25	0.8888	B <sup>2</sup>	1.875	0.7381	B <sup>2</sup>	2.5	0.9843	B <sup>2</sup>	2.875	1.1319	B <sup>2</sup>	2.0	1.1811			
	B <sup>3</sup>	2.75	1.0826	B <sup>3</sup>	.....	.....	B <sup>3</sup>	2.5	0.9842	B <sup>3</sup>	3.375	1.3287	B <sup>3</sup>	2.5	0.9842			
	B <sup>4</sup>	2.5	0.9842	B <sup>4</sup>	.....	.....	B <sup>4</sup>	.....	.....	B <sup>4</sup>	.....	.....	B <sup>4</sup>	2.5	0.9842			
Highest.....	.....	2.75	1.0826	.....	2.0	0.7874	.....	2.5	0.9842	.....	3.375	1.3287	.....	3.0	1.1811			
Minimum measurements.	B <sup>1</sup>	1.0	0.3937	B <sup>1</sup>	1.125	0.4429	B <sup>1</sup>	1.25	0.4921	B <sup>1</sup>	1.5	0.5905	B <sup>1</sup>	1.25	0.4921			
	B <sup>2</sup>	1.25	0.4921	B <sup>2</sup>	1.125	0.4429	B <sup>2</sup>	1.125	0.4429	B <sup>2</sup>	1.375	0.5413	B <sup>2</sup>	1.5	0.5905			
	B <sup>3</sup>	1.25	0.4921	B <sup>3</sup>	.....	.....	B <sup>3</sup>	1.375	0.5413	B <sup>3</sup>	1.25	0.4921	B <sup>3</sup>	1.5	0.5905			
	B <sup>4</sup>	1.25	0.4921	B <sup>4</sup>	.....	.....	B <sup>4</sup>	.....	.....	B <sup>4</sup>	.....	.....	B <sup>4</sup>	1.5	0.5905			
Lowest.....	.....	1.0	0.3937	.....	1.125	0.4429	.....	1.125	0.4429	.....	1.25	0.4921	.....	1.25	0.4921			
Average measurements..	B <sup>1</sup>	1.441	0.5673	B <sup>1</sup>	1.568	0.6173	B <sup>1</sup>	1.518	0.5976	B <sup>1</sup>	1.983	0.7846	B <sup>1</sup>	1.750	0.6869			
	B <sup>2</sup>	1.733	0.6822	B <sup>2</sup>	1.543	0.6074	B <sup>2</sup>	1.658	0.6527	B <sup>2</sup>	2.046	0.8055	B <sup>2</sup>	1.991	0.7838			
	B <sup>3</sup>	1.858	0.7314	B <sup>3</sup>	.....	.....	B <sup>3</sup>	1.083	0.6625	B <sup>3</sup>	2.088	0.8220	B <sup>3</sup>	1.850	0.7283			
	B <sup>4</sup>	2.000	0.7874	B <sup>4</sup>	.....	.....	B <sup>4</sup>	.....	.....	B <sup>4</sup>	.....	.....	B <sup>4</sup>	1.816	0.7149			
Average.....	.....	1.758	0.6921	.....	1.555	0.6122	.....	1.610	0.6374	.....	2.022	0.7800	.....	1.851	0.7285			
Measurements above average..	.....	44	.....	34	.....	43	.....	29	.....	.....	29	.....	.....	73	.....			
Measurements below average..	.....	76	.....	26	.....	47	.....	61	.....	.....	61	.....	.....	77	.....			



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		SPANISH MERINO.																			
Catalogue number of samples..		5.				105.					106.				115.						
Length of fiber in crimp.....		1½ inches.				2½ inches.					2½ inches.				3½ inches.						
Number of crimps per inch....		25.				—					—				—						
Number of section.....		B¹	B²	B³	B⁴	B¹	B²	B³	B⁴	B⁵	D¹	D²	D³	D⁴	B¹	B²	B³	B⁴	B⁵	B⁶	
Actual measurement in centimillimeters.	2.0	1.75	2.5	1.5	1.5	1.75	1.25	1.75	1.5	1.5	2.0	2.0	1.75	2.5	2.375	1.75	1.75	1.75	1.75	3.0	
	2.0	2.0	3.0	1.75	2.0	2.0	2.25	1.75	1.75	2.0	1.75	2.25	1.5	2.5	3.0	1.75	2.0	3.0	3.0	4.0	
	2.0	2.5	2.0	1.5	2.0	1.5	1.75	2.5	1.25	1.5	1.75	2.0	2.0	2.125	2.0	1.5	3.25	1.5	2.25	2.25	
	2.0	2.0	1.5	1.25	1.5	1.25	1.75	1.75	2.0	1.5	2.0	2.0	2.0	2.125	2.25	1.875	1.625	2.25	4.5	4.5	
	2.0	1.75	2.5	1.25	1.5	1.5	1.5	2.25	2.0	1.75	2.0	2.25	2.0	1.75	2.25	1.75	2.75	2.0	2.5	2.75	
	2.0	2.0	2.0	1.5	1.5	1.25	2.0	2.0	1.75	1.75	2.0	2.0	2.0	2.0	2.0	2.0	2.5	2.25	2.0	2.5	
	2.25	2.0	2.0	2.0	1.25	1.25	1.75	2.0	2.0	2.0	2.0	2.0	2.0	2.25	2.5	2.0	2.5	2.5	4.0	2.5	
	1.75	1.75	2.0	2.25	1.75	1.5	1.5	2.0	2.0	2.0	2.0	1.75	2.0	1.5	2.25	1.75	1.625	2.0	2.375	1.75	
	1.75	2.5	2.0	1.5	1.25	1.5	1.25	2.0	2.25	2.0	2.0	1.5	2.0	1.5	2.375	2.625	2.5	2.0	2.0	1.875	
	2.25	2.0	2.0	2.0	1.75	1.25	1.25	2.0	2.0	2.0	1.75	2.0	2.25	1.75	1.5	2.25	2.0	1.625	2.0	2.25	
	2.5	1.5	2.0	1.5	1.75	1.5	2.0	2.0	2.0	2.0	2.0	2.25	2.25	1.25	2.25	1.75	1.25	2.0	1.875	2.5	
	1.75	2.0	2.25	1.75	1.75	1.5	2.0	2.0	1.5	2.0	2.0	2.0	2.0	1.5	2.25	2.0	2.25	2.5	3.0	2.0	
	2.0	2.0	2.25	1.5	1.5	2.0	2.0	2.0	1.75	1.75	2.0	1.75	2.0	2.0	2.125	2.375	2.5	2.25	1.25	3.75	
	2.25	2.25	1.75	1.75	1.25	1.75	1.75	1.75	1.75	1.5	1.75	2.25	2.25	2.5	1.75	2.25	2.125	2.25	2.125	3.25	
	2.25	1.75	2.25	2.0	1.75	2.0	2.0	1.5	1.75	2.25	2.25	2.25	2.5	1.25	2.125	2.0	2.25	1.625	2.0	1.75	
	2.5	2.25	1.75	2.0	1.25	1.75	1.75	1.5	2.0	2.0	2.0	2.0	2.25	1.75	2.0	2.25	2.0	1.5	2.25	3.75	
	1.75	2.25	2.25	1.75	1.75	1.5	1.25	2.25	2.25	2.0	1.5	2.5	1.5	1.75	2.375	2.5	2.75	2.0	2.0	2.5	
	2.0	2.0	2.25	1.5	1.25	2.0	1.5	1.75	2.0	2.0	2.0	2.25	1.5	1.75	2.375	2.0	2.75	2.25	3.0	2.0	
	1.75	2.25	1.75	2.0	1.75	1.25	2.25	1.5	1.75	2.0	2.0	1.5	2.25	2.25	1.875	2.0	2.75	2.25	1.875	2.25	
	1.75	1.75	2.25	1.75	1.75	1.5	2.0	2.0	1.5	2.0	2.0	2.0	2.5	1.5	1.875	4.0	1.25	2.5	2.5	2.0	
1.5	1.75	2.25	2.0	1.5	1.75	2.0	2.0	2.25	2.25	2.0	2.5	2.0	2.5	2.25	2.0	2.25	2.5	2.5	3.0		
1.5	1.75	2.0	1.25	1.25	1.75	1.75	1.5	1.75	2.0	2.0	2.0	2.0	1.5	2.25	2.0	2.375	2.5	2.5	2.0		
2.0	2.25	1.75	1.75	1.5	1.5	2.5	2.0	1.5	1.25	2.25	2.0	2.25	2.0	2.0	2.25	2.0	1.5	3.125	1.625		
2.0	1.75	2.25	2.0	1.25	1.75	2.0	2.0	1.5	1.5	1.75	2.5	2.5	1.75	2.25	3.75	2.0	1.5	2.0	2.0		
1.5	1.75	2.0	2.0	1.5	1.5	1.5	2.0	1.75	1.75	2.0	2.0	2.0	1.75	2.0	2.5	2.0	1.5	2.375	3.25		
1.5	2.5	1.5	1.75	1.5	1.5	1.75	2.0	1.75	2.25	2.0	2.0	2.0	1.5	2.25	1.5	3.5	3.0	3.25	2.25		
Averages.....	1.950	2.008	2.041	1.725	1.508	1.583	1.800	1.916	1.766	1.817	2.033	2.150	1.741	2.293	2.329	2.279	2.125	2.358	2.508		

Recapitulation and reduction:		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Maximum measurements.	B¹	2.25	0.8858	B¹	2.0	0.7874	B¹	2.25	0.8858	B¹	2.75	1.0826	
	B²	2.50	0.9842	B²	2.0	0.7874	B²	2.5	0.9842	B²	4.0	1.5748	
	B³	3.00	1.1811	B³	2.5	0.9842	B³	3.0	1.1811	B³	3.5	1.3779	
	B⁴	2.25	0.8858	B⁴	2.25	0.8858	B⁴	2.5	0.9842	B⁴	3.5	1.3779	
Highest.....		3.00	1.1811		2.5	0.9842		3.0	1.1811		4.0	1.5748	
Minimum measurements.	B¹	1.50	0.5905	B¹	1.25	0.4921	B¹	1.25	0.4921	B¹	1.50	0.5905	
	B²	1.50	0.5905	B²	1.25	0.4921	B²	1.5	0.5905	B²	1.50	0.5905	
	B³	1.50	0.5905	B³	1.25	0.4921	B³	1.5	0.5905	B³	1.50	0.5905	
	B⁴	1.25	0.4921	B⁴	1.25	0.4921	B⁴	1.25	0.4921	B⁴	1.50	0.5905	
					B⁵	1.25	0.4921				B⁵	1.50	0.5905
Lowest.....		1.25	0.4921		1.25	0.4921		1.25	0.4921		1.50	0.5905	
Average measurements.	B¹	1.950	0.7677	B¹	1.508	0.5936	B¹	1.817	0.7153	B¹	2.233	0.8791	
	B²	2.008	0.7905	B²	1.583	0.6232	B²	2.033	0.8063	B²	2.329	0.9169	
	B³	2.041	0.8035	B³	1.800	0.7086	B³	2.150	0.8464	B³	2.279	0.8972	
	B⁴	1.725	0.6791	B⁴	1.916	0.7543	B⁴	1.741	0.6854	B⁴	2.125	0.8366	
Average.....		1.931	0.7602		1.714	0.6748		1.935	0.7618		2.305	0.9283	
Measurements above average.....			69			94			72			65	
Measurements below average.....			51			56			48			115	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		SPANISH MERINO.																					
Catalogue number of samples..		116.					117.					118.											
Length of fiber in crimp.....		3½ inches.					3 inches.					3 inches.											
Number of crimps per lock....		10.					—					16.											
Number of section .....		B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>5</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>5</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>5</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>5</sup> .		
Actual measurement in centimillimeters.	2.0	1.75	2.25	2.25	2.125	2.6	1.75	1.6	1.75	1.75	1.625	1.6	1.75	2.125	2.25	2.125	3.75	2.75	2.125	3.75	2.75	2.75	
	1.875	2.25	1.75	2.0	2.125	2.875	1.6	1.75	1.875	1.75	1.75	1.5	2.6	1.75	2.25	1.75	2.5	2.75	1.75	2.5	2.75	2.75	
	1.75	1.5	1.75	2.125	2.625	2.875	2.375	1.6	1.75	1.625	1.6	1.625	1.75	2.0	2.625	3.0	1.75	3.25	2.0	1.75	3.25	3.25	
	1.875	1.75	2.25	2.25	2.5	2.75	1.625	1.875	1.875	1.75	1.6	1.5	1.875	1.625	2.375	2.0	1.75	4.5	2.0	1.75	4.5	4.5	
	2.125	1.75	2.25	2.75	3.0	2.0	1.625	1.75	2.25	1.625	1.6	2.125	1.875	2.25	2.375	1.875	3.0	2.0	1.875	3.0	2.0	2.0	
	2.25	1.6	2.0	2.25	3.25	2.75	1.625	1.625	2.0	1.75	2.0	1.875	1.875	1.75	2.0	2.875	2.125	2.5	2.0	2.875	2.125	2.5	
	2.0	1.625	1.875	2.0	3.0	3.0	1.625	2.0	2.125	1.5	1.6	1.5	1.75	1.875	3.75	2.0	2.0	1.75	2.0	3.75	2.0	1.75	
	1.875	1.625	2.125	2.125	2.25	2.6	1.6	1.625	2.875	1.75	1.5	2.875	1.5	1.75	4.0	2.0	2.0	2.0	2.0	4.0	2.0	2.75	
	2.0	2.125	2.0	3.125	2.0	3.0	1.75	2.0	1.75	1.5	1.6	0.875	1.75	2.0	1.6	2.25	1.75	2.0	1.5	2.25	1.75	2.0	
	2.125	1.625	2.25	2.5	3.0	2.75	1.6	1.75	1.75	1.6	1.875	2.125	2.125	2.25	2.25	2.0	1.75	1.5	2.0	2.25	1.5	2.875	
	2.25	1.625	2.0	2.0	2.625	2.0	1.75	1.75	1.875	2.125	1.25	2.875	1.5	3.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
	1.75	1.5	2.0	3.0	2.625	2.25	1.75	1.625	2.0	2.0	1.6	1.75	2.0	2.875	1.625	2.25	1.75	2.5	1.75	2.25	1.75	2.6	
	2.0	1.75	1.875	2.25	3.0	2.6	2.0	2.0	1.625	1.875	1.875	1.5	1.6	2.125	1.75	2.0	3.25	2.875	2.0	2.75	2.0	2.75	
	2.5	2.0	1.75	3.375	2.75	2.0	1.5	2.0	2.25	2.125	1.0	1.625	1.75	2.0	3.25	2.875	2.0	2.75	2.0	2.75	2.0	2.75	
	1.75	1.875	1.75	2.5	2.6	2.0	1.625	2.25	1.75	2.0	1.25	1.875	1.5	2.0	1.5	1.625	2.125	2.25	2.0	1.625	2.125	2.25	
	2.0	1.25	2.25	2.5	2.5	2.25	1.5	1.75	2.25	2.0	2.25	1.75	1.625	2.0	3.6	3.25	1.75	3.6	2.0	3.6	3.25	1.75	
	2.875	1.6	1.75	2.0	2.5	1.75	1.6	2.6	1.75	1.625	1.625	2.0	1.75	1.875	2.0	1.25	2.0	1.5	2.0	1.25	2.0	1.5	
	2.5	2.0	1.875	2.5	3.0	3.0	1.625	2.125	2.125	2.0	1.6	1.6	1.625	1.75	2.75	1.75	3.75	2.0	1.75	2.75	3.75	2.25	
	2.0	1.875	1.625	2.25	2.25	2.6	1.6	1.625	2.0	3.0	1.25	1.6	2.0	2.0	3.0	2.0	2.6	2.6	2.0	3.0	2.6	1.5	
	2.6	1.75	1.625	2.375	2.75	2.5	1.75	1.625	1.75	3.125	2.125	1.625	1.75	1.875	1.875	1.875	1.875	2.0	1.75	1.875	2.0	1.5	
2.0	1.875	1.625	2.75	2.75	1.125	1.6	1.75	2.0	2.25	1.875	1.875	2.0	2.0	1.75	2.0	1.75	2.6	2.0	1.75	2.6	2.75		
2.0	2.0	2.25	2.625	2.875	1.75	1.6	1.75	2.0	1.625	1.875	1.875	1.625	2.875	3.25	1.75	4.25	2.75	2.0	3.25	1.75	2.75		
2.75	1.675	1.875	2.625	2.625	2.125	1.6	1.875	1.625	1.75	1.875	1.625	1.6	2.125	1.5	3.0	2.0	2.0	2.0	2.125	1.5	2.63		
2.125	1.75	1.625	2.625	2.5	2.25	1.75	2.6	1.75	1.5	2.0	1.75	1.35	1.75	1.75	2.75	2.0	2.25	2.0	2.75	2.0	2.25		
1.875	1.875	2.25	2.625	2.6	2.0	2.0	1.6	2.0	1.875	1.5	1.6	1.6	1.625	1.75	2.0	2.0	2.0	2.0	1.625	2.0	2.02		
1.75	1.375	1.50	2.125	2.876	2.25	1.625	2.0	1.875	1.5	1.75	2.125	1.875	1.75	1.5	2.125	2.6	1.87	2.0	1.5	2.125	1.87		
1.75	1.5	2.0	2.875	2.75	2.75	1.625	2.0	1.75	2.0	1.6	1.75	1.875	2.125	1.6	2.0	2.125	1.63	2.0	1.625	2.125	1.63		
2.375	2.0	2.25	2.125	2.0	2.6	1.75	1.875	2.25	1.875	1.25	1.35	1.75	2.375	1.75	2.0	1.75	3.25	2.0	1.75	3.25	3.25		
2.6	1.75	2.0	2.0	2.0	2.0	1.75	2.125	1.75	2.125	1.25	2.125	1.625	2.875	1.875	1.875	2.125	2.75	2.0	1.875	2.125	2.75		
Averages .....	2.070	1.704	1.875	2.337	2.075	2.450	1.712	1.602	1.920	1.941	1.535	1.745	1.783	2.003	2.225	2.233	2.350	2.537	2.003	2.225	2.537		

Recapitulation and reduction:		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Maximum measurements.	B <sup>1</sup>		2.875	1.1318	B <sup>1</sup>	2.50	0.9842	B <sup>1</sup>	3.0	1.1811
	B <sup>2</sup>		2.25	0.8858	B <sup>2</sup>	2.50	0.9842	B <sup>2</sup>	4.0	1.6748
	B <sup>3</sup>		2.50	0.9842	B <sup>3</sup>	2.375	0.9350	B <sup>3</sup>	2.25	1.2795
	B <sup>4</sup>		2.875	1.1318	B <sup>4</sup>	3.0	1.1811	B <sup>4</sup>	4.25	1.6732
	B <sup>5</sup>		3.25	1.2795	B <sup>5</sup>	2.25	0.8858	B <sup>5</sup>	4.50	1.7710
Highest .....			3.25	1.2795		3.0	1.1811		4.50	1.7710
Minimum measurements.	B <sup>1</sup>		1.75	0.6889	B <sup>1</sup>	1.50	0.5905	B <sup>1</sup>	1.625	0.6397
	B <sup>2</sup>		1.25	0.4921	B <sup>2</sup>	1.50	0.5905	B <sup>2</sup>	1.50	0.5905
	B <sup>3</sup>		1.50	0.5905	B <sup>3</sup>	1.50	0.5905	B <sup>3</sup>	1.625	0.6397
	B <sup>4</sup>		2.0	0.7874	B <sup>4</sup>	1.50	0.5905	B <sup>4</sup>	1.50	0.5905
	B <sup>5</sup>		2.0	0.7874	B <sup>5</sup>	1.25	0.4921	B <sup>5</sup>	1.50	0.5905
Lowest .....			1.25	0.4921		1.25	0.4921		1.50	0.5905
Average measurements.	B <sup>1</sup>		2.070	0.8185	B <sup>1</sup>	1.712	0.6740	B <sup>1</sup>	2.062	0.8118
	B <sup>2</sup>		1.704	0.6708	B <sup>2</sup>	1.602	0.7330	B <sup>2</sup>	2.225	0.8759
	B <sup>3</sup>		1.975	0.7775	B <sup>3</sup>	1.920	0.7559	B <sup>3</sup>	2.223	0.8751
	B <sup>4</sup>		2.337	0.9200	B <sup>4</sup>	1.941	0.7641	B <sup>4</sup>	2.250	0.8556
	B <sup>5</sup>		2.575	1.0137	B <sup>5</sup>	1.535	0.6003	B <sup>5</sup>	2.537	0.9988
Average .....			2.186	0.8606		1.784	0.7023		2.250	0.8693
Measurements above average.			86			77			62	
Measurements below average.			94			133			98	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		SPANISH MERINO.															
Catalogue number of samples..		119.					120.					121.					
Length of fiber in crimp.....		2½ inches.					2⅓ inches.					—					
Number of crimps per inch....		20.					22.					—					
Number of section.....		B¹.	B².	B³.	B⁴.	B⁵.	B¹.	B².	B³.	B⁴.	B⁵.	B¹.	B².	B³.	B⁴.	B⁵.	B⁶.
Actual measurement in centimillimeters.	1.5	1.625	1.875	2.0	2.0	2.125	1.625	2.5	1.5	2.0	1.5	1.5	2.5	1.75	2.125	2.375	2.25
	2.0	1.75	1.75	1.625	1.75	4.25	1.5	2.0	1.25	1.875	2.5	1.625	2.375	2.375	1.75	1.625	2.0
	1.5	1.5	2.0	2.125	2.0	2.25	2.0	2.0	1.5	2.6	2.375	2.375	2.0	2.375	2.0	2.375	1.25
	1.5	1.25	2.0	1.75	2.125	2.0	1.625	2.0	2.0	2.0	2.125	1.75	2.5	1.875	1.625	1.625	1.75
	1.75	1.25	2.0	2.125	1.75	2.0	1.5	2.25	2.0	1.75	1.75	1.75	2.625	2.25	2.0	2.0	1.75
	1.625	1.75	1.75	2.125	1.875	2.0	1.75	1.875	1.75	2.25	3.0	2.0	2.125	2.25	2.5	2.5	2.5
	1.6	1.75	1.75	1.75	2.125	2.25	1.5	1.875	1.625	2.125	1.75	2.0	1.75	2.5	2.625	1.5	2.5
	1.625	1.25	1.875	2.0	1.5	1.625	1.875	1.875	1.625	2.875	2.0	1.875	2.375	1.375	1.875	1.875	2.125
	1.5	1.625	1.625	1.5	2.0	1.875	1.625	2.125	1.875	1.875	1.875	2.0	2.875	1.875	1.875	2.0	2.0
	1.625	1.25	1.75	1.875	1.75	1.625	2.0	2.0	2.0	2.5	2.0	2.0	2.875	2.0	2.25	2.0	1.375
	1.875	1.5	2.25	1.5	2.0	1.875	2.0	1.625	1.75	2.5	1.75	1.625	1.5	2.0	2.0	2.0	2.125
	1.375	1.125	2.25	2.25	2.25	1.75	1.75	2.0	2.125	2.375	2.0	1.625	2.25	2.25	2.5	1.75	1.75
	1.75	1.5	2.125	2.25	2.5	2.5	2.0	2.125	1.625	1.75	1.75	2.0	2.375	1.875	1.875	1.375	1.875
	1.5	1.375	2.0	2.125	2.5	2.25	1.75	2.375	1.875	2.25	2.375	2.125	2.375	2.125	1.625	2.375	2.375
	1.75	1.25	1.625	2.375	2.25	2.375	2.5	1.625	1.75	2.5	1.625	1.75	1.75	2.0	2.5	2.25	2.25
	1.5	1.625	1.75	1.875	2.25	1.625	1.5	1.625	2.375	2.125	2.25	2.0	2.5	1.5	2.0	1.75	1.75
	1.5	1.375	2.0	2.0	2.125	2.0	2.0	2.0	2.25	1.75	2.125	1.875	3.0	1.75	2.5	1.625	1.625
	1.875	1.5	1.875	2.5	1.875	1.75	1.875	1.75	1.75	2.25	2.0	2.325	1.875	2.125	1.875	1.875	1.875
	1.875	1.875	2.0	2.5	2.0	2.125	2.25	1.875	2.125	2.5	2.5	2.0	2.0	2.25	2.0	2.0	2.0
	1.5	1.75	2.125	1.625	2.125	2.0	1.5	1.625	2.0	2.375	1.875	2.5	1.825	2.0	2.5	1.625	1.625
1.75	1.625	1.75	2.125	2.5	1.025	1.5	1.75	2.0	2.0	2.5	2.125	2.875	1.25	1.875	1.75	1.75	
2.0	2.125	1.875	2.0	1.5	1.5	1.75	2.5	2.0	1.875	2.125	1.625	2.25	1.625	1.875	1.5	1.5	
1.375	2.125	2.25	1.75	2.0	1.5	1.875	1.75	1.875	1.875	2.0	1.875	1.875	2.25	2.375	1.875	1.875	
1.625	1.625	1.5	2.0	2.25	2.0	2.0	2.0	1.625	2.6	2.0	2.5	2.625	1.875	2.375	1.375	1.375	
1.625	1.375	1.625	2.0	1.625	1.625	1.625	2.375	1.875	2.0	2.375	2.125	8.125	2.6	2.375	1.875	1.875	
1.5	2.0	2.125	1.75	2.0	2.375	1.5	1.75	2.0	2.5	2.25	2.25	2.5	1.5	2.625	1.875	1.875	
2.125	1.125	2.0	2.0	2.25	1.875	1.875	2.125	2.0	2.25	2.0	2.125	1.875	1.625	2.25	2.25	1.625	
1.6	1.25	2.125	1.875	2.0	1.5	1.75	2.0	1.75	2.5	1.75	2.5	2.25	1.5	1.875	2.0	2.0	
1.5	1.75	2.0	2.125	2.0	2.125	1.625	2.0	2.0	2.25	2.0	1.625	2.75	2.375	2.75	1.75	1.75	
2.0	1.75	2.125	2.0	2.0	2.0	1.875	1.75	1.75	2.6	2.375	1.75	2.0	2.25	1.625	1.875	1.875	
Averages.....	1.654	1.550	1.925	1.991	2.010	2.041	1.780	1.962	1.845	2.212	2.083	2.008	2.287	1.970	2.062	1.894	

		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:										
Maximum measurements.	B¹		2.375	0.9650	B¹	4.25	1.6732	B¹	3.0	1.1811
	B²		2.125	0.8360	B²	2.50	0.9842	B²	2.50	0.9842
	B³		2.25	0.8858	B³	2.50	0.9842	B³	3.125	1.2303
	B⁴		2.50	0.9842	B⁴	2.375	0.9350	B⁴	2.60	0.9842
	B⁵		2.50	0.9842	B⁵	2.875	1.1318	B⁵	2.75	1.0826
Highest.....			2.50	0.9842		4.25	1.6732		3.125	1.2303
Minimum measurements.	B¹		1.50	0.5905	B¹	1.50	0.5905	B¹	1.50	0.5905
	B²		1.25	0.4921	B²	1.50	0.5905	B²	1.625	0.6397
	B³		1.50	0.5905	B³	1.50	0.5905	B³	1.50	0.5905
	B⁴		1.50	0.5905	B⁴	1.25	0.4921	B⁴	1.25	0.4921
	B⁵		1.50	0.5905	B⁵	1.75	0.6889	B⁵	1.25	0.4921
Lowest.....			1.25	0.4921		1.25	0.4921		1.25	0.4921
Average measurements..	B¹		1.654	0.6511	B¹	2.041	0.8035	B¹	2.083	0.8209
	B²		1.550	0.6102	B²	1.786	0.7031	B²	2.008	0.7905
	B³		1.925	0.7578	B³	1.962	0.7724	B³	2.287	0.9009
	B⁴		1.991	0.7838	B⁴	1.845	0.7263	B⁴	1.970	0.7755
	B⁵		2.010	0.7986	B⁵	2.212	0.8708	B⁵	2.062	0.8118
Average.....			1.827	0.7102		1.969	0.7751		2.050	0.8070
Measurements above average..			77			78			76	
Measurements below average..			73			72			104	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		SPANISH MERINO.															
Catalogue number of samples..		121 A.										122.					
Length of fiber in crimp.....		—															
Number of crimps per inch....		20.															
Number of section.....		D <sup>1</sup> .	B <sup>1</sup> .	D <sup>2</sup> .	B <sup>2</sup> .	D <sup>3</sup> .	B <sup>3</sup> .	D <sup>4</sup> .	B <sup>4</sup> .	D <sup>5</sup> .	B <sup>5</sup> .	D <sup>6</sup> .	B <sup>6</sup> .	D <sup>7</sup> .	B <sup>7</sup> .		
Actual measurement in centimeters.	2 875	2 0	2 525	2 375	2 25	2 25	2 0	2 5	1 5	2 125	2 625	2 25	2 625	1 75	1 875	1 75	
	2 0	2 25	1 875	2 125	2 875	2 0	2 125	2 25	2 0	1 75	1 875	1 75	2 75	2 125	2 0	1 875	
	2 25	2 375	2 125	2 25	2 0	2 625	2 125	2 0	2 25	2 25	2 25	2 25	1 875	2 375	1 75	1 5	2 125
	1 875	2 25	2 5	2 875	1 875	1 875	1 625	2 25	1 625	2 25	2 25	2 25	2 75	1 875	1 875	1 625	2 75
	1 625	2 375	1 75	1 875	1 875	2 0	2 125	1 875	1 75	2 125	2 0	2 125	2 25	2 25	2 0	1 875	2 0
	2 50	2 75	1 75	2 0	1 875	2 25	2 875	1 625	1 625	2 75	2 5	2 125	2 125	1 875	1 875	2 875	2 0
	2 25	1 75	1 75	2 875	1 625	2 0	1 75	2 125	1 875	2 125	2 0	1 5	2 875	2 875	2 25	2 375	2 0
	2 0	1 875	1 75	2 125	2 125	2 25	2 5	1 75	1 625	1 5	1 75	2 5	2 085	2 125	1 75	2 25	2 25
	2 5	2 875	1 75	2 0	2 25	1 75	1 875	1 625	2 0	1 5	2 25	2 0	2 875	2 25	1 625	2 0	2 0
	2 0	2 25	2 0	2 0	2 0	1 25	2 5	1 875	1 75	1 5	2 25	2 125	2 0	2 0	2 25	2 25	2 375
	2 25	2 0	1 75	2 0	1 75	1 875	2 25	1 625	1 75	1 75	1 75	2 25	2 25	4 0	2 5	2 75	2 5
	1 875	2 0	2 25	1 75	1 875	2 25	1 875	1 875	2 25	1 5	2 25	2 25	2 875	2 0	2 0	2 0	2 0
	2 0	2 625	2 125	1 375	2 0	2 5	1 75	2 0	1 875	1 75	2 0	2 25	2 875	2 0	2 0	2 0	2 5
	2 125	2 25	2 625	1 875	2 875	1 875	2 25	1 875	1 875	1 75	2 375	2 125	2 75	2 125	1 625	2 0	2 25
	1 75	2 25	2 625	2 0	2 5	2 5	2 125	1 75	2 375	1 625	2 25	1 875	2 25	2 875	2 0	1 875	2 0
	2 5	1 25	1 875	2 0	2 125	2 0	2 875	1 75	1 875	2 0	2 25	2 25	1 875	2 0	2 125	1 625	2 25
	2 25	2 5	2 125	2 6	2 5	2 375	1 875	1 75	2 125	2 25	1 875	2 0	2 25	2 25	1 875	2 25	2 25
	2 25	2 25	2 25	2 25	2 375	1 75	2 25	2 125	2 0	1 75	8 25	2 125	2 5	2 125	2 25	2 875	2 0
	2 75	1 875	1 675	1 625	2 5	1 75	2 125	2 5	1 5	1 75	1 75	2 25	2 375	2 0	1 875	2 75	2 75
	3 0	1 25	2 25	2 0	2 0	2 0	2 0	2 25	1 625	2 0	2 25	2 125	2 25	2 875	1 75	2 25	2 25
2 5	2 5	2 25	1 75	2 25	2 375	2 125	2 125	2 0	1 625	2 0	1 875	2 5	2 875	1 625	2 25	2 25	
2 625	2 25	2 875	2 75	2 5	1 25	2 0	2 5	1 625	2 0	1 875	2 5	2 875	2 0	1 875	2 5	2 5	
2 25	1 875	2 375	1 75	2 25	2 375	2 875	2 75	1 5	2 5	2 25	2 375	2 25	2 25	2 875	2 125	2 125	
1 75	2 25	1 875	2 25	2 0	1 75	1 75	2 25	1 875	1 75	2 875	2 5	2 6	2 0	2 0	2 375	2 0	
2 25	1 875	2 25	2 0	2 5	2 0	2 875	2 25	1 75	1 875	2 0	2 0	2 0	2 25	2 25	2 0	2 5	
1 875	4 0	1 875	2 75	2 25	1 75	1 375	2 125	2 0	2 75	2 125	1 875	2 875	2 5	3 0	1 875	1 875	
2 25	4 25	1 75	2 625	2 0	2 25	2 125	2 25	1 625	2 375	1 75	2 5	2 875	1 875	1 875	2 5	2 5	
2 0	1 875	2 375	1 875	2 0	2 5	2 125	1 75	1 875	2 0	1 875	2 25	2 75	2 0	1 75	1 5	1 5	
2 25	2 0	2 875	2 25	1 75	2 25	2 375	2 25	2 25	1 625	2 875	2 25	2 125	1 75	1 75	2 25	2 25	
2 0	1 75	2 125	2 25	2 0	2 5	2 125	2 25	1 625	1 75	2 25	2 875	2 75	2 75	1 875	2 5	2 5	
Averages.....	2 212	2 304	2 100	2 154	2 125	2 035	2 067	2 062	1 855	1 911	2 153	2 130	2 550	2 124	1 963	2 225	

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:									
Maximum measurements.	B <sup>1</sup>	3 0	1 1811	B <sup>6</sup>	2 25	1 2795	B <sup>1</sup>	3 25	1 2795
	B <sup>2</sup>	4 25	1 6732	B <sup>7</sup>	2 6	0 9842	B <sup>2</sup>	2 75	1 6826
	B <sup>3</sup>	2 875	1 1318	B <sup>8</sup>	2 75	1 6826	B <sup>3</sup>	4 0	1 5748
	B <sup>4</sup>	3 0	1 1811	B <sup>9</sup>	2 5	0 9842	B <sup>4</sup>	2 75	1 6826
	B <sup>5</sup>	2 5	0 9842	B <sup>10</sup>	2 75	1 6826	B <sup>5</sup>	2 875	1 1811
Highest.....		4 25	1 6732		4 25	1 6732		4 0	1 5748
Minimum measurements.	B <sup>1</sup>	1 625	0 6397	B <sup>6</sup>	1 25	0 4921	B <sup>1</sup>	1 75	0 6899
	B <sup>2</sup>	1 25	0 4921	B <sup>7</sup>	1 875	0 6413	B <sup>2</sup>	1 875	0 5413
	B <sup>3</sup>	1 625	0 6397	B <sup>8</sup>	1 625	0 6397	B <sup>3</sup>	1 75	0 6899
	B <sup>4</sup>	1 625	0 6397	B <sup>9</sup>	1 5	0 5905	B <sup>4</sup>	1 75	0 6899
	B <sup>5</sup>	1 625	0 6397	B <sup>10</sup>	1 5	0 5905	B <sup>5</sup>	1 5	0 5905
Lowest.....		1 25	0 4921		1 25	0 4921		1 375	0 5413
Average measurements..	B <sup>1</sup>	2 212	0 8708	B <sup>6</sup>	2 035	0 8011	B <sup>1</sup>	2 153	0 8476
	B <sup>2</sup>	2 304	0 9070	B <sup>7</sup>	2 067	0 8116	B <sup>2</sup>	2 130	0 8385
	B <sup>3</sup>	2 100	0 8291	B <sup>8</sup>	2 062	0 8118	B <sup>3</sup>	2 550	1 0039
	B <sup>4</sup>	2 154	0 8480	B <sup>9</sup>	1 855	0 7303	B <sup>4</sup>	2 124	0 8362
	B <sup>5</sup>	2 125	0 8306	B <sup>10</sup>	1 941	0 7641	B <sup>5</sup>	1 963	0 7897
Average.....		2 180	0 8582		2 068	0 8220		2 194	0 8067
Measurements above average..				121					98
Measurements below average..				179					87



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of sample	SPANISH MERINO.					FRENCH MERINO.														
	124.					123.					135.					127.				
	3½ inches.					2¾ inches.					2½ inches.					3¼ inches.				
Length of fiber in crimp.....	20.					16.					22.									
Number of crimps per inch....	20.					16.					22.									
Number of section.....	B¹	B²	B³	B⁴	B⁵	B¹	B²	B³	B⁴	B⁵	B¹	B²	B³	B⁴	B⁵	B¹	B²	B³	B⁴	B⁵
2.0	2.0	2.0	2.025	1.875	1.75	1.25	1.25	1.375	2.125	2.0	4.25	2.0	2.0	2.375	1.75	2.25	1.75	2.25	1.75	3.125
2.0	1.875	2.0	2.0	2.0	2.0	2.0	1.875	1.0	2.025	1.75	2.125	2.0	1.75	2.0	1.5	2.25	1.75	2.025	3.125	3.125
2.375	1.75	1.75	2.25	2.125	2.0	2.0	1.375	1.25	2.375	2.0	1.5	1.5	1.625	1.75	2.0	2.125	2.125	2.25	3.0	2.125
2.375	2.0	1.625	2.25	1.875	1.5	1.25	1.375	2.0	2.5	2.75	1.75	1.625	2.0	2.0	1.75	2.375	3.0	2.75	3.0	3.5
1.75	1.75	2.0	1.75	2.25	1.25	1.25	1.0	1.0	2.0	1.75	1.875	2.0	2.125	2.0	2.125	2.125	2.0	2.375	2.875	2.5
1.625	2.25	2.0	1.75	1.75	1.625	4.0	1.125	1.5	1.625	1.625	1.75	1.75	1.5	1.625	1.75	2.875	2.25	2.75	2.875	2.5
2.5	1.625	3.75	2.75	1.75	1.625	3.75	1.875	1.875	2.75	2.75	1.75	1.625	1.75	2.25	2.0	2.875	2.125	2.625	2.625	3.0
1.75	1.875	2.0	2.375	1.5	1.75	1.5	1.375	2.0	2.0	2.0	1.75	2.0	2.375	1.875	1.75	2.125	1.625	2.25	2.5	2.625
2.375	1.75	2.0	2.5	2.25	2.0	1.75	2.5	1.75	1.5	1.625	2.125	2.0	2.0	2.0	1.75	2.125	2.5	2.625	2.875	2.5
1.875	2.0	1.875	1.75	2.125	2.75	2.125	1.875	2.25	2.25	1.875	1.75	1.5	1.625	2.125	2.125	3.125	2.125	2.875	2.75	2.25
1.75	1.875	2.25	2.875	2.125	1.5	1.5	1.25	1.5	2.0	1.75	1.75	1.375	1.375	2.125	1.625	2.125	1.75	2.875	3.0	2.75
2.0	2.0	1.75	2.0	2.5	1.0	2.0	2.0	1.5	1.625	1.75	1.625	1.5	1.375	2.0	2.0	2.25	1.875	2.5	3.0	3.25
1.5	1.75	2.5	1.75	2.5	1.625	2.0	2.125	1.5	1.625	1.625	1.75	1.625	1.75	2.375	2.125	2.5	1.75	2.125	3.25	2.75
2.5	1.5	2.125	1.625	2.25	2.0	2.0	1.75	2.5	1.875	1.875	2.25	1.75	2.0	1.875	2.0	2.75	2.0	2.5	3.25	3.5
1.875	2.0	1.875	2.625	2.5	1.5	2.125	1.5	1.875	2.0	1.875	1.875	1.75	2.0	2.0	2.0	2.75	1.875	2.25	3.25	2.75
2.25	1.75	2.875	2.0	2.75	1.5	1.5	2.25	1.375	1.75	1.75	1.5	2.5	2.125	2.125	2.0	2.125	1.5	3.25	2.5	2.5
2.375	2.0	1.875	2.0	1.625	1.625	1.625	1.75	1.875	2.25	1.875	2.0	2.25	2.0	2.0	2.0	2.125	1.5	3.25	2.5	2.5
2.0	2.375	2.25	2.25	1.625	1.625	1.625	1.125	1.25	1.75	2.5	2.125	1.375	1.875	2.125	2.125	2.0	1.625	2.375	3.125	3.0
2.0	2.25	1.875	2.25	2.375	1.625	1.625	2.0	1.75	1.625	1.125	2.0	1.875	1.5	1.875	1.875	2.0	3.125	2.375	3.0	2.25
2.375	1.875	2.0	2.375	1.25	1.875	1.875	1.25	1.75	2.0	2.375	2.125	1.875	1.75	1.875	1.875	2.25	2.0	2.875	3.125	2.875
2.125	2.125	1.75	2.5	2.75	1.875	2.0	2.0	2.0	2.125	1.75	2.0	2.125	2.0	1.875	1.75	2.375	2.0	2.875	3.125	2.875
2.75	1.875	1.75	2.375	1.5	1.5	1.75	1.5	2.0	2.375	2.375	2.25	1.875	1.875	1.875	1.875	2.375	2.0	2.875	3.125	2.875
1.625	2.125	2.0	2.375	2.0	2.125	1.875	1.875	2.25	1.75	1.75	2.0	1.625	2.0	1.875	1.75	2.125	2.375	2.625	4.0	2.625
1.875	2.0	2.0	2.25	2.375	1.75	1.75	1.25	1.0	2.5	1.75	2.0	1.75	1.75	1.5	1.375	2.0	2.5	2.75	2.875	2.875
2.0	1.5	2.0	1.75	1.625	2.0	2.0	1.875	1.5	1.75	1.15	2.125	1.625	2.125	1.5	2.125	2.375	2.25	2.625	2.625	2.625
2.25	1.625	2.0	2.375	1.5	1.5	1.625	1.5	1.625	1.625	1.625	1.875	1.75	1.75	2.0	2.25	2.375	2.5	3.25	3.125	3.125
2.125	1.5	2.0	2.125	1.75	2.0	1.875	1.75	1.5	1.75	1.75	1.75	1.875	1.75	2.0	2.375	2.375	2.0	2.625	3.125	2.75
1.75	2.0	2.25	2.0	2.0	2.0	1.75	1.375	1.625	2.0	2.0	1.75	1.625	2.0	2.25	2.0	2.0	2.625	3.5	3.0	2.75
1.75	2.0	2.0	2.0	2.375	1.75	1.75	1.25	1.75	2.75	1.875	1.625	1.625	1.875	1.875	1.875	2.5	2.0	2.5	2.875	2.875
1.75	2.0	1.75	1.75	1.875	1.875	1.875	1.125	1.5	2.625	1.75	2.125	1.5	2.5	1.875	2.0	2.125	1.625	3.25	3.25	2.625
Averages.....	2.041	1.937	2.075	2.187	2.091	1.779	1.737	1.575	2.085	1.880	1.954	1.845	2.175	1.987	1.920	2.329	2.075	2.637	2.016	2.770

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.			
Maximum measurements.	B¹	2.75	1.0826	B¹	2.75	1.0826	B¹	4.25	1.6732	B¹	3.125	1.2393
	B²	2.375	0.9350	B²	4.0	1.5748	B²	2.5	0.9842	B²	3.125	1.2393
	B³	3.75	1.4763	B³	2.125	0.8366	B³	2.375	0.9350	B³	3.25	1.2795
	B⁴	2.875	1.1318	B⁴	2.75	1.0826	B⁴	2.375	0.9350	B⁴	4.0	1.5748
	B⁵	2.75	1.0826	B⁵	2.75	1.0826	B⁵	2.375	0.9350	B⁵	3.5	1.3779
Highest.....		3.75	1.4763		4.0	1.5748		4.25	1.6732		4.0	1.5748
Minimum measurements.	B¹	1.5	0.5905	B¹	1.25	0.4921	B¹	1.5	0.5905	B¹	2.0	0.7872
	B²	1.5	0.5905	B²	1.0	0.3937	B²	2.375	0.5413	B²	1.5	0.5905
	B³	1.625	0.6307	B³	1.0	0.3937	B³	1.375	0.5413	B³	2.125	0.8966
	B⁴	1.75	0.6899	B⁴	1.25	0.4921	B⁴	1.5	0.5905	B⁴	1.75	0.6899
	B⁵	1.25	0.4921	B⁵	1.125	0.4420	B⁵	1.5	0.5905	B⁵	2.125	0.8966
Lowest.....		1.25	0.4921		1.0	0.3937		1.375	0.5413		1.5	0.5905
Average measurements.	B¹	2.041	0.8035	B¹	1.779	0.7003	B¹	1.054	0.7692	B¹	2.320	0.9169
	B²	1.937	0.7625	B²	1.737	0.6898	B²	1.845	0.7263	B²	2.075	0.8169
	B³	2.075	0.9169	B³	1.575	0.6200	B³	2.175	0.8562	B³	2.637	1.0481
	B⁴	2.187	0.8610	B⁴	2.085	0.8011	B⁴	1.937	0.7625	B⁴	2.966	1.1480
	B⁵	2.091	0.8232	B⁵	1.880	0.7401	B⁵	1.920	0.7559	B⁵	2.770	1.0995
Average.....		2.060	0.8133		1.801	0.7090		1.966	0.7740		2.545	1.0019
Measurements above average.....		58			65			67			71	
Measurements below average.....		92			85			83			79	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of samples..	SAXON MERINO.				SILESIAN MERINO.				AUSTRALIAN MERINO.											
	2.				3.				4.				6.				7.			
	2½ inches.				1¼ inches.				1½ inches.				—				—			
Length of fiber in crimp.....	25.				25.				25.				—				—			
Number of crimps per inch....	25.				25.				25.				—				—			
Number of section.....	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.
Actual measurement in centimillimeters.	1.875	1.625	2.125	1.875	1.75	1.75	1.25	1.75	2.0	1.5	2.25	1.25	1.75	1.875	1.75	2.125	2.375	2.0	1.75	1.625
	1.5	1.75	1.75	1.875	1.25	1.5	2.0	1.75	1.5	2.0	1.75	1.75	2.875	1.875	2.0	1.75	1.75	2.25	2.0	1.75
	1.875	1.875	1.875	1.875	1.5	1.5	1.75	2.25	1.5	1.75	2.0	1.5	2.25	1.875	1.75	1.75	2.5	1.875	1.75	2.5
	2.25	2.125	2.0	1.25	1.75	1.5	1.75	1.75	2.0	2.25	2.25	1.75	1.875	1.875	1.75	1.625	2.0	1.5	2.0	1.5
	1.875	1.75	2.0	1.5	1.5	1.75	1.5	1.75	1.25	2.25	1.75	2.0	1.75	1.625	2.125	1.625	2.75	1.5	2.0	2.375
	1.75	1.625	1.875	1.75	1.75	2.0	1.5	1.75	1.75	2.0	2.25	1.75	2.125	2.0	1.75	1.875	2.25	1.5	2.125	2.0
	1.375	1.875	1.75	1.75	1.75	2.0	1.5	1.75	2.5	2.0	2.0	2.25	2.75	2.875	1.75	1.5	1.5	2.0	2.0	2.0
	1.5	1.875	2.0	1.5	1.5	2.0	1.5	1.75	1.5	1.5	2.5	1.75	2.25	1.625	2.25	1.25	1.75	1.5	2.0	3.0
	1.125	1.625	1.625	1.625	1.5	1.75	2.0	2.0	1.25	2.0	1.75	2.0	2.25	1.5	1.875	2.0	2.0	1.5	1.75	2.0
	1.875	1.625	1.875	1.75	2.0	2.0	1.25	2.0	1.75	2.25	2.0	1.5	2.25	2.5	1.75	1.5	1.75	1.5	2.25	1.5
	1.375	2.125	1.875	1.375	2.0	1.75	1.75	2.5	1.5	2.25	1.75	1.75	3.125	1.575	1.5	1.75	2.0	1.625	2.0	1.4
	1.875	1.625	1.75	1.5	1.75	1.5	1.5	1.5	1.5	1.75	2.0	2.0	2.0	1.5	1.875	1.625	1.75	3.0	1.75	2.0
	1.375	1.75	1.875	1.5	1.5	1.75	1.5	2.5	2.25	2.0	2.5	1.5	2.25	2.0	1.75	1.375	1.875	1.875	1.625	2.25
	1.25	3.25	1.75	1.625	1.75	2.0	1.75	1.75	2.5	2.25	2.0	1.75	1.875	1.75	2.125	1.75	2.25	1.5	1.75	2.0
	1.75	1.75	1.875	1.875	2.0	1.25	2.0	2.5	1.75	2.75	2.25	1.75	1.5	1.5	2.0	1.875	2.0	1.5	1.875	1.875
	1.5	1.875	1.625	1.625	1.25	2.0	1.5	3.0	2.0	2.25	2.0	1.5	1.75	1.5	2.125	1.875	2.0	1.75	2.0	1.75
	1.75	2.0	1.75	1.0	1.5	2.0	1.5	1.75	1.5	2.5	2.0	1.5	1.5	2.5	2.0	1.875	2.0	1.625	1.75	2.375
	1.625	1.875	1.75	1.5	1.75	2.0	2.0	1.75	1.5	2.25	2.0	1.75	2.0	1.875	2.125	1.375	2.0	2.125	2.125	2.0
	1.375	1.75	2.0	1.375	1.5	1.5	1.5	2.0	2.0	2.0	2.0	2.0	1.75	1.5	2.0	1.875	1.5	1.875	1.5	2.25
	1.375	2.0	1.875	1.75	1.25	1.5	2.75	1.75	1.5	2.0	2.5	1.75	1.5	1.5	1.875	1.5	2.25	1.5	1.875	2.75
2.0	1.625	1.875	1.75	2.25	2.0	2.5	2.0	2.0	2.0	2.25	1.5	1.75	1.75	2.0	1.5	1.5	1.75	1.75	2.25	
1.75	1.5	1.875	1.5	2.0	2.0	2.25	1.75	1.5	2.0	1.75	1.75	1.75	1.75	2.75	1.625	1.875	1.5	2.0	1.75	
1.5	2.0	1.625	2.875	1.5	2.25	1.5	2.0	2.0	1.75	2.0	1.5	1.5	1.5	2.0	1.75	1.5	1.6	1.875	2.125	
1.5	1.625	1.625	1.5	2.5	1.75	1.75	1.75	2.0	1.75	2.0	1.75	1.5	1.5	2.0	1.875	1.75	1.75	1.875	2.25	
1.875	1.75	1.875	1.75	2.0	1.5	2.0	1.5	1.75	1.75	2.0	1.5	1.5	1.5	1.875	1.75	1.875	1.75	2.0	2.5	
1.5	1.5	1.875	1.375	2.5	1.25	1.75	1.5	2.0	2.0	2.0	1.5	1.5	1.5	1.625	1.875	1.875	2.25	2.5	2.25	
1.75	1.75	1.625	2.0	1.75	2.25	1.75	1.5	1.5	2.0	2.0	2.0	2.5	1.375	1.75	1.875	1.875	2.25	1.875	1.875	
1.75	1.625	1.875	1.5	1.75	1.75	1.75	1.75	2.0	2.0	1.75	1.25	2.125	2.0	1.625	1.5	2.0	1.75	1.875	1.75	
1.5	1.175	1.875	1.625	2.0	2.0	2.25	2.5	2.0	3.0	1.75	1.75	2.125	2.0	2.0	1.875	1.75	2.25	1.875	2.0	
1.75	1.75	1.875	1.75	1.5	1.75	1.5	1.5	1.75	2.25	2.25	1.5	1.5	1.5	1.375	1.875	2.25	1.5	1.875	2.25	
Averages.....	1.587	1.791	1.900	1.616	1.741	1.850	1.738	1.908	1.816	2.003	2.041	1.700	1.879	1.859	1.790	1.754	1.925	1.829	1.950	2.006

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.						
Maximum measurements.	B¹	2.25	0.8858	B¹	2.25	0.8858	B¹	2.50	1.3779	B¹	2.875	1.1318	B¹	2.75	1.0626
	B²	2.25	0.8858	B²	3.00	1.1811	B²	2.75	1.0826	B²	2.750	1.0826	B²	3.00	1.1811
	B³	2.125	0.8366	B³	2.75	1.0826	B³	2.50	0.9842	B³	2.250	0.8858	B³	2.50	0.9842
	B⁴	2.375	0.9350	B⁴	3.00	1.1811	B⁴	2.50	0.9842	B⁴	2.375	0.9350	B⁴	2.75	1.0626
Highest.....		2.375	0.9350		3.00	1.1811		2.50	1.3779		2.875	1.1318		3.00	1.1811
Minimum measurements.	B¹	1.125	0.4429	B¹	1.25	0.4921	B¹	1.25	0.4921	B¹	1.375	0.5413	B¹	1.5	0.5905
	B²	1.5	0.5905	B²	1.25	0.4921	B²	1.50	0.5905	B²	1.5	0.5905	B²	1.5	0.5905
	B³	1.625	0.6397	B³	1.25	0.492	B³	1.75	0.6889	B³	1.375	0.5413	B³	1.5	0.5905
	B⁴	1.0	0.3997	B⁴	1.50	0.5905	B⁴	1.25	0.4921	B⁴	1.25	0.4921	B⁴	1.5	0.5905
Lowest.....		1.0	0.3997		1.25	0.4921		1.25	0.4921		1.25	0.4921		1.5	0.5905
Average measurements.	B¹	1.587	0.6248	B¹	1.741	0.6851	B¹	1.816	0.7149	B¹	1.879	0.7397	B¹	1.925	0.7578
	B²	1.791	0.7051	B²	1.850	0.7283	B²	2.033	0.8003	B²	1.859	0.7318	B²	1.829	0.7300
	B³	1.900	0.7480	B³	1.758	0.6921	B³	2.041	0.8005	B³	1.790	0.7047	B³	1.920	0.7550
	B⁴	1.616	0.6362	B⁴	1.908	0.7511	B⁴	1.700	0.6692	B⁴	1.754	0.6905	B⁴	2.006	0.8133
Average.....		1.723	0.6783		1.814	0.7141		1.897	0.7468		1.250	0.7165		1.935	0.7618
Measurements above average.....		60			42			84			50			56	
Measurements below average.....		51			78			56			61			64	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of samples..	AUSTRALIAN MERINO.				LEICESTER AND COTSWOLD.										
	16.				111.										
	2 inches.				1½ inches.							2½ inches.			
Length of fiber in crimp .....	25.														
Number of crimps per inch...															
Number of section .....	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>5</sup> .	B <sup>6</sup> .	B <sup>7</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .
Actual measurement in centi- millimeters.	2.75	2.375	1.875	1.625	2.0	4.0	4.0	3.5	3.0	4.0	4.25	2.375	3.0	3.0	2.875
	2.5	2.25	1.5	1.275	2.6	3.5	4.0	4.0	2.0	4.5	3.0	2.5	2.75	3.125	2.875
	1.625	2.125	1.875	1.75	3.0	4.25	3.25	3.5	2.0	4.5	3.25	3.25	2.75	3.25	2.375
	2.5	1.75	2.125	1.375	2.25	4.0	3.5	3.5	4.0	3.25	2.0	2.5	3.25	3.5	3.75
	2.75	2.0	1.375	1.625	1.75	3.25	4.25	4.0	2.5	3.5	4.5	2.75	2.875	3.375	2.75
	2.375	1.375	1.625	1.75	3.5	2.25	3.75	3.5	3.75	3.0	3.0	2.375	2.875	3.5	3.0
	1.75	1.625	1.875	2.25	3.75	3.0	4.0	3.25	3.5	0.25	3.75	2.5	3.625	3.25	2.25
	1.625	1.5	1.5	1.75	3.75	3.0	3.75	2.75	3.5	6.0	3.25	2.5	2.375	3.0	3.875
	2.75	1.5	1.5	1.0	3.5	3.25	2.75	3.5	3.0	4.0	2.0	2.5	3.375	3.25	3.0
	1.75	1.75	1.625	1.25	2.25	3.0	3.5	3.0	2.0	4.0	4.0	3.5	3.25	3.0	2.375
	1.875	1.875	2.0	1.5	2.75	3.25	4.25	4.5	3.75	3.5	3.5	2.75	2.625	3.25	3.0
	1.625	1.75	1.875	1.375	2.25	3.75	3.25	4.25	3.0	3.0	2.5	3.0	3.5	3.0	2.75
	1.5	1.625	1.375	1.375	3.5	4.0	4.0	3.75	4.0	4.25	3.75	3.25	4.0	3.375	2.25
	1.875	1.75	1.375	1.75	2.25	3.0	4.25	2.75	3.25	3.5	3.75	2.5	3.5	3.125	2.5
	1.625	1.875	1.875	1.5	3.75	3.25	3.75	4.0	4.25	4.0	3.75	2.875	2.375	4.0	3.0
	1.75	1.625	2.0	1.375	3.0	2.0	3.0	2.5	3.5	2.75	2.5	2.5	3.25	3.25	3.125
	2.25	1.75	1.625	1.875	2.75	4.25	3.5	4.0	3.25	3.5	2.25	4.0	2.75	3.25	2.0
	1.5	1.625	2.0	2.25	2.0	4.0	4.5	4.0	4.75	2.5	4.0	2.875	3.75	3.375	2.75
	2.5	1.625	1.375	1.25	3.75	3.5	3.0	3.0	3.5	4.0	4.5	2.5	3.25	2.5	2.25
	2.25	2.25	1.5	1.25	4.0	4.0	3.0	4.5	4.75	3.5	3.5	2.25	3.25	3.25	4.0
1.375	2.375	1.75	2.0	4.0	4.0	3.75	3.5	3.25	3.0	2.75	2.75	3.375	3.875	3.0	
2.5	2.125	2.375	1.875	3.0	4.0	3.75	2.75	3.5	3.5	3.25	2.875	2.875	2.875	3.125	
2.25	2.25	1.75	1.75	2.5	4.0	2.5	4.5	3.5	3.5	3.25	2.375	3.25	3.375	2.25	
2.625	2.375	2.0	1.75	3.0	3.5	3.75	3.5	4.0	3.5	3.25	2.5	2.75	3.75	2.25	
2.5	1.625	2.125	1.75	3.0	3.5	3.75	3.0	3.5	3.0	3.0	2.5	3.0	3.125	5.75	
1.875	2.125	2.0	1.5	4.0	4.0	4.0	3.25	3.5	3.5	3.5	2.875	3.0	2.875	2.5	
1.625	1.625	2.0	1.5	2.75	3.75	3.75	3.5	4.0	4.0	2.75	2.75	3.0	2.875	2.0	
2.125	1.5	1.75	1.625	3.0	3.25	4.0	2.5	3.75	3.5	2.75	3.0	3.375	3.25	2.5	
2.375	1.875	2.25	1.0	2.25	3.0	3.5	3.5	3.75	3.75	4.0	2.5	3.375	3.375	3.125	
1.625	2.375	2.0	1.75	4.25	3.6	4.0	3.5	3.0	3.75	3.0	2.375	2.875	2.0	3.0	
Averages .....	2.066	1.875	1.795	1.588	3.0000	3.4666	3.6666	3.5083	3.4166	3.5333	3.3000	2.725	3.108	3.200	2.775

	No. of section.	In centimillime- ters.	In thousandths of inch.	No. of section.	In centimillime- ters.	In thousandths of inch.	No. of section.	In centimillime- ters.	In thousandths of inch.
Recapitulation and reduction:	B <sup>1</sup>	2.75	1.0826	B <sup>1</sup>	4.25	1.6732	B <sup>1</sup>	4.0	1.5748
Maximum measurements.	B <sup>2</sup>	2.375	0.9350	B <sup>2</sup>	4.25	1.6732	B <sup>2</sup>	4.0	1.5748
	B <sup>3</sup>	2.375	0.9350	B <sup>3</sup>	4.50	1.7716	B <sup>3</sup>	4.0	1.5748
	B <sup>4</sup>	2.25	0.8858	B <sup>4</sup>	4.50	1.7716	B <sup>4</sup>	4.0	1.5748
				B <sup>5</sup>	4.75	1.8700			
			B <sup>6</sup>	6.25	2.4606				
			B <sup>7</sup>	4.50	1.7716				
Highest .....		2.75	1.0826		6.25	2.4606		4.0	1.5748
Minimum measurements.	B <sup>1</sup>	1.375	0.5413	B <sup>1</sup>	2.0	0.7874	B <sup>1</sup>	2.25	0.8858
	B <sup>2</sup>	1.375	0.5413	B <sup>2</sup>	2.25	0.8858	B <sup>2</sup>	2.375	0.9350
	B <sup>3</sup>	1.375	0.5413	B <sup>3</sup>	2.50	0.9842	B <sup>3</sup>	2.0	0.7874
	B <sup>4</sup>	1.0	0.3937	B <sup>4</sup>	2.50	0.9842	B <sup>4</sup>	2.0	0.7874
				B <sup>5</sup>	2.0	0.7874			
			B <sup>6</sup>	2.50	0.9842				
			B <sup>7</sup>	2.0	0.7874				
Lowest .....		1.0	0.3937		2.0	0.7874		2.0	0.7874
Average measurements..	B <sup>1</sup>	2.066	0.8133	B <sup>1</sup>	3.000	1.1811	B <sup>1</sup>	2.725	1.0728
	B <sup>2</sup>	1.875	0.7380	B <sup>2</sup>	3.466	1.3645	B <sup>2</sup>	3.108	1.2236
	B <sup>3</sup>	1.795	0.7066	B <sup>3</sup>	3.508	1.3810	B <sup>3</sup>	3.200	1.2598
	B <sup>4</sup>	1.588	0.6251	B <sup>4</sup>	3.416	1.3448	B <sup>4</sup>	2.775	1.0925
				B <sup>5</sup>	3.533	1.3909			
			B <sup>6</sup>	3.300	1.2992				
Average .....		1.891	0.7208		3.370	1.3267		2.952	1.1622
Measurements above average..			53					62	
Measurements below average..			67			127		58	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		ONE-HALF MERINO AND ONE-HALF COTSWOLD.																	
Catalogue number of samples..		129.						15.				20.				24.			
Length of fiber in crimp .....		4½ inches.						3 inches.				3¼ inches.				2¾ inches.			
Number of crimps per inch....		—						20.				20.				12.			
Number of section.....		B¹.	B².	B³.	B⁴.	B⁵.	B⁶.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.
Actual measurement in centimillimeters.	3.5	2.0	2.5	2.0	2.0	3.0	2.375	1.375	1.5	1.875	2.0	1.875	2.375	2.5	2.0	1.875	2.5	2.625	
	3.0	2.5	2.75	2.25	2.25	2.5	1.75	1.5	1.875	1.5	2.0	2.625	3.0	2.5	2.0	2.625	3.0	2.5	
	4.0	2.75	2.5	2.5	2.0	2.0	2.125	1.625	1.875	1.75	2.5	2.75	2.5	2.875	1.875	2.5	2.625	2.5	
	4.0	3.0	3.0	3.0	2.0	2.0	2.5	1.75	1.375	1.625	2.5	2.125	2.5	2.75	2.375	2.25	2.625	2.375	
	2.25	2.0	2.25	2.0	2.0	2.0	2.0	1.625	1.5	1.625	2.25	1.875	2.5	2.75	2.375	2.375	2.875	2.875	
	2.5	2.25	2.0	2.25	2.0	1.75	1.75	1.625	1.625	1.625	2.375	1.875	2.875	2.625	2.125	2.5	2.5	2.125	
	3.0	2.25	2.0	2.5	2.0	2.0	1.625	1.625	1.625	1.75	2.375	1.75	2.875	2.75	2.875	2.125	2.25	2.875	
	3.5	2.35	2.0	3.0	2.0	2.5	1.75	1.75	1.625	2.125	2.375	2.5	2.5	1.875	2.375	2.75	3.625	2.25	
	4.0	1.25	2.5	2.0	1.75	1.75	1.625	1.5	1.5	1.75	2.25	2.0	2.875	2.875	1.875	2.0	2.625	1.875	
	2.5	1.25	2.75	2.75	2.0	1.75	1.75	1.375	2.375	1.875	2.5	1.875	2.625	3.0	2.0	2.375	2.375	2.375	
	2.25	3.0	3.0	3.5	2.5	2.0	1.5	1.5	1.875	1.75	2.25	3.0	2.25	2.5	3.875	2.375	2.25	2.25	
	2.5	3.5	1.5	2.0	2.5	2.25	2.125	1.75	1.625	2.125	1.75	2.25	2.5	2.625	2.25	1.75	1.875	2.75	
	2.5	2.5	1.5	1.75	2.25	2.5	1.5	1.5	1.375	1.625	1.875	2.5	2.875	2.375	2.375	2.25	2.375	3.25	
	2.375	2.5	1.5	1.5	2.5	3.0	1.625	1.875	2.0	2.0	2.375	2.875	1.75	2.375	2.0	2.25	2.75	2.5	
	1.5	2.25	3.0	1.375	2.0	2.0	1.625	2.375	1.5	1.75	1.875	2.375	2.5	2.375	2.25	2.25	1.675	2.5	
	3.25	1.25	2.0	1.5	2.25	1.75	1.5	1.375	2.125	1.625	2.0	2.475	2.75	3.5	2.0	1.625	2.375	2.875	
	3.0	3.0	1.75	1.75	1.5	2.0	1.75	1.5	1.5	1.875	2.625	2.5	2.75	1.875	2.0	1.875	2.0	3.5	
	3.0	2.0	2.25	2.25	1.75	2.5	1.5	2.25	1.625	1.625	1.875	2.375	2.5	2.875	3.0	1.875	2.625	2.0	
	2.0	2.5	2.0	3.0	2.0	2.5	1.75	1.75	1.625	1.625	2.125	2.5	3.125	2.375	2.675	2.0	2.0	2.25	
	3.25	3.0	2.0	2.0	2.0	2.25	1.75	1.25	2.0	1.75	2.0	2.5	2.5	2.375	1.625	2.5	2.875	2.0	
1.75	2.0	2.5	1.75	1.75	3.0	1.875	1.875	2.0	2.0	2.875	2.0	2.625	2.875	2.25	1.75	1.875	2.5		
3.0	2.25	2.0	2.0	2.5	3.0	1.5	1.5	1.875	1.75	3.0	2.25	2.5	2.0	2.5	2.0	2.0	2.375		
2.0	2.25	1.75	2.5	2.0	3.0	1.5	1.5	2.0	1.625	3.0	2.625	2.5	2.5	2.25	1.875	1.875	2.25		
2.25	2.0	2.0	2.75	2.25	3.25	1.75	1.75	1.875	1.5	2.0	1.375	2.5	2.75	3.25	2.875	1.266	2.875		
1.75	2.5	2.25	3.0	1.75	2.0	1.625	1.625	1.75	1.75	2.875	2.0	2.875	2.75	2.875	2.125	2.875	2.5		
1.75	2.75	2.5	2.5	1.75	1.75	1.5	1.625	1.5	1.875	3.5	2.625	2.375	2.125	2.625	1.875	1.5	2.5		
3.0	2.5	2.625	2.75	2.0	1.75	1.875	2.0	1.875	1.625	2.0	2.0	2.375	2.375	1.875	1.875	2.375	1.875		
2.5	2.0	1.5	2.25	2.0	2.25	1.75	1.625	1.625	1.875	2.375	1.875	2.5	2.25	2.75	1.875	2.0	2.25		
3.5	1.75	3.0	2.75	2.5	2.5	2.0	1.625	1.75	1.5	1.75	2.25	2.75	2.0	2.875	1.875	3.0	2.0		
2.75	2.75	3.0	3.0	2.25	2.5	1.375	1.375	1.5	1.875	2.5	1.875	1.75	2.5	2.25	1.875	2.0	2.75		
Averages.....	2.7708	2.3583	2.1958	2.3375	2.0606	2.3000	1.756	1.645	1.695	1.737	2.241	1.262	2.479	2.375	2.441	2.110	2.354	2.416	

Recapitulation and reduction:		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Maximum measurements.	B¹.	4.0	1.5748	B¹.	2.375	0.9350	B¹.	3.5	1.3779	B¹.	3.75	1.4763	
	B².	3.50	1.3779	B².	2.375	0.9350	B².	3.0	1.3779	B².	2.875	1.1318	
	B³.	3.0	1.1811	B³.	2.375	0.9350	B³.	3.0	1.3779	B³.	3.625	1.4371	
	B⁴.	3.50	1.3779	B⁴.	2.125	0.8366	B⁴.	3.0	1.3779	B⁴.	3.5	1.3779	
	B⁵.	2.50	0.9812										
B⁶.	3.25	1.2795											
Highest.....		4.0	1.5748		2.375	0.9350		3.5	1.3779		3.75	1.4763	
Minimum measurements.	B¹.	1.50	0.5905	B¹.	1.375	0.5413	B¹.	1.75	0.6869	B¹.	1.625	0.6397	
	B².	1.25	0.4921	B².	1.25	0.4921	B².	1.875	0.5413	B².	1.625	0.6397	
	B³.	1.50	0.5905	B³.	1.375	0.5413	B³.	1.75	0.6869	B³.	1.5	0.5905	
	B⁴.	1.375	0.5413	B⁴.	1.5	0.5906	B⁴.	1.875	0.7380	B⁴.	1.875	0.7380	
	B⁵.	1.50	0.5905										
B⁶.	1.75	0.6889											
Lowest.....		1.25	0.4921		1.25	0.4921		1.875	0.5413		1.5	0.5905	
Average measurements.	B¹.	2.770	1.0905	B¹.	1.756	0.6913	B¹.	2.241	0.8222	B¹.	2.441	0.9610	
	B².	2.358	0.9281	B².	1.645	0.6470	B².	1.262	0.4668	B².	2.110	0.8330	
	B³.	2.195	0.8644	B³.	1.695	0.6673	B³.	2.479	0.8750	B³.	2.354	0.9267	
	B⁴.	2.337	0.9300	B⁴.	1.737	0.6638	B⁴.	2.375	0.9350	B⁴.	2.416	0.8511	
	B⁵.	2.066	0.8133										
B⁶.	2.300	0.9055											
Average.....		2.336	0.9196		1.708	0.6721		2.080	0.8224		2.391	0.9177	
Measurements above average.....			70			58			50			58	
Measurements below average.....			101			62			31			62	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of samples..	ONE-HALF MERINO, AND ONE-HALF COTSWOLD.				SEVEN-EIGHTHS LEICESTER, AND ONE-EIGHTH MERINO.						SEVEN-EIGHTHS SPANISH, AND ONE-EIGHTH AUSTRALIAN.					COTSWOLD.			
	14.				126.						128.					199.			
	3½ inches.				4½.						3¾ inches.					8¾ inches.			
Number of crimps per inch....	20.																		
Number of section.....	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.	B⁵.	B⁶.	B¹.	B².	B³.	B⁴.	B⁵.	B¹.	B².	B³.	B⁴.
Actual measurement in centimillimeters.	1.875	2.125	2.125	1.875	4.0	2.0	2.25	3.0	3.0	3.0	2.0	1.25	2.0	2.5	2.0	3.375	4.25	4.0	4.125
	1.875	1.875	1.5	2.25	2.0	2.6	2.5	2.0	3.5	4.0	2.5	1.5	2.0	2.5	2.0	4.75	5.375	3.25	4.75
	2.125	1.625	1.75	1.875	2.5	2.75	2.75	3.5	4.0	3.5	1.875	1.75	2.25	2.5	2.0	3.75	3.5	4.125	4.125
	1.875	1.875	1.5	1.625	3.0	3.0	3.0	3.5	3.0	4.0	1.875	2.0	2.0	2.5	1.875	3.375	4.5	4.875	4.875
	1.5	1.75	1.75	1.5	2.0	2.0	2.5	2.25	2.5	2.5	2.0	2.0	1.75	2.5	2.5	4.25	4.75	4.375	4.0
	1.75	1.75	1.875	1.5	2.25	2.25	2.5	2.75	2.75	3.5	2.5	2.0	2.0	2.5	1.875	3.75	3.25	4.0	4.25
	2.25	1.75	2.0	1.75	1.75	2.25	2.0	2.0	2.25	3.0	2.5	2.0	2.0	2.0	1.75	3.75	3.875	4.5	3.75
	1.5	1.875	2.0	2.125	2.75	2.5	2.25	2.0	2.375	2.75	2.375	1.5	2.25	2.25	2.0	3.375	4.0	4.5	4.0
	1.5	1.875	1.75	2.25	2.5	2.25	2.25	2.5	5.0	2.25	2.0	1.75	2.25	2.25	2.5	3.75	4.75	4.0	2.5
	2.0	1.5	1.75	1.875	2.25	3.0	2.0	3.5	4.0	2.0	2.25	2.0	2.5	2.5	2.25	3.625	5.5	5.0	4.0
	1.875	1.5	1.75	1.875	2.5	3.25	3.0	3.0	3.0	3.0	2.25	1.75	2.5	2.25	1.875	4.0	4.875	4.125	4.5
	2.0	1.5	1.875	1.875	2.0	2.5	2.5	3.5	2.75	2.75	3.0	1.875	2.75	2.5	1.5	4.3	4.75	5.125	4.5
	1.75	1.625	1.5	1.875	2.375	2.75	2.75	2.5	2.5	3.25	2.0	1.5	2.75	2.375	2.0	4.875	5.0	3.625	4.625
	1.75	1.625	1.75	1.875	2.0	2.25	3.5	2.75	3.5	3.5	2.125	1.75	2.5	2.375	2.0	3.5	3.875	1.125	4.5
	2.25	1.375	2.0	2.0	1.75	3.0	4.0	3.0	3.0	2.25	2.125	1.625	2.25	2.5	2.0	3.375	3.875	4.0	4.0
	2.0	1.75	1.875	2.125	2.5	1.5	2.0	3.5	4.0	2.5	2.25	1.5	2.0	2.75	2.0	3.125	4.5	3.875	4.25
	1.75	1.875	1.875	1.875	2.0	1.75	4.5	2.5	2.75	2.5	1.25	1.5	3.0	2.0	2.0	4.0	5.25	4.875	5.0
	2.125	1.875	2.0	1.875	2.5	1.875	4.75	2.25	2.75	2.25	1.0	1.25	3.0	2.25	1.875	2.625	3.75	4.5	3.0
	1.875	2.375	1.75	2.0	2.0	1.5	5.0	2.375	3.25	2.25	1.25	2.0	2.5	2.25	1.75	3.375	3.25	4.25	4.75
	2.0	1.875	1.625	1.875	2.25	2.5	1.75	2.375	2.5	3.0	1.5	1.75	2.25	2.0	1.5	3.5	4.375	3.25	4.75
2.0	2.25	1.875	1.75	1.75	3.0	1.75	2.0	2.0	2.75	1.5	1.75	2.0	2.25	1.5	4.875	4.5	4.5	4.25	
1.5	1.75	1.5	2.0	2.0	3.0	2.0	1.75	2.0	3.5	2.0	2.0	2.5	2.0	1.5	3.875	4.5	3.5	3.75	
2.5	1.625	1.5	1.625	2.5	2.25	4.5	2.0	3.5	3.5	2.0	2.0	2.25	3.25	1.5	4.0	4.875	4.25	4.0	
1.875	1.625	1.75	1.5	2.25	1.5	2.5	2.25	2.5	3.5	2.0	2.25	2.25	2.5	2.0	3.125	4.75	3.625	2.5	
2.0	1.5	1.625	1.5	3.0	2.0	4.0	2.5	3.25	3.0	2.25	1.75	2.25	2.0	2.0	3.625	4.5	3.5	3.75	
2.125	1.75	1.375	1.875	2.75	2.75	2.25	3.0	3.5	2.5	2.25	2.5	2.5	2.5	2.25	3.375	2.75	3.5	3.625	
1.75	1.875	1.875	2.0	3.0	2.0	3.5	3.25	2.5	2.25	2.375	2.375	2.25	2.25	2.375	3.625	1.875	4.5	4.125	
1.75	1.625	1.875	1.6	2.0	1.5	3.0	3.5	3.5	2.25	2.25	2.25	2.25	2.0	2.5	3.5	4.0	3.875	3.5	
1.875	1.5	1.75	2.0	2.25	1.5	4.0	1.75	3.0	2.25	2.0	1.5	2.5	2.25	2.25	2.75	3.375	4.0	4.0	
1.875	1.625	1.375	1.625	2.75	2.0	2.0	2.75	2.5	2.5	2.0	1.25	2.75	2.25	2.00	4.375	4.0	3.75	3.0	
Averages.....	1.895	1.750	1.750	1.858	2.3706	2.2958	2.7410	2.6500	2.8625	2.8583	2.0416	1.7958	2.3500	2.3500	1.9708	3.701	4.212	4.112	4.025

Recapitulation and reduction:	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
	Maximum measurements.	B¹	2.5	0.9842	B¹	4.0	1.5748	B¹	3.0	1.1811	B¹	4.875
	B²	2.875	0.9350	B²	3.25	1.2705	B²	2.375	0.9350	B²	5.5	2.1653
	B³	2.125	0.8366	B³	5.0	1.9685	B³	3.0	1.1811	B³	5.125	2.0177
	B⁴	2.25	0.8658	B⁴	3.50	1.3779	B⁴	3.25	1.2795	B⁴	5.0	1.9685
				B⁵	5.0	1.9685	B⁵	2.50	0.9842			
				B⁶	4.0	1.6748						
Highest.....		2.5	0.9842		5.0	1.9685		3.25	1.2705		5.5	2.1653
Minimum measurements.	B¹	1.5	0.5905	B¹	1.75	0.6889	B¹	1.0	1.3937	B¹	3.125	1.2303
	B²	1.375	0.5413	B²	1.50	0.5905	B²	1.25	0.4921	B²	3.25	1.2795
	B³	1.375	0.5413	B³	1.75	0.6889	B³	1.75	0.6889	B³	3.25	1.2795
	B⁴	1.5	0.5905	B⁴	1.75	0.6889	B⁴	2.0	0.7874	B⁴	2.5	0.9842
				B⁵	2.0	0.7874		1.50	0.5905			
				B⁶	2.0	0.7874						
Lowest.....		1.375	0.5413		1.50	0.5905		1.0	0.3937		2.5	0.9842
Average measurements.	B¹	1.895	0.7460	B¹	2.370	0.9330	B¹	2.041	0.8035	B¹	3.701	1.4570
	B²	1.750	0.6889	B²	2.295	0.9055	B²	1.705	0.7069	B²	4.212	1.6532
	B³	1.750	0.6889	B³	2.741	1.0791	B³	2.350	0.9251	B³	4.112	1.6188
	B⁴	1.858	0.7314	B⁴	2.650	1.0433	B⁴	2.350	0.9251	B⁴	3.006	1.4433
				B⁵	2.892	1.1267	B⁵	1.970	0.7755			
				B⁶	2.858	1.1251						
Average.....		1.813	0.7137		2.029	1.0346		2.101	0.8271		3.922	1.5440
Measurements above average.....			64			83			72			71
Measurements below average.....			56			97			78			49



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		LINCOLN.																
Catalogue number of samples..		201.				205.				227.			228.			229.		
Length of fiber in crimp.....		5 inches.				6 inches.				—			—			—		
Number of crimps per inch....		—				—				—			—			—		
Number of section.....		B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .
Actual measurement in centimillimeters.	3.375	5.25	2.75	3.0	2.5	3.0	3.75	1.875	5.0	4.75	3.5	4.5	2.25	2.75	4.0	3.5	3.125	
	5.0	3.875	5.375	2.0	2.875	2.5	3.0	2.125	3.5	3.25	4.5	4.5	2.0	2.875	1.75	3.0	2.875	
	3.75	3.875	4.375	4.0	3.75	3.0	3.5	2.0	0.0	3.375	2.5	2.5	4.0	2.0	3.875	3.5	2.5	
	2.5	5.0	2.875	4.625	2.875	3.375	3.125	2.375	4.875	2.75	2.375	2.125	3.0	2.25	4.5	3.5	4.75	
	2.5	4.5	3.75	4.125	2.0	3.0	3.375	2.75	5.75	4.5	2.875	4.125	2.625	3.0	3.25	4.0	4.0	
	3.25	4.875	3.0	4.25	2.75	3.5	3.0	1.75	3.0	4.0	2.75	2.125	3.25	1.625	4.25	4.0	3.75	
	5.0	4.375	2.75	3.875	2.375	2.5	2.75	2.75	2.5	3.75	2.75	3.75	1.75	2.875	2.625	3.25	3.0	
	4.75	5.0	3.25	4.0	2.75	2.0	3.0	3.0	3.875	2.5	2.025	3.75	2.875	3.25	4.0	3.375	4.0	
	4.5	6.0	3.75	2.375	2.0	3.25	2.875	2.5	4.375	4.375	2.75	4.375	2.5	2.5	2.375	3.75	2.75	
	4.625	3.375	4.375	3.0	2.25	2.75	3.0	2.875	4.5	5.0	3.875	3.5	2.0	2.375	3.875	2.25	3.5	
	3.25	3.75	2.875	4.0	2.125	3.375	2.75	2.0	5.5	5.0	1.625	4.5	1.25	3.75	3.875	3.625	4.0	
	3.875	3.0	2.0	2.0	2.5	2.125	3.375	2.5	5.875	4.75	2.375	3.875	2.75	2.5	3.375	3.0	4.5	
	3.5	4.75	3.5	4.875	2.5	3.0	3.375	2.0	4.375	5.375	1.625	2.875	2.875	2.5	2.25	2.375	4.125	
	2.25	4.5	2.25	3.5	2.5	2.0	3.125	2.875	0.25	4.75	2.875	3.625	3.375	3.5	2.875	2.75	4.25	
	3.025	4.0	4.25	3.875	2.25	2.25	2.5	4.0	1.875	3.0	3.0	3.375	2.875	2.875	3.5	3.5	3.0	
	2.875	4.0	3.375	3.875	2.25	2.875	3.0	2.0	3.875	5.0	2.25	2.875	3.5	2.0	4.25	3.0	3.875	
	4.0	5.375	3.5	3.0	2.5	3.0	3.0	2.25	2.75	3.125	2.75	2.5	3.375	2.25	4.0	4.0	3.25	
	3.5	3.0	3.0	2.5	2.25	2.5	3.625	2.5	5.875	4.5	4.5	2.75	2.75	3.6	3.375	2.75		
	3.5	6.875	3.875	2.5	2.0	3.125	3.75	2.375	5.5	5.5	2.875	3.875	2.75	3.5	4.0	3.5	2.75	
	3.125	3.0	3.375	2.25	2.875	2.75	3.25	1.75	3.125	5.5	3.0	3.5	3.25	2.25	3.875	4.0	4.0	
3.25	3.875	2.0	3.5	2.5	3.0	3.625	2.375	3.25	3.5	2.8	3.0	3.25	2.0	4.5	2.5	4.0		
2.125	2.25	4.0	2.0	2.75	2.0	3.875	3.25	5.25	4.875	2.375	2.75	4.0	3.0	4.125	2.375	3.375		
3.5	4.375	4.25	5.375	2.375	3.375	2.875	2.875	4.375	3.0	1.875	4.375	2.5	3.125	3.5	2.125	4.25		
3.025	4.25	4.875	5.0	2.5	3.0	3.0	2.25	3.25	4.875	3.25	2.5	3.0	2.875	2.0	3.125	2.75		
4.5	0.375	3.375	2.75	2.75	3.5	3.25	2.125	5.375	3.375	3.375	3.375	2.875	2.75	4.0	3.0	3.5		
2.875	4.0	4.75	1.25	2.0	3.0	2.875	3.0	4.375	3.375	3.75	3.875	2.125	1.75	2.5	3.5	3.25		
2.875	4.125	2.625	2.5	2.375	3.25	3.25	2.5	5.75	4.5	5.0	2.875	2.0	2.5	3.75	3.625	3.875		
2.875	5.875	2.5	3.0	2.375	3.0	3.25	3.375	5.0	3.375	5.375	1.25	2.875	2.0	3.5	3.625	3.25		
2.875	5.375	5.25	4.75	2.5	3.375	2.75	2.75	3.0	4.125	3.75	3.0	2.25	1.75	3.5	3.25	3.75		
3.0	3.375	3.75	2.0	2.625	2.5	2.75	2.0	5.5	1.5	2.25	3.0	2.875	2.5	3.5	3.5	4.5		
Averages.....	3.508	4.375	3.614	3.475	2.520	2.998	3.332	2.807	4.720	4.350	2.991	3.383	2.666	3.621	3.283	3.791		

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:															
Maximum measurements.	B <sup>1</sup>	5.0	1.9685	B <sup>1</sup>	3.75	1.4703	B <sup>1</sup>	5.25	2.4666	B <sup>1</sup>	4.5	1.7710	B <sup>1</sup>	4.5	1.7710
	B <sup>2</sup>	0.375	2.5098	B <sup>2</sup>	3.5	1.3779	B <sup>2</sup>	5.5	2.1053	B <sup>2</sup>	4.0	0.5748	B <sup>2</sup>	4.0	1.5748
	B <sup>3</sup>	5.75	2.2637	B <sup>3</sup>	4.0	1.5748	B <sup>3</sup>	4.5	1.7718	B <sup>3</sup>	3.5	1.3770	B <sup>3</sup>	4.75	1.8700
	B <sup>4</sup>	5.375	2.1161	B <sup>4</sup>	3.375	1.3287									
Highest.....		6.375	2.5098		4.0	1.5748		5.25	2.4666		4.5	1.7710		4.75	1.8700
Minimum measurements.	B <sup>1</sup>	2.125	0.8366	B <sup>1</sup>	2.0	0.7874	B <sup>1</sup>	3.0	1.1811	B <sup>1</sup>	2.125	0.8366	B <sup>1</sup>	1.75	0.6889
	B <sup>2</sup>	2.25	0.8858	B <sup>2</sup>	2.125	0.8366	B <sup>2</sup>	1.5	0.5905	B <sup>2</sup>	1.75	0.6889	B <sup>2</sup>	2.125	0.8366
	B <sup>3</sup>	2.0	0.7874	B <sup>3</sup>	2.375	0.9350	B <sup>3</sup>	1.375	0.5413	B <sup>3</sup>	1.625	0.6397	B <sup>3</sup>	3.0	1.1811
	B <sup>4</sup>	1.25	0.4921	B <sup>4</sup>	1.75	0.6889									
Lowest.....		1.25	0.4921		1.75	0.6889		1.875	0.5413		1.625	0.6397		1.75	0.6889
Average measurements..	B <sup>1</sup>	3.508	1.3810	B <sup>1</sup>	2.520	0.9021	B <sup>1</sup>	4.720	1.8582	B <sup>1</sup>	3.383	1.3318	B <sup>1</sup>	3.521	1.3862
	B <sup>2</sup>	4.375	1.7224	B <sup>2</sup>	2.998	1.1893	B <sup>2</sup>	4.350	1.7125	B <sup>2</sup>	2.941	1.1578	B <sup>2</sup>	3.283	1.2925
	B <sup>3</sup>	3.614	1.4350	B <sup>3</sup>	3.332	1.3118	B <sup>3</sup>	2.994	1.1787	B <sup>3</sup>	2.666	1.0496	B <sup>3</sup>	3.791	1.4925
	B <sup>4</sup>	3.475	1.3881	B <sup>4</sup>		1.1051									
Average.....		3.765	1.4822		2.914	1.1472		4.021	1.5830		2.996	1.1795		3.531	1.3901
Measurements above average..			55			55			47			41			41
Measurements below average..			65			65			43			49			49



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of samples.....	LINCOLN.										OXFORD.			MERINO.				
	230.			231.			232.				200.			213.		214.		
	4½ inches.			5 inches.			6¼ inches.				2 inches.			2½ inches.		3½ inches.		
	Number of crimps per inch.....			Number of crimps per inch.....			Number of crimps per inch.....				Number of crimps per inch.....			25.		22.		
Number of section.....			Number of section.....			Number of section.....				Number of section.....			Number of section.....		Number of section.....			
B¹. B². B³.			B¹. B². B³.			B¹. B². B³. B⁴.				B¹. B². B³.			B¹. B².		B¹. B². B³.			
2.0	1.675	1.75	4.875	3.75	2.375	4.5	4.125	5.375	4.25	3.5	4.0	3.125	2.25	1.5	1.75	2.375	2.875	
3.875	1.75	2.0	3.5	4.25	3.375	3.75	5.0	4.75	3.0	3.25	3.5	3.75	2.0	2.25	2.375	2.25	3.0	
2.375	2.375	1.25	3.5	3.75	3.875	4.5	4.875	4.25	3.625	3.875	5.0	3.75	2.375	1.75	2.0	2.5	2.5	
3.0	4.75	2.5	3.25	3.25	2.75	3.25	4.0	3.875	3.5	4.0	4.5	3.125	1.875	1.875	2.25	2.125	2.0	
3.75	2.25	2.375	4.0	3.375	2.875	3.25	3.875	2.375	2.0	3.375	3.625	2.375	2.0	1.875	2.0	1.75	2.0	
3.75	3.625	2.125	1.875	3.75	3.125	3.375	3.0	4.5	3.25	3.75	3.375	3.375	1.875	1.625	2.0	1.875	2.125	
1.75	3.0	3.5	3.5	3.5	3.875	5.25	3.5	3.5	2.75	3.5	4.5	2.875	2.5	1.875	2.0	2.5	1.875	
2.875	3.5	4.25	2.875	2.875	2.75	3.375	3.0	3.25	3.25	3.375	3.75	2.375	2.0	2.25	2.375	2.75	2.5	
2.5	2.0	3.125	3.375	3.5	3.875	3.0	3.875	2.875	2.875	3.875	2.5	1.875	1.5	1.75	1.875	1.75	2.5	
4.0	3.5	3.5	3.75	3.875	4.25	4.0	3.375	3.125	2.75	4.0	3.5	2.5	2.25	1.75	2.75	3.0	2.25	
3.5	1.75	2.5	3.5	4.25	2.5	3.75	3.25	4.0	2.25	2.375	3.0	3.875	2.0	1.75	1.75	2.5	2.5	
2.875	3.0	1.875	3.5	3.875	2.5	3.5	3.125	2.625	5.0	3.75	4.25	4.0	2.125	1.875	1.875	2.0	2.625	
3.125	3.0	2.375	4.375	3.25	2.75	5.875	3.375	4.0	3.0	3.5	3.625	2.375	2.0	1.375	1.75	2.5	2.5	
3.25	3.75	1.875	4.0	2.25	2.5	3.375	2.5	5.0	3.375	4.0	3.375	4.125	2.375	2.375	2.375	2.875	2.0	
2.5	4.375	3.0	3.75	3.75	2.5	4.625	2.75	5.625	2.75	3.75	3.875	3.75	1.875	2.25	2.5	2.5	2.5	
4.375	4.375	2.375	3.75	4.375	3.0	5.0	2.375	5.375	3.75	3.375	3.5	3.375	2.125	1.5	2.375	2.0	2.25	
4.5	2.875	2.625	3.025	3.75	4.25	4.25	5.25	3.5	4.0	6.625	3.0	3.375	2.0	2.25	3.0	2.375	2.125	
2.5	3.25	2.5	1.5	4.375	2.75	3.625	4.0	2.5	3.0	3.75	3.75	3.375	2.0	1.375	1.625	1.75	2.375	
4.5	4.0	3.0	3.375	3.125	3.875	3.875	3.875	4.0	3.0	3.25	3.375	4.0	2.125	2.25	2.5	2.0	1.75	
3.5	3.75	2.375	2.875	3.5	2.875	5.375	2.5	2.25	3.875	3.25	4.5	2.875	2.375	1.625	2.875	3.0	2.0	
4.0	3.875	2.0	4.0	4.0	2.75	2.875	2.75	4.5	5.0	3.75	4.5	5.875	1.875	1.875	2.375	1.875	2.25	
4.75	2.25	2.5	2.0	3.0	2.5	4.25	3.375	4.875	3.25	3.5	3.375	2.5	2.0	1.75	2.25	3.0	1.5	
2.375	3.875	3.875	2.875	1.75	3.0	4.5	4.0	1.875	2.875	3.875	3.375	3.25	1.5	1.375	1.625	1.75	1.5	
2.5	2.375	2.0	2.5	3.75	4.375	2.5	3.75	4.0	3.25	3.875	3.75	4.75	1.75	1.875	2.0	2.0	3.5	
2.875	1.5	4.0	3.875	3.0	3.75	4.25	3.5	4.5	2.5	4.875	3.25	3.0	1.625	2.0	2.25	2.5	2.75	
3.0	3.375	3.0	3.625	4.5	2.25	4.0	4.5	3.75	4.875	3.25	3.625	2.625	2.0	1.375	2.125	2.5	2.125	
3.125	4.625	2.75	4.0	4.0	3.0	4.0	4.25	4.375	3.25	3.75	3.125	4.375	2.125	1.375	1.75	2.5	2.0	
2.25	2.875	2.125	3.0	3.625	4.0	4.0	4.0	3.875	2.5	3.25	4.0	4.25	1.625	1.75	2.25	2.125	2.5	
3.75	3.5	3.5	4.25	4.125	3.75	3.875	2.75	5.0	3.5	4.375	3.5	3.375	1.875	1.75	1.75	2.0	2.0	
4.25	3.875	4.25	3.0	3.875	3.125	3.75	4.0	2.75	2.5	3.375	4.0	4.125	1.5	1.875	2.0	1.875	2.875	
Averages.....	3.250	3.298	2.696	3.391	3.600	3.204	3.983	3.591	3.875	3.291	3.666	3.700	3.312	2.040	1.837	2.192	2.283	2.266

Recapitulation and reduction:	No. of section.			No. of section.			No. of section.			No. of section.			No. of section.		
	In centimillimeters.	In thousandths of inch.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In thousandths of inch.
Maximum measurements	B¹ 4.75	1.8700	B¹ 4.375	1.7224	B¹ 5.25	2.0669	B¹ 4.875	1.9192	B¹ 2.5	0.9842	B¹ 3.0	1.1811			
	B² 4.875	1.9192	B² 4.5	1.7710	B² 5.25	2.0669	B² 4.5	1.7716	B² 2.375	0.9350	B² 3.0	1.1811			
	B³ 4.25	1.6732	B³ 4.375	1.7224	B³ 5.625	2.2145	B³ 4.75	1.8700	B³ 1.875	0.7381	B³ 3.5	1.3779			
					B⁴ 5.0	1.9685									
Highest.....	4.875	1.9192	4.5	1.7716	5.625	2.2145	4.875	1.9192	2.5	0.9842	3.5	1.3779			
Minimum measurements	B¹ 2.0	0.7874	B¹ 1.5	0.5905	B¹ 2.5	0.9842	B¹ 3.25	1.2795	B¹ 1.5	0.5905	B¹ 1.625	0.6397			
	B² 1.5	0.5905	B² 1.75	0.6889	B² 2.375	0.9350	B² 3.0	1.1811	B² 1.375	0.5413	B² 1.75	0.6889			
	B³ 1.75	0.6889	B³ 2.25	0.8858	B³ 1.875	0.7381	B³ 1.875	0.7381	B³ 1.875	0.7381	B³ 1.5	0.5905			
					B⁴ 2.0	0.7874									
Lowest.....	1.5	0.5905	1.5	0.5905	1.875	0.7381	1.875	0.7381	1.375	0.5413	1.5	0.5905			
Average measurements	B¹ 3.250	1.2795	B¹ 3.391	1.3350	B¹ 3.983	1.5681	B¹ 3.666	1.4433	B¹ 2.046	0.8055	B¹ 2.192	0.8629			
	B² 3.298	1.2084	B² 3.600	1.4173	B² 3.591	1.4137	B² 3.700	1.4560	B² 1.837	0.7232	B² 2.283	0.8986			
	B³ 2.696	1.0614	B³ 3.204	1.2614	B³ 3.875	1.5255	B³ 3.312	1.3039	B³ 1.837	0.7232	B³ 2.208	0.8982			
					B⁴ 3.291	1.2956									
Average.....	3.081	1.2129	3.398	1.3377	3.685	1.4507	3.559	1.3961	1.941	0.7641	2.227	0.8767			
Measurements above average.....	40		49		60		44		26		47				
Measurements below average.....	50		41		60		46		34		48				



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		MERINO.																
Catalogue number of samples..		215.			216.			217.		218.			219.			220.		
Length of fiber in crimp.....		2½ inches.			3½ inches.			1½ inches.		4 inches.			2½ inches.			8½ inches.		
Number of crimps per inch....		18.			16.			16.		16.			16.			14.		
Number of section .....		B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.
Actual measurement in centimillimeters.	2.125	1.5	1.5	2.375	1.625	2.0	2.25	1.375	2.0	2.375	1.625	2.0	1.875	1.375	2.0	1.375	1.75	
	1.5	1.25	1.6	2.125	1.5	1.25	2.0	1.6	2.0	1.75	1.75	1.75	2.375	1.625	2.125	1.75	1.75	
	1.875	1.375	1.75	1.875	1.625	1.75	1.25	1.6	1.75	2.25	1.75	1.75	1.875	1.75	2.125	2.0	1.75	
	1.5	2.0	1.75	1.875	2.0	1.75	1.25	1.125	2.0	1.6	1.5	1.75	1.875	1.875	2.0	1.75	2.25	
	1.75	1.5	1.875	2.0	1.625	2.875	1.875	2.125	2.25	2.125	2.0	2.125	1.6	1.75	2.375	2.25	2.0	
	2.25	1.375	1.875	2.0	1.875	2.0	1.75	1.75	2.125	2.25	1.375	1.5	1.75	1.875	2.0	1.875	1.875	
	1.625	1.375	2.0	1.875	1.875	1.875	1.875	1.375	2.0	2.0	1.75	1.625	2.0	2.75	2.0	2.375	2.0	
	1.75	1.375	1.75	1.75	1.375	1.875	1.875	1.875	2.5	1.375	1.875	2.875	2.375	1.875	2.125	1.625	2.0	
	2.125	2.125	2.0	2.125	1.875	2.0	1.875	2.375	1.625	2.0	1.6	2.75	2.0	1.625	1.75	1.5	1.875	
	1.6	1.375	2.375	2.375	2.0	2.375	1.875	2.25	2.0	2.125	1.5	1.625	1.75	2.625	1.75	2.0	1.75	
	2.0	1.5	1.875	2.375	1.5	2.625	1.5	1.875	2.0	1.75	2.0	1.75	1.875	2.0	2.375	1.875	1.875	
	2.0	1.5	1.875	1.875	1.625	2.0	2.0	1.6	1.75	1.875	2.0	2.25	1.75	1.375	1.875	2.0	2.125	
	1.875	1.25	2.0	1.6	2.25	1.75	1.875	1.375	1.75	1.5	1.875	2.125	2.0	1.875	2.125	1.625	1.625	
	2.125	1.375	2.375	2.0	1.6	1.625	2.875	1.876	2.25	1.75	1.875	1.875	1.5	1.875	1.625	2.0	2.0	
	2.0	1.375	2.0	2.0	2.0	1.875	2.0	2.0	2.375	1.625	2.0	1.875	1.625	2.6	2.0	1.625	2.0	
	1.5	2.0	2.5	2.375	2.0	2.0	2.25	1.875	1.75	1.76	1.5	1.625	1.375	2.0	2.0	1.6	1.76	
	1.875	1.25	1.75	1.75	2.0	1.625	2.25	1.5	1.75	1.875	1.75	1.875	2.5	1.625	2.0	1.6	1.875	
	2.0	1.375	1.75	2.375	2.0	2.375	2.75	2.0	2.125	1.75	2.875	2.0	1.625	2.25	2.75	2.0	1.875	
	2.125	1.5	1.875	1.875	1.875	1.75	2.0	1.25	1.625	1.875	1.625	2.25	1.5	1.875	2.0	2.0	1.6	
	2.0	1.875	2.375	2.0	2.5	1.75	1.875	1.75	2.25	1.6	1.625	2.25	1.875	1.75	2.0	1.5	2.0	
1.75	1.25	1.375	2.5	2.0	1.375	2.25	2.0	2.0	2.25	1.375	2.75	2.0	2.5	2.6	2.0	1.875		
1.5	1.5	1.6	1.875	1.875	1.75	2.375	2.0	2.0	1.875	2.0	1.625	1.125	2.25	1.625	2.0	1.876		
2.0	1.5	1.75	2.0	2.375	2.0	1.625	1.875	1.875	1.625	2.25	2.0	2.125	2.5	1.75	2.125	1.875		
1.875	1.6	2.25	1.5	1.875	1.875	1.25	1.6	2.0	2.0	1.875	1.5	1.375	1.875	2.75	2.0	2.0		
1.75	1.25	1.875	2.875	1.875	2.25	1.75	1.75	1.625	1.875	2.0	2.75	1.5	1.75	1.6	2.0	1.75		
1.75	1.125	1.625	1.6	1.875	2.125	1.75	1.5	2.0	1.875	2.25	2.0	1.375	2.0	2.6	1.6	1.76		
1.6	1.875	2.0	2.625	1.875	2.0	1.875	1.6	1.875	1.875	2.0	2.25	1.875	1.76	2.75	1.625	1.875		
2.8	1.75	1.875	1.875	2.5	1.5	2.125	1.875	2.125	1.25	1.625	1.75	2.0	1.625	1.75	2.25	2.0		
1.625	1.375	1.875	1.625	1.75	2.375	1.875	1.625	2.875	2.75	1.75	1.875	1.75	2.0	2.5	2.0	1.875		
1.75	1.5	1.5	2.5	1.75	1.25	1.75	1.75	2.5	1.5	2.0	1.6	2.75	1.625	1.6	1.875	1.75		
Averages.....	1.850	1.495	1.795	2.012	1.675	1.887	1.870	1.605	2.018	1.870	1.800	1.962	1.883	1.960	2.070	1.850	1.875	

		No. of section.		In centimillimeters.		In thousandths of inch.		No. of section.		In centimillimeters.		In thousandths of inch.		No. of section.		In centimillimeters.		In thousandths of inch.	
Recapitulation and reductions:	Maximum measurements.	B¹	2.5	0.9642	B¹	2.625	1.0334	B¹	2.375	0.9350	B¹	2.875	1.1318	B¹	2.75	1.0626	B¹	2.75	1.0626
		B²	2.125	0.8366	B²	2.375	0.9350	B²	2.375	0.9350	B²	2.75	1.0626	B²	2.6	0.9642	B²	2.375	0.9350
		B³	2.5	0.9642	B³	2.675	1.1318	B³	2.675	1.1318	B³	2.875	1.3287	B³	2.75	1.0626	B³	2.25	0.8658
Highest.....		2.5	0.9642		2.675	1.1318		2.375	0.9350		2.875	1.1318		2.75	1.0626		2.75	1.0626	
Minimum measurements.	Lowest.....	B¹	1.5	0.5905	B¹	1.375	0.5413	B¹	1.25	0.4921	B¹	1.625	0.6397	B¹	1.6	0.5905	B¹	1.5	0.5905
		B²	1.125	0.4429	B²	1.5	0.5905	B²	1.125	0.4429	B²	1.25	0.4921	B²	1.125	0.4429	B²	1.375	0.5413
		B³	1.375	0.5413	B³	1.25	0.4921	B³	1.25	0.4921	B³	1.875	0.5413	B³	1.875	0.5413	B³	1.6	0.5905
Average measurements..		1.125	0.4429		1.25	0.4921		1.125	0.4429		1.25	0.4921		1.125	0.4429		1.375	0.5413	
Average.....	Measurements above average..	B¹	1.850	0.7283	B¹	2.012	0.7021	B¹	1.879	0.7397	B¹	2.018	0.7044	B¹	1.962	0.7724	B¹	2.070	0.8149
		B²	1.495	0.5885	B²	1.875	0.7380	B²	1.605	0.6673	B²	1.870	0.7362	B²	1.633	0.7216	B²	1.850	0.7283
		B³	1.795	0.7060	B³	1.887	0.7429	B³	1.887	0.7429	B³	1.800	0.7066	B³	1.960	0.7716	B³	1.875	0.7380
Measurements below average..		1.713	0.6744		1.931	0.7614		1.787	0.7035		1.896	0.7464		1.918	0.7551		1.931	0.7602	
		50			42			31			41			85			46		
		40			48			29			49			65			44		



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		MERINO.																
Catalogue number of samples..		221.			222.			223.			224.			225.		226.		
Length of fiber in crimp.....		2½ inches.			1¾ inches.			2¾ inches.			3¾ inches.			—		—		
Number of crimps per inch....		16.			16.			20.			20.			—		—		
Number of section .....		B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B¹.	B².	
Actual measurement in centimillimeters.	2.75	1.5	2.625	2.375	1.875	1.5	2.0	2.25	2.0	1.75	2.125	2.0	1.875	2.0	0.75			
	2.6	2.375	2.125	2.875	1.875	1.75	2.75	2.0	1.875	1.5	2.0	2.0	1.375	2.0	2.5			
	2.0	2.25	1.75	1.875	1.875	2.0	2.0	2.0	1.625	1.75	2.0	2.25	2.25	2.125	2.125			
	1.625	2.6	2.25	2.0	1.25	2.0	1.875	2.25	1.25	1.75	1.75	2.0	2.0	2.5	1.5			
	2.25	2.875	2.0	2.875	1.75	1.625	2.125	2.0	2.0	1.25	2.0	1.625	2.25	1.875	1.75			
	2.0	3.0	2.5	2.375	1.75	2.375	1.875	2.0	1.75	1.375	2.0	2.0	2.0	1.875	2.0			
	1.5	2.25	2.75	2.375	1.75	1.875	2.25	2.0	2.25	1.375	1.625	1.75	2.0	2.125	1.75			
	2.25	2.75	2.0	2.0	1.75	1.875	1.75	2.0	1.75	1.5	2.0	1.875	1.875	2.5	1.5			
	3.0	3.0	2.5	2.625	2.25	1.875	1.875	2.125	2.0	1.25	2.375	1.75	2.0	1.875	2.5			
	1.75	2.625	1.5	2.0	1.5	2.0	1.875	2.375	2.0	1.5	1.75	2.125	1.75	2.0	1.875	1.375		
	1.75	1.75	2.875	2.875	1.5	1.75	1.625	2.0	1.5	1.5	2.0	2.5	1.875	2.5	2.5			
	2.75	2.875	1.75	1.875	1.75	2.125	2.0	1.875	2.0	1.5	2.0	2.125	1.875	1.75	2.0			
	2.125	2.5	2.875	2.25	2.6	2.0	1.75	1.5	1.75	1.75	1.5	2.0	2.0	2.25	2.5			
	2.125	1.875	1.75	2.375	1.75	2.0	2.25	1.625	1.875	1.5	2.0	2.0	2.0	2.375	2.5	2.125		
	2.375	2.0	2.0	2.0	1.5	2.0	2.375	1.875	2.6	1.5	2.5	1.75	2.125	2.25	1.5			
	2.625	2.375	2.75	2.125	2.75	1.5	2.0	2.0	1.5	1.5	2.0	2.0	1.75	1.875	2.25			
	2.8	2.625	3.0	2.5	1.5	2.25	2.0	1.875	1.875	1.75	1.5	1.5	2.375	2.0	1.875			
	3.125	2.25	2.875	2.0	1.75	1.75	1.75	1.75	1.75	1.625	1.875	1.75	2.0	1.75	2.0	1.875		
	2.875	1.75	2.25	2.125	2.25	2.5	2.0	2.5	1.875	1.625	1.5	1.875	2.375	2.25	1.75			
	2.75	2.125	2.0	2.5	1.125	1.75	2.25	2.0	1.875	1.5	2.0	2.0	1.5	1.5	1.5			
	2.375	2.5	2.5	2.0	1.5	2.25	2.0	1.875	1.5	1.875	1.875	2.125	2.5	2.25	2.25			
	2.875	2.25	2.5	2.0	2.0	1.75	2.0	1.5	1.75	2.0	1.5	2.0	2.0	2.0	2.875	2.125		
	2.25	2.375	2.625	2.25	2.0	1.625	1.875	1.25	2.0	1.625	2.5	2.375	1.5	2.5	2.375			
	2.875	2.0	2.5	2.25	1.875	1.875	2.0	2.25	2.0	1.375	1.75	1.875	1.625	2.25	1.875			
	1.75	2.5	2.25	2.0	1.875	1.625	1.75	1.75	1.75	1.75	2.125	2.25	2.0	1.5	2.375			
	2.125	1.875	1.875	2.125	2.0	1.875	1.75	1.625	1.875	1.375	2.0	2.0	2.125	1.875	2.0			
	2.5	1.625	2.5	2.25	1.5	2.0	1.5	1.5	1.625	1.5	2.25	2.125	2.375	2.25	1.875			
	2.625	2.375	2.875	2.0	2.0	2.0	2.0	1.75	2.0	1.375	2.0	2.0	1.875	2.25	2.25			
2.5	2.5	2.5	2.0	1.625	1.75	2.125	2.0	2.125	2.0	2.375	1.625	1.75	2.125	1.5				
2.25	2.5	1.875	2.0	2.25	1.875	2.0	1.5	2.0	1.375	2.0	2.25	2.375	2.0	1.75				
Averages.....		2.328	2.308	2.321	2.189	1.804	1.920	1.967	1.900	1.854	1.566	1.962	1.916	2.012	2.050	1.879		

		No. of section.			No. of section.			No. of section.			No. of section.			No. of section.					
		In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.				
Recapitulation and reduction:	Maximum measurements.	B¹	2.125	1.2303	B¹	2.875	1.1318	B¹	2.5	0.9842	B¹	2.5	0.9842	B¹	2.875	1.1318			
		B²	3.0	1.1811	B²	2.75	1.0826	B²	2.75	1.0826	B²	2.0	0.7874	B²	2.5	0.9842			
		B³	3.0	1.1811	B³	.....	.....	B³	2.875	0.9350	B³	2.5	0.9842	B³	.....	.....			
Highest .....		3.125	1.2308	2.875	1.1318	2.75	1.0826	2.5	0.9842	2.50	0.9842	2.875	1.1318						
Minimum measurements.	B¹	1.5	0.5905	B¹	1.875	0.7381	B¹	1.625	0.6397	B¹	1.25	0.4921	B¹	1.625	0.6397	B¹	1.375	0.5413	
	B²	1.5	0.5905	B²	1.125	0.4429	B²	1.5	0.5905	B²	1.25	0.4921	B²	1.375	0.5413	B²	0.75	0.2925	
	B³	1.5	0.5905	B³	.....	.....	B³	1.5	0.5905	B³	1.5	0.5905	B³	.....	.....	B³	.....	.....	
Lowest .....		1.5	0.5905	1.125	0.4429	1.5	0.5905	1.25	0.4921	1.375	0.5413	0.75	0.2925						
Average measurements..	B¹	2.328	0.9105	B¹	2.189	0.8818	B¹	1.920	0.7559	B¹	1.854	0.7299	B¹	1.916	0.7543	B¹	2.050	0.8070	
	B²	2.308	0.9086	B²	1.804	0.7102	B²	1.967	0.7822	B²	1.566	0.6165	B²	2.012	0.7921	B²	1.879	0.7397	
	B³	2.321	0.9137	B³	.....	.....	B³	1.900	0.7490	B³	.....	.....	B³	.....	.....	B³	.....	.....	
Average.....		2.319	0.9129	1.990	0.7858	1.935	0.7618	1.710	0.6732	1.964	0.7732	1.964	0.7732	1.964	0.7732				
Measurements above average..		50			37			48			68			38					
Measurements below average..		40			23			42			32			22			27		



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of sample...	MERINO.						SPANISH MERINO.									SILESIAN MERINO.	
	233.			204.			205.			206.			207.			208.	
	3½ inches.			—			1½ inches.			—			—			1¼ inches.	
Length of fiber in crimp .....	16.			—			22.			—			—			—	
Number of crimps per inch .....	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².
Number of section .....																	
1.25	1.875	2.0	1.75	2.0	2.0	1.875	1.5	2.0	5.0	4.5	2.875	4.0	5.75	4.75	1.875	1.875	
2.25	1.5	2.0	1.625	2.225	1.5	2.0	1.75	2.0	5.025	3.875	5.0	3.5	6.5	6.5	1.625	1.25	
1.225	2.125	1.875	1.5	2.0	1.625	2.0	2.0	2.9	5.025	5.5	5.375	4.75	5.75	5.875	1.375	1.375	
2.375	1.875	2.25	1.25	2.0	1.75	1.375	1.75	2.125	6.0	5.875	3.5	5.375	7.0	7.25	1.125	1.5	
1.75	2.0	2.125	1.5	2.25	3.75	1.375	1.75	1.75	5.5	4.125	4.75	4.5	5.0	6.5	1.5	1.625	
2.5	2.125	1.875	1.75	1.75	2.25	1.5	1.75	1.75	5.75	4.5	3.875	3.875	6.5	7.0	1.5	1.75	
2.25	1.5	1.625	1.25	1.875	1.5	1.375	1.75	1.875	6.0	5.75	3.0	4.0	5.625	6.5	1.625	1.5	
2.25	2.25	1.75	1.5	2.0	1.75	1.375	1.875	2.0	4.5	4.375	3.375	4.375	5.875	8.25	1.25	1.5	
2.0	1.5	2.0	1.375	1.875	1.125	1.75	1.875	2.0	4.75	5.375	3.25	4.0	5.375	6.375	1.375	1.75	
1.625	2.375	2.0	1.125	1.5	1.375	1.625	2.375	1.75	4.75	5.375	3.375	4.5	7.0	6.5	1.875	1.375	
1.75	1.875	1.75	1.125	2.0	2.0	1.625	1.625	2.5	6.5	4.875	3.0	4.5	5.25	6.0	1.25	1.25	
1.75	2.5	1.875	1.375	1.375	1.875	1.75	2.25	1.375	5.75	4.5	2.875	4.25	5.75	6.375	1.375	1.375	
1.875	1.5	2.5	1.875	1.25	2.25	1.75	1.625	2.0	5.5	5.25	4.0	4.5	6.375	5.5	1.375	1.25	
2.25	2.25	2.0	1.75	1.5	1.75	1.5	1.625	1.625	5.75	3.375	3.375	3.875	4.875	5.75	1.5	1.625	
2.375	2.0	2.125	1.875	1.125	1.75	1.875	2.0	2.5	6.25	5.75	3.25	3.875	6.375	6.5	1.5	1.375	
2.0	1.625	2.0	1.5	1.25	1.875	1.5	1.625	1.875	5.0	4.5	3.25	4.0	5.5	4.75	1.5	1.875	
2.625	2.0	1.5	1.375	2.75	1.875	1.375	2.0	1.625	4.625	2.875	4.75	3.875	4.75	5.0	1.125	1.0	
2.375	2.125	2.25	2.0	2.0	1.875	1.875	1.875	1.375	5.375	5.375	3.5	5.0	5.75	6.25	1.5	1.75	
1.875	2.0	1.5	1.5	3.375	2.125	1.625	1.375	1.875	5.5	4.0	3.5	5.375	5.75	6.25	1.5	1.25	
2.0	2.5	2.375	1.5	2.375	1.875	1.0	1.5	1.75	5.875	4.5	3.875	5.0	6.0	7.25	1.5	1.25	
1.75	2.0	1.75	1.75	1.875	1.5	1.5	1.625	1.75	4.5	4.75	5.5	3.875	6.0	5.5	1.25	1.25	
2.0	1.75	1.75	1.5	1.5	2.0	1.75	1.75	2.375	5.0	5.0	4.25	4.125	4.0	6.75	1.375	1.25	
2.0	2.25	2.0	1.5	3.0	2.0	1.375	1.5	1.75	5.0	5.375	3.75	4.375	6.0	5.5	1.625	1.75	
2.0	2.5	1.875	2.125	2.875	2.25	1.75	2.25	1.875	5.75	6.0	3.5	4.125	6.75	6.5	1.5	1.25	
1.75	2.125	1.625	1.5	2.625	2.0	1.125	1.625	2.125	6.0	4.5	5.5	5.0	6.5	7.5	1.5	1.125	
2.75	1.875	2.375	1.5	1.75	1.875	1.875	2.0	1.625	6.5	4.875	2.5	4.0	6.375	6.25	1.375	1.5	
2.125	2.375	1.75	1.75	2.0	2.5	1.75	1.75	1.5	4.75	4.25	3.0	4.375	5.5	5.875	1.0	1.625	
1.75	2.25	2.25	1.625	2.125	2.5	1.75	1.875	1.875	6.75	4.0	2.75	3.5	5.625	5.875	1.375	1.25	
2.25	2.375	2.25	1.75	1.5	2.0	1.375	2.125	1.5	6.375	5.5	4.0	3.875	6.0	6.75	1.375	1.875	
2.0	2.25	1.625	2.25	1.75	1.875	1.375	1.75	2.0	5.375	5.75	4.0	3.875	6.5	6.75	1.5	1.375	
Average .....	2.054	2.041	1.987	1.635	1.982	1.943	1.593	1.804	1.887	5.520	4.808	3.750	4.275	5.866	5.937	1.437	1.441

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.		No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.		No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.	
		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.						
Maximum measurements.	B¹	2.75	1.0826	B¹	2.25	0.8858	B¹	2.0	0.7874	B¹	6.75	2.4606	B¹	5.375	2.1161	B¹	1.875	0.7381
	B²	2.5	0.9842	B²	3.375	1.3287	B²	2.125	0.8396	B²	6.0	2.3622	B²	7.0	2.7559	B²	1.875	0.7381
	B³	2.5	0.9842	B³	3.75	1.4763	B³	2.5	0.9842	B³	5.5	2.1653	B³	8.25	2.2480	B³	.....	.....
Highest .....		2.75	1.0826		3.75	1.4763		2.5	0.9842		6.75	2.4606		8.25	2.2480		1.875	0.7381
Minimum measurements.	B¹	1.25	0.4921	B¹	1.125	0.4429	B¹	1.0	0.3967	B¹	4.5	1.7716	B¹	3.5	1.3779	B¹	1.0	0.3937
	B²	1.5	0.5905	B²	1.125	0.4429	B²	1.375	0.5413	B²	3.375	1.3287	B²	4.0	1.5748	B²	1.0	0.3937
	B³	1.5	0.5905	B³	1.5	0.5905	B³	1.375	0.5413	B³	2.75	1.0826	B³	4.75	1.8700	B³	.....	.....
Lowest .....		1.25	0.4921		1.125	0.4429		1.0	0.3967		2.75	1.0826		3.5	1.3779		1.0	0.3937
Average measurements..	B¹	2.054	0.8066	B¹	1.635	0.6436	B¹	1.593	0.6271	B¹	5.520	2.1732	B¹	4.275	1.6830	B¹	1.437	0.5637
	B²	2.041	0.8035	B²	1.982	0.7803	B²	1.804	0.7102	B²	4.808	1.8929	B²	5.866	2.3094	B²	1.441	0.5673
	B³	1.987	0.7822	B³	1.943	0.7649	B³	1.887	0.7114	B³	3.750	1.4763	B³	5.937	2.3373	B³	.....	.....
Average .....		2.027	0.7980		1.853	0.7295		1.761	0.6933		4.692	1.8472		5.026	1.9787		1.439	0.5665
Measurements above average..		37			45			35			49			56			29	
Measurements below average..		53			45			55			41			34			31	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of sample ..	SILESIA MERINO.						LEICESTER AND LINCOLN.			BLACK WOOL.			
	209.		210.		211.		212.	234.			202.		
	1 1/4 inches.		1 1/2 inches.		1 3/4 inches.		3/4 inch.	—			—		
Length of fiber in crimp.....	25.		25.		25.		26.	—			—		
Number of crimps per inch....	25.		25.		25.		26.	—			—		
Number of section.....	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>1</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .
Actual measurement in centimillimeters.	1.875	1.625	1.75	1.875	2.375	1.75	1.5	4.5	3.375	4.5	2.75	3.5	3.875
	2.0	2.0	1.75	1.625	1.75	1.75	1.375	4.5	3.0	4.0	4.0	3.0	3.5
	2.75	1.625	1.75	1.5	1.5	2.0	1.75	3.75	4.5	4.25	3.375	2.125	3.25
	1.625	1.5	1.75	1.75	1.875	1.625	1.75	3.875	3.75	3.0	3.0	2.5	3.875
	1.25	1.375	1.25	1.5	1.5	1.5	1.875	4.5	4.0	2.75	2.875	2.875	3.5
	1.875	2.25	1.5	1.625	2.0	1.75	1.25	3.5	4.5	4.375	3.75	4.375	4.0
	1.375	1.0	1.625	1.625	1.625	1.375	3.0	4.0	3.375	4.0	3.5	2.0	2.75
	1.375	2.0	1.5	1.875	1.5	1.25	1.25	3.5	2.375	3.5	2.75	4.0	4.375
	2.25	2.375	1.375	2.0	2.0	1.75	1.875	4.0	3.0	3.0	3.5	3.0	3.0
	1.25	2.5	1.875	2.125	2.125	1.25	1.375	3.75	5.0	4.75	4.5	3.375	4.25
	1.75	1.5	1.875	1.625	2.0	1.625	1.625	3.5	4.75	4.875	3.75	4.375	3.25
	2.0	1.25	1.375	1.625	1.375	1.625	2.0	3.75	4.25	4.875	3.5	2.5	1.5
	1.25	1.625	1.75	1.75	1.75	1.75	1.75	4.0	3.375	2.5	3.5	2.375	3.875
	1.75	1.375	1.625	1.875	1.75	1.375	1.375	5.25	5.0	2.75	2.875	3.375	3.5
	1.75	2.0	1.5	2.125	1.875	1.625	1.5	3.5	3.375	2.5	3.5	2.875	4.375
	1.25	1.5	1.75	1.375	1.75	1.5	1.5	4.0	4.875	3.375	3.0	4.125	3.0
	1.75	1.0	1.25	1.75	1.5	1.75	1.25	3.5	2.875	3.75	4.0	2.5	3.625
	1.25	2.5	1.75	1.75	1.375	1.75	1.375	4.5	3.75	2.875	3.125	3.0	2.875
	1.375	1.375	1.5	1.625	1.5	1.625	1.125	4.875	3.125	4.125	1.875	3.5	3.0
	1.375	2.0	1.875	1.375	1.25	1.75	1.375	4.875	3.375	3.25	2.75	3.5	3.375
	1.875	2.875	2.0	1.375	1.75	1.5	2.375	3.375	3.875	4.5	1.75	2.5	2.5
	1.5	1.75	1.875	1.875	1.625	1.625	2.375	3.5	2.75	4.5	3.5	3.0	3.875
	1.875	1.5	1.5	1.75	1.75	1.375	1.5	4.0	3.875	3.5	2.5	4.0	4.0
	1.875	1.5	1.875	1.75	1.75	1.5	1.5	3.25	2.375	4.25	1.75	3.5	3.5
	1.75	1.875	1.875	1.875	1.625	1.5	1.125	3.25	4.5	3.0	2.75	3.0	3.5
1.375	2.125	3.0	2.0	1.75	1.75	1.0	3.75	4.0	3.5	2.75	3.5	2.875	
1.75	2.0	1.625	1.5	1.75	2.0	1.375	3.875	3.5	3.75	1.375	2.8	2.25	
1.125	2.25	1.75	1.75	1.75	1.5	1.625	4.0	4.0	4.25	3.375	2.75	3.25	
2.0	1.375	1.5	1.5	1.5	1.75	1.75	3.0	2.875	3.75	1.5	3.5	4.75	
1.875	1.5	1.625	1.5	1.5	2.0	1.375	4.5	4.375	1.75	2.25	3.0	3.0	
Averages.....	1.670	1.804	1.667	1.708	1.704	1.615	1.595	3.937	3.781	3.845	2.763	3.112	3.408

Recapitulation and reduction:	No. of section.		In centimillimeters.		In thousandths of inch.		No. of section.		In centimillimeters.		In thousandths of inch.		No. of section.		In centimillimeters.		In thousandths of inch.	
	B <sup>1</sup>	B <sup>2</sup>	B <sup>1</sup>	B <sup>2</sup>	B <sup>1</sup>	B <sup>2</sup>	B <sup>1</sup>	B <sup>2</sup>	B <sup>1</sup>	B <sup>2</sup>	B <sup>1</sup>	B <sup>2</sup>	B <sup>1</sup>	B <sup>2</sup>	B <sup>1</sup>	B <sup>2</sup>	B <sup>1</sup>	B <sup>2</sup>
Maximum measurements.	2.75	1.6828	2.875	1.1318	2.0	0.7874	2.375	0.9350	3.0	1.1811	4.875	1.9192	5.0	1.9685	4.875	1.9102	4.5	1.7710
Highest .....	2.875	1.1318	2.125	0.8360	2.375	0.9350	3.0	1.1811	5.0	1.9685	4.75	1.8700	4.75	1.8700	4.75	1.8700	4.75	1.8700
Minimum measurements.	1.125	0.4429	1.0	0.3937	1.25	0.4921	1.25	0.4921	1.0	0.3937	3.0	1.1811	2.375	0.9350	2.5	0.9842	1.375	0.5413
Lowest .....	1.0	0.3937	1.25	0.4921	1.25	0.4921	1.25	0.4921	1.0	0.3937	2.375	0.9350	2.375	0.9350	2.375	0.9350	1.375	0.5413
Average measurements.	1.670	0.6574	1.804	0.7102	1.667	0.6562	1.704	0.6708	1.595	0.6279	3.937	1.5499	3.721	1.4649	3.845	1.5137	2.763	1.0877
Average.....	1.727	0.6838	1.688	0.6645	1.658	0.6527	1.658	0.6527	1.595	0.6279	3.834	1.5094	3.845	1.5137	3.845	1.5137	3.004	1.2181
Measurements above average.	31		32		30		30		12		43		43		43		48	
Measurements below average.	29		28		30		30		18		47		47		47		42	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

Catalogue number of samples..	GOAT HAIR.			BOSTON GRADES.									
	203.			237a.		237b.		237c.		236a.		236b.	
	Grade of sample.....			No. 2.		No. 2.		No. 2.		No. 1.		No. 1.	
Length of fiber in crimp.....	—			—		—		—		—		—	
Number of crimps per inch.....	—			—		12.		12.		—		—	
Number of section.....	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>1</sup> .	B <sup>2</sup> .
Actual measurement in centimillimeters.	7.	9.25	6.875	2.75	2.75	2.625	3.375	2.0	2.0	1.625	2.125	1.5	2.0
	7.5	7.0	4.875	1.875	1.875	3.625	3.875	1.625	3.75	1.75	2.625	1.625	2.0
	7.25	0.0	6.625	2.375	2.875	2.75	2.0	1.75	2.75	2.0	2.0	2.125	2.0
	11.	7.0	7.0	1.75	2.25	3.5	2.25	2.0	2.875	1.875	2.75	2.0	2.875
	6.	6.6	5.0	2.75	2.625	2.5	2.75	2.125	3.75	1.875	1.75	1.875	2.75
	1.75	7.5	11.25	2.5	2.375	2.875	2.875	1.75	3.75	2.125	2.25	2.125	2.625
	4.0	7.0	5.5	3.25	2.625	3.0	3.0	2.25	2.0	1.875	2.25	2.0	2.875
	7.0	6.875	7.5	2.75	3.0	1.625	2.5	1.875	2.5	1.875	2.0	2.25	2.625
	8.25	4.375	6.5	2.5	2.5	2.375	2.0	2.0	2.75	2.125	2.0	2.0	1.875
	6.0	7.75	4.5	2.0	2.5	1.75	2.125	1.875	2.75	1.75	2.5	1.875	2.375
	7.5	6.75	7.0	2.5	2.5	2.5	2.875	2.0	3.875	2.125	1.875	2.125	2.75
	7.25	8.5	7.25	1.75	2.25	2.875	3.0	1.75	2.375	1.5	1.875	2.25	3.0
	7.5	8.0	4.75	2.0	3.0	2.625	2.5	2.125	3.125	2.0	2.5	2.0	2.25
	6.0	7.25	6.0	2.0	2.25	1.875	2.875	2.75	2.625	1.75	2.0	2.0	2.0
	5.25	6.375	9.5	1.5	2.5	1.875	2.375	2.0	2.0	2.0	2.0	2.375	2.75
	8.75	16.25	6.0	2.5	2.875	3.375	2.0	2.5	3.0	1.75	2.375	1.625	2.25
	6.0	7.875	2.5	2.125	2.25	3.0	2.0	1.875	2.5	2.25	2.375	2.875	2.5
	11.0	8.0	7.5	1.875	2.625	2.875	2.0	2.5	2.375	1.875	1.625	2.0	2.125
	4.0	7.125	4.25	2.5	2.75	2.125	3.75	2.375	2.5	2.5	2.0	2.375	1.75
	9.5	9.5	7.0	2.375	3.25	2.5	2.625	3.125	3.0	1.875	2.25	1.5	1.625
	5.5	8.5	6.25	2.125	2.5	3.25	3.25	2.0	3.25	1.75	1.875	2.25	2.625
	7.5	9.5	6.5	2.0	1.75	1.375	3.0	3.0	2.125	1.75	2.625	1.75	1.75
	7.	3.5	7.0	1.75	2.25	2.875	3.25	1.875	3.75	1.875	2.875	2.5	2.0
	5.875	6.75	6.5	2.875	2.375	1.875	3.5	1.875	3.5	2.375	3.0	2.125	2.25
	7.0	3.875	2.75	2.5	2.25	2.875	3.25	2.875	2.25	2.5	2.375	2.0	3.0
	5.25	5.375	5.5	2.125	3.75	2.0	4.0	2.5	3.5	2.0	2.0	2.25	2.375
	6.75	6.375	14.5	2.875	3.125	2.125	1.875	2.25	2.875	1.75	2.0	2.0	2.5
	2.875	8.	6.0	2.75	2.875	2.25	2.25	1.75	3.0	1.75	1.875	1.875	2.875
6.25	8.	4.25	2.375	1.875	2.0	2.25	3.75	2.25	1.75	2.875	3.0	2.375	
7.875	12.5	6.75	1.875	2.5	2.0	2.375	2.5	2.25	1.5	2.0	1.875	3.375	
Averages.....	6.520	7.382	6.520	2.220	2.564	2.462	2.725	2.210	2.833	1.940	2.227	2.054	2.337

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.			
Maximum measurements.	B <sup>1</sup>	11.00	4.3307	B <sup>1</sup>	3.25	1.2795	B <sup>1</sup>	3.625	1.4271	B <sup>1</sup>	3.75	1.4763	B <sup>1</sup>	2.6	0.9642
	B <sup>2</sup>	16.25	6.8978	B <sup>2</sup>	3.75	1.4763	B <sup>2</sup>	4.0	1.5748	B <sup>2</sup>	3.75	1.4763	B <sup>2</sup>	2.875	1.1318
	B <sup>3</sup>	14.50	5.7086	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Highest.....		16.25	6.3070		3.75	1.4763		4.0	1.5748		3.75	1.4763		2.875	1.1318
Minimum measurements.	B <sup>1</sup>	3.75	1.4763	B <sup>1</sup>	1.5	0.5905	B <sup>1</sup>	1.375	0.5413	B <sup>1</sup>	1.875	0.5413	B <sup>1</sup>	1.5	0.5905
	B <sup>2</sup>	3.0	1.1811	B <sup>2</sup>	1.75	0.6889	B <sup>2</sup>	1.875	0.7391	B <sup>2</sup>	2.0	0.7674	B <sup>2</sup>	1.625	0.6397
	B <sup>3</sup>	3.5	1.8779	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lowest.....		3.05	1.1811		1.5	0.5905		1.875	0.5413		1.875	0.5413		1.5	0.5905
Average measurements..	B <sup>1</sup>	6.520	2.5704	B <sup>1</sup>	2.220	0.8775	B <sup>1</sup>	2.462	0.9692	B <sup>1</sup>	2.210	0.8700	B <sup>1</sup>	1.940	0.7673
	B <sup>2</sup>	7.382	2.9062	B <sup>2</sup>	2.564	1.0094	B <sup>2</sup>	2.725	1.0728	B <sup>2</sup>	2.833	1.1133	B <sup>2</sup>	2.227	0.8767
	B <sup>3</sup>	6.520	2.504	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Average.....		6.513	2.6822		2.396	0.9433		2.593	1.0208		2.521	0.9925		2.088	0.8220
Measurements above average.....		45			30			30			23			23	
Measurements below average.....		45			30			30			37			37	



TABLE II.—Results of actual measurements of length, crimps, and fineness, with recapitulations and reductions—Cont'd.

		BOSTON GRADES.											
Catalogue number of samples..		238c.		239a.		239b.		239c.		240a.		240b.	
Grade of esmple.....		No. 1.		PICKLOCK.		PICKLOCK.		PICKLOCK.		XXX.		XXX.	
Length of fiber in crimp.....		—		—		—		—		—		—	
Number of crimps per inch....		14.		22.		22.		22.		22.		22.	
Number of section.....		B <sup>1</sup> .	B <sup>2</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>1</sup> .	B <sup>2</sup> .
Actual measurement in centimillimeters.	2.625	2.25	2.0	1.5	1.125	2.125	1.125	1.5	1.25	1.5	1.25	1.25	1.875
	2.0	2.25	1.375	1.875	1.625	1.875	1.0	1.375	1.5	1.875	1.375	1.875	1.875
	1.25	2.25	1.375	1.5	1.5	1.625	1.0	1.25	2.0	2.0	0.875	2.375	2.375
	2.0	2.125	1.375	1.5	1.25	1.875	1.375	1.625	1.125	1.75	1.125	1.75	1.75
	1.875	2.0	1.25	2.125	1.125	1.5	1.25	1.5	1.0	1.875	1.125	1.875	1.875
	1.75	2.0	1.125	2.0	1.025	1.25	1.375	1.375	1.0	1.5	1.25	1.875	1.875
	1.5	1.875	1.375	2.25	1.375	2.0	1.125	1.25	1.125	1.875	1.0	1.875	1.875
	2.0	2.125	1.25	1.625	1.875	2.25	1.0	1.5	1.0	2.25	1.125	2.0	2.0
	2.5	2.0	1.5	1.875	1.5	1.25	1.0	1.5	1.25	1.875	0.875	1.875	1.875
	2.5	2.625	1.25	2.5	1.125	2.0	1.375	1.5	1.75	2.0	1.375	1.75	1.75
	2.625	3.25	1.375	1.5	1.875	1.5	1.25	1.375	1.375	1.5	1.375	1.75	1.75
	2.0	2.75	1.875	1.375	1.0	1.5	1.125	1.625	1.25	2.0	1.0	1.5	1.5
	2.375	2.5	1.375	1.375	1.0	2.75	1.0	1.5	1.375	2.25	1.375	2.0	2.0
	2.375	2.25	1.375	1.625	1.5	1.75	1.25	1.375	1.375	1.875	1.375	1.875	1.875
	1.75	2.0	1.625	2.0	2.0	1.375	1.0	1.25	1.25	2.0	0.875	2.0	2.0
	2.0	2.375	1.25	2.25	1.375	1.625	1.0	1.5	1.375	2.0	1.375	1.875	1.875
	2.0	2.0	1.375	1.5	1.25	1.5	1.0	1.5	1.375	1.875	1.25	1.75	1.75
	1.75	2.0	1.375	1.375	1.5	1.125	1.0	1.25	1.375	1.875	1.375	1.5	1.5
	2.0	3.125	1.0	1.75	1.0	2.0	0.875	1.5	1.25	2.25	1.0	1.625	1.625
	1.625	2.5	1.25	1.5	1.125	1.25	1.125	1.5	1.375	1.75	1.125	2.25	2.25
	1.875	2.875	1.125	1.375	1.125	1.5	1.0	1.625	1.5	1.875	1.0	1.75	1.75
	2.5	2.375	2.25	1.75	1.75	1.5	1.125	1.5	1.375	1.875	1.0	1.5	1.5
	1.75	2.125	1.375	1.75	1.25	2.25	1.0	1.375	1.25	2.0	1.0	2.0	2.0
	2.0	2.0	1.125	1.375	1.375	2.0	1.0	1.375	1.0	1.875	1.5	1.5	1.5
	2.0	3.375	1.0	1.375	1.25	1.75	1.0	1.75	1.375	2.0	1.25	1.375	1.375
	2.375	3.375	1.25	1.375	1.875	1.875	1.25	1.5	1.375	1.5	1.75	1.875	1.875
2.5	2.875	2.125	1.5	1.75	1.625	1.375	1.375	1.25	1.75	1.125	2.25	2.25	
1.75	3.125	1.0	1.375	2.0	1.75	1.375	1.75	1.375	1.5	1.375	1.75	1.75	
1.5	3.125	1.0	1.75	1.875	1.5	0.875	2.0	1.875	1.75	1.25	1.75	1.75	
1.875	1.625	1.25	1.625	1.875	1.5	0.75	1.375	0.875	2.25	1.25	1.25	1.625	
Averages.....	2.027	2.437	1.441	1.675	1.469	1.695	1.100	1.492	1.304	1.841	1.204	1.812	

		238c.			239a.			239b.			239c.			240a.			240b.		
Recapitulation and reduction:		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Maximum measurements.	B <sup>1</sup> .	2.025	1.0934	B <sup>1</sup> .	2.25	0.8858	B <sup>1</sup> .	2.0	0.7874	B <sup>1</sup> .	1.375	0.5413	B <sup>1</sup> .	2.0	0.7874	B <sup>1</sup> .	1.75	0.6389	
	B <sup>2</sup> .	3.375	1.3287	B <sup>2</sup> .	2.5	0.9842	B <sup>2</sup> .	2.75	1.0826	B <sup>2</sup> .	2.0	0.7874	B <sup>2</sup> .	2.25	0.8858	B <sup>2</sup> .	2.375	0.9350	
Highest.....		3.375	1.3287		2.5	0.9842		2.75	1.0826		2.0	0.7874		2.25	0.8858		2.375	0.9350	
Minimum measurements.	B <sup>1</sup> .	1.25	0.4921	B <sup>1</sup> .	1.0	0.3937	B <sup>1</sup> .	1.0	0.3937	B <sup>1</sup> .	0.75	0.2952	B <sup>1</sup> .	0.875	0.3444	B <sup>1</sup> .	0.875	0.3444	
	B <sup>2</sup> .	1.625	0.6397	B <sup>2</sup> .	1.375	0.5413	B <sup>2</sup> .	1.25	0.4921	B <sup>2</sup> .	1.25	0.4921	B <sup>2</sup> .	1.5	0.5905	B <sup>2</sup> .	1.375	0.5413	
Lowest.....		1.25	0.4921		1.0	0.3937		1.0	0.3937		0.75	0.2952		0.875	0.3444		0.875	0.3444	
Average measurements..	B <sup>1</sup> .	2.027	0.7980	B <sup>1</sup> .	1.441	0.5673	B <sup>1</sup> .	1.469	0.5783	B <sup>1</sup> .	1.100	0.4330	B <sup>1</sup> .	1.304	0.5139	B <sup>1</sup> .	1.204	0.4740	
	B <sup>2</sup> .	2.437	0.9594	B <sup>2</sup> .	1.675	0.6594	B <sup>2</sup> .	1.695	0.6673	B <sup>2</sup> .	1.492	0.5874	B <sup>2</sup> .	1.841	0.7248	B <sup>2</sup> .	1.812	0.7333	
Average.....		2.232	0.8787		1.558	0.6133		1.582	0.6228		1.206	0.5192		1.572	0.6188		1.508	0.5986	
Measurements above average..		27			20			27			31			27			26		
Measurements below average..		33			40			33			20			33			34		



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and deductions—Cont'd.

BOSTON GRADES.														
Catalogue number of samples..	240c.		241.			242.		243.			244.		245a.	
Grade of sample .....	XXX.		DELAINE, FINE.			DELAINE, MEDIUM.		COMBING, COARSE.			COMBING, MEDIUM.		[XX.	
Length of fiber in crimp.....	—		—			—		—			—		—	
Number of crimps per inch....	22.		20.			—		—			—		20.	
Number of section .....	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>1</sup> .	B <sup>2</sup> .
Actual measurement in centi- millimeters.	1.5	2.125	2.0	1.625	1.625	2.025	1.75	3.0	2.0	2.0	2.5	2.625	1.25	1.875
	1.375	2.0	1.5	1.875	1.875	2.0	4.125	2.875	2.375	2.5	2.5	2.625	1.25	1.875
	1.875	1.75	1.625	2.125	1.375	1.5	2.875	2.875	2.75	3.875	2.625	3.125	1.125	1.5
	1.625	2.25	1.5	1.375	1.5	2.75	2.875	2.25	2.625	3.875	2.75	2.375	1.875	2.
	1.5	1.875	1.625	2.125	1.625	1.875	2.5	2.25	2.875	3.25	1.5	2.125	1.625	1.875
	1.375	1.75	1.375	1.5	1.625	3.5	2.575	1.875	3.0	2.675	2.75	2.5	1.25	1.625
	1.625	1.75	1.875	2.0	2.0	1.5	3.875	2.0	3.25	2.875	2.75	2.875	1.25	1.875
	1.875	2.125	1.75	1.5	1.625	2.0	2.0	1.675	2.125	2.375	1.75	2.5	1.375	1.5
	1.5	2.125	1.75	1.625	1.625	2.0	2.25	1.875	3.5	2.25	2.25	2.625	1.25	1.75
	1.5	1.875	2.0	1.875	1.875	2.0	2.125	2.125	3.5	3.125	2.25	1.625	1.0	1.5
	1.5	1.5	1.625	1.75	1.75	2.25	3.25	2.25	4.375	2.875	2.5	2.375	1.0	2.
	1.375	2.0	1.375	1.5	1.5	2.875	2.75	3.5	2.75	3.25	2.375	2.875	0.875	1.25
	1.0	1.625	1.875	1.75	1.5	1.75	2.25	3.0	2.875	2.675	1.625	2.25	1.25	1.875
	1.6	1.5	1.375	2.0	2.0	2.0	2.0	1.875	2.875	3.	2.125	2.25	1.125	2.
	1.125	1.875	1.675	1.625	1.75	2.375	2.5	2.25	3.375	3.25	2.0	2.5	1.0	1.75
	1.25	2.0	1.5	1.75	1.75	1.75	2.625	3.25	3.0	3.25	2.25	2.25	1.0	1.5
	1.5	1.875	1.75	1.5	1.625	1.625	2.875	2.25	2.5	3.75	2.0	2.25	1.375	1.75
	1.875	2.125	1.375	2.0	1.75	1.625	3.375	2.75	2.5	2.25	2.125	2.5	1.125	1.625
	1.375	2.125	1.75	2.0	2.0	2.875	2.25	2.0	2.5	3.375	2.25	2.25	1.875	1.5
	1.125	1.625	1.5	1.875	1.875	2.375	3.25	2.75	2.125	4.25	2.25	1.75	1.25	2.0
	1.25	2.125	1.5	1.75	1.875	1.5	3.75	2.875	3.375	3.	2.5	1.875	1.875	1.875
	1.25	1.625	1.5	1.5	1.75	1.375	3.25	2.0	2.75	2.125	2.25	2.5	1.875	1.5
	1.25	1.875	1.875	1.875	1.625	2.375	2.875	1.875	2.75	3.875	2.75	2.125	1.75	1.975
	1.5	1.875	1.75	1.75	1.5	2.5	2.625	2.25	2.25	3.25	2.0	1.75	0.875	2.375
	1.25	2.0	1.875	2.125	1.875	1.75	3.25	1.875	4.0	3.25	2.5	1.875	1.5	1.75
1.75	1.5	1.5	1.75	1.625	1.625	2.5	2.5	3.875	1.875	3.25	2.125	1.125	1.875	
1.25	1.875	1.375	2.5	1.875	2.5	3.375	2.625	2.75	4.0	2.875	1.875	1.5	2.0	
1.5	1.875	1.75	1.5	1.5	2.875	3.0	1.25	2.125	3.75	2.0	1.75	1.0	2.0	
1.25	1.5	1.875	2.375	2.0	1.25	3.0	2.0	3.875	3.5	2.25	2.875	1.875	1.875	
1.25	1.75	1.375	1.625	1.625	1.625	3.25	1.075	3.0	2.0	2.25	2.75	1.125	1.25	
Averages.....	1.379	1.820	1.620	1.808	1.700	2.067	2.787	2.233	2.904	3.066	2.516	2.275	1.254	1.770

Recapitulation and reductions:	No. of section.	In centimillime- ters.		No. of section.	In centimillime- ters.		No. of section.	In centimillime- ters.		No. of section.	In centimillime- ters.		No. of section.	In centimillime- ters.	
		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.			
Maximum measurements.	B <sup>1</sup>	1.75	0.6889	B <sup>1</sup>	2.0	0.7874	B <sup>1</sup>	3.5	1.3779	B <sup>1</sup>	3.5	1.3770	B <sup>1</sup>	3.25	1.2705
	B <sup>2</sup>	2.25	0.6868	B <sup>2</sup>	2.5	0.9842	B <sup>2</sup>	4.125	1.6240	B <sup>2</sup>	4.375	1.7224	B <sup>2</sup>	3.0	1.1811
Highest.....		2.25	0.8558		2.5	0.9842		4.125	1.6240		4.375	1.7224		3.25	1.2705
Minimum measurements.	B <sup>1</sup>	1.0	0.3937	B <sup>1</sup>	1.375	0.5413	B <sup>1</sup>	1.25	0.4921	B <sup>1</sup>	1.25	0.4921	B <sup>1</sup>	1.5	0.5905
	B <sup>2</sup>	1.5	0.5905	B <sup>2</sup>	1.375	0.5413	B <sup>2</sup>	1.75	0.6389	B <sup>2</sup>	2.125	0.8366	B <sup>2</sup>	1.75	0.6889
Lowest.....		1.0	0.3937		1.375	0.5413		1.25	0.4921		1.25	0.4921		1.75	0.6889
Average measurements..	B <sup>1</sup>	1.379	0.5429	B <sup>1</sup>	1.62	0.6377	B <sup>1</sup>	2.067	0.8137	B <sup>1</sup>	2.233	0.8791	B <sup>1</sup>	2.316	0.9118
	B <sup>2</sup>	1.820	0.7165	B <sup>2</sup>	1.808	0.7119	B <sup>2</sup>	2.787	1.0672	B <sup>2</sup>	2.904	1.1433	B <sup>2</sup>	2.275	0.8956
Average.....		1.599	0.6295		1.709	0.6728		2.427	0.9555		2.734	1.8763		2.295	0.9035
Measurements above average..		29			46			28			48			28	
Measurements below average..		31			44			32			43			32	







TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

BOSTON GRADES.												
Catalogue number of samples..	247b.		247a.		248a.		248b.		248c.		249a.	
Grade of sample .....	DELAINE, FINE.		DELAINE, FINE.		DELAINE, MEDIUM.		DELAINE, MEDIUM.		DELAINE, MEDIUM.		UNWASHED DELAINE.	
Length of fiber in crimp.....	—		—		—		—		—		—	
Number of crimps per inch....	20.		20.		—		—		—		20.	
Number of section.....	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>1</sup> .	B <sup>2</sup> .
Actual measurement in centimillimeters.	2.875	2.25	2.5	2	3.25	2.375	2.0	2.0	2.625	2.875	2.0	1.875
	1.75	1.875	2.625	1.75	1.875	3.875	2.875	2.0	3.0	2.875	1.75	2.0
	1.875	1.875	2	1.875	2.75	2.0	2.25	2.125	2.25	2.125	2.25	2.0
	1.75	1.875	2.125	1.5	1.625	2.625	2.375	2.25	2.625	2.625	2.875	2.25
	2	1.875	2.5	1.5	2.0	2.875	2.875	2.5	2.625	4.25	1.75	2.0
	1.875	1.75	1.5	1.875	2.625	3.0	2.0	2.125	1.875	3.0	2.0	2.25
	1.5	1.5	2.5	2.875	2.625	1.875	2.5	2.625	2.625	2.0	2.25	2.5
	1.75	1.875	2.5	1.5	2.625	3.0	3.0	3.0	2.875	2.875	1.875	2.75
	1.625	1.75	2	1.625	2.5	3.5	1.875	1.875	2.5	2.25	1.5	2.25
	2.25	1.75	1.75	1.875	2.875	2.5	2.875	2.125	2.75	2.75	2.875	2.0
	1.875	1.5	2.25	2.125	2.875	3.0	2.375	2.0	2.875	2.5	1.75	1.875
	1.75	1.625	2.375	1.125	2.25	2.5	2.0	2.125	2.25	2.5	1.875	2.375
	1.5	1.75	1.5	1.875	2.875	3.0	2.25	1.75	2.5	3.75	2.0	3.0
	1.75	1.875	2.875	1.875	2.875	3.0	2.875	1.875	2.25	3.875	2.0	1.875
	1.75	1.75	2.625	1.75	2.5	3.5	2.875	1.875	2.25	3.125	1.25	2.0
	1.75	2	2	1.75	2.25	3.25	2.875	1.875	2.6	3.25	1.875	2.25
	1.625	1.6	2	1.875	2.25	3.5	2.5	1.75	3.875	2.875	1.875	2.5
	1.875	1.5	1.625	1.625	2.5	2.0	2.5	2.75	2.875	1.75	1.625	2.25
	1.75	1.875	2.875	1.75	1.625	3.75	2.25	2.25	2.875	2.75	1.5	1.625
	2	1.625	1.75	2	2.875	2.5	2.5	1.575	2.0	2.5	1.5	2.0
1.875	2	2.5	1.625	2.25	2.0	2.5	1.75	2.875	2.0	2.0	1.875	
1.875	1.75	1.875	1.875	2.25	3.0	2.675	1.875	2.875	2.75	2.25	1.625	
1.875	2	1.875	1.625	2.0	2.0	2.25	2.875	2.875	2.25	2.0	2.5	
1.75	1.5	2.5	1.75	2.25	2.125	1.75	2.25	2.25	1.75	1.875	2.5	
1.875	1.875	2	1.75	2.875	2.5	2.5	2.25	2.5	4.0	1.875	2.0	
1.875	1.625	2.25	2.125	1.875	3.125	2.125	2.0	2.5	3.0	1.5	2.875	
2.25	1.75	2.875	2.875	2.875	3.5	2.75	1.75	2.25	2.6	1.875	2.125	
2.25	1.875	2.25	2.25	2.875	3.0	2.25	1.75	2.5	1.5	1.5	1.625	
2.25	2	1.875	2.125	2.5	4.5	2.5	1.875	2.0	2.75	1.6	1.875	
1.875	1.875	3.875	1.875	2.5	2.0	2.375	2.125	2.25	3.5	1.875	2.875	
Averages.....	1.804	1.770	2.187	1.791	2.470	2.908	2.383	2.104	2.704	2.813	1.787	2.166

Recapitulation and reductions:	247b.			247a.			248a.			248b.			248c.			249a.		
	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Maximum measurements.	B <sup>1</sup> 2.25	0.8858	B <sup>1</sup> 2.625	1.0334	B <sup>1</sup> 3.25	1.2705	B <sup>1</sup> 3.0	1.1811	B <sup>1</sup> 3.375	1.3287	B <sup>1</sup> 2.25	0.8858						
Highest.....	B <sup>2</sup> 2.25	0.8858	B <sup>2</sup> 2.375	0.9350	B <sup>2</sup> 3.875	1.5255	B <sup>2</sup> 2.875	1.1318	B <sup>2</sup> 4.25	1.6732	B <sup>2</sup> 3.25	1.2795						
Minimum measurements.	B <sup>1</sup> 1.875	0.5413	B <sup>1</sup> 1.6	0.5905	B <sup>1</sup> 1.625	0.6397	B <sup>1</sup> 1.5	0.5905	B <sup>1</sup> 1.875	0.7381	B <sup>1</sup> 1.375	0.5413						
Lowest.....	B <sup>2</sup> 1.875	0.5413	B <sup>2</sup> 1.875	0.5413	B <sup>2</sup> 1.875	0.7381	B <sup>2</sup> 1.5	0.5905	B <sup>2</sup> 1.5	0.5905	B <sup>2</sup> 1.375	0.5413						
Average measurements.	B <sup>1</sup> 1.804	0.7102	B <sup>1</sup> 2.187	0.8610	B <sup>1</sup> 2.470	0.9750	B <sup>1</sup> 2.383	0.9381	B <sup>1</sup> 2.704	1.0445	B <sup>1</sup> 1.787	0.7035						
Average.....	B <sup>2</sup> 1.770	0.6969	B <sup>2</sup> 1.791	0.7051	B <sup>2</sup> 2.908	1.1448	B <sup>2</sup> 2.104	0.8283	B <sup>2</sup> 2.812	1.1070	B <sup>2</sup> 2.166	0.8921						
Average.....	1.787	0.7085	1.989	0.7830	2.603	1.0603	2.243	0.8730	2.758	1.0858	1.966	0.7740						
Measurements above average..	29		31		27		83		20		32							
Measurements below average..	31		29		33		27		40		28							



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		BOSTON GRADES.													
Catalogue number of sample...		249b.		249c.		250.					251.		252.		
Grade of sample.....		UNWASHED DELAINE.		UNWASHED DELAINE.		SPANISH MERINO.					PICKLOCK.		XXX.		
Length of fiber in crimp.....		—		—		4 7/8 inches.					—		—		
Number of crimps per inch.....		20.		20.		20.					22.		22.		
Number of section .....		B <sup>1</sup> .	B <sup>2</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>5</sup> .	B <sup>6</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>1</sup> .	B <sup>2</sup> .
Actual measurement in centimillimeters.		1.5	1.75	1.875	2.0	2.125	1.5	1.5	2.875	2.625	1.875	1.375	1.5	1.5	2.0
		1.625	1.625	1.75	1.5	2.125	1.5	1.625	1.75	2.375	1.875	1.25	1.625	1.5	1.625
		1.625	1.5	1.75	2.25	2.5	1.75	1.75	2.25	2.25	1.875	1.5	1.375	1.5	2.25
		1.25	1.375	1.625	2.25	2.125	1.625	2.125	1.875	1.75	2.0	1.375	1.625	1.375	1.875
		1.25	2.125	2.0	2.125	1.75	1.5	2.0	1.5	1.875	1.625	1.5	1.375	1.25	1.875
		1.5	1.375	2.0	2.0	1.75	1.5	1.5	1.625	2.125	1.875	1.5	1.5	1.5	1.875
		1.875	2.25	1.875	2.0	1.75	1.75	2.25	1.75	2.5	1.875	1.5	1.625	1.375	2.0
		1.25	2.25	1.875	2.0	1.875	1.75	2.25	2.5	2.0	2.0	1.0	1.5	1.375	1.75
		1.875	2.125	1.5	2.0	2.0	1.5	1.875	1.75	1.5	1.5	1.375	1.5	1.125	2.0
		1.875	1.75	2.125	2.25	2.25	1.5	2.5	1.75	2.625	1.75	1.375	1.375	1.75	2.0
		1.25	1.625	1.875	1.875	2.0	1.5	2.0	2.0	1.875	2.5	1.5	1.5	1.375	1.375
		1.625	2.375	2.0	2.0	2.0	1.625	1.875	2.375	2.75	1.5	1.25	2.0	1.5	1.375
		1.25	2.875	2.0	2.0	2.0	1.875	2.0	2.25	2.5	1.75	0.875	1.5	1.25	1.375
		1.625	1.875	1.75	2.875	2.125	2.25	2.5	1.875	2.375	1.125	1.5	1.625	0.875	1.75
		1.5	2.0	1.5	1.875	1.75	2.0	3.25	1.5	1.875	1.625	1.375	1.625	1.0	1.625
		1.125	1.875	1.75	2.0	2.0	1.75	1.875	1.75	2.0	2.75	1.5	1.5	0.875	1.75
		1.25	2.0	1.125	2.0	2.0	1.625	2.125	2.375	3.0	1.875	1.375	1.625	1.5	2.0
		1.625	2.375	1.875	2.0	1.5	1.5	2.5	1.875	1.875	1.75	1.5	1.5	1.5	1.5
		1.25	2.125	2.0	1.75	2.0	1.75	2.275	1.75	2.125	2.5	1.5	1.5	1.5	1.875
		1.0	2.0	1.625	2.0	2.75	1.75	2.375	2.25	1.625	1.75	1.625	1.375	1.6	2.0
	1.375	2.0	1.625	2.125	2.25	1.625	2.375	2.125	2.0	2.0	1.25	1.25	1.375	1.75	
	1.0	2.25	1.875	2.75	2.25	2.0	1.5	2.875	1.625	1.875	1.0	1.375	1.0	1.875	
	1.375	1.875	1.625	2.125	1.875	1.625	2.0	1.5	2.375	1.75	1.375	1.5	1.0	2.0	
	1.25	1.75	1.875	1.875	1.875	2.0	2.5	2.5	1.875	1.875	1.5	1.625	1.0	1.625	
	1.125	1.875	1.875	2.5	1.75	1.75	2.5	1.5	2.625	1.625	1.5	1.75	1.0	1.875	
	1.25	1.875	1.75	2.0	1.5	1.75	1.875	2.5	2.0	1.75	1.25	1.625	1.25	1.375	
	1.875	1.75	1.875	1.875	1.75	2.5	2.5	1.875	2.25	1.75	1.375	1.75	1.5	1.875	
	1.5	1.75	1.875	2.5	1.875	1.5	2.875	1.875	1.75	2.5	1.375	1.75	1.0	1.5	
	1.25	1.75	1.75	1.875	1.875	2.5	2.25	1.25	2.25	1.625	1.125	1.625	1.25	1.5	
	1.5	1.875	1.75	2.5	1.5	1.5	2.25	1.625	2.0	1.75	1.25	1.375	1.125	1.875	
Averages.....		1.670	1.933	1.758	2.001	1.962	1.743	2.150	1.979	1.154	1.695	1.358	1.545	1.287	1.787

Recapitulation and reduction:		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.		
Maximum measurements.	B <sup>1</sup> .	1.875	0.7381	B <sup>1</sup> .	2.125	0.8366	B <sup>1</sup> .	2.75	1.0820	B <sup>1</sup> .	1.625	0.6397	B <sup>1</sup> .	1.75	0.6889
	B <sup>2</sup> .	2.375	0.9350	B <sup>2</sup> .	2.5	0.9842	B <sup>2</sup> .	2.5	0.9842	B <sup>2</sup> .	2.0	0.7874	B <sup>2</sup> .	2.25	0.8858
Highest .....		2.375	0.9350		2.5	0.9842		2.875	1.1318		2.0	0.7874		2.25	0.8858
Minimum measurements.	B <sup>1</sup> .	1.0	0.3937	B <sup>1</sup> .	1.125	0.4429	B <sup>1</sup> .	1.5	0.5905	B <sup>1</sup> .	0.875	0.3444	B <sup>1</sup> .	1.0	0.3937
	B <sup>2</sup> .	1.5	0.5905	B <sup>2</sup> .	1.5	0.5905	B <sup>2</sup> .	1.5	0.5905	B <sup>2</sup> .	1.25	0.4921	B <sup>2</sup> .	1.375	0.5413
Lowest .....		1.0	0.3937		1.125	0.4429		1.25	0.4921		0.875	0.3444		1.0	0.3937
Average measurements..	B <sup>1</sup> .	4.370	0.5393	B <sup>1</sup> .	1.758	0.6913	B <sup>1</sup> .	1.962	0.7724	B <sup>1</sup> .	1.358	0.5346	B <sup>1</sup> .	1.287	0.5066
	B <sup>2</sup> .	1.933	0.7610	B <sup>2</sup> .	2.091	0.8292	B <sup>2</sup> .	1.743	0.7049	B <sup>2</sup> .	1.545	0.6082	B <sup>2</sup> .	1.787	0.7095
								2.150	0.8464						
								1.979	0.7701						
								2.154	0.8480						
Average .....		1.651	0.6499		1.924	0.7574		1.980	0.7795		1.452	0.5716		1.537	0.6051
Measurements above average..															
Measurements below average..		27	33		29	31		83	97		35	25		25	35



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

BOSTON GRADES.													
Catalogue number of samples..	253.		254.		255.		256.		257.		258.		
Grade of sample .....	XX.		X.		No. 1.		No. 2.		DELAINE, FINE.		DELAINE, MEDIUM.		
Length of fiber in crimp .....	—		—		—		—		—		—		
Number of crimps per inch ....	20.		16.		—		—		10.		—		
Number of section .....	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .
Actual measurement in centi- millimeters.	2.5	2.375	1.625	2.5	2.375	2	3.5	2.25	1.75	2	2.25	2	3.75
	1.75	1.875	2.25	2.5	2.125	2.375	2.6	3.25	1.75	1.875	2.25	2.375	2.125
	2	2.75	1.5	2	2.5	1.625	2.75	2.5	2.125	2.5	1.875	1.875	2.875
	1.75	1.75	1.5	2	2.25	2.875	3	2.25	2.25	1.625	1.5	2	2.875
	1.625	1.5	1.5	1.75	3	1.75	2.875	2.5	1.75	2.5	2	3.375	2.625
	1.6	2.125	1.875	1.875	1.75	1.75	3	2.375	1.75	1.875	1.75	1.75	2.75
	1.625	1.875	2.375	2	2	1.5	2	2	1.875	1.875	1.6	2.125	2
	1.5	2.5	2.25	2.125	1.875	2.5	2.125	2.875	1.5	2.375	1.875	1.875	3
	1.875	1.5	1.5	1.625	1.625	2.375	2.75	3	1.875	1.5	1.75	2.5	2.375
	1.625	1.625	1.6	2.25	2.125	2.125	2.25	2.5	2.75	1.625	1.875	2.625	1.875
	1.5	1.75	1.375	2	1.875	1.875	3.875	3.5	1.5	1.6	2.25	2	2
	1.5	2.25	2.25	2.125	1.5	1.875	3.5	2.25	1.75	2	2.875	2.25	2.25
	1.75	2	1.875	2	2.125	2.25	2.375	2.25	1.625	2.5	1.5	1.6	1.875
	1.875	1.75	2.375	1.75	2	2	1.875	4	3	1.5	1.75	3.25	3
	1.5	2	1.875	2	2.25	2.5	2.75	2.5	1.5	2	1.75	1.625	2.875
	2	1.5	2	1.625	1.5	2	2.375	2.5	1.875	2	2.25	1.375	2
	1.6	2.25	3.25	1.75	2.25	2.375	2	2.625	2	1.75	1.625	1.75	1.875
	1.6	1.75	1.875	1.875	1.5	2.25	2.5	1.875	1.75	1.75	2	2.25	2
	1.6	2.125	2.375	2	1.875	2	2.5	2.875	2	1.6	1.75	1.5	2
	1.6	1.5	1.5	1.5	1.5	1.625	2.125	3	3.125	1.75	1.75	1.875	1.875
1.875	1.875	2	1.75	2.125	2.5	3	2.875	1.875	1.75	2	1.875	3	
1.875	1.75	1.75	2	1.375	1.875	3.125	3	1.5	1.675	2.875	1.75	2	
1.75	1.625	3	1.625	2	2.25	2.875	3.25	1.5	1.625	1.5	2	2	
1.5	1.875	1.75	2.25	2	1.6	2.375	2.875	1.875	1.875	2.5	2	1.75	
1.875	1.875	2.625	2.25	1.875	2.25	4	3.625	1.75	1.875	2.25	1.875	3	
1.75	2.6	2.875	2.5	2	2.75	2.375	3	1.375	2	2.5	1.875	2.875	
1.875	2	1.6	2	2	2.375	3.125	2.875	1.5	1.75	1.875	1.875	2.75	
1.875	1.875	1.875	2.5	2	2.25	2	2	2.25	2	2	1.675	1.875	
1.5	1.75	2.875	2	2	2.25	2.5	2.25	1.25	1.625	1.75	2	1.875	
2	2.5	2.375	2.375	2	2.5	2.5	3	1.5	1.5	2.25	2.25	2	
Averages .....	1.601	1.995	1.929	2.016	1.901	2.179	2.950	2.708	1.704	1.862	2.070	2.008	2.291

Recapitulation and reduction:	253.			254.			255.			256.			257.			258.					
	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.			
Maximum measurements.	B <sup>1</sup>	2.5	0.9842	B <sup>1</sup>	3.25	1.2795	B <sup>1</sup>	2.375	0.9350	B <sup>1</sup>	4.00	1.5748	B <sup>1</sup>	2.25	0.8858	B <sup>1</sup>	3.25	1.2795			
	B <sup>2</sup>	2.75	1.0826	B <sup>2</sup>	2.5	0.9842	B <sup>2</sup>	2.75	1.0826	B <sup>2</sup>	3.625	1.4271	B <sup>2</sup>	2.5	0.9843	B <sup>2</sup>	2.375	1.3287			
Highest.....	2.75		1.0826	2.25		1.2795	2.75		1.0826	4.00		1.5748	2.50		0.9842	3.75		1.4763			
Minimum measurements.	B <sup>1</sup>	1.5	0.5905	B <sup>1</sup>	1.375	0.5413	B <sup>1</sup>	1.375	0.5413	B <sup>1</sup>	2.125	0.8066	B <sup>1</sup>	1.25	0.4921	B <sup>1</sup>	1.5	0.5905	B <sup>1</sup>	1.5	0.5905
	B <sup>2</sup>	1.375	0.5413	B <sup>2</sup>	1.5	0.5905	B <sup>2</sup>	1.625	0.6307	B <sup>2</sup>	1.75	0.6889	B <sup>2</sup>	1.5	0.5905	B <sup>2</sup>	1.375	0.5413	B <sup>2</sup>	1.375	0.5413
Lowest.....	1.375		0.5413	1.375		0.5413	1.375		0.5413	1.75		0.6889	1.25		0.4921	1.375		0.5413			
Average measurements..	B <sup>1</sup>	1.601	0.6657	B <sup>1</sup>	1.929	0.7501	B <sup>1</sup>	1.901	0.7838	B <sup>1</sup>	2.950	1.1614	B <sup>1</sup>	1.704	0.6709	B <sup>1</sup>	2.070	0.8149			
	B <sup>2</sup>	1.965	0.7854	B <sup>2</sup>	2.016	0.7936	B <sup>2</sup>	2.179	0.8578	B <sup>2</sup>	2.708	1.0661	B <sup>2</sup>	1.862	0.7300	B <sup>2</sup>	2.008	0.7905			
Average.....	1.843		0.7255	1.972		0.7763	2.065		0.8208	2.829		1.1187	1.783		0.7413	2.123		0.8358			
Measurements above average..	27			34			28			23			26			35					
Measurements below average..	33			26			32			27			34			55					







TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		BOSTON GRADES.											
Catalogue number of samples..		264.		265.		266.		267.		268.		269.	
Length of fiber in crimp .....		1½ inches.		1½ inches.		1½ inches.		1½ inches.		1½ inches.		—	
Number of crimps per inch....		20.		—		—		—		20.		—	
Number of section.....		B¹.	B².	B¹.	B².	B¹.	B².	B¹.	B².	B¹.	B².	B¹.	B².
Actual measurement in centimillimeters.	2.625	2.25	2.375	1.875	2.25	1.5	2.5	2.125	2.0	1.875	2.0	1.75	
	2.5	1.875	1.5	1.875	2.125	2.25	1.75	2.75	2.0	2.0	2.0	1.75	
	3.0	2.5	2.375	2.25	1.875	2.25	1.5	2.375	1.75	2.0	2.125	2.0	
	2.25	2.375	2.0	2.0	2.0	2.0	1.875	2.5	1.725	1.75	2.0	1.875	
	2.875	2.375	1.875	1.625	2.0	2.125	1.75	1.75	2.25	1.75	1.875	1.75	
	2.5	2.25	2.125	2.25	2.0	1.875	2.25	3.0	1.625	1.75	1.875	1.875	
	2.25	2.25	2.5	2.375	1.5	2.0	2.25	2.25	1.75	1.875	2.25	2.0	
	2.875	2.375	2.25	2.5	1.75	1.625	1.875	3.0	1.375	1.75	2.0	2.375	
	2.5	2.375	2.0	1.75	1.875	1.875	1.875	2.375	1.875	1.5	2.0	1.75	
	2.5	2.0	1.75	2.0	2.25	1.5	1.25	2.375	1.875	2.375	2.0	2.0	
	2.25	1.375	2.0	2.25	2.0	1.875	2.125	2.375	1.75	2.25	2.0	1.875	
	2.625	2.875	1.625	2.0	2.0	2.175	2.0	2.625	1.75	2.5	1.875	2.25	
	2.0	2.375	2.0	2.875	1.875	2.375	1.375	2.25	1.5	1.875	1.75	2.375	
	2.25	2.5	1.0	2.0	1.75	1.375	1.75	2.5	1.875	2.0	1.75	2.0	
	2.25	2.0	1.875	1.375	2.75	2.0	1.5	3.0	1.875	2.25	2.375	1.5	
	1.875	2.375	2.25	2.375	1.625	2.0	2.0	3.0	1.75	1.875	1.75	1.625	
	2.0	2.125	1.625	1.875	1.75	1.75	2.125	3.375	1.875	2.0	2.0	2.25	
	2.25	1.25	2.0	2.0	2.25	1.875	1.375	2.625	1.625	2.5	2.0	1.875	
	1.875	1.75	2.0	2.25	1.875	2.0	1.75	3.25	2.25	2.0	1.75	1.75	
	1.375	2.25	1.875	2.125	2.5	2.0	1.875	3.0	2.0	2.25	2.0	2.375	
2.375	2.0	2.125	2.0	2.0	2.125	1.125	2.5	1.5	2.0	1.75	1.75		
2.125	2.0	2.25	1.875	1.75	2.125	2.0	2.875	1.75	1.875	1.875	1.75		
2.0	1.625	1.625	2.0	1.5	2.0	1.5	2.0	1.75	2.0	1.625	1.5		
2.25	2.5	1.5	2.125	2.25	2.125	1.875	2.5	1.75	2.375	2.375	1.875		
2.0	2.0	1.75	2.0	2.0	2.0	1.75	2.75	1.75	1.875	2.125	2.0		
2.375	2.0	2.0	2.0	2.0	2.375	2.0	2.5	1.875	1.5	1.875	2.125		
2.875	2.0	1.5	2.375	2.375	1.75	1.25	2.375	1.875	1.875	2.25	1.75		
2.5	2.0	2.125	1.875	1.875	2.0	2.0	3.0	2.0	2.25	1.625	2.0		
2.375	1.625	1.75	2.0	1.75	2.0	1.75	2.5	1.75	1.75	2.0	1.875		
2.375	2.5	1.875	2.0	2.5	2.0	1.625	3.25	1.75	2.0	2.5	2.0		
Averages .....	2.329	2.125	1.910	2.059	2.000	1.995	1.804	2.625	1.785	1.991	1.949	1.920	

		No. of section.			In centimillimeters.			In thousandths of inch.											
Recapitulation and reduction:	Maximum measurements.	B¹	3.0	1.1811	B¹	2.375	0.9350	B¹	2.75	1.0826	B¹	2.25	0.8858	B¹	2.25	0.8858	B¹	2.5	0.9842
		B²	2.875	1.1318	B²	2.875	1.1318	B²	2.375	0.9350	B²	3.375	1.3287	B²	2.375	0.9350	B²	2.375	0.9350
	Highest.....		3.0	1.1811		2.875	1.1318		2.75	1.0826		3.375	1.3287		2.375	0.9350		2.5	0.9842
Minimum measurements.	Lowest .....	B¹	1.375	0.5413	B¹	1.0	0.3937	B¹	1.5	0.5905	B¹	1.125	0.4429	B¹	1.375	0.5413	B¹	1.625	0.6397
		B²	1.25	0.4921	B²	1.375	0.5413	B²	1.375	0.5413	B²	1.75	0.6889	B²	1.5	0.5905	B²	1.5	0.5905
	Average measurements..	B¹	2.329	0.9169	B¹	1.910	0.7519	B¹	2.000	0.7874	B¹	1.804	0.7102	B¹	1.785	0.7027	B¹	1.949	0.7673
	Average .....	B²	2.125	0.8366	B²	2.059	0.8106	B²	1.995	0.7854	B²	2.625	1.0334	B²	1.991	0.7838	B²	1.920	0.7559
			2.227	0.8767		1.984	0.7811		1.997	0.7862		2.214	0.8716		1.888	0.7433		1.934	0.7614
Measurements above average..			37			38			37			31			21			31	
Measurements below average..			23			22			23			29			39			29	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		BOSTON GRADES.												
Catalogue number of samples..		270.		271.		272.		273.		17.				
Length of fiber in crimp .....		—		—		—		—		2½ inches.				
Number of crimps per inch....		—		—		—		—		20.				
Number of section.....		B¹.	B².	B¹.	B².	B¹.	B².	B¹.	B².	B¹.	B².	B³.	B⁴.	
Actual measurement in centimillimeters.		1.375	1.75	1.375	1.375	1.875	2.0	1.875	2.0	1.625	1.5	2.0	2.375	
		1.375	1.625	1.5	1.625	1.75	1.625	1.375	1.5	1.5	2.125	1.875	2.0	
		1.875	2.0	1.375	1.875	1.75	1.375	1.375	1.375	1.875	2.5	2.0	2.0	
		1.75	1.5	1.25	1.75	1.5	1.625	1.375	1.5	2.0	2.0	1.875	1.875	
		1.875	1.75	1.5	1.25	1.5	2.0	1.625	1.375	1.75	2.0	1.875	2.125	
		2.0	1.75	1.25	1.625	1.625	1.875	1.625	1.625	1.5	1.5	2.25	1.875	1.875
		1.75	1.875	1.375	1.75	1.5	1.875	1.5	1.5	1.5	2.0	2.375	2.375	
		1.75	1.75	1.75	1.75	1.75	1.75	1.5	1.5	1.375	2.5	1.75	2.0	
		1.375	1.875	1.5	1.875	1.5	1.5	1.75	1.5	1.875	1.875	1.5	1.75	
		1.25	1.5	1.0	1.75	2.0	1.5	2.0	2.0	1.5	1.875	1.875	2.0	
		1.375	1.625	1.75	1.75	1.75	1.875	1.875	1.375	1.875	1.675	2.0	2.25	
		1.625	2.125	1.5	1.875	1.5	1.75	1.5	2.0	1.5	2.125	2.0	1.875	
		1.375	1.875	1.75	1.75	2.0	1.625	1.625	2.0	1.875	1.875	2.0	2.0	
		1.625	2.75	1.75	1.75	1.5	1.625	1.75	1.5	1.875	2.375	2.0	2.0	
		1.75	1.5	1.5	1.625	1.75	1.625	1.375	1.75	2.0	1.875	2.0	1.75	
		1.5	1.75	1.5	1.875	1.875	1.5	1.875	1.5	2.0	2.375	2.0	1.875	
		1.375	1.875	1.75	0.875	1.75	1.875	1.375	1.5	1.5	2.0	2.0	1.875	
		1.625	2.0	1.375	2.0	1.875	1.625	1.625	1.75	1.75	1.75	2.0	2.0	
		1.375	2.375	1.375	1.75	1.875	1.75	1.625	1.875	2.0	2.875	2.0	1.5	
		1.375	2.0	1.5	1.375	1.5	1.5	1.5	1.75	1.75	1.75	2.25	1.75	
	1.375	1.875	1.625	1.675	1.5	1.5	1.5	1.875	2.0	1.875	1.875	1.875		
	1.25	1.5	1.75	2.0	1.75	1.625	1.625	2.25	2.0	1.75	1.875	1.5		
	1.375	1.875	1.75	1.5	1.625	1.625	1.5	1.75	1.5	2.0	2.0	1.75		
	1.5	2.5	1.375	1.625	1.75	1.625	1.5	1.875	1.875	1.75	1.875	1.5		
	1.25	2.5	1.625	2.0	2.0	2.25	1.75	1.75	1.75	2.375	2.0	2.0		
	1.75	1.75	1.625	1.75	1.75	2.25	1.25	1.875	1.625	2.375	1.875	1.625		
	1.375	1.875	1.375	1.75	2.0	1.75	1.75	1.5	1.75	1.875	1.75	2.0		
	1.25	2.375	6.5	1.375	1.875	2.25	1.25	2.0	1.875	2.375	1.75	1.5		
	1.75	1.875	1.375	1.375	1.875	1.5	1.75	1.5	2.0	2.75	2.0	1.875		
	1.5	1.75	0.875	1.5	2.125	2.0	1.875	1.75	2.25	2.0	2.0	1.875		
Averages.....		1.547	1.570	1.561	1.641	1.710	1.741	1.635	1.670	1.800	2.080	1.041	1.891	

Recapitulation and reduction:		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.		
Maximum measurements.	B¹	2.0	0.7874	B¹	1.75	0.6889	B¹	2.125	0.8366	B¹	2.0	0.7874	B¹	2.25	0.8858
	B²	2.75	1.0826	B²	2.0	0.7874	B²	2.25	0.8858	B²	2.25	0.8858	B²	2.375	0.9350
Highest .....		2.75	1.0826		2.0	0.7874		2.25	0.8858		2.25	0.8858		2.875	1.1318
Minimum measurements.	B¹	1.25	0.4921	B¹	0.875	0.3444	B¹	1.375	0.5413	B¹	1.375	0.5413	B¹	1.375	0.5413
	B²	1.5	0.5005	B²	0.875	0.3444	B²	1.375	0.5413	B²	1.375	0.5413	B²	1.5	0.5905
Lowest .....		1.25	0.4921		0.875	0.3444		1.375	0.5413		1.375	0.5413		1.5	0.5905
														1.5	0.5905
Average measurements..	B¹	1.547	0.6090	B¹	1.561	0.6145	B¹	1.710	0.6732	B¹	1.635	0.6436	B¹	1.800	0.7086
	B²	1.570	0.6181	B²	1.641	0.6460	B²	1.741	0.6854	B²	1.670	0.6598	B²	2.080	0.8188
Average .....		1.559	0.6114		1.601	0.6303		1.725	0.6791		1.655	0.6515		1.941	0.7444
														1.891	0.7444
Measurements above average..		38			31			31			25			57	
Measurements below average..		22			29			29			35			63	



TABLE II.—Results of actual measurements of length, crimp, and fineness, with recapitulations and reductions—Cont'd.

		BOSTON GRADES.														
Catalogue number of samples..		18.				130.					131.					
Length of fiber in crimp.....		2½ inches.				2¼ inches.					2⅜ inches.					
Number of crimps per inch....		20.				—					—					
Number of section.....		B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.	B⁵.	B¹.	B².	B³.	B⁴.	B⁵.	
Actual measurement in centimillimeters.	2.0	1.5	1.875	1.75	2.125	2.375	2.375	2.375	2.0	2.125	2.0	2.0	2.375	2.25		
	1.5	1.875	1.875	1.75	2.75	2.375	2.375	2.5	2.75	1.75	1.875	1.875	2.0	2.375		
	2.25	1.875	2.0	2.0	2.125	2.25	2.125	2.0	2.5	2.375	1.875	2.125	2.0	2.0		
	2.375	2.0	2.0	2.0	2.25	2.5	2.0	2.5	2.25	1.75	2.125	1.875	2.0	2.0		
	1.5	2.375	1.875	2.375	2.0	2.0	1.875	2.25	2.5	1.5	1.875	2.75	2.0	2.25		
	2.0	2.0	1.5	2.0	2.0	1.5	2.0	2.5	2.25	1.75	1.75	2.125	2.5	3.25		
	1.875	1.5	1.75	1.875	2.5	2.25	1.75	2.25	2.75	2.0	1.875	2.125	2.875	1.75		
	2.0	2.0	1.75	2.0	1.75	2.0	2.0	1.75	1.875	2.0	1.875	2.5	1.75	3.0		
	1.5	1.5	1.875	2.5	2.0	2.0	2.375	1.375	3.0	2.375	2.0	1.875	2.375	2.25		
	2.125	2.0	1.75	1.875	2.25	1.625	1.75	2.0	2.25	2.5	1.875	2.375	2.125	2.375		
	1.875	1.625	1.75	1.75	1.75	1.625	2.5	2.5	2.25	1.875	1.75	2.125	2.5	2.375		
	1.75	1.75	2.25	2.0	1.875	2.375	2.25	1.75	2.125	1.5	1.75	2.0	2.0	2.875		
	2.25	1.5	1.75	2.5	1.5	1.625	1.875	2.875	2.375	2.5	2.25	2.375	2.5	2.5		
	2.0	1.5	1.75	1.875	2.25	1.875	2.0	3.0	3.0	2.125	1.5	2.125	2.25	2.0		
	1.875	1.75	1.5	2.0	1.5	1.625	1.875	2.125	2.125	1.875	2.25	2.0	3.125	1.75		
	2.125	1.875	1.875	1.75	2.25	1.875	1.5	2.375	2.125	2.125	1.75	2.375	2.25	3.375		
	2.0	2.0	1.75	1.5	1.625	2.0	2.0	2.875	2.125	1.625	2.25	2.125	1.875	2.75		
	2.0	2.0	2.0	2.125	2.25	1.75	2.75	2.375	2.625	2.25	2.125	2.375	2.0	1.875		
	1.5	2.0	2.25	1.875	1.75	2.125	2.25	1.875	2.125	2.0	2.25	2.125	2.0	1.625		
	2.0	1.875	1.75	2.375	1.75	2.125	2.125	1.875	2.375	1.875	2.25	2.25	2.5	2.0		
2.5	1.875	1.625	1.875	2.0	1.625	2.0	2.375	2.5	2.0	1.75	1.375	2.875	2.0			
2.0	2.0	1.5	2.0	1.5	1.75	2.0	2.25	2.375	1.875	1.75	1.875	1.875	2.375			
2.375	1.5	1.5	1.875	1.625	2.25	2.125	2.0	2.75	1.75	2.5	2.375	2.375	2.5			
2.0	2.0	1.625	2.0	1.875	1.75	1.5	2.25	2.5	2.125	1.875	2.25	2.5	1.125			
2.0	2.375	1.5	2.25	2.0	2.875	1.5	2.0	1.875	1.75	1.875	2.625	2.5	2.75			
1.75	1.875	2.0	2.25	2.875	1.875	2.375	3.0	2.125	2.125	2.0	1.875	2.25	2.5			
1.875	2.375	1.875	2.0	1.875	2.25	2.5	2.25	2.125	1.875	2.125	2.375	2.0	2.75			
1.75	2.0	1.875	1.875	1.75	1.75	2.0	1.375	2.375	1.5	1.125	2.375	2.375	1.875			
2.5	2.125	1.375	2.375	2.125	1.75	2.0	2.125	2.5	2.0	1.75	2.25	1.75	2.75			
1.875	1.5	1.875	2.0	1.875	2.25	2.5	2.0	2.5	2.375	1.875	1.625	2.5	2.5			
Averages.....	1.970	1.870	1.787	2.012	1.901	2.003	2.075	2.258	2.350	1.975	1.969	2.150	2.258	2.301		

Recapitulation and reductions:		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Maximum measurements.	B¹	2.5	0.9842	B¹	2.875	1.1818	B¹	2.5	0.9842	
	B²	2.375	0.9350	B²	2.875	1.1818	B²	2.5	0.9842	
	B³	2.25	0.8858	B³	2.75	1.0826	B³	2.75	1.0826	
	B⁴	2.5	0.9842	B⁴	3.0	1.1811	B⁴	3.125	1.2303	
Highest.....		2.5	0.9842		3.0	1.1811		3.375	1.3287	
Minimum measurements.	B¹	1.5	0.5905	B¹	1.5	0.5905	B¹	1.5	0.5905	
	B²	1.5	0.5905	B²	1.5	0.5905	B²	1.5	0.5905	
	B³	1.375	0.5413	B³	1.5	0.5905	B³	1.625	0.6397	
	B⁴	1.5	0.5905	B⁴	1.875	0.5413	B⁴	1.75	0.6889	
Lowest.....		1.375	0.5413		1.375	0.5413		1.5	0.5905	
Average measurements..	B¹	1.970	0.7755	B¹	1.901	0.7838	B¹	1.975	0.7775	
	B²	1.870	0.7362	B²	2.003	0.7885	B²	1.969	0.7751	
	B³	1.787	0.7035	B³	2.075	0.8160	B³	2.150	0.8464	
	B⁴	2.012	0.7921	B⁴	2.258	0.8889	B⁴	2.258	0.8889	
Average.....		1.909	0.7515		2.135	0.8405		2.148	0.8458	
Measurements above average.....		56			64			60		
Measurements below average.....		64			86			90		



TABLE III.—Individual extremes and averages of fineness of each sample.

Catalogue number of samples.	Portion of fleece represented.	Number of crimps per inch.	Highest.		Lowest.		Average.		Length in inches.	Catalogue number of sample.	Portion of fleece represented.	Number of crimps per inch.	Highest.		Lowest.		Average.		Length in inches.
			In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.					In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	
COTSWOLD.										COTSWOLD—cont'd.									
34	Shoulder	6.33	2.4921	2.66	1.0472	4.399	1.7318	0.50	188	Shoulder	4.875	1.9192	1.50	0.5905	3.380	1.3367	6.50		
	Side	5.66	2.6220	2.66	1.0472	4.704	1.9519	4.75		Side	5.375	2.1161	1.25	0.4921	3.709	1.4602	7.375		
	Hip	6.33	2.4921	2.00	0.7874	4.428	1.7433	6.00		Hip	5.875	2.3129	1.75	0.6889	4.071	1.6027	7.50		
	Belly	6.00	2.3622	3.33	1.3110	4.474	1.7614	3.75		Belly	5.25	2.0669	2.25	0.8858	3.744	1.4740	5.50		
35	Shoulder	6.33	2.4921	2.66	1.0472	4.373	1.7216	4.75	189	Shoulder	5.50	2.1653	2.25	0.8858	3.831	1.5082	4.00		
	Side	7.00	2.7559	3.00	1.1811	4.404	1.7338	4.25		Side	6.00	2.3622	3.00	1.1811	4.378	1.7236	4.125		
	Hip	7.00	2.7559	2.66	1.0472	4.303	1.6944	5.25		Hip	6.00	2.3622	2.50	0.9842	4.261	1.6787	4.125		
	Belly	6.00	2.3622	3.33	1.3110	4.633	1.8240	5.30		Belly	5.00	1.9685	2.625	1.0334	3.923	1.5444	2.00		
36	Shoulder	6.00	2.3622	2.00	0.7874	4.111	1.6185	7.25	190	Shoulder	5.875	2.3129	2.50	0.9842	4.104	1.6157	4.50		
	Side	5.66	2.2833	2.00	0.7874	4.184	1.6472	8.25		Side	6.50	2.5590	3.00	1.1811	4.321	1.7011	4.125		
	Hip	6.00	2.3622	2.00	0.7874	4.184	1.6472	8.50		Hip	6.375	2.5098	1.875	0.7381	4.601	1.8114	4.75		
	Belly	6.00	2.3622	2.00	0.7874	4.203	1.6547	6.00		Belly	6.50	2.5590	2.75	1.0826	4.385	1.7263	4.00		
37	Shoulder	6.33	2.4921	2.00	0.7874	4.237	1.6681	9.50	198	Shoulder	6.25	2.4608	1.75	0.6880	4.179	1.6452	13.50		
	Side	6.00	2.3622	2.00	0.7874	4.210	1.6574	9.75		Side									
	Hip	7.00	2.7559	0.33	1.3110	4.995	1.9665	9.00		Hip									
	Belly	6.33	2.4921	2.33	0.9173	4.416	1.7385	5.75		Belly									
38	Shoulder	5.66	2.2833	2.00	0.7874	4.305	1.7048	4.00	113	Average	5.961	2.3468	2.261	0.8901	4.196	1.6519	5.156		
	Side	6.00	2.3622	2.33	0.9173	4.419	1.7397	4.50		LEICESTER.									
	Hip	6.00	2.3622	3.33	1.3110	4.972	1.9574	5.50		Leicester	5.75	2.2637	2.50	0.9842	3.879	1.5271	9.75		
	Belly	6.33	2.4921	2.00	0.7874	4.229	1.6649	3.25											
30	Shoulder	6.00	2.3622	2.66	1.0472	4.088	1.6094	4.50	59										
	Side	5.66	2.2833	2.00	0.7874	4.399	1.7283	4.75		LINCOLN.									
	Hip	5.66	2.2833	3.00	1.1811	4.519	1.7766	5.25	60	Shoulder	6.833	2.2964	2.66	1.0472	4.201	1.6539	3.75		
	Belly	7.00	2.7559	2.66	1.0472	4.135	1.6279	3.50		Side	6.33	2.4921	2.66	1.0472	4.567	1.7980	3.00		
109	Shoulder	4.25	1.6732	1.50	0.5905	2.998	1.1803	.....		Shoulder	5.833	2.2964	2.33	0.9173	4.478	1.7629	3.50		
	Side	5.00	2.1653	2.25	0.8858	3.926	1.5456	3.875		Side	7.33	2.8858	2.33	0.9173	4.488	1.7669	3.75		
	Hip	5.25	2.0669	2.125	0.8366	3.828	1.5070	3.50		Hip	6.00	2.3622	2.66	1.0472	4.318	1.6999	3.25		
	Belly	5.00	2.1653	2.25	0.8858	3.810	1.4999	2.25		Belly	5.66	2.2833	2.00	0.7874	3.887	1.5303	2.25		
171	Shoulder	5.25	2.0669	1.625	0.6397	3.721	1.7649	6.00	61	Shoulder	5.33	2.0984	2.00	0.7874	3.909	1.5389	6.25		
	Side	5.00	2.1653	1.25	0.4921	3.406	1.4049	6.50		Side	5.66	2.2833	2.66	1.0472	4.124	1.6296	6.75		
	Hip	4.75	1.8129	2.00	0.7874	4.131	1.6263	6.00		Belly	5.33	2.0984	2.160	0.8527	3.581	1.4198	3.625		
	Belly	4.75	1.8129	1.875	0.7381	3.675	1.4768	3.625		Shoulder	5.00	1.9685	1.875	0.7380	3.62	1.4251	5.50		
172	Shoulder	4.50	1.7716	1.75	0.6889	3.176	1.2499	4.125	164	Side	5.375	2.1161	1.25	0.4921	3.518	1.3968	7.00		
	Side	5.25	2.0669	1.625	0.6397	3.499	1.3775	6.00		Hip	5.00	1.9685	1.50	0.5905	3.522	1.3856	5.625		
	Hip	5.50	2.1653	1.75	0.6889	3.388	1.3338	4.80		Belly	3.875	1.6255	1.375	0.5413	2.964	1.1669	3.50		
	Belly	4.25	1.6732	1.375	0.5413	3.267	1.2782	3.125		Shoulder	8.75	3.4448	1.50	0.5905	3.178	1.2511	5.00		
173	Shoulder	5.625	2.2945	2.125	0.8366	3.925	1.5452	3.25	165	Side	4.625	1.8208	1.875	0.7381	3.178	1.2511	6.00		
	Side	7.00	2.7559	2.875	0.9350	4.190	1.6259	4.50		Hip	4.75	1.8700	1.875	0.7381	3.319	1.3066	5.00		
	Hip	7.75	3.0511	1.75	0.6889	4.785	1.8838	.....		Belly	4.50	1.7716	1.50	0.5905	3.101	1.2208	2.75		
	Belly	5.875	2.1161	2.75	1.0826	3.041	1.5515	2.00		Shoulder	5.75	2.2637	1.25	0.8366	3.837	1.5106	2.625		
174	Shoulder	5.00	1.9685	2.50	0.9842	3.786	1.4905	4.125	160	Side	6.00	1.9685	2.125	0.8366	3.616	1.4296	5.00		
	Side	6.25	2.4066	2.00	0.7874	3.958	1.5582	4.50		Hip	6.00	2.3622	2.375	0.9351	2.761	1.6884	2.00		
	Hip	6.75	2.2637	2.25	0.8858	4.097	1.6129	4.125		Belly	4.25	1.6732	2.25	0.8858	3.216	1.2661	2.00		
	Belly	4.50	1.7716	1.75	0.6889	3.541	1.3910	2.375		Shoulder	6.00	1.9685	2.50	0.9842	3.528	1.3889	3.125		
175	Shoulder	5.75	2.2637	1.75	0.6889	4.493	1.7689	2.875	107	Side	4.875	1.9192	2.375	0.9350	3.646	1.4354	2.625		
	Side	6.875	2.7066	2.125	0.8366	4.613	1.8161	3.25		Hip	5.25	2.0669	2.125	0.8366	3.907	1.6381	2.875		
	Hip	6.875	2.7066	2.875	1.1318	4.165	2.0394	2.75		Belly	4.50	1.7716	2.50	0.9842	3.513	1.3803	1.625		
	Belly	6.25	2.4066	3.125	1.2303	4.354	1.7141	2.00		Shoulder	4.50	1.7716	1.625	0.6397	3.410	1.3425	2.875		
176	Shoulder	5.50	2.1653	2.875	1.1318	4.206	1.6559	4.125	168	Side	4.875	1.9192	2.875	0.9350	3.545	1.3956	3.25		
	Side	6.00	2.3622	3.00	1.1811	4.310	1.6968	4.75		Hip	4.75	1.8700	2.50	0.9842	3.638	1.4322	2.875		
	Hip	6.50	2.5590	2.00	0.7874	4.377	1.7232	4.125		Belly	4.25	1.6732	2.00	0.7874	3.530	1.3897	1.75		
	Belly	5.25	2.0669	1.75	0.6889	4.078	1.6035	6.25		Shoulder	5.00	1.9685	1.50	0.5905	3.824	1.5055	6.25		
177	Shoulder	5.75	2.2637	2.00	0.7874	3.631	1.4295	3.625	169	Side	5.00	1.9685	2.875	0.9350	3.838	1.5109	2.75		
	Side	5.75	2.2637	2.00	0.7874	4.364	1.7181	4.125		Hip	5.375	2.1161	2.00	0.7874	3.917	1.5421	2.875		
	Hip	5.75	2.2637	2.375	0.9350	4.478	1.7629	4.375		Belly	5.25	2.0669	2.50	0.9842	3.695	1.4547	1.625		
	Belly	5.00	1.9685	2.875	1.1318	3.951	1.5555	2.75		Shoulder	4.25	1.6732	1.25	0.4921	2.933	1.1547	8.50		
178	Shoulder	5.75	2.2637	2.25	0.8858	4.183	1.6468	3.125	181	Average	5.298	2.0858	2.103	0.8279	3.707	1.4594	3.785		
	Side	5.75	2.2637	2.00	0.7874	3.890	1.5314	3.25											
	Hip	6.00	2.3622	2.60	0.9842	4.460	1.7559	2.875		SOUTHDOWN.									
	Belly	4.75	1.8700	2.625	1.0334	3.645	1.4350	2.125		Shoulder	4.66	1.8346	2.00	0.7874	3.063	1.2650	1.375		
179	Shoulder	5.875	2.3129	1.875	0.7381	4.250	1.6732	3.875	62	Side	4.66	1.8346	2.00	0.7874	3.274	1.2889	1.50		
	Side	6.625	2.6082	1.75	0.6889	4.674	1.8037	4.50		Hip	4.66	1.8346	2.33	0.9173	3.186	1.2543	1.00		
	Hip	6.50	2.5590	2.50	0.9842	5.198	2.0491	3.875		Belly	4.33	1.7047	2.00	0.7874	3.024	1.1905	.....		
	Belly	6.00	2.3622	2.50	0.9842	4.099	1.6137	3.00		Shoulder	4.00	1.5748	2.00	0.7874	2.946	1.1598	1.25		
180	Shoulder	6.50	2.5590	2.375	0.9350	4.350	1												



TABLE III.—Individual extremes and averages of fineness of each sample—Continued.

Catalogue number of samples.	Portion of fleece represented.	Number of crimps per inch.						Length in inches.	Catalogue number of samples.	Portion of fleece represented.	Number of crimps per inch.						Length in inches.		
		Highest.		Lowest.		Average.					Highest.		Lowest.		Average.				
		In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.				In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.			
SOUTHDOWN—cont'd.								MERINO—continued.											
139	.....	4.75	1.8700	1.625	0.6397	2.745	1.0807	2.00	48	Side	10	3.75	1.4763	1.00	0.9937	2.215	0.8712	1.375	
140	.....	4.25	1.6732	1.75	0.6889	2.440	0.9611	1.75	49	Hip	10	3.75	1.4763	1.50	0.5905	2.201	0.9418	1.75	
141	.....	4.75	1.8700	1.50	0.5905	2.831	1.1145	1.125	50	Belly	10	4.00	1.5748	1.50	0.5905	2.260	0.9820	1.50	
142	.....	4.00	1.5748	1.925	0.6397	2.692	1.0598	1.00	51	Shoulder	20	4.50	1.7716	1.50	0.5905	2.219	0.8736	1.75	
143	.....	5.00	1.9685	1.75	0.6889	3.020	1.1889	1.25	52	Side	20	2.50	1.0779	1.50	0.5905	2.213	0.8712	1.4375	
144	.....	5.00	1.9685	2.00	0.7874	3.005	1.1830	1.75	53	Hip	10	4.00	1.5748	1.25	0.4921	2.141	0.8429	1.50	
145	.....	4.25	1.6732	2.00	0.7874	3.084	1.2141	1.50	54	Belly	10	3.25	1.2795	1.25	0.4921	2.205	0.8081	1.625	
146	.....	4.50	1.7716	2.00	0.7874	2.849	1.1210	1.875	55	Shoulder	22	2.50	1.0779	1.25	0.4921	1.733	0.6755	1.625	
147	.....	4.00	1.5748	1.375	0.5413	2.668	1.0481	1.625	56	Side	22	2.75	1.0926	1.00	0.5905	1.716	0.7358	1.25	
148	.....	4.875	1.9192	1.25	0.4921	2.911	1.1469	1.625	57	Hip	20	2.50	1.0779	1.50	0.5905	1.609	0.7358	1.875	
149	.....	4.50	1.7716	1.375	0.5413	2.667	1.0109	2.00	58	Belly	20	3.25	1.2795	1.25	0.4921	1.808	0.7118	1.875	
	Average	13.053	4.486	1.7601	1.753	0.6901	2.930	1.1559	1.851	59	Shoulder	22	2.50	1.0779	1.50	0.5905	1.896	0.7404	1.4375
HAMPSHIRE.								Shoulder, top of wrinkle											
162	Hampshire	5.875	2.1101	1.625	0.6397	3.309	1.2027	2.25	60	Shoulder, between wrinkle	.....	4.00	1.5748	1.50	0.5905	2.136	0.9118	1.25	
163	do	5.625	2.2145	1.875	0.7381	3.287	1.2040	2.125	61	Side	20	3.00	1.1811	1.25	0.4921	1.850	0.7283	1.00	
	Average	5.50	2.1653	1.75	0.6889	3.268	1.2084	2.188	62	Hip	22	2.50	1.0779	1.25	0.4921	1.816	0.7149	1.375	
OXFORD.								Hip, top of wrinkle											
64	Shoulder	6.00	2.3622	3.33	1.3110	4.542	1.7881	3.00	63	Hip, between wrinkle	16	3.50	1.3779	1.25	0.4921	2.027	0.7980	0.875	
	Side	6.33	2.4921	2.33	0.9173	4.863	1.7177	2.50	64	Belly	20	2.50	1.0779	1.50	0.5905	1.836	0.7228	1.25	
	Hip	6.00	2.3622	2.33	1.3110	5.068	1.9834	2.75	65	Belly II	20	3.00	1.1811	1.50	0.5905	2.013	0.7925	1.00	
	Belly	6.00	2.3622	2.66	1.0472	4.24	1.6092	1.75	66	Shoulder, top of wrinkle	14	4.00	1.5748	1.73	0.6889	2.514	0.9897	0.875	
65	Shoulder	6.60	2.3283	2.00	0.7874	3.942	1.5519	1.125	67	Shoulder, between wrinkle	.....	3.00	1.1811	1.25	0.4921	2.098	0.7905	1.0625	
	Side	6.66	2.3622	2.66	1.0472	3.915	1.5413	2.00	68	Hip, top of wrinkle	.....	5.00	1.9685	1.75	0.6889	2.902	1.1425	0.875	
	Hip	6.00	2.3622	2.66	1.0472	4.007	1.5775	1.75	69	Hip, between wrinkle	14	3.50	1.3779	1.25	0.4921	2.206	0.8692	1.00	
	Belly	6.00	2.3622	2.66	1.0472	3.624	1.4307	2.50	70	Belly	14	3.50	1.3779	1.25	0.4921	2.106	0.8299	1.00	
66	Shoulder	5.33	2.0984	2.00	0.7874	3.667	1.4136	2.625	71	Shoulder, top of wrinkle	14	4.00	1.5748	1.00	0.3937	2.455	0.9667	1.875	
	Side	6.00	2.3622	2.66	1.0472	4.015	1.5802	3.00	72	Shoulder, between wrinkle	20	3.00	1.1811	1.25	0.4921	2.098	0.7905	1.0625	
	Hip	6.00	2.3622	2.00	0.7874	3.957	1.5578	2.25	73	Side	20	2.75	1.0926	1.25	0.4921	1.861	0.7326	1.0625	
	Belly	5.33	2.0984	2.33	0.9173	3.60	1.4178	3.00	74	Hip, top of wrinkle	10	4.25	1.6782	1.50	0.5905	2.291	0.9019	1.125	
67	Shoulder	7.33	2.8838	2.66	1.0472	4.787	1.8848	3.00	75	Hip, between wrinkle	20	3.00	1.1811	1.25	0.4921	2.108	0.7511	1.125	
	Side	7.68	3.0157	3.33	1.3110	5.129	2.0192	2.75	76	Belly	20	3.25	1.2795	1.50	0.5905	2.038	0.8023	1.875	
	Hip	7.00	2.7559	3.160	1.2464	4.714	1.8356	2.75	77	Neck, top of wrinkle	16	3.50	1.3779	1.25	0.4921	2.494	0.9818	1.875	
	Belly	7.68	3.0157	3.33	1.3110	4.931	1.9413	2.00	78	Shoulder, between wrinkle	20	3.00	1.1811	1.00	0.3937	2.013	0.7925	1.125	
107	.....	5.75	2.2637	2.00	0.7874	3.743	1.4738	2.50	79	Side	20	3.00	1.1811	1.25	0.4921	2.152	0.8472	0.8125	
108	.....	5.25	2.0669	2.00	0.7874	3.638	1.4289	2.50	80	Hip, top of wrinkle	16	4.00	1.5748	1.50	0.5905	2.363	0.9303	1.00	
109	.....	7.125	2.8051	2.75	1.0826	4.806	1.8921	2.50	81	Hip, between wrinkle	20	3.00	1.1811	1.00	0.3937	2.152	0.8472	1.125	
110	.....	7.625	3.0019	2.00	0.7874	3.923	1.5144	2.00	82	Shoulder	20	4.00	1.5748	1.50	0.5905	2.363	0.9303	1.00	
111	.....	6.875	2.7066	2.375	0.9350	4.040	1.5939	2.75	83	Shoulder, top of wrinkle	20	4.00	1.5748	1.00	0.3937	2.255	0.8677	0.75	
112	.....	6.75	2.2637	1.875	0.7861	3.704	1.4582	2.875	84	Shoulder, between wrinkle	20	4.00	1.5748	1.00	0.3937	2.049	0.8066	0.9375	
113	.....	7.00	2.7559	3.125	1.2903	4.730	1.8582	2.875	85	Side	20	2.75	1.0926	1.50	0.5905	2.049	0.8066	0.9375	
114	.....	6.00	2.3622	1.60	0.5905	3.350	1.3212	3.00	86	Hip	20	4.75	1.8700	1.50	0.5905	2.405	0.9468	0.875	
115	.....	6.25	2.4006	3.625	1.4271	4.539	1.7870	2.75	87	Shoulder, top of wrinkle	.....	4.75	1.8700	1.50	0.5905	2.405	0.9468	0.875	
116	.....	5.00	1.9685	2.00	0.7874	3.769	1.4926	2.75	88	Shoulder, between wrinkle	20	3.50	1.3779	1.25	0.4921	2.149	0.8400	1.0625	
117	.....	5.875	2.1829	3.125	1.2393	4.510	1.7753	3.00	89	Hip	20	3.25	1.2795	1.25	0.4921	2.141	0.8429	0.875	
118	.....	5.50	2.1653	1.875	0.7281	3.797	1.4948	3.00	90	Belly	20	3.00	1.1811	1.25	0.4921	2.158	0.8400	0.875	
119	.....	6.25	2.4006	2.125	0.8260	4.101	1.6381	2.50	91	Shoulder, top of wrinkle	16	4.00	1.5748	1.50	0.5905	2.216	0.8724	1.125	
120	.....	5.125	2.0177	1.25	0.4921	3.452	1.3300	3.50	92	Shoulder, between wrinkle	20	3.00	1.1811	1.50	0.5905	2.030	0.7992	1.25	
	Average	6.253	2.4623	2.496	0.9826	4.365	1.7183	2.647	93	Hip, top of wrinkle	10	5.00	1.9685	1.75	0.6889	2.635	1.0673	1.00	
MERINO.								Hip, between wrinkle											
8	Merino	3.875	1.5255	1.75	0.6889	2.512	1.0097	.....	94	Shoulder	20	2.50	1.0779	1.25	0.4921	2.096	0.8251	1.125	
10	do	2.50	0.9849	1.25	0.4921	1.956	0.7706	2.625	95	Side	20	3.00	1.1811	1.50	0.5905	2.066	0.8128	1.125	
11	do	3.375	1.3287	1.50	0.5925	2.050	0.8076	3.00	96	Belly	20	3.83	1.6078	1.66	0.6335	2.272	0.9044	0.875	
12	do	3.375	1.3287	1.375	0.6413	2.125	0.8396	3.25	97	Shoulder	20	4.66	1.8346	1.66	0.6335	2.472	0.9732	0.875	
13	do	2.60	0.9849	1.25	0.4921	1.830	0.7688	2.50	98	Side	16	4.66	1.8346	1.66	0.6335	2.372	1.0674	0.875	
21	do	2.50	0.9849	1.00	0.3937	1.952	0.7968	2.75	99	Hip	16	2.00	0.7874	1.66	0.6335	2.428	0.9559	1.00	
22	do	3.00	1.1811	1.50	0.5905	2.031	0.7996	2.25	100	Belly	20	3.33	1.3779	1.33	0.5236	2.246	0.8942	0.875	
23	do	2.375	0.9350	1.125	0.4429	1.820	0.7163	1.25	101	Shoulder	20	4.00	1.5748	1.33	0.5236	2.427	0.9555	1.875	
30	Neck, top of wrinkle	4.25	1.6732	2.00	0.7874	2.822	1.1110	1.23	102	Side	16	5.66	2.2283	1.66	0.6335	2.630	0.9660	1.625	
	Neck, between wrinkle	16	3.50	1.3779	1.75	0.6889	2.400	0.7073	1.625	103	Belly	20	3.00	1.1811	1.66	0.6335	2.363	0.9093	1.25
	Shoulder	16	2.75	1.0926	1.75	0.6889	2.252	0.8860	1.60	104	Shoulder	20	3.33	1.3779	1.33	0.5236	2.119	0.8242	1.25
	Side	16	3.00	1.1811	1.50	0.5905	2.113	0.8436	1.8125	105	Side	20	3.23	1.3110	1.33	0.6336	2.099</		



TABLE III.—Individual extremes and averages of fineness of each sample—Continued.

Catalogue number of samples.	Portion of fleece represented.	Number of crimps per inch.	Highest.		Lowest.		Average.		Length in inches.	Catalogue number of samples.	Portion of fleece represented.	Number of crimps per inch.	Highest.		Lowest.		Average.		Length in inches.	
			In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.					In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.		
MERINO—continued.										MERINO—continued.										
76	Side	20	2.75	1.0826	1.50	0.5905	2.068	0.8133	1.125		S. Archer's between	20	3.25	1.2795	1.50	0.5905	2.094	0.8244	3.25	
	Hip	16	4.00	1.5748	1.50	0.5065	2.216	0.8724	1.50		wrinkle	20	3.125	1.2303	1.75	0.6889	2.224	0.8755	2.50	
	Belly	20	4.00	1.6748	1.875	0.7381	2.451	0.9649	1.125	350	S. Archer's wools.	20	2.375	0.9350	1.25	0.4921	1.655	0.6515	3.00	
77	Shoulder	20	2.50	0.9842	1.50	0.5005	1.928	0.7590	1.125	351	do	20	3.25	1.2795	1.25	0.4921	1.848	0.7275	2.75	
	Side	20	3.00	1.1811	1.25	0.4921	1.921	0.7562	1.375	352	do	20	2.875	1.1318	1.25	0.4921	1.867	0.7350	2.25	
	Hip	20	4.25	1.6732	1.25	0.4921	2.20	0.8661	1.00	353	do	20	3.25	1.2795	1.125	0.4429	1.686	0.7307	2.75	
	Belly	20	3.50	1.3779	1.25	0.4921	1.963	0.7728	1.50	354	do	22	3.375	1.3287	1.50	0.5905	2.163	0.8515	2.75	
78	Shoulder	20	3.00	1.1811	1.50	0.5005	2.170	0.8543	1.375	355	do	20	4.50	1.7716	1.375	0.5413	1.885	0.8641	2.50	
	Side	20	4.00	1.5748	1.25	0.4921	2.191	0.8625	1.125	356	do	20	3.50	1.3779	1.125	0.4429	2.100	0.7440	2.50	
	Hip	16	3.50	1.3779	1.75	0.6889	2.306	0.9314	1.375	357	do	20	3.25	1.2795	1.25	0.4921	2.033	0.8903	2.25	
	Belly	20	3.00	1.1811	1.25	0.4921	2.086	0.8212	1.375	358	do	20	2.75	1.0826	1.25	0.4921	1.874	0.7377	2.875	
79	Shoulder	20	4.25	1.6732	1.25	0.4921	2.030	0.7992	1.50	359	do	20	3.25	1.2795	1.50	0.5905	2.203	0.8909	2.75	
	Side	20	3.50	1.3779	1.50	0.5905	2.023	0.7864	1.50	360	do	20	2.875	1.1318	1.125	0.4429	2.265	0.8720	2.50	
	Hip, top of wrinkle.	14	4.50	1.7716	1.75	0.6889	2.043	1.0405	1.25		Average	19.595	3.406	1.3409	1.371	0.5397	2.127	0.8373	1.502	
	Hip, betw. wrinkle.	16	4.00	1.5748	1.50	0.5905	2.357	0.9279	1.375		SPANISH MERINO.									
	Belly	20	3.00	1.1811	1.60	0.5905	2.155	0.8484	1.50		1	Spanish merino	25	3.00	1.1811	1.25	0.4921	1.851	0.7287	1.875
80	Shoulder	20	2.25	0.8858	1.25	0.4921	1.770	0.6968	1.50		5	do	25	3.00	1.1811	1.25	0.4921	1.931	0.7602	1.8125
	Side	22	3.50	1.3779	1.25	0.4921	1.753	0.6901	1.625	105	do	25	2.50	0.9842	1.25	0.4921	1.714	0.6748	2.625	
	Hip	22	2.75	1.0826	1.25	0.4921	1.873	0.7374	1.375	106	do	25	3.00	1.1811	1.25	0.4921	1.935	0.7618	2.125	
	Belly	20	3.00	1.1811	1.50	0.5905	2.126	0.8370	1.375	107	do	25	4.00	1.5748	1.50	0.5905	2.350	0.9074	3.875	
81	Shoulder	20	3.50	1.3779	1.25	0.4921	2.310	0.9118	1.375	110	do	16	3.25	1.2795	1.25	0.4921	2.186	0.8606	3.50	
	Side	16	3.00	1.1811	1.50	0.5905	2.146	0.8488	1.625	116	do	20	3.00	1.1811	1.25	0.4921	1.834	0.7223	5.00	
	Hip	16	3.50	1.3779	1.25	0.4921	2.310	0.9118	1.375	117	do	16	4.50	1.7716	1.50	0.5905	2.259	0.8893	5.00	
	Belly	20	3.00	1.1811	1.50	0.5905	2.306	0.8779	1.50	118	do	20	2.50	0.9842	1.25	0.4921	1.877	0.7192	2.50	
82	Shoulder	20	3.25	1.2795	1.50	0.5905	2.083	0.8200	1.50	119	do	22	4.25	1.6732	1.25	0.4921	1.969	0.7751	2.75	
	Side	20	3.00	1.1811	1.50	0.5905	2.296	0.9039	1.25	120	do	20	3.125	1.2303	1.25	0.4921	2.050	0.8070	.....	
	Hip	20	3.50	1.3779	1.25	0.4921	2.22	0.8740	1.375	121	do	20	4.25	1.6732	1.25	0.4921	2.088	0.8220	.....	
	Belly	20	3.50	1.3779	2.00	0.7874	2.513	0.9693	1.375	122	do	20	4.00	1.5748	1.375	0.6413	2.194	0.8637	.....	
83	Shoulder	20	3.50	1.3779	1.50	0.5905	2.093	0.8240	1.25	123	do	20	3.75	1.4763	1.25	0.4921	2.066	0.8133	3.125	
	Side	20	4.00	1.5748	1.50	0.5905	2.123	0.8358	1.375	124	do	20	2.50	0.9842	1.25	0.4921	1.856	0.7307	1.1875	
	Hip	16	5.25	2.0669	1.00	0.3937	2.383	0.9381	1.375		Average	20.50	3.438	1.3535	1.295	0.5098	2.014	0.7929	3.108	
	Belly	20	4.75	1.8700	1.25	0.4921	2.500	0.9842	1.25		SAXON MERINO.									
84	Shoulder, 17 months	22	3.75	1.4763	1.25	0.4921	2.035	0.8011	3.125		2	Saxon merino	25	2.375	0.9850	1.00	0.3997	1.723	0.6783	2.25
	Shoulder	22	3.50	1.3779	1.60	0.5905	1.858	0.7688	1.375		SILESIA MERINO.									
	Side	22	3.50	1.3779	1.25	0.4921	1.970	0.7755	1.00		3	Silesian merino	25	3.00	1.1811	1.25	0.4921	1.814	0.7141	1.25
	Hip	20	4.00	1.5748	1.50	0.6095	2.201	0.8665	1.00		4	do	25	3.50	1.3779	1.25	0.4921	1.897	0.7468	1.125
	Belly	20	3.75	1.4763	1.00	0.3937	1.886	0.7425	1.375		Average	25	3.25	1.2795	1.25	0.4921	1.856	0.7307	1.1875	
85	Shoulder	22	2.75	1.0826	1.25	0.4921	1.793	0.7059	1.375		AUSTRALIAN MERINO.									
	Side	22	2.50	0.9842	1.25	0.4921	1.810	0.7125	1.375		6	Australian merino	.....	2.875	1.1318	1.25	0.4921	1.820	0.7165	.....
	Hip	20	3.00	1.1811	1.00	0.3937	1.838	0.7336	1.25		7	do	.....	3.00	1.1811	1.50	0.5905	1.935	0.7618	.....
	Belly	20	3.75	1.4763	1.00	0.3937	1.886	0.7425	1.375		16	do	25	2.75	1.0826	1.00	0.3937	1.831	0.7208	2.00
86	Shoulder	22	3.50	1.3779	1.00	0.3937	1.851	0.7287	1.375		Average	25	2.875	1.1318	1.25	0.4921	1.862	0.7330	2.00	
	Side	22	3.50	1.3779	1.50	0.5905	2.103	0.8279	1.25		CROSS BREEDS.									
	Hip	22	3.50	1.3779	1.50	0.5905	2.083	0.8200	1.25		111	Cotswold and Lie-	.....	6.25	2.4600	2.00	0.7874	3.370	1.3267	1.150
	Belly	20	3.00	1.1811	1.50	0.5905	2.173	0.8560	1.375		19	do and South-	.....	4.00	1.5748	2.00	0.7871	2.952	1.1622	2.625
87	Shoulder	22	3.00	1.1811	1.50	0.5905	2.056	0.8094	1.50		129	One-half Cotswold	.....	4.00	1.5748	1.25	0.4921	2.336	0.9106	4.75
	Side	22	3.25	1.2795	1.50	0.5905	2.201	0.8665	1.375		15	do and one-half	.....	2.00	0.7874	1.25	0.4921	1.708	0.6724	3.00
	Hip	22	3.00	1.1811	1.50	0.5905	2.173	0.8555	1.25		20	Cotswold and	.....	4.00	1.5748	1.25	0.4921	2.336	0.9106	4.75
	Belly	20	2.75	1.0826	1.50	0.5905	1.928	0.7590	1.50		15	do	20	2.375	0.9350	1.25	0.4921	1.708	0.6724	3.00
88	Shoulder	20	3.00	1.1811	1.25	0.4921	1.921	0.7562	1.125		20	Cotswold and	.....	3.50	1.3779	1.375	0.5413	2.089	0.8224	3.25
	Side	20	3.25	1.2795	1.25	0.4921	1.970	0.7779	1.25		24	do	12	3.75	1.4763	1.50	0.5905	2.331	0.9177	2.75
	Hip	20	2.75	1.0826	1.00	0.3937	1.980	0.7795	1.25		14	Cotswold and	.....	2.00	0.7874	1.00	0.3937	1.509	0.6295	2.125
	Belly	20	4.75	1.8700	1.50	0.5905	2.233	0.8791	1.25		24	do	20	2.50	0.9842	1.375	0.5413	1.813	0.7137	3.25
89	Shoulder	20	3.25	1.2795	1.25	0.4921	2.004	0.7889	1.4375		126	Seven-eighths	.....	5.00	1.9685	1.50	0.5905	2.629	1.0346	4.633
	Side	20	4.00	1.5748	1.25	0.4921	1.956	0.7700	1.25		128	do and one-	.....	5.00	1.9685	1.50	0.5905	2.629	1.0346	4.633
	Hip	20	3.25	1.2795	1.25	0.4921	2.009	0.7900	1.25		128	do and one-	.....	5.00	1.9685	1.50	0.5905	2.629	1.0346	4.633
	Belly	20	3.50	1.3779	1.25	0.4921	2.263	0.8609	1.125		128	do and one-	.....	5.00	1.9685	1.50	0.5905	2.629	1.0346	4.633
90	Shoulder	20	3.00	1.1811	1.50	0.5905	2.193	0.8638	1.1875		128	do and one-	.....	5.00	1.9685	1.50	0.5905	2.629	1.0346	4.633
	Side	20	3.00	1.1811	1.50	0.5905	2.193	0.8638	1.1875		128	do and one-								



TABLE III.—Individual extremes and averages of fineness of each sample—Continued.

MISCELLANEOUS—Continued.

Catalogue number of samples.	Portion of fleece represented.	Number of crimps per inch.	Highest.		Lowest.		Average.		Length in inches.	Catalogue number of samples.	Portion of fleece represented.	Number of crimps per inch.	Highest.		Lowest.		Average.		Length in inches.							
			In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.					In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.										
AUSTRALIAN WOOLS—continued.									CANADA.																	
213	Merino	25	2.50	0.9842	1.375	0.5413	1.941	0.7641	2.875	202	Black-pulled	.....	4.75	1.8700	1.375	0.5413	3.094	1.2181	.....							
214	do	23	3.50	1.3779	1.59	0.5905	2.227	0.8767	3.375	203	Goat hair	.....	16.25	6.3970	3.00	1.1811	6.813	2.6822	.....							
215	do	18	2.50	0.9842	1.125	0.4429	1.713	0.6744	2.25																	
216	do	16	2.875	1.1318	1.25	0.4921	1.934	0.7614	3.625	261	Wells & Dickson.	20	3.00	1.1811	1.00	0.3937	1.897	0.7468	1.125							
217	do	16	2.375	0.9350	1.125	0.4429	1.787	0.7035	1.50																	
218	do	16	2.875	1.1318	1.25	0.4921	1.896	0.7464	4.00	262	do	20	4.00	1.5748	1.375	0.5413	2.268	0.8929	1.50							
219	do	16	2.75	1.0826	1.125	0.4429	1.918	0.7551	2.25	263	do	20	2.375	0.9350	1.125	0.4429	1.776	0.6992	1.50							
220	do	14	2.75	1.0826	1.375	0.5413	1.931	0.7602	3.25	264	do	20	3.00	1.1811	1.25	0.4921	2.227	0.8767	1.50							
221	do	16	3.125	1.2303	1.59	0.5905	2.319	0.9129	2.25	265	do	.....	2.875	1.1318	1.00	0.3937	1.984	0.7811	1.50							
222	do	16	2.875	1.1318	1.125	0.4429	1.966	0.7856	1.75	266	do	.....	2.75	1.0826	1.375	0.5413	1.997	0.7862	1.50							
223	do	20	2.75	1.0826	1.59	0.5905	1.935	0.7618	3.875	267	do	.....	3.375	1.3287	1.125	0.4429	2.214	0.8716	1.25							
224	do	20	2.50	0.9842	1.25	0.4921	1.710	0.6732	3.375	268	do	20	2.375	0.9350	1.375	0.5413	1.888	0.7433	1.375							
225	do	.....	2.50	0.9842	1.375	0.5413	1.964	0.7732	.....	269	do	.....	2.50	0.9842	1.625	0.6307	1.934	0.7614	.....							
226	do	.....	2.875	1.1318	0.75	0.2952	1.964	0.7732	.....	270	do	.....	2.75	1.0826	1.25	0.4921	1.553	0.6114	.....							
233	do	16	2.75	1.0826	1.25	0.4921	2.027	0.7980	3.875	271	do	.....	2.00	0.7874	0.875	0.3444	1.601	0.6903	.....							
	Average	17.769	2.767	1.0803	1.258	0.4952	1.951	0.7681	2.942	272	do	.....	2.25	0.8858	1.375	0.5413	1.725	0.6791	.....							
204	Spanish merino	.....	3.75	1.4763	1.125	0.4429	1.853	0.7295	.....	273	do	.....	2.25	0.8858	1.375	0.5413	1.655	0.6515	.....							
205	do	22	2.50	0.9842	1.00	0.3937	1.761	0.6933	1.875	Average									20	2.731	1.0751	1.240	0.4881	1.901	0.7484	1.406
206	do	.....	6.75	2.4606	2.75	1.0826	4.692	1.8472	.....	McDowell									25	2.375	0.9350	1.00	0.3937	1.723	0.6783	2.25
207	do	.....	8.25	3.2480	3.50	1.3779	5.026	1.9787	.....	23	do	.....	2.375	0.9350	1.125	0.4429	1.820	0.7165	2.25							
	Average	22	5.313	2.0917	2.094	0.8244	3.333	1.3122	1.875	96	do	.....	2.00	0.7874	1.00	0.3937	1.472	0.5795	2.00							
208	Silesian merino	.....	1.875	0.7381	1.00	0.3937	1.439	0.5665	1.25	97	do	.....	2.50	0.9842	1.00	0.3937	1.498	0.5897	2.125							
209	do	25	2.875	1.1318	1.00	0.3937	1.737	0.6838	1.25	98	do	.....	2.50	0.9842	1.00	0.3937	1.687	0.6641	1.875							
210	do	25	2.125	0.8366	1.25	0.4921	1.688	0.6645	1.125	99	do	.....	2.25	0.8858	1.00	0.3937	1.704	0.6708	2.0625							
211	do	25	2.375	0.9350	1.25	0.4921	1.638	0.6327	1.625	100	do	.....	2.25	0.8858	0.75	0.2972	1.573	0.6192	2.125							
212	do	26	3.00	1.1811	1.00	0.3937	1.595	0.6279	0.875	101	do	.....	2.25	0.8858	1.00	0.3937	1.521	0.5988	1.75							
	Average	25.25	2.45	0.9645	1.10	0.4330	1.624	0.6303	1.225	102	do	.....	2.00	0.7874	1.00	0.3937	1.599	0.5940	2.125							
234	Leicester and Lincoln.	.....	5.00	1.9685	2.375	0.9350	3.834	1.5094	.....	103	do	.....	3.50	1.3779	1.25	0.4921	1.891	0.7444	2.375							
										104	do	.....	3.00	1.1811	1.25	0.4921	1.830	0.7204	1.625							
										104a	do	.....	2.75	1.0826	1.00	0.3937	1.758	0.6921	2.125							
										Average									27.846	2.481	0.9767	1.029	0.4051	1.660	0.6535	2.005



TABLE IV.—Individual extremes and averages showing influence of breed, sex, and portion of fleecce upon fineness.

Catalogue number of samples.	Portion of fleecce represented.	Number of crimps per inch.	Highest.		Lowest.		Average.		Length in inches.	Catalogue number of samples.	Portion of fleecce represented.	Number of crimps per inch.	Highest.		Lowest.		Average.		Length in inches.
			In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.					In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.			
																	In centimillimeters.	In thousandths of inch.	
<b>COTSWOLD.</b>										<b>COTSWOLD—cont'd.</b>									
<i>Ram.</i>										<i>Ewe—Continued.</i>									
34	Shoulder	6.33	2.4921	2.66	1.0472	4.399	1.7318	6.50	37	Hip	7.00	2.7559	3.33	1.3110	4.095	1.9655	0.00		
35	do	6.33	2.4921	2.66	1.0472	4.373	1.7216	4.75	39	do	6.66	2.6220	3.33	1.3110	4.972	1.9574	5.50		
36	do	5.00	2.5622	2.00	0.7874	4.111	1.6185	7.25	39	do	5.66	2.2283	3.00	1.1811	4.519	1.7756	5.25		
172	do	4.50	1.7716	1.75	0.6889	3.175	1.2499	4.125	171	do	5.875	2.3129	2.00	0.7874	4.131	1.6263	6.00		
173	do	6.625	2.2945	2.125	0.8366	3.925	1.5432	3.25	177	do	6.75	2.6574	2.375	0.9350	4.473	1.7629	4.375		
174	do	5.00	1.9685	2.50	0.9842	3.760	1.4905	4.125	178	do	6.00	2.3622	2.50	0.9842	4.46	1.7559	2.875		
175	do	5.75	2.2637	1.75	0.6889	4.493	1.7688	2.875	179	do	6.50	2.5590	2.50	0.9842	5.198	1.0484	3.875		
176	do	5.50	2.1653	2.875	1.1318	4.206	1.6559	4.125	180	do	6.50	2.5590	1.875	1.6826	4.657	1.2934	5.25		
184	do	6.00	2.3622	2.50	0.9842	4.122	1.6228	6.875	181	do	8.25	3.2480	2.75	1.6826	5.023	1.9775	4.375		
185	do	6.75	2.2637	3.00	0.5905	4.042	1.5913	8.50	182	do	6.75	2.6574	2.00	0.7874	4.66	1.8346	4.50		
186	do	6.00	2.3622	1.50	1.1811	4.506	1.7740	6.00	183	do	6.00	2.3622	2.00	0.7874	4.245	1.6712	9.87		
	Average	5.708	2.2472	2.302	0.9002	4.163	1.6153	5.307	187	do	6.25	2.4666	2.25	0.8858	4.554	1.7893	7.505		
									188	do	6.00	2.3622	2.50	0.9812	4.264	1.6787	4.12		
									190	do	6.375	2.5098	1.875	0.7381	4.601	1.8114	4.755		
84	Side	8.66	2.6220	2.66	1.0472	4.704	1.8519	4.75	Average										
85	do	7.00	2.7559	3.00	1.1811	4.404	1.7388	4.25	0.469										
86	do	5.66	2.2283	2.00	0.7874	4.184	1.6472	8.25	2.5458										
172	do	5.25	2.0669	1.625	0.6397	3.499	1.3775	6.00	2.449										
173	do	7.00	2.7559	2.375	0.9350	4.13	1.6259	4.50	0.9641										
174	do	6.25	2.4606	2.00	0.7874	3.958	1.5582	4.50	4.626										
175	do	6.875	2.7090	2.125	0.8366	4.013	1.8161	3.25	1.8212										
176	do	6.00	2.3622	3.00	1.1811	4.31	1.8998	4.75	5.618										
177	do	6.25	2.4606	3.00	1.1811	4.574	1.8078	6.25	37	Belly	6.33	2.4921	2.38	0.9173	4.416	1.7385	5.75		
178	do	6.25	2.4606	3.00	1.1811	4.161	1.6381	9.125	38	do	6.33	2.4921	3.00	1.1811	4.229	1.6649	3.25		
185	do	5.50	2.1653	2.875	1.1318	4.161	1.6381	9.125	39	do	7.00	2.7559	2.66	1.0472	4.135	1.6279	3.50		
186	do	6.50	2.5300	2.25	0.8858	4.273	1.8822	6.75	171	do	4.75	1.6700	1.875	0.7381	3.675	1.4168	3.625		
	Average	6.268	2.4677	2.628	1.0846	4.250	1.6755	5.671	177	do	5.00	1.9685	2.875	1.1318	3.951	1.655	2.75		
34	Hip	6.33	2.4921	2.00	0.7874	4.428	1.7433	6.00	178	do	4.75	1.8700	2.625	1.0334	3.845	1.435	2.125		
35	do	7.00	2.7559	2.66	1.0472	4.303	1.6944	5.25	179	do	6.00	2.3622	2.50	0.9842	4.099	1.0137	3.00		
36	do	6.00	2.3622	2.00	0.7874	4.184	1.6472	8.00	181	do	6.00	2.3622	2.50	0.9842	4.374	1.7220	3.375		
172	do	5.50	2.1653	1.75	0.6889	3.388	1.3338	4.50	182	do	6.00	2.3622	2.50	0.9842	4.143	1.6310	8.00		
173	do	7.75	2.0511	1.75	0.6889	4.785	1.8838	4.125	183	do	6.50	2.1653	1.125	0.4429	4.158	1.6362	3.875		
174	do	6.75	2.2637	2.25	0.8858	4.097	1.6129	4.125	187	do	4.875	1.9192	2.00	0.7874	3.574	1.4070	4.00		
175	do	6.875	2.7066	2.875	1.1318	5.165	2.0334	2.75	189	do	5.00	1.9685	2.625	1.0334	3.923	1.5444	2.00		
176	do	6.50	2.5300	2.00	0.7874	4.377	1.7232	4.125	190	do	6.50	2.5300	2.75	1.0826	4.385	1.7263	4.00		
184	do	0.825	2.0682	2.75	1.0826	4.865	1.9153	8.00	Average										
185	do	6.00	2.3622	2.00	0.7874	4.388	1.7275	7.50	6.685										
186	do	7.125	2.8051	1.60	0.5905	4.580	1.8031	9.00	2.2381										
	Average	6.496	2.5574	2.140	0.8425	4.415	1.7381	5.386	2.413										
									0.9499										
									4.054										
									1.5960										
									3.75										
<b>LINCOLN.</b>										<b>RAM.</b>									
34	Belly	6.00	2.3622	3.33	1.3110	4.474	1.7614	3.75	59	Shoulder	5.833	2.2964	2.66	1.0472	4.201	1.6539	3.75		
35	do	0.00	2.3622	3.33	1.3110	4.633	1.8240	5.30	165	do	8.75	3.448	1.50	0.5905	3.178	1.2511	5.00		
36	do	6.00	2.3622	2.00	0.7874	4.263	1.6547	6.50	166	do	5.75	2.2637	2.125	0.8366	3.837	1.5106	2.625		
172	do	4.25	1.6732	1.375	0.5413	3.267	1.2862	3.125	167	do	5.00	1.9685	2.50	0.9842	3.528	1.3889	3.125		
173	do	5.375	2.1161	2.75	1.0826	3.941	1.5515	2.00	Average										
174	do	4.50	1.7716	1.75	0.6889	3.541	1.3940	2.375	6.333										
175	do	0.25	2.4006	3.125	1.2303	4.354	1.7141	2.00	2.4933										
176	do	5.25	2.0669	1.75	0.6889	4.078	1.6655	2.625	2.196										
177	do	5.50	2.1653	3.00	1.1811	4.273	1.6822	3.625	0.8645										
184	do	5.00	1.9685	2.00	0.7874	3.885	1.5295	6.125	3.686										
185	do	6.50	2.5300	3.00	1.1811	4.581	1.8035	5.25	1.4511										
	Average	5.911	2.1696	2.492	0.9611	4.112	1.6188	3.789	59	Side	6.33	2.4921	3.00	1.1811	3.970	1.5629	3.00		
									165	do	4.625	1.8208	1.875	0.7381	3.178	1.2511	6.00		
									166	do	5.00	1.9685	2.125	0.8366	3.618	1.4236	2.50		
									167	do	4.875	1.9192	2.375	0.9350	3.646	1.4354	2.625		
									Average										
									5.208										
									2.0508										
									2.344										
									0.9228										
									3.663										
									1.4185										
									3.531										
									59	Hip	6.33	2.4921	2.66	1.0472	4.567	1.7980	3.00		
									165	do	4.75	1.8700	1.875	0.7381	3.310	1.3066	5.50		
									166	do	6.00	2.3622	2.375	0.9551	4.276	1.6824	2.50		
									167	do	5.25	2.0669	2.125	0.8366	3.907	1.5381	2.875		
									Average										
									5.583										
									2.1980										
									2.259										
									0.8893										
									4.017										
									1.5814										
									3.460										
37	Shoulder	6.33	2.4921	2.00	0.7874	4.237	1.6881	9.50	165	Belly	4.50	1.7716	1.50	0.5905	3.101	1.2208	2.75		
38	do	5.66	2.2283	2.00	0.7874	4.365	1.6948	4.00	166	do	4.25	1.6732	2.25	0.8858	3.216	1.2661	2.00		
39	do	5.66	2.2283	2.66	1.0472	4.088	1.6094	4.50	167	do	4.50	1.7716	2.50	0.9842	3.613	1.3836	1.625		
171	do	5.25	2.0669	1.625	0.6397	3.721	1.4649	6.00	Average										
177	do	5.75	2.2637	2.00	0.7874	3.631	1.4295	3.125	4.417										
178	do	5.75	2.2637	2.25	0.8858	4.183	1.6168	3.125	1.7369										
179	do	6.875	2.3129	1.875	0.7381	4.25	1.6732	3.875											



TABLE IV.—Individual extremes and averages showing influence of breed, sex, and portion of fleece upon fineness—Cont'd.

Catalogue number of samples.	Portion of fleece represented.	Number of crimps per inch.	Highest.		Lowest.		Average.		Length in inches.	Catalogue number of samples.	Portion of fleece represented.	Number of crimps per inch.	Highest.		Lowest.		Average.		Length in inches.
			In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.					In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.			
LINCOLN—cont'd.										OXFORD.									
Ewe—Cont'd.										Ram.									
60	Belly	.....	6.66	2.2283	2.00	0.7874	3.887	1.5303	2.25	65	Shoulder	.....	5.66	2.2283	2.00	0.7874	3.942	1.5510	1.125
61	do	.....	6.83	2.0984	2.166	0.8527	3.581	1.4198	3.625	66	do	.....	5.33	2.0984	2.00	0.7874	3.667	1.4136	2.50
164	do	.....	8.875	1.5255	1.873	0.5413	2.904	1.1689	3.50	67	do	.....	7.33	2.8858	2.63	1.0472	4.787	1.8846	3.00
168	do	.....	4.25	1.6732	2.00	0.7874	3.53	1.3897	1.75	Average									
169	do	.....	5.25	2.0669	2.68	0.9842	3.095	1.4547	1.625	65	Side	.....	6.66	2.6220	2.66	1.0472	3.915	1.5413	2.00
Average										66	do	.....	6.00	2.3622	2.66	1.0472	4.015	1.5808	2.625
SOUTHDOWN.										67	do	.....	7.66	3.0157	3.33	1.3110	5.129	2.0192	2.75
Ram.										Average									
62	Shoulder	.....	4.66	1.8346	2.00	0.7874	2.063	1.2059	1.875	65	Hip	.....	6.66	2.6220	2.66	1.0472	4.007	1.5775	1.75
62	Side	.....	4.66	1.8346	2.00	0.7874	3.274	2.2889	1.50	66	do	.....	6.00	2.3622	2.00	0.7874	3.937	1.5678	3.75
62	Hip	.....	4.66	1.8346	2.33	0.9173	3.186	1.2543	1.00	67	do	.....	7.00	2.7559	3.166	1.2464	4.714	1.8559	2.75
62	Belly	.....	4.33	1.7047	2.00	0.7874	2.024	1.1905	.....	Average									
132	.....	.....	4.00	1.5748	1.75	0.6889	2.813	1.1082	1.125	65	Belly	.....	6.00	2.3622	2.66	1.0472	5.624	1.4267	2.50
133	.....	.....	3.875	1.5255	1.125	0.4429	2.823	1.1114	1.50	66	do	.....	5.33	2.0984	2.33	0.9173	3.66	1.4173	2.25
134	.....	.....	4.75	1.8700	1.875	0.5413	3.233	1.2729	1.625	67	do	.....	7.66	3.0157	3.33	1.3110	4.931	1.9413	3.00
135	.....	.....	4.25	1.6732	0.675	0.3444	2.996	1.1765	1.875	Average									
136	.....	.....	3.875	1.5255	1.50	0.5905	2.696	1.0614	1.00	65	.....	.....	7.125	2.8051	2.75	1.0820	4.806	1.8921	2.50
137	.....	.....	5.50	2.1683	2.00	0.7874	3.209	1.2625	1.50	150	.....	.....	7.025	3.0010	2.00	0.7874	3.923	1.5444	2.00
138	.....	.....	3.75	1.4763	1.25	0.4921	2.580	1.0157	1.875	151	.....	.....	6.875	2.7696	2.375	0.9350	4.046	1.5929	2.75
139	.....	.....	4.75	1.8700	1.625	0.6897	2.745	1.0807	2.00	152	.....	.....	5.75	2.2637	1.875	0.7381	3.704	1.4532	2.75
140	.....	.....	4.25	1.6732	1.75	0.6889	2.440	0.9641	1.75	153	.....	.....	7.00	2.7559	3.125	1.2803	4.72	1.8582	2.875
Average										154	.....	.....	6.00	2.3622	1.50	0.5905	3.356	1.3212	3.00
Ewe.										155	.....	.....	6.33	2.4921	2.773	1.0017	4.718	1.8574	2.916
63	Shoulder	.....	4.00	1.5748	2.00	0.7874	2.946	1.1598	1.25	Average									
01	do	.....	4.25	1.6732	1.75	0.6889	3.193	1.2570	1.50	64	Shoulder	.....	6.00	2.3622	3.33	1.3110	4.542	1.7881	3.00
92	do	.....	0.83	2.4921	2.33	0.9173	3.007	1.4200	1.875	64	Side	.....	6.33	2.4921	2.33	0.9173	4.363	1.7177	2.50
93	do	.....	4.33	1.7047	2.00	0.7874	2.94	1.1574	1.1875	64	Hip	.....	6.66	2.6220	3.33	1.3110	5.038	1.0834	2.75
91	do	.....	4.66	1.8346	2.00	0.7874	2.743	1.0799	1.25	64	Belly	.....	6.00	2.3622	2.66	1.0472	4.24	1.6092	1.75
95	do	.....	4.00	1.5748	1.66	0.6585	2.496	0.9816	1.60	156	do	.....	6.25	2.4606	3.625	1.4271	4.539	1.7870	2.75
Average										157	do	.....	5.00	1.9985	2.00	0.7874	3.766	1.4926	2.75
63	Side	.....	4.66	1.8346	1.33	0.5236	3.013	1.1862	.....	158	do	.....	5.875	2.3120	3.125	1.2303	4.51	1.7755	2.75
91	do	.....	4.66	1.8346	2.00	0.7874	3.128	1.2314	1.1875	159	do	.....	5.50	2.1653	1.875	0.7381	3.797	1.4948	3.00
92	do	.....	4.75	1.8700	1.50	0.5905	2.705	1.0649	1.00	160	do	.....	6.25	2.4606	2.125	0.8366	4.161	1.6381	2.50
93	do	.....	4.00	1.5748	1.66	0.6535	2.947	1.1602	1.00	161	do	.....	5.125	2.0977	1.25	0.4921	3.452	1.3560	3.50
94	do	.....	4.00	1.5748	1.66	0.6535	2.946	1.1574	1.125	Average									
95	do	.....	4.43	1.8110	1.66	0.6535	2.496	0.9826	1.4375	64	.....	.....	5.899	2.3224	2.565	1.0098	4.241	1.6096	2.725
Average										MERINO.									
Hip										Ram.									
63	.....	.....	5.233	2.0602	1.66	0.6535	3.235	1.2736	.....	30	Neck, top of wrinkle	16	4.25	1.6733	2.00	0.7874	2.822	1.1110	1.25
91	do	.....	4.66	1.8346	2.00	0.7874	3.316	1.3055	1.5625	16	Neck, betw. wrinkle	16	3.50	1.3779	1.75	0.6889	2.466	0.0703	1.625
92	do	.....	5.33	2.0984	1.66	0.6535	2.965	1.1673	1.875	Average									
93	do	.....	5.00	1.9085	2.33	0.9173	3.111	1.2248	1.125	10	.....	.....	3.875	1.5255	1.875	0.7380	2.644	1.0409	1.4375
94	do	.....	5.66	2.2283	2.00	0.7874	3.501	1.3733	2.00	30	Shoulder	.....	2.75	1.0826	1.75	0.6889	2.252	0.8665	1.50
95	do	.....	4.66	1.8346	1.66	0.6535	2.777	1.0933	1.75	47	do	.....	3.00	1.1811	1.25	0.4921	2.199	0.8657	1.50
Average										48	Shoulder, top of wrinkle	16	4.50	1.7716	1.25	0.4021	2.374	0.9347	1.125
63	Belly	.....	4.00	1.5748	2.00	0.7874	2.912	1.1464	0.75	51	Shoulder, between wrinkle	16	3.50	1.3779	1.50	0.5905	2.392	0.9662	1.50
91	do	.....	3.33	1.3110	1.66	0.5335	2.77	1.0995	0.875	53	do	.....	4.50	1.7716	1.50	0.5905	2.219	0.8736	1.75
92	do	.....	4.66	1.8346	2.00	0.7874	2.872	1.1307	0.875	Average									
93	do	.....	4.33	1.7047	2.00	0.7874	2.788	1.0976	.....	16	Shoulder, top of wrinkle	22	2.50	0.9842	1.50	0.5905	1.896	0.7464	1.4375
94	do	.....	4.33	1.7047	2.00	0.7874	2.918	1.1489	0.875	30	Shoulder, between wrinkle	20	4.00	1.5748	1.50	0.5905	2.136	0.9118	1.25
95	do	.....	4.00	1.5748	1.66	0.6535	2.807	1.1051	1.5625	47	do	.....	3.00	1.1811	1.25	0.4921	1.850	0.7283	1.00
Average										54	Shoulder, top of wrinkle	14	4.00	1.5748	1.75	0.6889	2.514	0.9897	0.875
141	.....	.....	4.75	1.8700	1.50	0.5905	2.331	1.1145	1.125	55	Shoulder, between wrinkle	14	3.00	1.1811	1.25	0.4921	2.008	0.7905	1.0625
143	.....	.....	4.00	1.5748	1.625	0.6397	2.692	1.0598	1.00	14	Shoulder, top of wrinkle	20	3.00	1.1811	1.25	0.4921	2.008	0.7905	1.0625
143	.....	.....	5.00	1.9085	1.75	0.6889	3.020	1.1830	1.25	55	Shoulder, between wrinkle	20	3.83	1.5078	1.68	0.6535	2.272	0.8944	1.375
144	.....	.....	5.00	1.9085	2.00	0.7874	3.005	1.1830	1.75	68	Shoulder	.....	3.33	1.3110	1.33	0.5236	2.246	0.8812	1.875
145	.....	.....	4.25	1.6732	2.00	0.7874	3.084	1.2141	1.50	69	do	.....	3.50	1.3779	1.75	0.6889	2.31	0.9056	1.50
146	.....	.....	4.50	1.7716	2.00	0.7874	2.849	1.1216	1.875	71	do	.....	2.75	1.0826	1.50	0.5905	2.100	0.8267	1.25
147	.....	.....	4.00	1.5748	1.375	0.5413	2.063	1.0484	1.625	72	do	.....	2.75	1.0826	1.50	0.5905	2.100	0.8267	1.25
148	.....	.....	4.875	1.9192	1.25	0.4921	2.911	1.1490	1.625	73	do	.....	3.50	1.3779	1.53	0.5905	2.110	0.8300	1.625
149	.....	.....	4.66	1.7716	1.875	0.5413	2.067	1.0490	2.00	78	do	.....	3.00	1.1811	1.50	0.5905	2.170	0.8343	1.875
Average										Average									
12.170										12.170									
4.516										4.516									
1.7779										1.7779									
1.789										1.789									
0.7143										0.7143									
2.964										2.964									
1.1433										1.1433									
1.328										1.328									



TABLE IV.—Individual extremes and averages showing influence of breed, sex, and portion of fleece upon fineness—Cont'd.

Catalogue number of samples.	Portion of fleece represented.	Number of crimps per inch.	Highest.		Lowest.		Average.		Length in inches.	Catalogue number of sample.	Portion of fleece represented.	Number of crimps per inch.	Highest.		Lowest.		Average.		Length in inches.
			In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.					In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	
MERINO—continued.										MERINO—continued.									
Ewe.										Ewe.									
79	Shoulder.....	20	4.25	1.6752	1.50	0.5905	2.030	0.7092	1.50	41	Neck.....	16	3.00	1.1811	1.50	0.5905	2.083	0.8220	1.75
82	do.....	20	3.25	1.2795	1.50	0.5905	2.083	0.8200	1.50	45	Neck, top of wrinkle	16	4.00	1.5748	1.50	0.5905	2.296	0.9039	1.1875
89	do.....	20	3.25	1.2795	1.25	0.4921	2.004	0.7889	1.4375		Neck, between wrinkle	16	3.25	1.2795	1.25	0.4921	2.271	0.8940	1.125
90	do.....	20	4.00	1.5748	1.25	0.4921	2.200	0.8661	1.25	50	Neck, top of wrinkle	16	3.50	1.3779	1.25	0.4921	2.492	0.9818	1.1875
	Average.....	18.90	3.478	1.3673	1.431	0.5633	2.171	0.8547	1.338		Average.....	16	3.313	1.3043	1.375	0.5413	2.287	0.9018	1.3125
30	Side.....	16	3.00	1.1811	1.50	0.5905	2.143	0.8436	1.3125	40	Shoulder.....	20	3.50	1.3779	1.25	0.4921	2.116	0.8330	1.375
47	do.....	20	3.25	1.2775	1.75	0.6889	2.103	0.8515	1.1875	62	do.....	22	2.50	0.9842	1.25	0.4921	1.733	0.6822	1.5025
48	do.....	16	3.75	1.4763	1.00	0.3937	2.213	0.8712	1.375	56	Shoulder, between wrinkle	20	3.00	1.1811	1.00	0.3937	2.013	0.7925	1.125
51	do.....	20	3.50	1.3779	1.50	0.5905	2.213	0.8712	1.4375	67	Shoulder, top of wrinkle	20	4.75	1.8700	1.50	0.5905	2.405	0.9468	0.875
53	do.....	22	2.60	0.9842	1.25	0.4921	1.816	0.7149	1.375		Shoulder, between wrinkle	20	3.50	1.3779	1.25	0.4921	2.149	0.8460	1.0025
55	do.....	20	2.75	1.0820	1.25	0.4921	1.861	0.7326	1.0925	58	Shoulder, top of wrinkle	16	4.00	1.5748	1.50	0.5905	2.216	0.8781	1.125
68	do.....	20	4.66	1.8040	1.00	0.6535	2.472	0.9732	1.375		Shoulder, between wrinkle	20	3.00	1.1811	1.50	0.5905	2.030	0.7992	1.25
69	do.....	20	4.00	1.5748	1.33	0.5236	2.427	0.9555	1.375	74	do.....	20	3.33	1.3110	1.33	0.5236	2.119	0.8341	1.25
71	do.....	20	3.00	1.1811	1.50	0.5905	2.128	0.8777	1.25	74	do.....	18	4.00	1.5748	1.50	0.5905	2.487	0.9791	1.375
72	do.....	20	2.75	1.0820	1.50	0.5905	2.068	0.8141	1.125	76	do.....	16	3.50	1.3779	1.50	0.5905	2.365	0.9311	1.50
73	do.....	20	3.00	1.1811	1.50	0.5905	2.186	0.8606	1.375	76	do.....	16	3.875	1.5225	1.50	0.5905	2.245	0.8838	1.375
75	do.....	20	4.00	1.5748	1.25	0.4921	2.191	0.8925	1.125	77	do.....	20	2.50	0.9842	1.50	0.5905	1.928	0.7590	1.125
79	do.....	20	3.50	1.3779	1.50	0.5905	2.023	0.7964	1.50	80	do.....	20	2.25	0.8858	1.25	0.4921	1.770	0.6968	1.501
82	do.....	20	3.00	1.1811	1.50	0.5905	2.296	0.9039	1.25	81	do.....	20	3.00	1.1811	1.50	0.5905	2.133	0.8397	1.625
89	do.....	20	4.00	1.5748	1.50	0.5905	2.026	0.7976	1.25	83	do.....	20	3.50	1.3779	1.50	0.5905	2.093	0.8240	1.25
90	do.....	20	3.50	1.3779	1.25	0.4921	2.263	0.8999	1.125	84	do.....	22	3.50	1.3779	1.50	0.5905	1.958	0.7688	1.375
	Average.....	19.625	3.385	1.3326	1.421	0.5594	2.156	0.8468	1.281		do.....	22	3.75	1.4763	1.25	0.4921	2.035	0.8011	1.325
30	Hip.....	14	3.25	1.2706	1.75	0.6889	2.294	0.9091	1.75	85	Shoulder, 17 months	22	2.75	1.0826	1.25	0.4921	1.793	0.7059	1.375
47	do.....	20	3.50	1.3779	1.50	0.5905	2.294	0.9091	1.375	86	do.....	22	3.50	1.3779	1.00	0.3937	1.851	0.7287	1.375
48	do.....	18	3.75	1.4763	1.60	0.5905	2.391	0.9413	1.75	87	do.....	22	3.00	1.1811	1.50	0.5905	2.050	0.8094	1.60
51	do.....	16	4.00	1.5748	1.25	0.4921	2.141	0.8429	1.50	88	do.....	20	3.00	1.1811	1.25	0.4921	1.920	0.7562	1.125
53	do.....	20	2.25	0.8858	1.00	0.3937	1.607	0.6681	1.3125		Average.....	10.80	3.319	1.3066	1.301	0.5858	2.041	0.8035	1.308
	Hip, top of wrinkle	14	5.00	1.9685	1.25	0.4921	2.608	1.0247	1.1875	41	Side.....	16	3.00	1.1811	1.50	0.5905	1.977	0.7783	1.50
	Hip, betw. wrinkle	16	3.50	1.3779	1.25	0.4921	2.027	0.7080	0.875	45	do.....	20	3.75	1.4763	1.25	0.4921	2.294	0.9031	1.375
54	Hip, top of wrinkle	5.00	1.9685	1.75	0.6889	2.002	1.1425	0.875	56	do.....	20	3.75	1.4763	1.25	0.4921	1.911	0.7838	1.25	
	Hip, betw. wrinkle	14	3.50	1.3779	1.25	0.4921	2.208	0.8092	1.00	52	do.....	22	2.75	1.0826	1.00	0.3937	1.761	0.6755	1.25
55	Hip, top of wrinkle	16	4.25	1.6782	1.50	0.5905	2.291	0.9019	1.125	60	do.....	20	3.00	1.1811	1.25	0.4921	1.252	0.8472	1.8125
	Hip, betw. wrinkle	20	3.00	1.1811	1.25	0.4921	1.908	0.7511	1.125	70	do.....	20	3.33	1.3110	1.33	0.5236	2.090	0.8326	1.25
68	Hip.....	16	4.66	1.8646	1.00	0.6535	2.732	1.0834	1.375	74	do.....	16	3.50	1.3779	1.60	0.6905	2.403	0.9400	1.60
69	do.....	16	5.66	2.2258	1.66	0.6535	2.630	0.9660	1.625	75	do.....	20	3.75	1.4763	1.50	0.5905	2.263	0.8909	1.60
71	do.....	20	3.60	1.3779	1.50	0.5905	2.283	0.8988	1.125	76	do.....	20	2.75	1.0826	1.50	0.5905	2.066	0.8133	1.125
72	do.....	16	5.60	1.9685	1.25	0.4921	2.270	0.8936	1.00	77	do.....	20	3.00	1.1811	1.25	0.4921	1.921	0.7562	1.375
73	do.....	16	4.25	1.6782	1.25	0.4921	2.186	0.8006	1.25	80	do.....	22	3.50	1.3779	1.25	0.4921	1.733	0.6901	1.625
75	do.....	16	3.50	1.3779	1.75	0.6889	2.360	0.9314	1.375	81	do.....	18	3.50	1.3779	1.60	0.5905	2.146	0.8448	1.625
79	Hip, top of wrinkle	14	4.50	1.7716	1.75	0.6889	2.643	1.0405	1.25	83	do.....	20	4.00	1.5748	1.60	0.5905	2.123	0.8358	1.375
	Hip, betw. wrinkle	18	4.00	1.5748	1.50	0.5905	2.367	0.9279	1.375	84	do.....	22	3.50	1.3779	1.25	0.4921	1.970	0.7753	1.00
82	Hip.....	20	3.50	1.3779	1.25	0.4921	2.220	0.8740	1.375	85	do.....	22	2.50	0.9842	1.25	0.4921	1.810	0.7125	1.375
89	do.....	20	3.25	1.2795	1.25	0.4921	1.956	0.7700	1.25	86	do.....	22	3.50	1.3779	1.50	0.5905	2.108	0.8291	1.25
90	do.....	20	3.00	1.1811	1.50	0.5905	2.153	0.8633	1.1875	87	do.....	22	3.25	1.2795	1.60	0.5905	2.201	0.8665	1.1875
	Average.....	16.952	3.901	1.5338	1.435	0.5649	2.297	0.9043	1.276	88	do.....	20	3.25	1.2795	1.25	0.4921	1.976	0.7779	1.25
30	Bolly.....	20	3.25	1.2795	1.50	0.5905	2.202	0.8609	1.375	41	Hip.....	16	3.00	1.1811	1.50	0.5905	1.977	0.7783	1.50
47	do.....	20	3.00	1.1811	1.50	0.5905	2.361	0.9295	1.4375	45	do.....	12	4.25	1.6732	1.60	0.5905	2.739	1.1019	1.0625
48	do.....	10	4.00	1.5748	1.50	0.5905	2.369	0.9326	1.50	48	do.....	20	3.25	1.2795	1.25	0.4921	2.091	0.8228	1.50
51	do.....	16	3.25	1.2795	1.25	0.4921	2.205	0.8981	1.625	52	do.....	20	2.50	0.9842	1.50	0.4921	1.869	0.7358	1.375
53a	do.....	20	2.50	0.9842	1.50	0.5905	1.896	0.7228	1.25	56	Hip, top of wrinkle	16	4.00	1.5748	1.50	0.5905	2.300	0.9303	1.00
54	do.....	20	3.00	1.1811	1.60	0.6905	2.018	0.8229	1.00	57	Hip, betw. wrinkle	20	4.00	1.5748	1.00	0.3937	2.355	0.8877	0.75
55	do.....	20	3.25	1.2795	1.50	0.5905	2.038	0.8023	1.1875	58	Hip, top of wrinkle	20	3.25	1.2795	1.25	0.4921	2.141	0.8429	0.875
68	do.....	20	3.66	1.4509	1.66	0.6535	2.428	0.9559	1.00	58	Hip, betw. wrinkle	20	3.50	1.3779	1.25	0.4921	2.036	0.8251	1.125
69	do.....	20	3.00	1.1811	1.66	0.6535	2.363	0.9303	1.25	70	Hip.....	20	3.50	1.3779	1.375	0.5413	2.115	0.8326	1.125
71	do.....	16	3.50	1.3779	1.75	0.6889	2.363	0.9381	1.375	74	do.....	14	6.00	2.3622	1.60	0.5905	2.450	0.9724	1.50
72	do.....	20	3.25	1.2795	1.50	0.5905	2.470	0.											



TABLE IV.—Individual extremes and averages showing influence of breed, sex, and portion of fleece upon fineness—Cont'd.

Catalogue number of samples.	Portion of fleece represented.	Number of crimps per inch.	Highest.		Lowest.		Average.		Length in inches.	Catalogue number of samples.	Portion of fleece represented.	Number of crimps per inch.	Highest.		Lowest.		Average.		Length in inches.
			In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.					In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.			
																	Fineness		
MERINO—continued.										MERINO—continued.									
Ewe—Continued.										Ewe—Continued.									
56	Belly	20	2.75	1.0826	1.50	0.5905	2.049	0.8066	0.9375	96	.....	30	2.00	0.7874	1.00	0.3937	1.472	0.5795	2.00
57	do	20	3.00	1.1811	1.25	0.4921	2.158	0.8496	0.875	98	.....	30	2.50	0.9842	1.00	0.3937	1.687	0.6641	1.875
58	do	20	3.00	1.1811	1.50	0.5905	2.066	0.8133	1.125	99a	.....	30	2.25	0.8858	0.75	0.2972	1.573	0.6192	2.125
59	do	20	4.00	1.5748	1.50	0.5905	2.431	0.9570	1.25	100	.....	30	2.25	0.8858	1.00	0.3937	1.521	0.5988	1.75
74	do	20	4.00	1.5748	1.50	0.5905	2.390	0.9409	1.25	102	.....	30	2.50	0.9842	1.00	0.3937	1.599	0.6295	1.875
75	do	20	4.00	1.5748	1.25	0.4921	2.423	0.9559	1.375	103	.....	25	3.50	1.3779	1.25	0.4921	1.891	0.7444	2.375
76	do	20	4.00	1.5748	1.875	0.7381	2.415	0.9649	1.125	347	.....	16	3.375	1.3287	0.75	0.2953	1.887	0.7429	3.125
77	do	20	3.50	1.3779	1.25	0.4921	1.963	0.7728	1.50	348	.....	16	3.25	1.2795	1.25	0.5921	1.971	0.7759	3.125
80	do	20	3.00	1.1811	1.50	0.5905	2.123	0.8370	1.375	351	.....	20	2.375	0.9350	1.25	0.4921	1.655	0.6515	3.00
81	do	20	3.00	1.1811	1.50	0.5905	2.230	0.8779	1.50	352	.....	20	2.25	1.2795	1.25	0.4921	1.848	0.7275	2.75
83	do	20	4.75	1.8700	1.25	0.4921	2.50	0.9842	1.25	353	.....	20	2.875	1.1318	1.25	0.4921	1.867	0.7350	2.25
85	do	20	3.75	1.4763	1.00	0.3937	1.886	0.7425	1.375	354	.....	22	3.25	1.2795	1.125	0.4429	1.856	0.7307	2.75
86	do	20	3.00	1.1811	1.50	0.5905	2.176	0.8566	1.375	355	.....	20	3.375	1.3287	1.50	0.5905	2.163	0.8515	2.75
87	do	20	2.75	1.0826	1.50	0.5905	1.928	0.7590	1.50	356	.....	20	4.50	1.7716	1.375	0.5413	2.185	0.8641	2.50
88	do	20	4.75	1.8700	1.50	0.5905	2.233	0.8791	1.25	357	.....	20	3.50	1.3779	1.125	0.4429	1.890	0.7440	2.50
	do	20	4.75	1.8700	1.50	0.5905	2.233	0.8791	1.25	358	.....	20	3.25	1.2795	1.25	0.4921	2.033	0.8003	2.25
	Average	10.474	3.50	1.3779	1.388	0.5464	2.160	0.8563	1.306			19.828	3.395	1.3366	1.325	0.5216	2.084	0.8204	1.491



TABLE V.—General extremes and averages, showing influence of breed, sex, and portion of fleece upon fineness.

Breeds.	No. of samples tested.	Highest.		Lowest.		Average.		Length in inches.
		In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	
<b>General averages for each breed regardless of other conditions:</b>								
Cotswold	109	5.061	2.3468	2.261	0.8901	4.190	1.6519	5.156
Leicester	1	5.75	2.2637	2.50	0.9642	3.870	1.5271	0.75
Lincoln	36	5.208	2.0858	2.103	0.8279	3.707	1.4594	3.735
Southdown	46	4.486	1.7661	1.753	0.6901	2.936	1.1559	1.351
Hampshire	2	6.50	2.1653	1.750	0.6889	3.208	1.2984	2.138
Oxford	30	6.255	2.4025	2.496	0.9826	4.365	1.7185	2.647
Merino	206	3.406	1.3409	1.871	0.5937	2.127	0.8373	1.502

Portion of fleece represented.	No. of crimps per inch.	Highest.		Lowest.		Average.		Length in inches.
		In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	
<b>COTSWOLD.</b>								
<i>Ram.</i>								
<b>General averages for whole fleece and parts of fleece for each sex:</b>								
Whole fleece		5.996	2.3606	2.345	0.9232	4.227	1.6641	6.156
Shoulder		5.708	2.2472	2.302	0.9062	4.103	1.6153	5.307
Side		6.268	2.4677	2.623	1.0304	4.256	1.6755	5.671
Hip		6.496	2.5574	2.140	0.8425	4.415	1.7381	5.386
Belly		5.511	2.1696	2.482	0.8911	4.112	1.6188	3.789
<i>Ewe.</i>								
Whole fleece		6.022	2.3708	2.262	0.8905	4.252	1.6740	5.010
Shoulder		5.814	2.2889	2.140	0.8425	4.002	1.6110	5.223
Side		6.098	2.4007	2.059	0.8106	4.225	1.6633	5.482
Hip		6.469	2.5469	2.449	0.9641	4.026	1.8212	5.518
Belly		5.685	2.2381	2.413	0.9499	4.054	1.5900	3.76
<b>LINCOLN.</b>								
<i>Ram.</i>								
Whole fleece		5.450	2.1456	2.23	0.8779	3.671	1.4452	3.268
Shoulder		6.333	2.4933	2.196	0.8645	3.686	1.4511	3.625
Side		5.208	2.0503	2.344	0.9228	3.609	1.4185	3.531
Hip		5.683	2.1980	2.259	0.8893	4.017	1.5814	3.469
Belly		4.417	1.7389	2.083	0.8200	3.277	1.2901	2.125
<i>Ewe.</i>								
Whole fleece		5.236	2.0614	2.051	0.8074	3.774	1.4858	3.969
Shoulder		5.133	2.0208	1.866	0.7346	3.848	1.5140	4.35
Side		5.682	2.1976	2.066	0.8133	3.809	1.4996	4.70
Hip		6.357	2.1090	2.264	0.8913	3.904	1.6370	4.275
Belly		4.873	1.9185	2.006	0.7897	3.531	1.3901	2.55
<b>SOUTHDOWN.</b>								
<i>Ram.</i>								
Whole fleece	12	1.407	1.7350	1.660	0.6395	2.940	1.1574	1.411
Shoulder	12	4.00	1.8346	2.00	0.7874	3.063	1.2050	1.375
Side	12	4.66	1.8346	2.00	0.7874	3.274	1.2889	1.50
Hip		4.66	1.8346	2.33	0.9173	3.186	1.2543	1.00
Belly		4.33	1.7047	2.00	0.7874	3.024	1.1905	
<i>Ewe.</i>								
Whole fleece	13.176	4.516	1.7779	1.780	0.7143	2.904	1.1433	1.328
Shoulder	13.	4.695	1.8900	1.057	0.7704	2.988	1.1763	1.344
Side	14.	4.333	1.7059	1.635	0.6436	2.872	1.1307	1.15
Hip	12.	5.091	2.0943	1.885	0.7421	3.151	1.2405	1.563
Belly	14.	4.108	1.6173	1.887	0.7429	2.846	1.1200	0.9875
<b>OXFORD.</b>								
<i>Ram.</i>								
Whole fleece		6.539	2.5744	2.504	0.9858	4.269	1.6807	2.004
Shoulder		6.107	2.4043	2.220	0.8740	4.132	1.6267	2.208
Side		6.773	2.605	2.883	1.1350	4.353	1.7137	2.782
Hip		6.553	2.5799	2.009	1.0271	4.226	1.6637	2.750
Belly		6.330	2.4921	2.773	1.0917	4.718	1.8574	2.916
<i>Ewe.</i>								
Whole fleece		6.899	2.3224	2.565	1.0098	4.241	1.6696	2.725
Shoulder		6.00	2.3622	3.330	1.3110	4.542	1.7681	3.00
Side		6.33	2.4921	2.35	0.9173	4.365	1.7177	2.50
Hip		6.06	2.6220	3.33	1.3110	5.038	1.9834	2.75
Belly		6.00	2.3622	2.66	1.0472	4.240	1.6692	1.75
<b>MERINO.</b>								
<i>Ram.</i>								
Whole fleece	18.786	3.620	1.3858	1.445	0.5688	2.215	0.8720	1.424
Neck	16.	3.875	1.5255	1.875	0.7380	2.644	1.0409	1.4375
Shoulder	18.90	3.473	1.3673	1.431	0.5633	2.171	0.8547	1.338
Side	19.626	3.365	1.3326	1.421	0.5594	2.156	0.8488	1.281
Hip	16.952	3.901	1.5358	1.435	0.5649	2.207	0.9043	1.276
Belly	10.204	3.342	1.3157	1.400	0.5866	2.234	0.8795	1.284
<i>Ewe.</i>								
Whole fleece	19.828	3.395	1.3367	1.325	0.5216	2.084	0.8204	1.491
Neck	16.	3.813	1.3043	1.375	0.5413	2.287	0.9003	1.3125
Shoulder	19.80	3.319	1.3066	1.361	0.5358	2.041	0.8035	1.393
Side	20.	3.310	1.3031	1.352	0.5322	2.054	0.8086	1.368
Hip	17.	3.727	1.4673	1.347	0.5303	2.206	0.8664	1.219
Belly	19.474	3.60	1.3779	1.388	0.5464	2.160	0.8563	1.306



TABLE VI.—Individual extremes and averages, showing influence of age upon fineness.

Catalogue number of sample.	Portion of fleece represented.	No. of crimp per inch.	Highest.		Lowest.		Average.		Length in inches.	Catalogue number of sample.	Portion of fleece represented.	No. of crimp per inch.	Highest.		Lowest.		Average.		Length in inches.
			In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.					In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	
<b>COTSWOLD.</b>										<b>COTSWOLD—cont'd.</b>									
<b>Ram.</b>										<b>Ewe—Cont'd.</b>									
<b>Lamb:</b>										<b>Two years;</b>									
172	Shoulder	4.50	1.7710	1.75	0.6889	3.175	1.2499	4.125	177	Shoulder	5.75	2.2637	2.00	0.7874	3.631	1.4295	3.625		
	Side	5.25	2.0669	1.625	0.6397	3.499	1.3775	6.00		Side	5.75	2.2637	2.00	0.7874	3.364	1.7181	4.125		
	Hip	5.50	2.1653	1.75	0.6889	3.388	1.3338	4.50		Hip	6.75	2.6574	2.875	0.9650	4.478	1.7629	4.870		
	Belly	4.25	1.6732	1.375	0.5113	3.267	1.2862	3.125	178	Belly	5.00	1.9685	2.875	1.1318	3.951	1.6553	2.75		
185	Shoulder	5.75	2.2637	1.50	0.5905	4.049	1.5918	8.50		Shoulder	5.75	2.2637	2.25	0.8858	4.183	1.6408	3.125		
	Side	5.50	2.1653	1.375	0.5113	4.161	1.6381	9.125		Side	5.75	2.2637	2.00	0.7874	3.890	1.5314	3.25		
	Hip	6.00	2.3622	2.00	0.7874	4.388	1.7275	7.50		Hip	6.00	2.3622	2.50	0.9642	4.490	1.7559	2.875		
	Belly	5.00	1.9685	2.00	0.7874	3.885	1.5295	6.125	180	Belly	4.75	1.8700	2.625	1.0334	3.045	1.4350	2.125		
	Average	5.210	2.0547	1.850	0.7318	3.726	1.4609	6.125		Shoulder	6.50	2.5590	2.375	0.9650	4.350	1.7129	3.875		
<b>Six months:</b>										<b>Side</b>									
96	Shoulder	6.00	2.3622	2.00	0.7874	4.111	1.6185	7.25	181	Side	6.50	2.5590	1.750	0.6889	4.151	1.6342	4.875		
	Side	5.60	2.1253	2.00	0.7874	4.184	1.6472	8.25		Hip	6.50	2.5590	1.875	0.7911	4.657	1.8394	5.25		
	Hip	6.00	2.3622	2.00	0.7874	4.184	1.6472	8.00	182	Belly	6.25	2.4006	2.375	0.9350	4.253	1.8744	4.25		
	Belly	6.00	2.3622	2.00	0.7874	4.203	1.6547	5.50		Average	6.375	2.5098	2.250	0.8858	4.570	1.7992	4.00		
	Average	5.915	2.3287	2.00	0.7874	4.171	1.6421	7.25	190	Shoulder	6.50	2.5590	2.50	0.8858	4.070	1.7992	4.00		
<b>One year:</b>										<b>Side</b>									
94	Shoulder	6.33	2.4921	2.66	1.0472	4.399	1.7318	6.50		Hip	6.50	2.5590	2.75	1.0826	5.023	1.9775	4.875		
	Side	6.60	2.6220	2.66	1.0472	4.704	1.8519	4.75		Belly	6.25	2.4006	2.375	0.9350	4.136	1.8283	3.875		
	Hip	6.33	2.4921	2.00	0.7874	4.428	1.7439	6.00		Average	6.875	2.8129	1.60	0.5905	4.334	1.7662	3.75		
	Belly	6.00	2.3622	2.33	0.8110	4.474	1.7814	3.75		Shoulder	6.75	2.6574	2.00	0.7874	4.060	1.8846	4.60		
174	Shoulder	6.00	2.3622	2.50	0.9842	3.780	1.4965	4.125		Side	6.50	2.5590	1.125	0.4429	4.156	1.6962	3.875		
	Side	6.25	2.4696	2.00	0.7874	3.958	1.5582	4.60		Hip	6.75	2.6574	2.00	0.7874	4.060	1.8846	4.60		
	Hip	6.75	2.2637	2.25	0.8858	4.097	1.6129	4.125		Belly	6.50	2.5590	2.50	0.9643	4.104	1.6197	4.60		
	Belly	4.50	1.7710	2.75	0.6889	3.541	1.3940	2.875		Average	6.375	2.5098	1.875	0.7874	4.001	1.8114	4.75		
184	Shoulder	6.25	2.4696	2.50	0.9842	4.123	1.6228	6.875		Shoulder	6.50	2.5590	2.75	1.1811	4.321	1.7011	4.125		
	Side	6.25	2.4696	2.00	0.7874	4.574	1.8607	6.25		Side	6.75	2.6574	2.00	0.7874	4.060	1.8846	4.60		
	Hip	6.625	2.6082	2.75	1.0826	4.865	1.8133	8.00		Hip	6.50	2.5590	2.75	1.1811	4.321	1.7011	4.125		
	Belly	5.50	2.1653	3.00	1.1811	4.273	1.6822	3.625		Belly	6.50	2.5590	2.75	1.0826	4.385	1.7263	4.00		
	Average	5.933	2.3358	2.533	0.9072	4.268	1.6803	5.075		Average	6.120	2.4091	2.239	0.8815	4.290	1.6889	3.853		
<b>Two years:</b>										<b>LINCOLN.</b>									
175	Shoulder	5.75	2.2637	1.75	0.6889	4.408	1.7638	2.875		<b>Ram.</b>									
	Side	6.875	2.7066	2.125	0.8366	4.613	1.8181	3.25		<b>Lamb:</b>									
	Hip	6.875	2.7066	2.875	1.1318	5.185	2.0334	2.75		<b>Shoulder</b>									
	Belly	6.25	2.4696	3.125	1.2303	4.354	1.7141	2.00		<b>Side</b>									
176	Shoulder	6.50	2.1653	2.875	1.1318	4.206	1.6559	4.125		<b>Hip</b>									
	Side	6.00	2.3622	3.00	1.1811	4.310	1.6968	4.75		<b>Belly</b>									
	Hip	6.50	2.4696	2.00	0.7874	4.377	1.7232	4.125		<b>Average</b>									
	Belly	5.25	2.0669	1.75	0.6889	4.078	1.6055	2.625		<b>Shoulder</b>									
180	Shoulder	6.00	2.3622	3.00	1.1811	4.506	1.7740	6.00		<b>Side</b>									
	Side	6.50	2.5590	2.25	0.8858	4.273	1.6822	6.75		<b>Hip</b>									
	Hip	7.125	2.8051	1.50	0.5905	4.680	1.8031	0.00		<b>Belly</b>									
	Belly	6.50	2.5590	3.00	1.1811	4.581	1.8035	5.25		<b>Average</b>									
	Average	6.264	2.4061	2.438	0.9596	4.461	1.7502	4.458		<b>Shoulder</b>									
<b>Ewe.</b>										<b>Shoulder</b>									
171	Shoulder	5.25	2.0669	1.625	0.6397	3.721	1.4640	6.00		<b>Side</b>									
	Side	5.60	2.1653	1.25	0.4921	3.406	1.3499	6.50		<b>Hip</b>									
	Hip	5.875	2.3129	2.00	0.7874	4.131	1.6269	6.00		<b>Belly</b>									
	Belly	4.75	1.8700	1.875	0.7381	3.675	1.4468	3.625		<b>Average</b>									
183	Shoulder	5.625	2.145	2.50	0.9842	4.275	1.6330	10.25		<b>Shoulder</b>									
	Side	5.625	2.145	2.00	0.7874	4.098	1.6133	10.50		<b>Side</b>									
	Hip	6.00	2.3622	2.00	0.7874	4.245	1.6712	9.875		<b>Hip</b>									
	Belly	5.875	2.3129	2.00	0.7874	4.143	1.6310	8.00		<b>Belly</b>									
187	Shoulder	5.75	2.2637	1.75	0.6889	3.917	1.6421	7.75		<b>Average</b>									
	Side	7.00	2.7559	2.00	0.7874	4.051	1.5948	8.60		<b>Shoulder</b>									
	Hip	6.25	2.4696	2.25	0.8858	4.545	1.7893	7.50		<b>Side</b>									
	Belly	4.875	1.9192	2.00	0.7874	3.574	1.4070	4.00		<b>Hip</b>									
	Average	5.698	2.2433	1.938	0.7620	3.982	1.5677	7.375		<b>Belly</b>									
<b>Six months:</b>										<b>Ewe.</b>									
37	Shoulder	6.33	2.4921	2.00	0.7874	4.237	1.6681	9.50		<b>Lamb:</b>									
	Side	6.00	2.3622	2.00	0.7874	4.210	1.6574	9.75		<b>Shoulder</b>									
	Hip	7.00	2.7559	3.33	1.3110	4.995	1.9685	9.00		<b>Side</b>									
	Belly	6.33	2.4921	2.33	0.9173	4.416	1.7385	5.75		<b>Hip</b>									
	Average	6.415	2.5235	2.418	0.9507	4.465	1.7578	6.50		<b>Belly</b>									
<b>One year:</b>										<b>Average</b>									
30	Shoulder	5.66	2.2283	2.66	1.0472	4.088	1.6091	4.60		<b>Shoulder</b>									
	Side	6.00	2.3622	3.00	0.7874	4.390	1.7283	4.75		<b>Side</b>									
	Hip	5.66	2.2283	2.00	1.1811	4.518	1.7786	5.25		<b>Hip</b>									
	Belly	7.00	2.7559	2.66	1.0472	4.185	1.6279	3.50		<b>Belly</b>									
170	Shoulder	5.875	2.3129	1.875	0.6391	4.25	1.6732	3.875		<b>Average</b>									
	Side	6.625	2.6082	1.75	0.6889	1.574	1.8607	4.50		<b>Shoulder</b>									
	Hip	6.50	2.5590	2.50	0.9842	5.198	2.0464	3.875		<b>Side</b>									
	Belly	6.00	2.3622	2.50	0.9842	4.069	1.6137	3.00		<b>Hip</b>									
180	Shoulder	6.50	2.5590	2.25	0.8858	3.831	1.5082	4.00		<b>Belly</b>									
	Side	6.00	2.3622	3.00	1.1811	4.378	1.7236	4.125		<b>Average</b>									
	Hip	6.00	2.3622	2.60	0.9843	4.261	1.6787	4.125		<b>Shoulder</b>									
	Belly	5.00	1.9685	2.625	1.0391	3.928	1.6444	2.00		<b>Side</b>									
	Average	5.985	2.3562	2.443	0.9618	4.054	1.6090	3.958		<b>Hip</b>									
										<b>Belly</b>									
										<b>Average</b>									
										<b>Shoulder</b>									
										<b>Side</b>									
										<b>Hip</b>									
										<b>Belly</b>									
										<b>Average</b>									
										<b>Shoulder</b>									
										<b>Side</b>									
										<b>Hip</b>									
										<b>Belly</b>									
										<b>Average</b>									
										<b>Shoulder</b>									
										<b>Side</b>									
										<b>Hip</b>									
										<b>Belly</b>									
										<b>Average</b>									







TABLE VI.—Individual extremes and averages, showing influence of age upon fineness—Continued.

Catalogue number of samples.	Portion of fleece represented.	Number of crimps per inch.						Length in inches.	Catalogue number of samples.	Portion of fleece represented.	Number of crimps per inch.						Length in inches.			
		Highest.		Lowest.		Average.					Highest.		Lowest.		Average.					
		In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.				In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.				
MERINO—continued.								MERINO—continued.												
Ewe—Continued.								Ewe—Continued.												
2 years—cont'd.								5 months:												
43	Shoulder, top of wrinkle.....	10	4.50	1.7716	1.50	0.4921	2.374	0.9346	1.125	45	Neck, top of wrinkle.....	16	4.00	1.5748	1.50	0.5905	2.206	0.9039	1.1675	
	Shoulder, between wrinkle.....	10	3.50	1.3779	1.50	0.5905	2.309	0.9092	1.50		Neck, bot wrinkle.	16	3.25	1.2795	1.25	0.4921	2.271	0.8946	1.125	
	Side.....	10	3.75	1.4763	1.00	0.2937	2.213	0.8712	1.875		Side.....	20	3.75	1.4763	1.25	0.4921	2.294	0.9031	1.375	
	Hip.....	16	3.75	1.4763	1.50	0.5905	2.891	0.9419	1.75		Hip.....	10	4.25	1.6732	1.50	0.5905	2.799	1.1019	1.0625	
	Belly.....	10	4.00	1.5748	1.50	0.5905	2.369	0.9336	1.50		Belly.....	10	3.00	1.1811	1.25	0.4921	2.170	0.8535	1.25	
	Average.....	10	3.50	1.3779	1.50	0.5905	2.309	0.9092	1.50		Average.....	10	3.05	1.4370	1.35	1.5314	2.267	0.9318	1.200	
53	Shoulder.....	22	2.50	0.9842	1.50	0.5905	1.890	0.7464	1.4375	41	1 year:	10	2.00	1.1811	1.50	0.5905	2.088	0.8220	1.75	
	Shoulder, top of wrinkle.....	4.00	1.5748	1.50	0.5905	2.130	0.9118	1.25		Side.....	10	3.00	1.1811	1.50	0.5905	1.977	0.7783	1.50		
	Shoulder, between wrinkle.....	20	3.00	1.1811	1.25	0.4921	1.850	0.7283	1.00	74	Hip.....	10	3.00	1.1811	1.50	0.5905	2.141	0.8429	1.375	
	Side.....	22	2.50	0.9842	1.25	0.4921	1.816	0.7149	1.375		Belly.....	14	4.00	1.5748	1.25	0.4921	1.989	0.7840	1.875	
	Hip.....	20	2.25	0.8858	1.00	0.3937	1.697	0.6681	1.8125		Shoulder.....	16	4.00	1.5748	1.50	0.5905	2.487	0.9791	1.375	
	Hip, top of wrinkle.	14	5.00	1.9685	1.25	0.4921	2.608	1.0267	1.875		Side.....	10	3.50	1.3779	1.50	0.5905	2.408	0.9490	1.50	
	Hip, bet. wrinkle..	16	3.50	1.3779	1.25	0.4921	2.027	0.7980	0.875		Hip.....	14	6.00	2.3622	1.50	0.5905	2.470	0.9724	1.50	
	Belly A.....	20	2.50	0.9842	1.50	0.5905	1.836	0.7228	1.25		Belly.....	20	4.00	1.5748	1.50	0.5905	2.390	0.9409	1.25	
	Belly B.....	20	3.00	1.1811	1.50	0.5905	2.013	0.7925	1.00		Shoulder.....	16	3.50	1.3779	1.50	0.5905	2.365	0.9311	1.50	
71	Shoulder.....	30	3.50	1.3779	1.75	0.6889	2.283	0.8988	1.50		Side.....	20	3.75	1.4763	1.50	0.5905	2.263	0.8009	1.50	
	Side.....	30	3.00	1.1811	1.60	0.5905	2.128	0.8377	1.25		Hip.....	18	2.75	1.4763	1.00	0.5905	2.455	0.9667	1.375	
	Hip.....	20	3.50	1.3779	1.50	0.5905	2.260	0.9015	1.125		Belly.....	20	4.00	1.5748	1.25	0.4921	2.422	0.9539	1.375	
	Belly.....	16	3.50	1.3779	1.75	0.6889	2.383	0.9381	1.375		Shoulder.....	18	3.875	1.9265	1.50	0.5905	2.245	0.8838	1.375	
4	S. Archer's wools..	20	3.125	1.2908	1.75	0.6889	2.224	0.8753	2.50		Side.....	20	2.75	1.0826	1.50	0.5905	2.066	0.8133	1.125	
	Average.....	17.833	3.375	1.3297	1.45	0.5708	2.200	0.8685	1.360		Hip.....	10	4.00	1.5748	1.50	0.5905	2.216	0.8724	1.50	
											Belly.....	20	4.00	1.5748	1.50	0.5905	2.123	0.8358	1.375	
51	3 years:									83	Shoulder.....	20	3.50	1.3779	1.50	0.5905	2.099	0.8240	1.25	
	Shoulder, top of wrinkle.....	14	4.00	1.5748	1.75	0.6889	2.514	0.9697	0.875		Side.....	20	4.00	1.5748	1.50	0.5905	2.223	0.8358	1.375	
	Shoulder, between wrinkle.....	3.00	1.1811	1.25	0.4921	2.008	0.7905	1.0625			Hip.....	10	5.25	2.0669	1.00	0.3937	2.383	0.9381	1.375	
	Hip, top of wrinkle.	6.00	1.9685	1.75	0.6889	2.902	1.1425	0.875		86	Belly.....	20	4.75	1.8700	1.25	0.4921	2.500	0.9642	1.25	
	Hip, bet. wrinkle..	14	3.50	1.3779	1.25	0.4921	2.208	0.8092	1.00		Shoulder.....	22	3.50	1.3779	1.50	0.5905	2.103	0.8279	1.25	
	Belly.....	3.50	1.3779	1.25	0.4921	2.106	0.8229	1.00		Side.....	22	2.50	1.0826	1.50	0.5905	2.083	0.8300	1.25		
55	Shoulder, top of wrinkle.....	14	4.00	1.5748	1.00	0.3937	2.453	0.9067	1.1875	347	Hip.....	20	3.00	1.1811	1.50	0.5905	2.176	0.8566	1.375	
	Shoulder, between wrinkle.....	20	3.00	1.1811	1.25	0.4921	2.008	0.7905	1.025	348	Belly.....	16	3.375	1.3287	0.75	0.2937	1.887	0.7429	1.125	
	Side.....	20	2.75	1.0826	1.25	0.4921	1.861	0.7336	1.0625			16	3.25	1.2795	1.25	0.4921	1.971	0.7759	1.125	
	Hip, top of wrinkle.	16	4.25	1.6732	1.50	0.5905	2.540	1.0020	1.125											
	Hip, bet. wrinkle..	20	3.00	1.1811	1.25	0.4921	1.908	0.7511	1.125											
	Belly.....	20	3.25	1.2705	1.50	0.5905	2.038	0.8023	1.1875											
800	Average.....	17.556	3.542	1.3044	1.625	0.6397	2.235	0.8799	1.240											
47	4 years:									46	2 years:									
	Shoulder.....	20	3.00	1.1811	1.25	0.4921	2.199	0.8657	1.50		Shoulder.....	20	3.50	1.3779	1.25	0.4921	2.116	0.8330	1.375	
	Side.....	20	3.25	1.2795	1.75	0.6889	2.163	0.8515	1.1875		Side.....	20	3.75	1.4763	1.25	0.4921	1.991	0.7838	1.25	
	Hip.....	20	3.50	1.3779	1.50	0.5905	2.294	0.9031	1.375		Hip.....	20	3.25	1.2795	1.25	0.4921	2.091	0.8223	1.50	
	Belly.....	20	3.50	1.3779	1.75	0.6889	2.861	0.9295	1.4375		Belly.....	20	3.00	1.1811	1.25	0.4921	2.061	0.8244	1.4375	
73	Shoulder.....	20	3.50	1.3779	1.50	0.5905	2.116	0.8330	1.025	57	Shoulder, top of wrinkle.....	4.75	1.8700	1.50	0.5905	2.405	0.9468	0.875		
	Shoulder, between wrinkle.....	20	2.00	1.1811	1.50	0.5905	1.856	0.8006	1.375		Shoulder, between wrinkle.....	20	3.50	1.3779	1.25	0.4921	2.149	0.8460	1.0625	
	Side.....	20	2.00	1.1811	1.50	0.5905	1.856	0.8006	1.375		Hip.....	20	3.25	1.2795	1.25	0.4921	2.141	0.8429	0.875	
	Hip.....	16	4.25	1.6732	1.25	0.4921	1.86	0.8006	1.25		Belly.....	20	3.00	1.1811	1.25	0.4921	2.158	0.8496	0.875	
	Hip, bet. wrinkle..	20	4.25	1.6732	1.25	0.4921	1.84	0.8212	1.50	58	Shoulder, top of wrinkle.....	16	4.00	1.5748	1.50	0.5905	2.216	0.8724	1.125	
	Belly.....	20	2.875	1.1318	1.125	0.4429	2.215	0.8720	2.50		Shoulder, between wrinkle.....	20	2.00	1.1811	1.50	0.5905	2.030	0.7992	1.25	
861	Average.....	10.50	3.458	1.3614	1.431	0.5632	2.229	0.8775	1.75		Hip, top of wrinkle.	18	5.00	1.9685	1.75	0.6889	2.635	1.0373	1.00	
60	6 years:										Hip, bet. wrinkle..	20	3.50	1.3779	1.25	0.4921	2.096	0.8251	1.125	
	Shoulder.....	20	3.33	1.3110	1.33	0.5236	2.246	0.8842	1.375		Belly.....	20	3.00	1.1811	1.50	0.5905	2.066	0.8133	1.125	
	Side.....	20	4.00	1.5748	1.33	0.5236	2.427	0.9550	1.375		Shoulder.....	20	3.83	1.5110	1.33	0.5236	2.119	0.8342	1.25	
	Hip.....	16	5.68	3.2258	1.66	0.6535	2.752	1.0834	1.875		Side.....	20	3.333	1.2110	1.33	0.5236	2.099	0.8283	1.25	
	Belly.....	20	3.68	1.4509	1.60	0.6535	2.363	0.9809	1.00		Hip.....	20	3.50	1.3779	1.50	0.5905	2.5413	2.115	0.8326	1.125
104		25	3.00	1.1811	1.25	0.4921	1.630	0.7204	1.625		Belly.....	20	4.00	1.5748	1.50	0.5905	2.431	0.9570	1.25	
140		25	2.75	1.0826	1.00	0.3937	1.758	0.6921	2.125		Shoulder.....	22	2.75	1.0826	1.25	0.4921	1.793	0.7059	1.375	
	Average.....	21	3.567	1.4043	1.372	0.5401	2.240	0.8918	1.472		Side.....	22	2.50	0.9842	1.25	0.4921	1.810	0.7125	1.375	
90	7 years:										Hip.....	20	2.00	1.1811	1.00	0.3937	1.638	0.7236	1.25	
	Shoulder.....	20	4.00	1.5748	1.25	0.4921	2.200	0.8661	1.25	851	Belly.....	20	3.75	1.4763	1.00	0.3937	1.626	0.7425	1.375	
	Side.....	20	3.50	1.3779	1.25	0.4921	2.263	0.8909	1.125	853		20	2.875	0.9350	1.25	0.4921	1.955	0.6515	0.80	
	Hip.....	20	3.00	1.1811	1.50	0.5905	2.193	0.8633	1.1875	854		20	3.25	1.2795	1.25	0.4921	1.818	0.7275	2.75	



TABLE VI.—Individual extremes and averages, showing influence of age upon fineness—Continued.

Catalogue number of samples.	Portion of fleece represented.	Number of crimps per inch.	Highest.		Lowest.		Average.		Length in inches.	Catalogue number of samples.	Portion of fleece represented.	Number of crimps per inch.	Highest.		Lowest.		Average.		Length in inches.
			In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.					In centimillimeters.	In thousandths of inch.					
MERINO—continued.										MERINO—continued.									
<i>Ewe—continued.</i>										<i>Ewe—Continued.</i>									
80	4 years:									52	5 years:								
	Shoulder.....	20	2.25	0.8858	1.25	0.4921	1.770	0.6363	1.50		Shoulder.....	22	2.50	0.9842	1.25	0.4921	1.733	0.6922	1.5625
	Side.....	22	3.50	1.3779	1.25	0.4921	1.753	0.6901	1.625		Side.....	22	2.75	1.0826	1.00	0.3937	1.716	0.6755	1.25
	Hip.....	22	2.75	1.0826	1.25	0.4921	1.873	0.7374	1.375		Hip.....	20	2.50	0.9842	1.50	0.5905	1.860	0.7358	1.375
	Belly.....	20	3.00	1.1811	1.50	0.5905	2.126	0.8370	1.375		Belly.....	20	3.25	1.2795	1.25	0.4921	1.808	0.7118	1.1875
	Average.....	21	2.875	1.1315	1.318	0.5169	1.882	0.7409	1.469		Average.....	19.6	3.125	1.2303	1.25	0.4921	2.045	0.8051	1.219
84	4½ years:									50	Neck, top of wrinkle, between wrinkle.....	16	3.50	1.3770	1.25	0.4921	2.494	0.9818	1.1875
	Shoulder.....	22	3.50	1.3779	1.50	0.5905	1.053	0.7658	1.375		Shoulder, between wrinkle.....	20	3.00	1.1811	1.00	0.3937	2.013	0.7925	1.125
	Shoulder, 17 months.....	22	3.75	1.4763	1.25	0.4921	2.035	0.8011	3.125		Side.....	20	3.00	1.1811	1.25	0.4921	2.152	0.8472	1.6125
	Side.....	22	3.50	1.3779	1.25	0.4921	1.970	0.7755	1.00		Hip, top of wrinkle.....	16	4.00	1.5748	1.50	0.5905	2.363	0.9303	1.00
	Hip.....	20	4.00	1.5748	1.50	0.5905	2.201	0.8665	1.00		Hip, bet. wrinkle... ..	20	4.00	1.5748	1.00	0.3937	2.255	0.8877	0.75
	Average.....	21.5	3.688	1.4519	1.375	0.5413	2.040	0.8031	1.625		Belly.....	20	2.75	1.0826	1.50	0.5905	2.010	0.8066	0.6375



TABLE VII.—General extremes and averages, showing influence of age upon fineness.

Ages represented.	No. of crimps per inch.	Highest.		Lowest.		Average.		Length in inches.
		In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	
<b>COTSWOLD.</b>								
<i>Ram.</i>								
Lamb.....		5.219	2.0547	1.859	0.7318	3.726	1.4669	6.125
Six months.....		5.915	2.3287	2.00	0.7874	4.171	1.6421	7.25
One year.....		5.933	2.3358	2.533	0.9972	4.268	1.6803	5.073
Two years.....		6.264	2.4661	2.433	0.9598	4.461	1.7562	4.458
<i>Ewe.</i>								
Lamb.....		5.698	2.2433	1.968	0.7629	3.982	1.5677	7.375
Six months.....		6.415	2.5255	2.415	0.9507	4.465	1.7578	8.50
One year.....		5.985	2.3562	2.443	0.9618	4.054	1.5969	3.958
Two years.....		6.120	2.4094	2.239	0.8815	4.290	1.6889	3.893
<b>LINCOLN.</b>								
<i>Ram.</i>								
Lamb.....		5.656	2.2267	1.688	0.6645	3.194	1.2574	4.813
One year.....		4.906	1.9314	2.375	0.9350	3.649	1.4366	2.563
Two years.....		5.25	2.0669	2.219	0.8736	3.736	1.4768	2.406
Five and one-half years.....		6.164	2.4267	2.773	1.0917	4.346	1.7110	3.25
<i>Ewe.</i>								
Lamb.....		5.113	2.0129	1.853	0.7295	3.610	1.4212	5.75
Two years.....		5.319	2.0940	2.183	0.8594	3.883	1.5287	2.779
<b>SOUTHDOWN.</b>								
<i>Ram.</i>								
Lamb.....		4.25	1.6732	1.542	0.6070	2.591	1.0200	1.6458
One year.....		4.542	1.7881	1.458	0.5739	2.967	1.6810	1.292
Two years.....	12	4.437	1.7468	1.891	0.7444	3.098	1.2196	1.844
Three years.....		4.00	1.5748	1.75	0.6889	2.815	1.1052	1.125
Four years.....		4.75	1.8700	1.375	0.5413	3.233	1.2728	1.625
<i>Ewe.</i>								
Lamb.....		4.458	1.7551	1.333	0.5248	2.747	1.0814	1.75
Six months.....	13.333	3.998	1.5740	1.66	0.6535	2.644	1.0409	1.625
One year.....	13.714	4.758	1.8732	1.876	0.7385	3.020	1.1889	1.269
Two years.....	12.667	4.378	1.7236	1.755	0.6909	2.993	1.1783	1.214
Three years.....	12.50	4.415	1.7381	1.998	0.7866	2.947	1.1602	1.104
<b>OXFORD.</b>								
<i>Ram.</i>								
Lamb.....		6.00	2.3622	1.50	0.5905	3.356	1.3212	3.00
One year.....		6.041	2.3783	2.338	0.9204	3.958	1.5582	2.928
Two years.....		6.421	2.5279	2.546	1.0023	4.459	1.7555	1.975
Six years.....		7.625	3.0019	2.000	0.7874	3.923	1.5444	2.00
<i>Ewe.</i>								
Lamb.....		5.125	2.0177	1.25	0.4921	3.452	1.3590	3.50
One year.....		6.088	2.3968	2.682	1.0559	4.379	1.7240	2.607
Two years.....		5.625	2.2145	2.813	1.1074	4.153	1.6350	2.75
<b>MERINO.</b>								
<i>Ram.</i>								
Lamb.....	18	3.850	1.5157	1.55	0.6102	2.242	0.8826	1.425
Five months.....	19	3.375	1.3287	1.438	0.5661	2.203	0.8673	1.3125
One year.....	19	3.589	1.4129	1.438	0.5661	2.182	0.8590	1.616
Two years.....	17.833	3.375	1.3287	1.45	0.5708	2.206	0.8685	1.38
Three years.....	17.556	3.542	1.3944	1.625	0.6397	2.235	0.8799	1.24
Four years.....	19.56	3.458	1.3614	1.431	0.5633	2.229	0.8775	1.75
Six years.....	21	3.567	1.4043	1.372	0.5401	2.240	0.8818	1.479
Seven years.....	20	3.563	1.4027	1.313	0.5169	2.261	0.8901	1.172
<i>Ewe.</i>								
Five months.....	20	3.313	1.3043	1.313	0.5169	2.003	0.7885	1.25
Five and one-half months.....	16	3.65	1.4370	1.35	0.5314	2.367	0.9318	1.20
One year.....	17.923	3.76	1.4803	1.499	0.5547	2.214	0.8716	1.529
Two years.....	19.929	3.415	1.3440	1.307	0.5145	2.061	0.8114	1.582
Three years.....	19	3.444	1.3165	1.340	0.5291	2.117	0.8324	1.375
Four years.....	21	2.875	1.1318	1.313	0.5169	1.882	0.7409	1.469
Four and one-half years.....	21.50	3.698	1.4519	1.375	0.5413	2.040	0.8031	1.625
Five years.....	19.60	3.125	1.2303	1.25	0.4921	2.045	0.8051	1.219



TABLE VIII.—*Individual extremes and averages, showing influence of folds upon fineness.*

Catalogue num- ber of samples.	Portion of fleece represented.	Number of crimps per inch.	Highest.		Lowest.		Average.		Length in inches.
			In centimill- meters.	In thousandths of inch.	In centimill- meters.	In thousandths of inch.	In centimill- meters.	In thousandths of inch.	
MERINO.									
30	Neck, top of wrinkle.....	16	4.25	1.6732	2.00	0.7874	2.322	1.1110	1.25
45	do.....	16	4.00	1.5748	1.50	0.5905	2.296	0.9039	1.1875
48	Shoulder, top of wrinkle.....	15	4.50	1.7710	1.25	0.4921	2.374	0.9340	1.125
53	do.....	14	4.00	1.5748	1.50	0.5905	2.196	0.5118	1.125
	Hip, top of wrinkle.....	14	5.00	1.9685	1.25	0.4921	2.698	1.0267	1.1875
54	Shoulder, top of wrinkle.....	14	4.00	1.5748	1.75	0.6889	2.514	0.9597	0.875
	Hip, top of wrinkle.....	14	5.00	1.9685	1.75	0.6889	2.902	1.1425	0.875
55	Shoulder, top of wrinkle.....	14	4.00	1.5748	1.00	0.3937	2.455	0.9607	1.1875
	Hip, top of wrinkle.....	10	4.25	1.6732	1.50	0.5905	2.291	0.9019	1.125
56	Neck, top of wrinkle.....	10	3.50	1.3779	1.25	0.4921	2.494	0.9318	1.1875
	Hip, top of wrinkle.....	10	4.00	1.5748	1.50	0.5905	2.363	0.8503	1.00
57	Shoulder, top of wrinkle.....	10	4.75	1.8700	1.50	0.5905	2.405	0.9468	0.875
58	do.....	10	4.00	1.5748	1.50	0.5905	2.216	0.8724	1.125
	Hip, top of wrinkle.....	10	5.00	1.9685	1.75	0.5889	2.695	1.0373	1.00
79	do.....	14	4.50	1.7716	1.75	0.6889	2.643	1.0405	1.125
		15.333	4.317	1.6998	1.517	0.5972	2.477	0.9751	1.100
80	Neck, between wrinkle.....	16	3.50	1.3779	1.75	0.6889	2.466	0.9708	1.625
45	do.....	16	3.25	1.2795	1.25	0.4921	2.271	0.8942	1.125
48	Shoulder, between wrinkle.....	10	3.50	1.3779	1.50	0.5905	2.302	0.9062	1.50
53	do.....	20	3.00	1.1811	1.25	0.4921	1.850	0.7283	1.00
	Hip, between wrinkle.....	16	3.50	1.3779	1.25	0.4921	2.027	0.7989	0.875
54	Shoulder, between wrinkle.....	14	3.00	1.1811	1.25	0.4921	2.008	0.7905	1.0625
	Hip, between wrinkle.....	14	3.50	1.3779	1.25	0.4921	2.208	0.8692	1.00
55	Shoulder, between wrinkle.....	20	3.00	1.1811	1.25	0.4921	2.098	0.7505	1.0625
	Hip, between wrinkle.....	20	3.00	1.1811	1.25	0.4921	1.908	0.7511	1.125
56	Shoulder, between wrinkle.....	20	3.00	1.1811	1.00	0.3937	2.013	0.7925	1.125
	Hip, between wrinkle.....	20	4.00	1.5748	1.00	0.3937	2.255	0.8877	0.75
57	Shoulder, between wrinkle.....	20	3.50	1.3779	1.25	0.4921	2.149	0.8490	1.0625
58	do.....	20	3.00	1.1811	1.50	0.5905	2.030	0.7992	1.25
	Hip, between wrinkle.....	20	3.50	1.3779	1.25	0.4921	2.095	0.8251	1.125
79	do.....	16	4.00	1.5748	1.50	0.5905	2.357	0.9279	1.375
		18.143	3.35	1.3188	1.30	0.5118	2.130	0.8385	1.1375



TABLE IX.—Individual extremes and averages, showing influence of folds upon fineness in different sexes and portions of fleece.

Catalogue number of samples.	Portion of fleece represented.	Number of crimps per inch.	Highest.		Lowest.		Average.		Length in inches.
			In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	
<b>MERINO.</b>									
<i>Ram.</i>									
30	Neck, top of wrinkle .....	16	4.25	1.6732	2.00	0.7874	2.822	1.1110	1.25
48	Shoulder, top of wrinkle .....	16	4.50	1.7716	1.25	0.4921	2.374	0.9246	1.125
53	do .....	14	4.00	1.5748	1.50	0.5905	2.136	0.9118	1.25
54	do .....	14	4.00	1.5748	1.75	0.6889	2.514	0.9897	0.875
55	do .....	14	4.00	1.5748	1.00	0.3937	2.455	0.9667	1.1875
	Average .....	14.667	4.125	1.6240	1.375	0.5413	2.370	0.9330	1.100
53	Hip, top of wrinkle .....	14	5.00	1.9685	1.25	0.4921	2.608	1.0267	1.1875
54	do .....	14	5.00	1.9685	1.75	0.6889	2.902	1.1425	0.875
55	do .....	16	4.25	1.6732	1.50	0.5905	2.291	0.9019	1.125
79	do .....	14	4.50	1.7716	1.75	0.6889	2.643	1.0405	1.25
	Average .....	14.667	4.688	1.8456	1.503	0.6153	2.611	1.0279	1.100
30	Neck, between wrinkle .....	16	3.50	1.3779	1.75	0.6889	2.466	0.9708	1.625
48	Shoulder, between wrinkle .....	16	3.50	1.3779	1.50	0.5905	2.302	0.9062	1.50
53	do .....	20	3.00	1.1811	1.25	0.4921	1.850	0.7288	1.00
54	do .....	20	3.00	1.1811	1.25	0.4921	2.008	0.7905	1.0625
55	do .....	20	3.00	1.1811	1.25	0.4921	2.008	0.7905	1.0625
	Average .....	18.667	3.125	1.2303	1.313	0.5169	2.042	0.8039	1.156
53	Hip, between wrinkle .....	16	3.50	1.3779	1.25	0.4921	2.027	0.7930	0.875
54	do .....	14	3.50	1.3779	1.25	0.4921	2.208	0.8692	1.00
55	do .....	20	3.00	1.1811	1.25	0.4921	1.908	0.7511	1.125
79	do .....	16	4.00	1.5748	1.50	0.5905	2.357	0.9279	1.375
	Average .....	16.50	3.50	1.3779	1.313	0.5169	2.125	0.8366	1.094
<i>Ewe.</i>									
45	Neck, top of wrinkle .....	16	4.00	1.5748	1.50	0.5905	2.296	0.9039	1.1875
56	do .....	16	3.50	1.3779	1.25	0.4921	2.494	0.9818	1.1875
	Average .....	16	3.75	1.4763	1.375	0.5413	2.395	0.9429	1.1875
57	Shoulder, top of wrinkle .....	16	4.75	1.8700	1.50	0.5905	2.405	0.9468	0.875
58	do .....	16	4.00	1.5748	1.50	0.5905	2.216	0.8724	1.125
	Average .....	16	4.375	1.7224	1.50	0.5905	2.311	0.9098	1.00
56	Hip, top of wrinkle .....	16	4.00	1.5748	1.50	0.5905	2.363	0.9303	1.00
58	do .....	16	5.00	1.9685	1.75	0.6889	2.635	1.0373	1.00
	Average .....	16	4.50	1.7716	1.625	0.6397	2.499	0.9838	1.00
45	Neck, between wrinkle .....	16	3.25	1.2795	1.25	0.4921	2.271	0.8942	1.125
56	Shoulder, between wrinkle .....	20	3.00	1.1811	1.00	0.3937	2.613	0.7925	1.125
57	do .....	20	3.50	1.3779	1.25	0.4921	2.149	0.8460	1.0625
58	do .....	20	3.00	1.1811	1.50	0.5905	2.030	0.7992	1.25
	Average .....	20	3.167	1.2268	1.25	0.4921	2.064	0.8125	1.146
56	Hip, between wrinkle .....	20	4.00	1.5748	1.00	0.3937	2.255	0.8877	0.75
58	do .....	20	3.50	1.3779	1.25	0.4921	2.096	0.8251	1.125
	Average .....	20	3.75	1.4763	1.125	0.4429	2.171	0.8547	0.9375



TABLE X.—General extremes and averages, showing influence of folds upon fineness.

Portion of fleece represented.	Average number of crimps per inch.	Highest.		Lowest.		Average.		Length in inches.
		In centimillimeters.	In thousandths of an inch.	In centimillimeters.	In thousandths of an inch.	In centimillimeters.	In thousandths of an inch.	
<b>MERINO.</b>								
Top of wrinkle, whole fleece.....	15.333	4.310	1.6996	1.517	0.5972	2.477	0.9751	1.10
Between wrinkle, whole fleece.....	18.143	3.350	1.3188	1.300	0.5118	2.130	0.8385	1.1375
<b>Ram.</b>								
Top of wrinkle:								
Whole fleece.....	14.857	4.389	1.7279	1.528	0.6015	2.556	1.0062	1.125
Neck.....	10.00	4.250	1.6732	2.000	0.7374	2.822	1.1110	1.25
Shoulder.....	14.667	4.125	1.6240	1.375	0.5413	2.371	0.9334	1.109
Hip.....	14.669	4.688	1.8456	1.563	0.6153	2.611	1.0279	1.109
Between wrinkle:								
Whole fleece.....	17.25	3.333	1.3122	1.361	0.5858	2.137	0.8413	1.181
Neck.....	16	3.50	1.3779	1.75	0.6889	2.466	0.9708	1.625
Shoulder.....	18.667	3.125	1.2308	1.313	0.5169	2.042	0.8039	1.156
Hip.....	16.50	3.50	1.3379	1.313	0.5169	2.125	0.8366	1.094
<b>Ewe.</b>								
Top of wrinkle:								
Whole fleece.....	16	4.208	1.6566	1.50	0.5905	2.402	0.9456	1.0625
Neck.....	16	3.75	1.4763	1.375	0.5413	2.395	0.9429	1.1875
Shoulder.....	16	4.375	1.7224	1.50	0.5905	2.311	0.9098	1.00
Hip.....	16	4.50	1.7716	1.625	0.6397	2.499	0.9838	1.00
Between wrinkle:								
Whole fleece.....	19.333	3.375	1.3287	1.208	0.4755	2.137	0.8413	1.073
Neck.....	16	3.250	1.2795	1.25	0.4621	2.271	0.8942	1.125
Shoulder.....	20	3.167	1.2468	1.25	0.4921	2.064	0.8125	1.146
Hip.....	20	3.75	1.4763	1.125	0.4429	2.171	0.8547	0.9375



TABLE XI.—Individual extremes and averages showing relation of fineness to crimp.

Catalogue number of samples.	Portion of fleece represented.	Number of crimps per inch.						Length in inches.	Catalogue number of samples.	Portion of fleece represented.	Number of crimps per inch.						Length in inches.		
		Highest.		Lowest.		Average.					Highest.		Lowest.		Average.				
		In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.				In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.			
<b>SOUTHDOWNS.</b>																			
<i>Ram.</i>																			
82	Shoulder.....	12	4.66	1.8346	2.00	0.7874	3.063	1.2059	1.375	48	Hip.....	16	3.75	1.4763	1.50	0.5905	2.391	0.9413	1.75
	Side.....	12	4.66	1.8346	2.00	0.7874	3.274	1.3889	1.50	51	do.....	16	4.00	1.5748	1.25	0.4921	2.141	0.8429	1.50
	Average.....	12	4.66	1.8346	2.00	0.7874	3.220	1.2712	1.4375	53	Hip, between wrinkle	16	3.50	1.3779	1.25	0.4921	2.027	0.7900	0.875
<i>Ewe.</i>																			
91	Shoulder.....	12	4.25	1.6732	1.75	0.6889	3.193	1.2570	1.50	55	Hip, top of wrinkle..	16	4.25	1.6732	1.50	0.5905	2.546	1.0620	1.125
92	do.....	12	0.35	2.4921	2.33	0.9172	3.607	1.4200	1.975	58	Hip.....	16	4.00	1.5748	1.60	0.6335	2.752	1.0834	1.375
93	do.....	12	4.33	1.7047	2.00	0.7874	2.940	1.1574	1.3675	59	do.....	16	5.00	2.2258	1.60	0.6335	2.530	0.9960	1.625
	Average.....	12	4.97	1.9566	2.03	0.7992	3.240	1.2779	1.3542	73	do.....	16	5.00	1.9685	1.25	0.4921	2.270	0.8936	1.00
91	Hip.....	12	4.06	1.8346	2.00	0.7874	3.810	1.3055	1.5625	78	do.....	16	4.25	1.6732	1.25	0.4921	2.166	0.8000	1.25
92	do.....	12	5.33	2.0924	1.60	0.6335	2.905	1.1673	1.875	79	Hip, between wrinkle	16	3.50	1.3779	1.75	0.5905	2.366	0.9114	1.375
93	do.....	12	5.00	1.9685	2.33	0.9172	3.111	1.2248	1.125		Average.....	16	4.26	1.6771	1.48	0.5826	2.36	0.9291	1.325
95	do.....	12	4.66	1.8346	1.60	0.6335	2.177	1.0933	1.75		Final average..	16	3.98	1.4094	1.50	0.5905	2.318	0.9129	1.50
	Average.....	12	4.91	1.9330	1.01	0.7519	2.892	1.1385	1.4531			16	3.83	1.5472	1.51	0.5914	2.235	0.8799	1.631
93	Belly.....	12	4.33	1.7047	2.00	0.7874	2.788	1.0970	.....	48	Belly.....	16	4.00	1.5748	1.50	0.5905	2.369	0.9326	1.66
	Final average...	12	4.82	1.8976	1.97	0.7755	3.072	1.2091	1.4172	51	do.....	16	3.25	1.2795	1.25	0.4921	2.205	0.8931	1.625
63	Shoulder.....	14	4.00	1.5748	2.00	0.7874	2.940	1.1596	1.23	71	do.....	16	3.50	1.3779	1.75	0.5889	2.383	0.9831	1.375
94	do.....	14	4.00	1.8318	2.00	0.7874	2.743	1.0799	1.25		Average.....	16	3.58	1.4094	1.50	0.5905	2.318	0.9129	1.50
95	do.....	14	4.00	1.5748	1.60	0.6335	2.496	0.9826	1.50		Final average..	16	3.83	1.5472	1.51	0.5914	2.235	0.8799	1.631
	Average.....	14	4.22	1.6614	1.89	0.7440	2.727	1.0736	1.33	51	Shoulder.....	20	4.00	1.7716	1.50	0.5905	2.219	0.8736	1.75
63	Side.....	14	4.66	1.8346	1.83	0.6296	3.013	1.1862	.....	53	Shoulder, between wrinkle.	20	3.00	1.1811	1.25	0.4921	1.850	0.7283	1.00
93	do.....	14	4.00	1.6748	1.60	0.6335	2.847	1.1602	1.00	55	do.....	20	3.00	1.1811	1.25	0.4991	2.068	0.7905	1.0625
94	do.....	14	4.00	1.5748	1.60	0.6335	2.940	0.9826	1.125	58	Shoulder.....	20	3.83	1.5678	1.60	0.6335	2.272	0.8944	1.375
95	do.....	14	3.33	1.8110	1.60	0.6335	2.406	0.9826	1.4375	59	do.....	20	3.83	1.3110	1.33	0.5236	2.246	0.8342	1.375
	Average.....	14	3.99	1.5708	1.58	0.6220	2.849	1.1216	1.1876	71	do.....	20	3.50	1.3779	1.75	0.5889	2.310	0.9059	1.50
63	Side.....	14	4.66	1.8346	1.83	0.6296	3.013	1.1862	.....	73	do.....	20	2.75	1.0826	1.50	0.5905	2.100	0.8267	1.25
93	do.....	14	4.00	1.6748	1.60	0.6335	2.847	1.1602	1.00	73	do.....	20	3.50	1.3779	1.50	0.5905	2.116	0.8330	1.625
94	do.....	14	4.00	1.5748	1.60	0.6335	2.940	0.9826	1.125	78	do.....	20	3.00	1.1811	1.50	0.5905	2.170	0.8543	1.375
95	do.....	14	3.33	1.8110	1.60	0.6335	2.406	0.9826	1.4375	79	do.....	20	4.25	1.6732	1.50	0.5905	2.030	0.7992	1.50
	Average.....	14	3.99	1.5708	1.58	0.6220	2.849	1.1216	1.1876	82	do.....	20	3.25	1.2795	1.50	0.5905	2.075	0.8300	1.50
63	Side.....	14	4.66	1.8346	1.83	0.6296	3.013	1.1862	.....	80	do.....	20	3.25	1.2795	1.25	0.4921	2.001	0.7669	1.4375
93	do.....	14	4.00	1.6748	1.60	0.6335	2.847	1.1602	1.00	90	do.....	20	4.00	1.5748	1.25	0.4921	2.200	0.8661	1.35
94	do.....	14	4.00	1.5748	1.60	0.6335	2.940	0.9826	1.125		Average.....	20	3.474	1.8001	1.442	0.5677	2.124	0.8362	1.385
95	do.....	14	3.33	1.8110	1.60	0.6335	2.406	0.9826	1.4375	47	Side.....	20	3.25	1.2795	1.75	0.6889	2.163	0.8515	1.1875
	Average.....	14	3.99	1.5708	1.58	0.6220	2.849	1.1216	1.1876	51	do.....	20	3.50	1.3779	1.60	0.5905	2.213	0.8712	1.4375
91	Belly.....	14	3.33	1.8110	1.60	0.6335	2.77	1.0905	0.875	55	do.....	20	2.75	1.0826	1.25	0.4921	1.861	0.7326	1.0625
	Final average...	14	4.49	1.7677	1.76	0.6692	2.793	1.0996	1.062	58	do.....	20	4.00	1.5748	1.66	0.6335	2.473	0.9739	1.375
92	Belly.....	16	4.06	1.8346	2.00	0.7874	2.872	1.1307	0.875	59	do.....	20	4.00	1.5748	1.33	0.5236	2.427	0.9525	1.375
<b>MERINO.</b>																			
<i>Ram.</i>																			
54	Shoulder, top of wrinkle.....	14	4.00	1.5748	1.75	0.6889	2.519	0.9917	0.815	71	do.....	20	3.00	1.1811	1.50	0.5905	2.128	0.8377	1.25
55	do.....	14	4.00	1.5748	1.60	0.5967	2.455	0.9667	1.1875	72	do.....	20	2.75	1.0826	1.50	0.5905	2.068	0.8141	1.125
	Average.....	14	4.00	1.5748	1.375	0.5413	2.487	0.9791	1.0313	73	do.....	20	3.00	1.1811	1.50	0.5905	2.186	0.8606	1.375
30	Hip.....	14	3.25	1.2795	1.75	0.6889	2.294	0.9031	1.75	78	do.....	20	4.00	1.5748	1.25	0.4921	2.191	0.8025	1.125
53	Hip, top of wrinkle..	14	5.00	1.9685	1.25	0.4921	2.608	1.0267	1.1875	79	do.....	20	3.50	1.3779	1.50	0.5905	2.033	0.7964	1.50
54	Hip, between wrinkle	14	3.50	1.3779	1.25	0.4921	2.208	0.8692	1.00	82	do.....	20	3.00	1.1811	1.50	0.5905	2.296	0.9039	1.25
79	Hip, top of wrinkle..	14	4.60	1.7716	1.75	0.6889	2.643	1.0405	1.25	89	do.....	20	4.00	1.5748	1.50	0.5905	2.026	0.7976	1.25
	Average.....	14	4.06	1.5984	1.50	0.5905	2.436	0.9500	1.297	90	do.....	20	3.50	1.3779	1.25	0.4921	2.263	0.8909	1.125
	Final average..	14	4.32	1.7007	1.49	0.5866	2.469	1.0429	1.39		Average.....	20	2.455	1.3602	1.461	0.9751	2.178	0.8574	1.264
340	Top of wrinkle.....	14	5.00	1.9685	1.625	0.6397	2.582	1.0086	2.50	47	Hip.....	20	3.50	1.3779	1.50	0.5905	2.294	0.9031	1.375
	Final average..	14	4.32	1.7007	1.49	0.5866	2.469	1.0429	1.39	53	do.....	20	2.25	0.8686	1.00	0.3937	1.697	0.6931	0.8125
30	Neck, top of wrinkle.	16	4.25	1.6732	2.00	0.7874	2.822	1.1110	1.25	55	Hip, between wrinkle.	20	3.00	1.1811	1.25	0.4921	1.998	0.7511	1.125
	Neck, betw. wrinkle.	16	3.50	1.3779	1.75	0.6889	2.466	0.9708	1.625	71	Hip.....	20	3.50	1.3779	1.50	0.5905	2.383	0.9098	1.125
	Average.....	16	3.875	1.5255	1.875	0.7380	2.644	1.0409	1.4875	82	do.....	20	3.50	1.3779	1.25	0.4921	2.220	0.8740	1.375
90	Shoulder.....	16	2.75	1.0826	1.75	0.6889	2.252	0.8866	1.50	89	do.....	20	3.25	1.2795	1.25	0.4921	1.956	0.7700	1.25
43	Shoulder, top of wrinkle.....	16	4.50	1.7716	1.25	0.4921	2.374	0.9346	1.125	90	do.....	20	3.00	1.1811	1.50	0.5905	2.193	0.8633	1.1875
	Shoulder, between wrinkle.....	16	3.50	1.3779	1.50	0.5905	2.392	0.9062	1.50		Average.....	20	3.143	1.2373	1.321	0.5200	2.079	0.8185	1.25
	Average.....	16	3.58	1.4094	1.50	0.5905	2.399	0.9090	1.342	30	Belly.....	20	3.25	1.2795	1.50	0.5905	2.202	0.8969	1.375
90	Shoulder.....	16	2.75	1.0826	1.75	0.6889	2.252	0.8866	1.50	47	do.....	20	3.50	1.3779	1.75	0.6889	2.761	0.9295	1.4375
43	Shoulder, top of wrinkle.....	16	4.50	1.7716	1.25	0.4921	2.374	0.9346	1.125	53	Belly, A.....	20	3.50	0.9642	1.60				



TABLE XI.—Individual extremes and averages showing relation of fineness to crimp—Continued.

Catalogue number of samples.	Portion of fleece represented.	Number of crimps per inch.	Highest.		Lowest.		Average.		Length in inches.	Catalogue number of samples.	Portion of fleece represented.	Number of crimps per inch.	Highest.		Lowest.		Average.		Length in inches.
			In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.					In centimillimeters.	In thousandths of inch.					
															In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	
MERINO—continued.										MERINO—continued.									
Ram—Continued.										Ewe—Continued.									
53	Shoulder.....	22	2.50	0.9842	1.50	0.5905	1.896	0.7464	1.4375	83	Side.....	20	4.00	1.5748	1.50	0.5905	2.123	0.8358	1.375
53	Side.....	22	2.50	0.9842	1.25	0.4921	1.816	0.7149	1.375	83	do.....	20	3.25	1.2795	1.25	0.4921	1.976	0.7779	1.25
	Final average...	22	2.50	0.9842	1.375	0.5413	1.856	0.7307	1.4063		Average.....	20	3.393	1.3377	1.342	0.5293	2.009	0.8293	1.368
104	.....	25	3.00	1.1811	1.25	0.4921	1.830	0.7204	1.625	46	Hip.....	20	3.25	1.2795	1.25	0.4921	2.091	0.8223	1.50
104	.....	25	2.75	1.0826	1.00	0.3937	1.758	0.6921	2.125	52	do.....	20	2.50	0.9842	1.00	0.5905	1.869	0.7356	1.375
	Average.....	25	2.875	1.1318	1.125	0.4429	1.794	0.7062	1.875	56	Hip between wrinkle	20	4.00	1.6748	1.00	0.3937	2.255	0.8877	1.75
96	.....	26	2.25	0.8858	1.00	0.3937	1.704	0.6708	2.0625	57	Hip.....	20	3.25	1.2795	1.25	0.4921	2.141	0.8412	0.875
	Ewe.....									58	Hip, between wrinkle	20	3.50	1.3779	1.25	0.4921	2.096	0.8251	1.125
45	Hip.....	12	4.25	1.6732	1.50	0.5905	2.799	1.1019	1.0625	70	Hip.....	20	3.50	1.3779	1.375	0.5413	2.115	0.8326	1.125
74	do.....	14	6.00	2.3622	1.50	0.5905	2.470	0.9724	1.50	77	do.....	20	4.25	1.6732	1.25	0.4921	2.200	0.8661	1.00
41	Belly.....	14	4.00	1.5748	1.25	0.4921	1.993	0.7846	1.875	84	do.....	20	4.00	1.5743	1.59	0.5905	2.201	0.8665	1.00
	Average.....	14	5.00	1.9585	1.375	0.5413	2.232	0.8787	1.6875	85	do.....	20	3.00	1.1811	1.00	0.3937	1.838	0.7236	1.25
41	Neck.....	16	3.00	1.1811	1.50	0.5905	2.088	0.8220	1.75	88	do.....	20	2.75	1.0826	1.00	0.3937	1.980	0.7785	1.25
45	Neck, top of wrinkle.	16	4.00	1.5748	1.50	0.5905	2.296	0.9039	1.1875		Average.....	20	3.40	1.3385	1.238	0.4874	2.079	0.8185	1.125
56	Neck, betw. wrinkle.	16	3.25	1.2705	1.25	0.4921	2.271	0.8940	1.125	46	Belly.....	20	3.00	1.1811	1.25	0.4921	2.094	0.8244	1.4375
	Neck, top of wrinkle.	16	3.50	1.3779	1.25	0.4921	2.492	0.9818	1.1875	52	do.....	20	9.25	2.795	1.25	0.4921	1.808	0.7118	1.1875
	Average.....	16	3.438	1.3535	1.375	0.5413	2.287	0.9003	1.3125	59	do.....	20	2.75	1.0826	1.50	0.5905	2.049	0.8066	0.9375
58	Shoulder, top of wrinkle.....	16	4.00	1.5748	1.50	0.5905	2.216	0.8724	1.125	57	do.....	20	3.00	1.1811	1.25	0.4921	2.158	0.8496	0.875
74	Shoulder.....	16	4.00	1.5748	1.50	0.5905	2.487	0.9791	1.375	58	do.....	20	3.00	1.1811	1.50	0.5905	2.066	0.8183	1.25
75	do.....	16	3.50	1.3779	1.50	0.5905	2.365	0.9311	1.50	57	do.....	20	4.00	1.5748	1.60	0.5905	2.431	0.9570	1.25
76	do.....	16	3.875	1.5225	1.50	0.5905	2.245	0.8838	1.375	70	do.....	20	4.00	1.5748	1.50	0.5905	2.330	0.9409	1.25
	Average.....	16	3.844	1.5133	1.50	0.5905	2.328	0.9165	1.3438	74	do.....	20	4.00	1.5748	1.25	0.4921	2.423	0.9559	1.375
41	Side.....	16	3.00	1.1811	1.50	0.6905	1.977	0.7783	1.50	75	do.....	20	4.00	1.5748	1.875	0.7381	2.415	0.9649	1.125
74	do.....	16	3.50	1.3779	1.50	0.5905	2.400	0.9400	1.50	76	do.....	20	3.50	1.3779	1.25	0.4921	1.968	0.7728	1.50
81	do.....	16	3.50	1.3779	1.50	0.5905	2.146	0.8448	1.625	77	do.....	20	3.00	1.1811	1.50	0.5905	2.120	0.8370	1.375
	Average.....	16	3.333	1.3122	1.50	0.5905	2.175	0.8547	1.5417	81	do.....	20	3.00	1.1811	1.50	0.5905	2.230	0.8779	1.50
41	Hip.....	16	3.00	1.1811	1.50	0.5905	1.977	0.7783	1.50	81	do.....	20	4.75	1.8700	1.25	0.4921	1.800	0.9842	1.25
56	Hip, top of wrinkle.....	16	4.00	1.6748	1.50	0.5905	2.360	0.9303	1.00	80	do.....	20	3.75	1.4765	1.00	0.3937	1.856	0.7425	1.375
58	do.....	16	5.00	1.9835	1.75	0.6882	2.635	1.0373	1.00	85	do.....	20	3.00	1.1811	1.50	0.5905	2.176	0.8586	1.375
75	Hip.....	16	3.75	1.4763	1.50	0.5905	2.455	0.9667	1.375	87	do.....	20	2.75	1.0826	1.50	0.5905	2.238	0.8791	1.50
76	do.....	16	4.00	1.5748	1.60	0.5905	2.218	0.8724	1.50		Average.....	20	3.50	1.3779	1.404	0.5527	2.178	0.8574	1.276
80	do.....	16	3.50	1.3779	1.25	0.4921	2.316	0.9118	1.375	851	.....	20	2.375	0.9350	1.25	0.4921	1.655	0.6515	3.00
81	do.....	16	5.25	2.0669	1.00	0.3937	2.383	0.9381	1.375	352	.....	20	3.25	1.2795	1.25	0.4921	1.848	0.7275	2.75
	Average.....	16	4.071	1.6027	1.429	0.5625	2.335	0.9192	1.3035	353	.....	20	2.875	1.1318	1.25	0.4921	1.677	0.7350	2.25
45	Belly.....	16	3.00	1.1811	1.25	0.4921	2.173	0.8555	1.25	355	.....	20	3.275	1.3287	1.50	0.5905	2.163	0.8515	2.75
347	.....	16	3.375	1.3287	0.75	0.2953	1.887	0.7429	3.125	358	.....	20	4.50	1.7716	1.375	0.5413	2.185	0.8641	2.50
348	.....	16	3.25	1.2795	1.25	0.4921	1.971	0.7759	3.125		Average.....	20	3.50	1.3779	1.125	0.4429	1.890	0.7440	2.50
	Final average...	16	3.679	1.4484	1.392	0.5484	2.256	0.8881	1.618	52	Shoulder.....	22	3.50	0.9842	1.25	0.4921	1.733	0.6822	1.5625
46	Shoulder.....	20	3.50	1.3779	1.25	0.4921	2.110	0.8330	1.375	80	do.....	22	3.50	1.3779	1.50	0.5905	1.853	0.7688	1.375
56	Shoulder, between wrinkle.....	20	3.00	1.1811	1.00	0.3937	2.013	0.7921	1.125	84	do.....	22	2.75	1.0826	1.25	0.4921	2.035	0.8011	1.325
57	do.....	20	3.50	1.3779	1.25	0.4921	2.149	0.8460	1.0625	85	do.....	22	3.75	1.4763	1.25	0.4921	1.703	0.7059	1.375
58	do.....	20	3.00	1.1811	1.50	0.5905	2.030	0.7992	1.25	86	do.....	22	3.00	1.1811	1.00	0.3937	1.851	0.7287	1.375
70	Shoulder.....	20	3.33	1.3110	1.33	0.5336	2.118	0.8342	1.25	87	do.....	22	3.00	1.1811	1.50	0.5905	2.050	0.8094	1.50
77	do.....	20	2.50	0.9842	1.50	0.5905	1.928	0.7590	1.125		Average.....	22	3.167	1.2468	1.291	0.5082	1.903	0.7492	1.719
80	do.....	20	2.25	0.8858	1.25	0.4921	1.770	0.6968	1.60	52	Side.....	22	2.75	1.0826	1.00	0.3937	1.716	0.6755	1.25
81	do.....	20	3.00	1.1811	1.50	0.5905	2.133	0.8391	1.625	80	do.....	22	2.75	1.3779	1.25	0.4921	1.753	0.6901	6.25
83	do.....	20	3.50	1.3779	1.50	0.5905	2.093	0.8240	1.25	84	do.....	22	3.50	1.3779	1.25	0.4921	1.070	0.7755	1.00
88	do.....	20	3.00	1.1811	1.25	0.4921	1.920	0.7562	1.125	85	do.....	22	2.50	0.9842	1.25	0.4921	1.810	0.7125	1.375
	Average.....	20	3.058	1.2089	1.333	0.5248	2.127	0.8373	1.209	86	do.....	22	3.50	1.3779	1.60	0.6905	2.103	0.8279	1.25
45	Side.....	20	3.75	1.4733	1.25	0.4921	2.294	0.9033	1.375	87	do.....	22	3.25	1.2795	1.50	0.5005	2.201	0.8665	1.1875
46	do.....	20	3.75	1.4763	1.25	0.4921	2.091	0.7338	1.25		Average.....	22	3.167	1.2468	1.291	0.5082	1.920	0.7550	1.2813
56	do.....	20	3.00	1.1811	1.25	0.4921	2.153	0.8472	1.8125	80	Hip.....	22	2.75	1.0826	1.25	0.4921	1.873	0.7374	1.375
70	do.....	20	3.33	1.3110	1.33	0.5336	2.099	0.8263	1.25	80	do.....	22	3.50	1.3779	1.50	0.5905	2.083	0.8200	1.25
75	do.....	20	3.75	1.4763	1.50	0.5905	2.263	0.8909	1.150	87	do.....	22	3.00	1.1811	1.50	0.5905	2.173	0.8555	1.25
76	do.....	20	2.75	1.0826	1.50	0.5905	2.066	0.8133	1.125		Average.....	22	3.083	1.2137	1.416	0.5574	2.043	0.8043	1.292
77	do.....	20	3.00	1.1811	1.25	0.4921	1.921	0.7562	1.375	354	.....	22	3.25	1.2795	1.125	0.4429	1.856	0.7307	2.75



TABLE XII.—General extremes and averages showing relation of crimp to fineness.

Portion of fleece represented.	Number of crimps per inch.	Highest.		Lowest.		Average.		Length in crimp.
		In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In inches.
SOUTHDOWN.								
<i>Ram.</i>								
Whole fleece .....	12	4.66	1.8346	2.00	0.7874	3.229	1.2713	1.4375
Shoulder .....	12	4.66	1.8346	2.00	0.7874	3.063	1.2059	1.375
Side .....	12	4.66	1.8346	2.00	0.7874	3.274	1.2889	1.50
<i>Ewe.</i>								
Whole fleece .....	12	4.82	1.8976	1.97	0.7755	3.072	1.2094	1.4172
Shoulder .....	12	4.97	1.9566	2.03	0.7992	3.246	1.2779	1.3542
Hip .....	12	4.91	1.9330	1.91	0.7519	2.892	1.1385	1.4531
Belly .....	12	4.33	1.7047	2.00	0.7874	2.788	1.0976	.....
Whole fleece .....	14	4.49	1.7677	1.70	0.6692	2.793	1.0996	1.062
Shoulder .....	14	4.22	1.6644	1.89	0.7440	2.727	1.0736	1.33
Side .....	14	3.99	1.5708	1.58	0.6220	2.849	1.1216	1.1875
Belly .....	14	3.33	1.3110	1.66	0.6535	2.770	1.0905	0.875
Belly .....	16	4.06	1.8346	2.00	0.7874	2.872	1.1307	0.875
MERINO.								
<i>Ram.</i>								
Whole fleece .....	14	4.32	1.7007	1.49	0.5866	2.469	1.0429	1.390
Shoulder .....	14	4.00	1.5748	1.375	0.5413	2.487	0.9791	1.0313
Hip .....	14	4.06	1.5984	1.50	0.5905	2.436	0.9590	1.297
Whole fleece .....	16	3.93	1.5472	1.51	0.5944	2.235	0.8799	1.631
Neck .....	16	3.875	1.5255	1.875	0.7380	2.644	1.0409	1.4875
Shoulder .....	16	3.58	1.4094	1.50	0.5905	2.309	0.9090	1.342
Side .....	16	3.375	1.3287	1.25	0.4921	2.178	0.8574	1.3438
Hip .....	16	4.26	1.6771	1.48	0.5826	2.360	0.9291	1.325
Belly .....	16	3.58	1.4094	1.50	0.5905	2.319	0.9129	1.50
Whole fleece .....	20	3.343	1.3161	1.45	0.5708	2.168	0.8535	1.413
Shoulder .....	20	3.474	1.3661	1.442	0.5677	2.124	0.8362	1.385
Side .....	20	3.455	1.3602	1.461	0.5751	2.178	0.8574	1.264
Hip .....	20	3.143	1.2373	1.321	0.5200	2.079	0.8185	1.25
Belly .....	20	3.270	1.2909	1.505	0.5925	2.240	0.9448	1.277
Whole fleece .....	22	2.50	0.9842	1.375	0.5413	1.856	0.7307	1.4063
Shoulder .....	22	2.50	0.9842	1.50	0.5905	1.806	0.7404	1.4375
Side .....	22	2.50	0.9842	1.25	0.4921	1.816	0.6149	1.875
.....	25	2.875	1.1318	1.125	0.4429	1.794	0.7062	1.875
.....	26	2.25	0.8858	1.00	0.3937	1.704	0.6708	2.0625
Hip .....	12	4.25	1.6732	1.50	0.5905	2.799	1.1019	1.0625
Whole fleece .....	14	5.00	1.9685	1.375	0.5413	2.232	0.8787	1.6875
Hip .....	14	6.00	2.3622	1.50	0.5905	2.470	0.9724	1.50
Belly .....	14	4.00	1.5748	1.25	0.4921	1.993	0.7846	1.875
Whole fleece .....	16	3.679	1.4484	1.393	0.5484	2.256	0.8881	1.518
Neck .....	16	3.438	1.3535	1.375	0.5413	2.287	0.9003	1.3125
Shoulder .....	16	3.844	1.5133	1.50	0.5905	2.338	0.9165	1.3438
Side .....	16	3.333	1.3122	1.50	0.5905	2.175	0.8547	1.5417
Hip .....	16	4.071	1.6027	1.429	0.5625	2.335	0.9192	1.3035
Belly .....	16	3.00	1.1811	1.250	0.4921	2.173	0.8555	1.25
Whole fleece .....	20	3.354	1.3204	1.333	0.5248	2.105	0.8287	1.433
Shoulder .....	20	3.658	1.2039	1.333	0.5248	2.127	0.8373	1.269
Side .....	20	3.398	1.3377	1.342	0.5283	2.099	0.8263	1.368
Hip .....	20	3.400	1.3385	1.238	0.4874	2.079	0.8185	1.125
Belly .....	20	3.50	1.3779	1.404	0.5527	2.178	0.8574	1.276
Whole fleece .....	22	3.156	1.2425	1.305	0.5137	2.049	0.8066	1.539
Shoulder .....	22	3.167	1.2468	1.291	0.5082	1.993	0.7492	1.719
Side .....	22	3.167	1.2468	1.291	0.5082	1.920	0.7559	1.2813
Hip .....	22	3.083	1.2137	1.416	0.5574	2.043	0.8043	1.292
.....	25	3.50	1.3779	1.25	0.4921	1.890	0.7444	2.375
.....	30	2.30	0.9053	0.95	0.3740	1.571	0.6185	1.825







## CHAPTER V.

### TENSILE STRENGTH, DUCTILITY, AND ELASTICITY.

By "tensile strength of the fiber" we understand the strain it is able to resist previous to rupture, or the power required to effect its rupture. By ductility, the elongation which the fiber suffers previous to rupture when subject to strain. This may be divided into *elongation* and *set*, as the authorities on strength of materials have it. The former indicates the total elongation the fiber undergoes when under the influence of strain, and *set* the elongation of the fiber which remains permanent when the power causing the strain is relieved or removed. The difference between elongation and set may be called elasticity. It is upon these different qualities that the commercial and industrial value of the fibers depends more than perhaps any other. The length is important in the determination of the manner in which it shall be worked, the fineness in determining the character of the fabric into which it shall enter; but the durability of the latter, its power to resist and recover from strain, and its general beauty and worth will depend to a great extent upon the properties just mentioned. The examination of our material with regard to these properties must therefore be considered as probably the most important portion of our work. But their accurate measurement, and the form and expression to be adopted in stating the results, have involved the most difficult and perplexing problem met with in the examination of the fiber. It has seldom been attempted to any great extent by the students of the staple, and we believe never to the extent to which we have carried it. The tensile strength of the fiber in threads and yarns of different sizes has been made the subject of study at various times and in various ways, but such material varies so much in mechanical preparation and condition, depending upon the closeness of the twist and other properties necessarily inherent in the samples submitted to the test, that the results obtained can, in the nature of the case, scarcely be other than unsatisfactory. Alcan, in his *Traité des Laines*, describes the apparatus he employed for his tests and discusses the results he obtained. His tests of yarns were made by means of a spring-balance, which furnished the resistance and the necessary cog-wheel motions to apply the power. In the tests of individual fibers he attached to a board or table a rod of good spring steel. Parallel to it he placed another of similar length and free to swing by one end upon a pivot. At the extremity of these two arms he fixed clamps into which to insert the fiber to be tested. The movable arm, when the fiber is in position and the clamp closed, is drawn to one side. The fixed arm is drawn aside and its point moves over an arc graduated to grams and parts of grams by experiment. Each test thus made is recorded. It is such tests of the individual fibers that must be made for the comparison of different qualities of wool, and in such work the comparative fineness and frailty of the material operated upon, and often the diminutive length, makes the examination one requiring a skill in manipulation and delicacy of instrument difficult to obtain. It also involves the expenditure of a large amount of time and painstaking labor, which under ordinary circumstances cannot generally be devoted to it.

In the present investigation we were met at the outset with the difficulty of securing a means in which the time and labor required should be reduced to a minimum. The ordinary form employed in securing the limited results that have been published in Brown's *Tricologia*, and in the works of Bohm, Nathusius, and May, consists of an upright standard, to the top of which is fixed a horizontal arm having at its end a clamp in which the fiber to be tested is placed. The instrument is also provided with an ordinary scale-pan attached to a clamp by which it may in turn be attached to the other end of the fiber in the instrument. In some cases, after being placed in the clamps, the fiber is drawn up by means of a set-screw and through the jaws of a third clamp until an indicator on the lower clamp covers the zero of a vertical scale attached to the horizontal arm at the top, which scale, graduated to equal parts, serves to show the elongation which the fiber suffers when subjected to the strain applied. The latter is secured by placing small weights successively in the pan until sufficient are added to cause rupture of the fiber, and the total weight and the stretch are then noted and recorded. Or, in other cases, very fine shot or sand is caused to flow very slowly into the pan until rupture occurs, and the quantity necessary to this is weighed in a chemical balance to determine the strain.



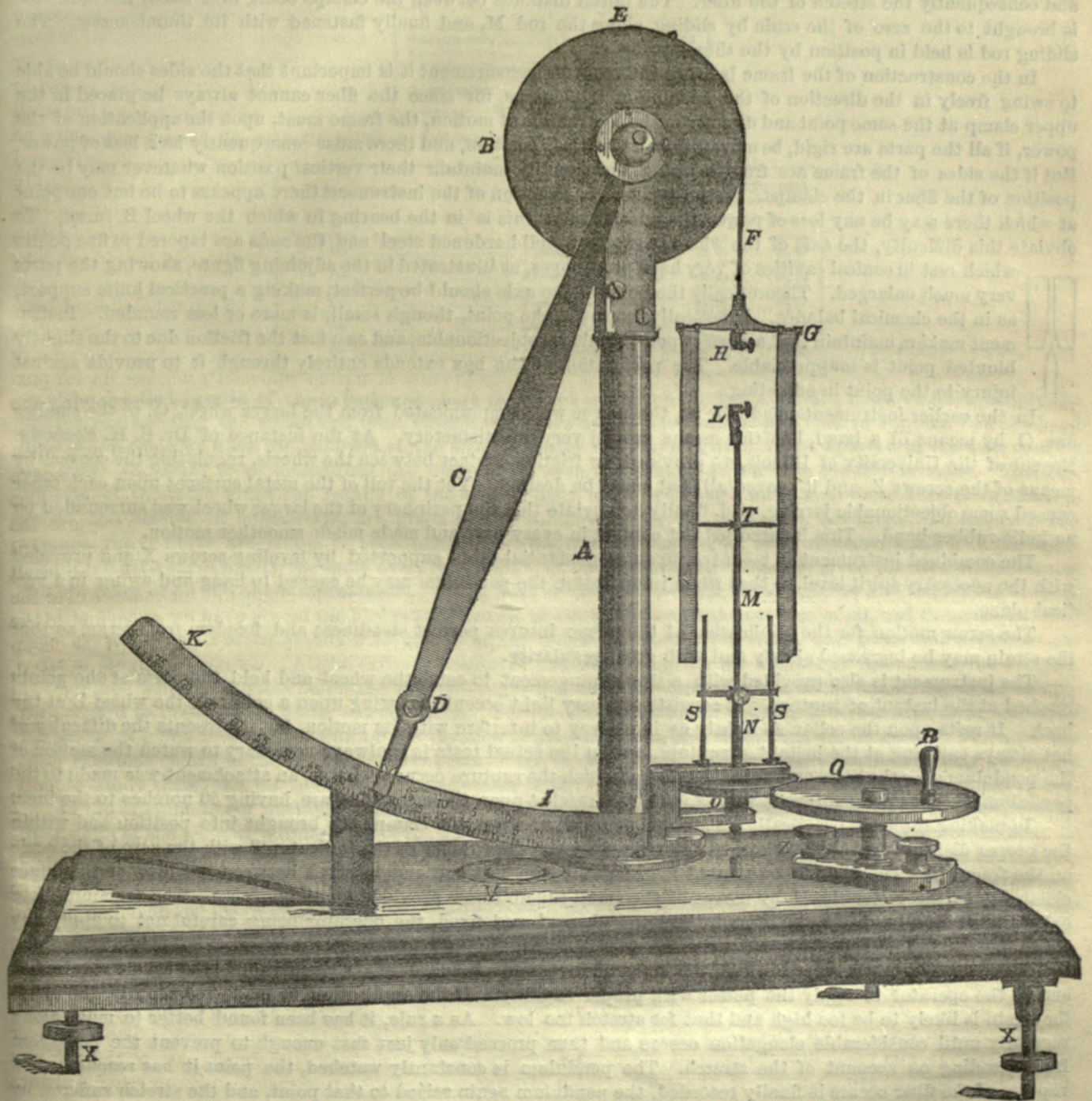
Mr. Charles O'Neill has devised an instrument which he has described in a paper read before the Literary and Philosophical Society of Manchester, England, and it is so ingenious that we have taken occasion to reproduce his description in an appendix to this report. In general it consists of two cylinders of different diameters, one partially filled with water, the other floating vertically within the first. The whole arrangement is placed upon a bracket fixed to a stand, and at the top of which is a horizontal arm. The floating cylinder is raised to a zero point, the fiber fixed by one end to its upper part, and by the other to the extremity of the horizontal arm of the upright standard. At the bottom of the larger cylinder is a stop-cock by which the water may be drawn off. When the stop-cock is opened the fall of the water throws the weight of the smaller cylinder upon the fiber nearly in proportion to the amount of water drawn off. The latter is measured and the strain calculated, correction being easily made for differences due to stretch of the fiber. For holding the fibers in making the test, they are first pasted to small pieces of paper fixed to wire triangles, so that clamps are avoided, and it is only necessary to place the small triangles over the hooks provided. O'Neill's method and apparatus are certainly excellent, and there can be no question of the accuracy of his results. The only objection to it is, that it involves more time in manipulation and subsequent calculation than can ordinarily be given to such tests, and any means that will obviate this difficulty must certainly be desirable. For instance, great care and skill must be used in arranging the fibers for the test. To paste them to the small pieces of paper attached to the wire triangles requires an amount of patient labor, which, in our work, we have sought to avoid without impairing the correctness of our results, and reduce the time required to make the actual tests as well.

The difficulty of securing an apparatus that will combine all the qualities desired will be appreciated upon comparison of the instruments described. As we have said, in France, in testing the strength of wools and raw silks, the spring balance has been almost exclusively employed, but the relations that may intervene to affect the elasticity of the spring, and consequently its resisting power, especially in the case of springs sufficiently delicate for our purpose, are so numerous that we considered it advisable to avoid them and seek some other means for applying the resistance required.

Many good authorities on strength of materials maintain that satisfactory results can be obtained only when the beam balance is used, and it is upon this principle that the instrument we have employed is based. To arrive at this as nearly as possible we have made use of a pendulum attached to the axis of a wheel free to turn. The power is transmitted to the circumference of the latter, and the pendulum moved from the vertical furnishes the resistance. The construction of the instrument is illustrated in the accompanying plate, No. III. A is a standard for supporting the wheel B, to which is attached the pendulum arm C, bearing at its lower extremity the small weight or counterpoise D. At the point E in the wheel is attached the end of the chain F, which passes over the circumference and is attached at its other extremity to the frame G, in the center of the head of which and to the end of the chain is fixed the clamp H. Now, it is plain that any power applied vertically downwards at the clamp H must be communicated to the circumference of the wheel B and turn it, moving the pendulum from the vertical, and the deviation from the vertical or the distance which the point of the pendulum moves over the arc I K, will be in direct relation with the amount of power applied. To standardize the instrument and graduate it, for this must of course be done by experiment, it is only necessary to successively apply at the point H weights of different denominations and locate the point on the arc at which the point of the pendulum comes to rest after the oscillations communicated in the application of the weight, or started by hand, cease. As might naturally be expected, the divisions on the arc corresponding with different weights vary with their position; that is, they are smaller near the extremity I and gradually increase toward the end K. But there is a section in the quadrant where the cosines are nearly equal, and to secure as nearly as possible uniformity in the length of the division of the scale, it was our endeavor to confine the motion of the pendulum to that part of the arc. The pendulum was, therefore, so counterpoised by an initial weight that when in equilibrium it hangs at an inclination to the vertical line passing through its center of motion.

In the instrument we have used, which for convenience was graduated according to the metric system, the range given is 80 grams; but this range is necessary only in the tests of the coarser and stronger wools, and the instrument with this large range is less delicate for tests of finer and weaker wools than one of shorter range, and in order to secure both conditions in the same instrument the following plan was adopted: The weight or counterpoise D was made detachable, and when it was removed the scale upon the upper part of the arc was graduated after the same manner as the other. With the counterpoise thus removed the shorter scale is always employed in testing the finer fibers, and the arrangement makes the same instrument adapted to the test of fibers of widely differing tensile strength, and it has proved exceedingly convenient in some parts of our work. The divisions on the arc, as already intimated, represent grams, and are sufficiently large for the eye to detect and read off differences of a quarter of a gram and even less, though the scale is not so graduated. The other essential parts of the instrument are the following: The clamp L, entirely independent of the frame G, attached to the rod *m*, which slides vertically through the screw *n*, working through the nut-wheel, which, in turn, is in contact with the wheel or pulley Q, having a crank, R, for application of motion. The guides S S insure steadiness of the parts in operation. In practice the fibers are stretched and held between the clamps H and L, which are opened and closed by means of the small thumb-screws *hh* and *l*. It is plain that if, upon application of power, which may







now be effected by turning the wheel or pulley Q, if the fiber be perfectly rigid the distance between the points or clamps H and L will always remain the same until rupture of the fibers occur, but in case of stretch of the fiber previous to rupture the distance between the clamps must be correspondingly increased and the measurement of this increase and consequently the elongation or ductility of the fiber, provided for. A scale is ruled upon the frame G, while the indicator T, passing over it, indicates the amount of increase of distance between the clamps, and consequently the stretch of the fiber. The initial distance between the clamps being first fixed, the indicator is brought to the zero of the scale by sliding along the rod M, and finally fastened with its thumb-screw. The sliding rod is held in position by the thumb-screw *m*.

In the construction of the frame bearing the scale for measurement it is important that the sides should be able to swing freely in the direction of the opening of the clamps, for since the fiber cannot always be placed in the upper clamp at the same point and directly in the central line of motion, the frame must, upon the application of the power, if all the parts are rigid, be moved from its vertical position, and there must consequently be a loss of power. But if the sides of the frame are free to swing they readily maintain their vertical position whatever may be the position of the fiber in the clamps. In the further construction of the instrument there appears to be but one point at which there may be any loss of power and motion, and this is in the bearing in which the wheel B turns. To obviate this difficulty, the axis of the wheel is made of well-hardened steel and the ends are tapered to fine points



which rest in conical cavities of very hard steel boxes, as illustrated in the adjoining figure, showing the parts very much enlarged. Theoretically the point of the axle should be perfect, making a practical knife support, as in the chemical balance. Practically, however, the point, though small, is more or less rounded. Instrument-makers maintain that a perfect point would be objectionable, and as a fact the friction due to the slightly blunted point is inappreciable. The perforation of the box extends entirely through it to provide against injury to the point in adjusting.

In the earlier instruments made for us, the power was communicated from the larger wheel, Q, to the smaller one, O, by means of a band, but this means proved very unsatisfactory. At the instance of Dr. S. H. Peabody, Regent of the University of Illinois, we provided for friction contact between the wheels, regulating the contact by means of the screws Z, and it proved all that could be desired. Yet the roll of the metal surfaces upon each other caused some objectionable jarring, and, finally, to obviate this the periphery of the larger wheel was surrounded by an india-rubber band. This insured perfect contact in every part and made much smoother motion.

The combined instrument is mounted upon a substantial table supported by leveling-screws X and provided with the necessary spirit-level, so that when in operation the pendulum may be caused to hang and swing in a vertical plane.

The screw motion for the application of the power insures perfect steadiness and freedom from jerks, so that the strain may be increased slowly and with great regularity.

The instrument is also provided with a stop arrangement to catch the wheel and hold the parts at the points reached at the instant of rupture. It consists of a very light eccentric resting upon a collar on the wheel B at the back. It rests upon the collar so lightly as in no way to interfere with its motion, but it presents the difficulty of not always catching at the instant of rupture, and in the actual tests it is always necessary to watch the motion of the pendulum over the scale and note the point at which the rupture occurs. Later, an attachment was made to the pendulum so that upon rupture it was caught by a ratchet upon the measuring arc, having 50 notches to the inch.

In making the tests practically we proceed as follows: First, the clamps are brought into position and within the proper distance from each other, as determined by the coincidence of the indicator T with the zero of the scale on the frame G. The fiber to be treated is grasped by its butt end and inserted between the jaws of the upper clamp L, and the latter closed by means of the small thumb-screw provided for the purpose. The remaining free extremity of the fiber is drawn through the lower clamp L and fixed, the operator being careful not to apply any strain more than just sufficient to destroy the crimp. With the fiber just fixed, the wheel Q is slowly turned and the power applied to the fiber through the screw motion and standard M. Considerable practice is required to enable the operator to apply the power with proper rapidity. If the application be made too rapidly, the result for strain is likely to be too high and that for stretch too low. As a rule, it has been found better to move along regularly until considerable elongation occurs and then proceed only just fast enough to prevent the pendulum from receding on account of the stretch. The pendulum is constantly watched, the point it has reached when rupture of the fiber occurs is finally recorded, the pendulum again raised to that point, and the stretch suffered by the fiber under the strain read from the scale on the frame G, and entered upon the record. One arm being graduated to millimeters, the other to parts of an inch, it is possible to state the result in either standard. We have used the metric scale.

In this way all of our tests have been made. But a very important question at once arose, that is, the length of the portion of fiber to be tested or the distance between the clamps during the test. Of course all the tests should be made with the same length of fiber, but it was difficult to decide upon what this length should be. To determine differences due to this cause a series of special tests were made in which different lengths of fiber were employed, and the results obtained are presented in Table XII. Here we have made experiments with Cotswold wool, using successively lengths of 1, 2, 3, 4, 5, and 6 centimeters, respectively, and we find that the differences are



very marked. In this test, while there seems to be no regularity in the variation in strength, there is a gradual reduction in the figures representing the stretch. This is illustrated by the following figures, giving the averages in each case. The first sample tested in this way was No. 66, side.

Length tested.	Strain.	Per cent. of stretch.
1 centimeter .....	23.87	48.87
2 centimeters .....	24.84	42.30
3 centimeters .....	22.53	37.66
4 centimeters .....	22.51	36.17
5 centimeters .....	26.35	34.56
6 centimeters .....	21.63	36.86

The averages of the other tests are as follows :

Sample.	Length tested.	Strain.	Per cent. of stretch.
No. 50, side, Lincoln .....	2 centimeters .....	23.43	37.60
Do .....	4 centimeters .....	23.05	31.67
No. 35, side, Cotawold .....	2 centimeters .....	40.10	37.85
Do .....	4 centimeters .....	36.93	33.12
No. 39, side, Cotawold .....	2 centimeters .....	39.61	32.15
Do .....	4 centimeters .....	36.06	35.67
No. 60, side, Lincoln .....	2 centimeters .....	37.77	39.50
Do .....	4 centimeters .....	33.19	36.00
No. 61, side, Lincoln .....	2 centimeters .....	25.55	43.25
Do .....	4 centimeters .....	23.10	36.95

The detailed results of the experiments here described are given in Table XIII. Here we have simply the figures representing the strain and total stretch the fibers are able to sustain previous to rupture. In the head lines of the table we have the numbers of the samples tested and the length of fiber employed in the test; and by the latter we desire to be understood the distance between the clamps at the time the test is made. The first division of the table gives the results of the actual tests made with each fiber, and these results in strain in grams, and stretch in millimeters, are given in the columns under the respective headings. To secure a fair average, thirty fibers are tested in each sample, for this number was found, after repeated trials with the same sample, to give more nearly the same average result. At the foot of each column is given the sum of the strains and stretches of all the fibers represented. In the next section we have the recapitulation and reductions of these results; that is, we have stated the highest and lowest of all the tests and the average of all, and these are reduced from grams of the French standard to grains of the English standard for strain, and from millimeters to per cents of length for stretch. At the extreme bottom of the table are given the number of tests above the average, as compared with the number below the average—figures of value for determination of the uniformity of the sample with regard to the qualities under consideration. For the determination of the length of the fiber to be employed the averages given in the lower line of the division of recapitulation and reductions are necessary; but there are other relations shown in the figures of other parts of the table that will be of interest to those who may have more time to study them, and we therefore reproduce them in full. With these statements the table will explain itself.

In the examination of the table mentioned, or of the abstract of it we have already given, the variations between the results of the tests with different lengths do not seem to be very regular in any case; that is, there seems to be no distinct relation between the length of fiber and the strain and stretch it is able to sustain previous to rupture; for while it is true that there is a comparatively little difference in the result as to strain, and a comparatively regular decrease in the percentage of stretch, the differences between the figures for stretch are not sufficiently uniform to become a basis for any law to govern subsequent experiments. Thus, taking the figures for sample No. 60, we find the differences in the figures for stretch as follows:

Per cent. of stretch.	Differences.
48.76	6.40
42.30	
37.66	4.64
36.17	
34.56	1.49
35.86	
	1.61
	3.70

The difficulty of fixing the length of fiber to be employed in the tests, therefore, becomes apparent. If we take the average of these tests we find that it falls at 23.6 grams for strain and 33.3 per cent. for stretch. This would correspond with a length of between 2 and 3 centimeters in each case. Probably 2.5 would fall at nearly the true average for a series of tests. But for convenience, on many accounts, we were led to choose 2 centimeters as the length employed for our tests, and, as this was the length taken for all samples, the results must be fairly comparable.



The conditions for determination of the strain being thus settled, another difficulty arises that has proved even more perplexing. In what has just been stated we have spoken of the stretch the fiber sustains under the strain required for its rupture, and in many of our tests this has always been noted and recorded in making the tests of strain. But in the determination of the commercial value of the staple its elasticity must be considered, and it becomes an important question to fix the relations between this stretch or *elongation* and the elasticity or the power of the material of the fiber to return to its original condition subsequent to the application of strain not sufficient for rupture, and what will be the proportion of permanent stretch or *set* produced in each case. To determine this point a large number of tests have been made after the following manner: A certain number of fibers are drawn from each sample, and each fiber placed in the instrument in the same way as described for the tests of strain. A strain sufficient to cause a stretch of 1 millimeter is then applied. When this amount of stretch has been produced the strain is relieved and the fiber allowed to resume as far as possible its original condition. When the action of contraction appears complete the power is again applied and continued until a stretch of 2 millimeters is effected, when the strain is again removed and the fiber again allowed to contract. Again, after complete contraction, the operation of applying power and withdrawing it is repeated for a stretch of 3 millimeters, 4, 5, 6, &c., respectively, until the fiber breaks. In each experiment with the fiber we record the strain applied in grams, the total stretch suffered by the fiber at that strain, and the permanent stretch or the increased length of the fiber after each experiment. It must be plain that the difference between the total stretch or elongation and the permanent stretch or *set* represents the elasticity of the fiber under the given strain. The results of a series of experiments made upon different kinds of fiber are detailed in Table XIV. The question of how to state them best has been a perplexing one, and after long consideration we have concluded that because of the many relations they involve it is advisable to give them in full as they were obtained, leaving to others or to future work the matter of their condensation.

With these considerations we submit Table XIV, with the general conclusion, most important for our present purpose, that the total stretch each fiber is able to sustain previous to rupture is a fair indication of its elasticity. And on account of the excess of work required in making these tests the conclusion proves to be for us a fortunate one.

In the earlier tests made for this table the work was confined to samples of the known breeds, and fearing lest the more favorable conditions of feeding and management might have a tendency to induce greater regularity in the results, a series of tests were also made with samples from the various commercial grades of the Boston and Philadelphia markets at our disposal, in which the objections on account of such conditions could not arise. But as may be seen upon inspection of the results obtained from tests of these samples, the source of the material seems to be unimportant. The law, if it may be accepted as a law, still holds good, and the set and elasticity vary almost directly with the stretch. In this branch of our investigation we have relied principally upon the results of tests of strain and stretch taken in single operations for the determination of the relations of the various conditions of breed, part of fleece, sex, age, &c., upon the strength and elasticity of the staple in each case. In Table XV we have collected all of the individual tests, with samples of known breed, placing those of the same breed under the same head. This table is constructed after the same manner as Table XIV, already described. The results of the separate tests in each sample may be studied and compared if desirable, and from their various relations made out. For the more ready comparison of the relations between strain and stretch we have projected the curves given at the end of the table. These show pretty clearly what may be learned from more extended study of the tables themselves, that while there is a certain relation between the two qualities of the fiber, and that the relation is nearly general, it is by no means absolute from fiber to fiber. Thus, in these curves the figures at the bottom of the table indicate the number of the fiber tested in the sample represented. The figures at the side represent, respectively, strain and stretch, the colors in the figures and curves corresponding. We shall return to these curves further on. In the present table we may compare, then, the individual fibers of each sample, and secure from it the data for construction of the following tables showing the various relations above mentioned. At the bottom of the table we have the reductions of grams to grains of strain, and from millimeters to per cents of stretch, and as in the previous tables, for fineness, the highest and lowest results in each case, and the number of tests above and below the average, respectively, are given, we have here in a limited way the means for comparison of uniformity in the fibers of each sample as well.

In Table XVI we have collected the recapitulations and reductions of Table XV, arranged to show the influence of breed upon the qualities in question. It affords an opportunity not only for comparison of the breeds with each other, but for the variations occurring in the fibers of each breed also. Thus, if we collect the general averages, we find them to be as follows:

	Strain in grains.			Stretch in per cents.		
	Highest.	Lowest.	Average.	Highest.	Lowest.	Average.
Cotswold.....	44.54	16.10	30.44	55.00	10.65	35.45
Leicester.....	30.00	15.50	23.70	40.00	12.60	28.05
Lincoln.....	35.72	15.79	25.66	47.15	10.00	35.35
Southdown.....	21.29	6.48	12.78	39.70	8.45	22.05
Oxford.....	45.15	19.15	30.43	45.40	16.25	33.05
Merino.....	11.92	3.86	7.35	39.95	10.70	28.70



It will be remembered that these figures\* involve no other consideration than that of breed. Here we find that as regards the strain the Cotswold and Oxforddown are about equal, and that they have very nearly the same percentage of stretch, while in both strain and stretch the Oxforddown shows somewhat more of uniformity. Between the others there seems to be little of any similarity. Comparison of all the figures of this statement and the entire table shows that a high strain corresponds with a high stretch; but it is also true that this relation is by no means absolute; that is, there is no regular or proportionate increase of stretch with increase of strain. That while the Cotswold and Oxford and the other coarse wools have a high stretch with the high strain, relatively the stretch of the Merino is much higher when compared with its strain. At the same time when we examine the averages for each sample we find variations depending upon causes either difficult to determine or to be developed in the following tables. In the general averages, as shown by the highest and lowest, the Cotswold is the most uniform, though it presents tolerably wide variations from the average. Next to it stands the Merino, followed by the Southdown; the Lincoln, Leicester, and Oxford being comparatively irregular, according to the indications these figures afford.

In the next table the results given in Table XVII are collected and classified according to breed, sex, and parts of fleece. That is, in the first place, the breeds are all placed in separate groups, then under each group the rams' wools are placed in one division and the ewes' wools in another. These divisions are further subdivided and the figures representing the shoulder, side, hip, and belly, respectively, are placed in separate subdivisions. By these means we are able to obtain general averages for each condition, as well as to note the variations in the results in each case. And from this table it is easy to see that although the number of specimens examined and the number of results obtained in our investigation are apparently large, yet for the comparisons and deductions we have here to make they are still very meager, for in some cases we have had one or two results under each head, scarcely sufficient to base general conclusions upon. The general averages of this table are collected in the following one, Table XVIII, where they may be more conveniently compared.

In this table we have brought together the general averages of the two preceding ones, and we therefore have in it an exposition of the influence of breed, sex, and portion of fleece upon the strain and stretch. In the first portion of the table we have the general average found in Table XVII; that is, those found for each breed, with no consideration of sex, part of fleece, or other condition. We find here the relations already pointed out. The Cotswold and Oxford are strongest, and have the highest percentage of stretch. The Southdown and Merino the weakest, and have the highest relative stretch, that is, when referred to the size of the fiber and the strain they are able to sustain, while the other breeds occupy an intermediate position. The variations from the average are in all cases pretty wide, but least so in the case of the Cotswold and Merino.

In the further examination of this table we find that in all of the breeds with the exception of the Merino, as shown in the general average for the whole fleece in each case, the ewes' wool is stronger and is able to sustain a greater strain than the rams' wool. In the Merino the conditions in this regard are reversed. But the same relations do not hold for the stretch, for while the strain is in each case greater, we find that for the Cotswold and Oxforddown the rams' wool is able to sustain a greater per cent. of stretch than the ewes' wool. In the other breeds, however, the relations are the same, the higher stretch corresponding with the higher strain.

If now we compare the figures representing the different parts of the fleece, we find that in some cases there is a gradual increase from the shoulder to the hip as regards the strength, while as regards the stretch there appears to be no regularity. That is to say for the Cotswold of both sexes and the Lincoln and Oxford ewes the side is stronger than the shoulder, and the hip than the side samples. In all other cases the side wool appears to be the weakest and the hip wool the strongest. But all of the figures of this table clearly show that no fixed relation prevails between the amount of the strain and the percentage of stretch, though such a relation might occur if we had in all cases fibers of the same degree of fineness. But it would be exceedingly difficult and almost impossible to secure the data for such a comparison unless time were no consideration.

In the wools of the cross-bred animals there seems to have been no improvement in either strength or stretch as a result of the cross, for in all cases both stretch and strain are lower than in the original breeds of either side. It must, however, be remarked that the samples represented in these figures were taken from animals which probably received no special care in feeding and management, and the fibers may have suffered to some extent either from exposure or bad nutrition. Yet the figures to be given further on for the grades of the Boston and Philadelphia markets will scarcely sustain this view, and for the present at least, and until we have been able to study material from animals concerning which the conditions of feeding and management are known, we must believe that the discrepancies, if they may be so considered, are due to the influence of crossing.

Passing to the next table, No. XIX, we have an opportunity to study the influence of age of the animal upon the qualities under consideration. Here, as before, the figures are classified, first as to breed, then as to sex, then as to age, and finally as to parts of the fleece. And here is well illustrated the paucity of the results we have to work upon, for while there seem to be a great many results as a whole, we must depend in many cases upon a single individual for the determination of these relations in any given breed. If we look over Table XIX we find consider-

\* These figures are collected in Table XVIII, given further on.



able variations in the strength of the wool, both in different animals of the same age and in different parts of the same animal, which shows the importance of a large number of tests in each case. But from the general averages we have been able to obtain from them we have some interesting facts. These averages are collected in Table XX. They show, as a general rule, that the strongest wool is produced upon animals of about two years of age, or at the second shearing, though there are some exceptions to this rule. Thus, while in the Cotswold rams we have the strongest at two years, in the ewes we have it at one. In the Lincoln ram we have it stronger at one, and in the ewe at two. In the Southdown both the rams' and ewes' wools are stronger at one year than at two; while the Merino wool appears to attain a maximum strength at two years in the case of the rams and one in case of the ewes. But upon further examination we shall note another interesting point. We find that these wools attain a maximum strength at a given age, and show a certain falling off with increase of age. But this does not continue indefinitely. After the first decline, which may be rather decided, there is a gradual increase of strength with increase of age, and a second maximum may be reached at 4, 5, or even beyond this, higher than the first. This appears more marked in the coarse wools than in the Merino. But in the latter we have so many more tests, that this relation may be only accidental, and what is true for the Merino may be true for all other breeds as well; that is, after the first maximum is reached there is little variation in the strength of the wool, and the wool of the older animal is as good as regards strength as that of a younger one. But if, as we have already shown, the diameter of the fiber increases with the age of the animal, we should also expect that there would be an increase in the strength. It appears, then, that this relation does hold good here, for we have found that in the coarse-wooled breeds the increase in size of the fiber corresponds with increase in the age with greater regularity than in the Merino, and so we find here that this relation, as we are able to trace it, is more marked in the coarse wools than in the Merinos. But, as we have already intimated, this difference in the two classes of wools must be considered with reference to the number of samples examined in each case, and its existence as a general fact must still remain an open question.

When we examine the relations of stretch to age we find somewhat similar conditions, and the maximum corresponds in most cases with from one to two years in the case of the long and coarse wools, and with five or six years in the case of the merino. It is greatly to be regretted that we have not more figures for this comparison; but taken as a whole we believe we may conclude that in most cases the strength and stretch, like the fineness, will increase with the age of the animal, at least up to the limits of its profitable wool-producing capacity.

In Tables XXI, XXII, and XXIII we have results collected and arranged to show the influence of the folds or wrinkles of the Merino race upon the characteristics of the staple as regards strength and stretch. In the first table, No. XXI, we have them divided into two classes, one class including results for samples from the tops of folds, the other from between the folds. In glancing over the figures, either for strain or stretch, in this table we see considerable variation from sample to sample as well as in the relations between strain and stretch in each case. But what is more important is, that in the figures representing the fiber from between the wrinkles we find less variation in the strength from sample to sample, though the average strength is lower. The latter condition is to be expected also, for we remember that the fiber from between the folds is much finer than that grown upon them, and the strain should naturally be less in the former case than in the latter. But we find the general average for percentage of stretch in the fibers from between the folds greater than in the others, though the difference is not great. In view of the relations already developed this was scarcely to be expected.

In Table XXII the results of Table XXI are classified with reference to the portion of the fleece represented, and here we find the same relations to hold true. The wool from between the wrinkles is weaker than that from the top, while in almost every case the stretch is higher in the former than in the latter, whatever may be the source of the sample. We have an exception to this rule in No. 45, neck. Here the wool from the top of the wrinkle proves more elastic than that from between the folds. But as regards the influence of different parts of the fleece upon the quality of the wool upon the folds and between them there does not seem to be sufficient regularity to establish a law.

In Table XXIII we have a collection of the averages deduced in the two preceding tables, and we have in a condensed form the facts already set forth. We see that the wool from top of wrinkle is stronger but less elastic than that from between the wrinkles when taken as a whole both in ram and ewe, and it appears also to be true whatever be the source of the sample in the fleece. We may therefore accept it as a general rule, and it shows that in the strength and elasticity, as well as in the fineness, the wool from the folds is less valuable than that from the portion of the fleece where no folds occur, and it would therefore appear that if it be possible to secure as much wool without them as with them they should be dispensed with if this be within the range of the breeder's art.

In the preceding tables we have presented the data showing the relations of the various conditions of breeding upon each of characteristics of the fiber we have under consideration, and have thus furnished an opportunity to study each one separately. It now remains to bring together all the results, or rather the averages, they furnish to show the influence of the various conditions upon all the qualities examined collectively. To this end we have gathered from the several tables the general averages obtained. What is there shown will be better understood by reference to them, Tables XXIV to XXVI inclusive. In the first place, we have in Table XXIV all the general averages showing the influence of breed upon the fiber, in the next the influence of age, and in the last the rela-



tion between the number of crimps per inch, and the fineness, strain, and stretch. Referring to the tables, then, we find in Table XXIV, at the top, a section in which is given, under the tables, number of crimps per inch, length, fineness, strain, and stretch, the general average obtained for each in each breed, with no reference to any other quality. But we must call attention to the seeming advantage of the Leicester as regards length. It must be borne in mind that most of the material for these examinations was collected in September from the bodies of the animals, and that at this time the wool had acquired only half its annual growth. On the other hand, the Leicester wool examined was that of one year's growth, and had acquired its full length. In other particulars the comparisons may be made without reserve. The figures of this section show, then, that, the Cotswold and Leicester breeds produce the longest fiber, and that in this respect the Lincoln is somewhat inferior to these two. These three constitute the long-wooled breeds. In the other wools the Downs occupy a position between the Merino and long-wools, the Oxford and Hampshire being of about equal length and longer as a rule than Southdown. The latter in turn has about the same length as the American Merino. The Merino wools we have examined have an average length of 1.5 inches, which shows that the staple in full growth and development should have an average length in crimp of about three inches. In fineness we find the Merino to take the lead, as might naturally be expected. This is followed by the Southdown and Hampshiredown, which resemble it closely in very many peculiarities of form and quality, the Southdown being the finer of the two, while the other breeds stand in the following order: Lincoln, Leicester, Cotswold, and Oxforddown. The Oxforddown is coarser than either of the two breeds from which it sprang, and thus shows to some extent the influence of the cross in the development of strength and vigor. But now when we come to examine the figures for strength of the fiber represented in the strain, we find the order somewhat changed, and the law that the strain should increase with the diameter of the fiber somewhat interfered with. Thus, with regard to the strain, the order of strain from the weakest to the strongest is as follows: Merino, Southdown, Leicester, Lincoln, Oxford, and Cotswold. That is, whereas we find the Lincoln finer than the Leicester and the Cotswold than the Oxford, we unexpectedly find the same order as regards strength, the Lincoln and Cotswold, which, because of the smaller amount of material they contain, should be able to resist a less strain than the Leicester and Oxford respectively, being really the stronger, thus showing conclusively, as far as these figures go, that the general rule that has been adopted by many of the best authorities on wool, that there is a direct relation between the size of the fiber or its diameter and its strength, is unjust and should not be accepted. The differences here shown are quite sufficient to disprove the rule.

So also with regard to stretch. It is naturally to be expected that, for the same material, an increase of cross-section of the specimen tested should correspond with an increased stretch it should sustain. But we find that this is by no means the case with wools, and differences in quality from breed to breed are very manifest here. The Merino, which has the smallest diameter, should also have the smallest percentage of stretch; but we find this latter in the Southdown, which is much coarser. So also we find that while the Merino, having an average fineness of 2.131 centimillimeters, has a percentage of stretch equal to 28.70; the Oxford, Cotswold, Leicester, and Lincoln, which are nearly or quite twice as coarse, stretch only from 33 to 35 per cent. in a length of 20 millimeters. This shows that in reality the Merino wool is apparently much more elastic than that of other breeds, while of the coarse wools the Cotswold and Lincoln are the most elastic. As we shall see further on, however, in the comparison of strains and stretch for the fibers reduced to the same diameter, the difficulties apparent here are thoroughly cleared up. This point is worthy of much more thorough and extensive study than we have thus far been able to devote to it, but we are fortunately now in possession of material for the purpose, and hope at some future time to present data of a much more definite character, that will afford conclusions that may be accepted as a guide in this interesting and valuable branch of sheep-breeding and production of wool.

The comparative elasticity of the wools of different breeds will be shown in a different manner elsewhere in this report, so that we need discuss them no further here. The results obtained by the two methods show the reliability of the total stretch as here stated, taken in connection with the fineness, as an indication of this quality of the fiber.

In the continuation of this table we have these same relations between length and fineness, strain and stretch, as affected by sex and portion of fleece, fully illustrated. From these figures it appears that in the Cotswold and Southdown the rams produce the longer wool, while in the other races the ewes take the lead in this particular. It would therefore appear that for the same weight of carcass, and hence the same extent of skin surface, the ewes should be better wool-producers than the rams in all the races except the two here mentioned. But as regards the portions of the fleece, it appears that the longest fiber is produced on the side and hip in all the coarse-wooled breeds, while in the Merino the neck and shoulder are more favored in this respect. Indeed, it is probable that the neck samples here represented were taken from so near the shoulder that they should really be classed with that portion of the fleece. So we also find, if we exclude the belly wool—which, as we shall see further on, is very inferior in many particulars—the finest wool as a rule is found upon the shoulder and side, with the predominance in favor of the former. In the Cotswold and Merino we find the finer wool on the shoulder in both cases of ram and ewe. In the Lincoln the finer wool is upon the side in both ram and ewe, while in the Downs the ram produces the finer wool on the shoulder and the ewe on the side.



But as regards strain we find the stronger wool invariably upon the hip, though the wool of this part is not always coarsest, proving again that the strongest resistance to strain does not always correspond with the greatest area of cross-section in the sample tested. After the hip the greatest strain varies between the shoulder and side, being found greater sometimes in one case and sometimes in the other, and nearly equally divided. But the variations between the two are often comparatively wide, wider than the difference in fineness of the two parts would lead one to expect. Thus, in case of the Cotswold ram, we find a difference of nearly 7 grams in favor of the side, and of only about 2 in favor of the side in the case of the ewe. On the other hand, in the case of the Lincoln ram we find a difference of only about 3.4 grams in favor of the shoulder, while in the Lincoln ewe the difference is nearly 7 in favor of the side. In the Southdown they are nearly equal in both cases, and in the Oxford the difference is only 1 or 2, while in the Merino they are also very nearly equal. But we find that as regards the elasticity of the fiber the tendency to the highest standard is toward the hip, and that the latter and the side furnish, as a general rule, the higher stretch. It is true that the shoulder wool is rather finer than that of other parts, and the stretch should therefore be expected to be lower in that part; but the relation between the fineness and stretch is not sufficiently marked to account for the differences we find here. So that when we come to consider the wool as a whole, and its value for the textile industries, one quality counterbalances another to a large extent, and there would seem to be less necessity, and even less desirability, for dividing the fleeces in grading than has popularly been supposed. But these figures will bear further comparison and further study, and we hope and believe that breeders and manufacturers alike will find in them much of interest and value for practical application in their respective pursuits.

We have next to consider the influence of age upon the different qualities of the fiber, as illustrated in the general averages of all the tables we have presented, and as collected in Table XXV. Here the distinctions due to age are the same as previously described in the consideration of previous tables. In all cases in which the age falls below one year, and is not otherwise given, it is simply stated by the term "lamb." But at the same time it may be considered that the animals represented were of the spring drop of the same year, and that the wool when taken had had a growth of about five to seven or eight months. Lambs and six months animals are therefore practically of about the same age. The wool of animals one year or over was, as has already been stated, taken in September, after a clip made between April 15 and May 1, as a general rule having had about half its annual growth. Now, when we compare the figures of this table as regards the length, we find that the young animals have the power of producing wool twice as rapidly as fully-developed animals, for in all cases the lambs' wool is longer than that of older sheep, while in many cases it is fully twice as long. How long this rapid growth would continue we have had no opportunity to determine, but we see that at the age of one year, though slightly more rapid than at a more advanced age, the difference in each case is very small. On the other hand, with an increase of age there seems to be a tendency toward an increased size of fiber and that the staple produced becomes coarser with the advance of years. We may see exceptions to this rule in all the breeds, but in general this tendency undoubtedly prevails. So also we have a tendency toward increase of strain, though here we find exceptions, too. The stretch fluctuates, and in some cases even exhibits a tendency to decline, showing that the increase of age is probably accompanied by a decrease in the elastic quality of the wool produced. There can be no doubt, therefore, that if all the qualities we have studied be taken into account, the sheep reaches its maximum capacity for wool production at the age of two or three years, and that beyond that age the staple is likely to decline, both as to quantity and quality. We may find exceptions to this in animals well fed and especially well cared for; but in large flocks, when no extraordinary attention is received by the animals, they will probably produce wool of lower standard at six years of age than at two or three.

In Table XXVI we have a comparison of the general averages to show the relation between the number of crimps per inch in the fiber and the other qualities heretofore named. It shows that as a general rule in the Merino, in which it is by far the most important, the diameter of the fiber decreases and the fineness consequently increases with an increase in the number of crimps per inch. But when we carefully examine the table we find that the relation does not always hold good, and that sometimes with very fine fiber we may have very little crimp, and *vice versa*. However, it holds good for the final averages, showing that it is reliable for the majority of cases, and it may therefore be accepted both by breeders and manufacturers as a tolerably fair indication of fineness, even though it may not be an absolute guide.

As regards the strain and stretch, the relation between them and the fineness already pointed out here find application, and here, as elsewhere, definite relations appear to be wanting.



TABLE XIII.—Showing influence of length of fiber tested upon strain and stretch.

Catalogue number of samples..	66. SIDE.				66. SIDE.				66. SIDE.				66. SIDE.				
	1 centimeter.				2 centimeters.				3 centimeters.				4 centimeters.				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	21.50	5.00	30.00	5.00	16.50	8.50	28.00	10.25	31.00	12.50	22.00	10.25	23.50	15.00	30.00	16.60	
	13.00	4.75	31.00	5.00	18.75	9.50	22.00	8.00	17.00	10.00	24.00	10.00	17.00	13.25	26.00	18.60	
	21.00	5.00	25.25	5.00	29.00	9.00	32.50	9.00	24.25	12.50	23.00	11.00	28.00	14.25	17.50	10.75	
	20.00	4.00	31.00	4.75	23.00	9.25	20.25	8.25	24.60	12.25	31.50	12.25	18.25	17.25	26.00	14.75	
	14.50	4.00	23.00	5.00	22.50	8.75	37.00	10.25	16.00	9.00	30.50	12.50	16.50	9.50	22.00	13.25	
	14.00	4.25	21.00	6.00	14.00	6.00	31.75	8.00	23.50	13.00	24.75	13.50	37.00	17.50	21.00	16.00	
	32.00	5.75	21.00	5.50	19.00	7.00	23.50	10.00	17.50	11.00	22.00	8.00	24.75	14.00	23.25	15.75	
	32.50	5.00	20.25	4.25	20.50	9.50	19.60	7.50	15.00	11.75	18.00	16.25	19.50	12.00	24.00	18.00	
	16.50	4.00	20.00	3.75	13.00	7.00	30.00	8.00	18.00	13.00	23.00	12.00	20.00	7.00	12.00	0.25	
	20.25	4.75	36.00	5.00	16.25	8.50	22.50	7.25	22.00	12.50	16.00	11.00	13.00	11.75	20.50	15.25	
	33.50	5.00	25.25	5.00	26.50	9.50	27.50	8.25	15.00	12.00	18.50	10.50	32.00	17.25	21.75	12.50	
	27.50	5.50	20.00	4.50	11.50	7.50	39.75	9.00	23.00	5.00	23.00	12.00	31.25	15.00	15.00	15.25	
	20.00	4.00	19.75	4.25	34.00	10.25	33.00	7.50	15.00	11.60	18.00	11.25	35.00	14.50	13.00	12.50	
	18.50	4.50	30.00	6.00	17.75	8.50	38.00	9.00	30.75	15.00	22.50	11.00	24.75	14.50	18.00	18.50	
	20.00	5.00	20.00	5.75	17.75	6.00	28.00	8.60	25.25	11.00	31.00	11.75	24.00	17.00	26.00	14.75	
	Total .....	330.25	71.50	390.00	74.75	300.00	124.75	445.25	129.25	327.75	172.00	348.25	107.25	360.50	209.75	310.00	224.50
	Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
		Highest .....	30.00	555.65	6.00	60.00	39.75	613.52	10.25	51.25	39.75	613.52	13.50	45.00	37.00	671.68	18.50
Lowest .....		13.00	209.65	8.75	37.50	11.60	177.50	6.00	30.00	15.00	231.52	5.00	16.67	12.00	183.22	7.00	17.50
Average .....	23.57	368.42	4.87	48.70	24.84	383.40	8.40	42.30	22.53	347.74	11.30	37.07	22.51	347.43	11.47	36.13	
Tests above average .....	13		17		14		17		15		10		15		10		
Tests below average .....	17		13		10		13		15		14		13		11		

Catalogue number of samples..	66. SIDE.				66. SIDE.				64. SIDE.				64. SIDE.				
	5 centimeters.				6 centimeters.				2 centimeters.				4 centimeters.				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	27.00	20.00	30.25	13.75	21.90	21.00	26.75	23.75	29.50	5.00	34.00	7.50	40.25	13.00	32.00	14.00	
	21.60	14.25	33.00	19.00	32.00	25.00	22.25	17.00	36.25	6.50	33.00	8.00	29.25	15.25	32.00	14.00	
	40.00	22.75	20.00	18.50	19.00	20.00	14.00	11.50	27.50	4.00	25.75	6.50	31.00	14.25	27.50	13.00	
	19.00	17.00	20.00	14.50	29.00	25.00	24.00	20.00	32.00	7.25	47.00	9.00	34.00	17.00	30.50	8.50	
	32.75	16.50	30.00	17.25	15.00	14.75	17.00	13.50	26.75	8.75	38.00	8.50	32.25	14.00	19.00	6.50	
	25.25	17.00	20.00	10.25	16.00	14.00	14.00	18.50	33.00	8.00	27.00	9.00	25.00	10.00	26.25	13.25	
	17.00	16.00	29.25	18.50	24.00	21.50	17.50	12.00	27.50	8.00	20.00	6.00	20.00	11.00	27.25	15.50	
	22.00	17.75	27.00	17.25	23.00	25.50	18.00	21.25	29.00	7.75	33.00	9.00	34.00	13.00	28.75	12.25	
	18.50	12.00	25.00	17.00	14.00	19.75	23.00	14.00	23.00	8.50	42.00	9.00	31.00	14.75	31.25	17.00	
	17.75	16.00	31.00	18.00	16.00	12.00	20.75	21.00	20.00	8.25	34.75	8.50	28.25	9.25	29.00	16.00	
	22.50	20.00	20.00	17.75	20.50	17.00	30.00	10.75	31.50	6.50	22.50	7.75	33.00	14.25	30.50	14.25	
	32.50	19.25	27.00	18.00	31.00	21.50	26.00	18.50	28.00	10.00	34.75	6.00	33.00	15.00	36.75	14.50	
	36.00	21.90	19.00	14.00	27.00	22.00	19.00	18.50	26.50	6.50	34.50	7.25	21.25	10.50	35.75	17.00	
	27.00	16.75	25.25	10.50	19.00	21.00	18.00	11.00	26.25	7.25	27.00	5.50	30.00	12.25	27.00	10.00	
	20.00	17.00	33.00	10.00	21.25	15.00	21.00	16.00	23.00	6.00	33.25	6.25	40.00	17.25	29.50	12.25	
	Total .....	385.75	263.25	404.75	252.25	327.75	296.00	321.25	256.75	436.25	100.25	494.50	114.75	442.25	201.25	413.00	200.50
	Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
		Highest .....	40.00	617.33	22.75	45.50	32.00	493.91	25.50	43.50	47.00	725.44	10.00	50.00	40.00	617.33	17.25
Lowest .....		17.00	262.39	10.25	20.00	14.00	216.09	11.00	18.33	23.00	330.66	4.00	20.00	19.00	283.20	8.00	20.00
Average .....	26.35	408.17	17.28	34.56	21.63	333.85	13.52	30.88	30.09	478.32	7.46	37.90	29.50	455.32	13.30	33.47	
Tests above average .....	13		14		12		17		14		18		15		17		
Tests below average .....	17		10		13		13		16		12		14		12		



TABLE XIII.—Showing influence of length of fiber tested upon strain and stretch—Continued.

Catalogue number of samples..	35. SIDE.				35. SIDE.				39. SIDE.				39. SIDE.				59. SIDE.				
	2 centimeters.				4 centimeters.				2 centimeters.				4 centimeters.				2 centimeters.				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	
Actual measurement in grams and millimeters.	49.00	8.50	37.00	9.00	47.00	10.00	31.75	15.00	43.00	7.00	47.00	8.50	36.00	13.50	39.75	14.75	18.50	6.25	26.75	6.50	
	58.50	9.00	47.00	7.50	36.00	11.00	44.50	17.00	29.50	3.25	46.00	8.25	34.00	15.50	33.00	11.50	30.25	8.00	30.00	9.00	
	57.00	8.50	45.75	9.50	43.00	6.50	36.00	15.75	40.00	8.25	41.00	8.25	41.25	15.25	22.00	13.50	15.25	7.50	31.00	8.25	
	35.50	8.00	36.00	7.50	35.00	13.50	25.50	10.00	43.00	8.25	35.00	6.25	39.75	15.00	38.00	16.00	21.00	7.75	25.00	7.25	
	52.75	8.50	24.00	9.00	46.00	12.00	52.50	14.50	31.00	7.50	44.00	8.50	38.50	14.50	17.00	7.00	31.00	7.25	31.00	7.50	
	49.75	7.50	33.00	9.00	26.00	3.06	48.75	14.25	42.00	0.50	41.75	9.00	36.75	18.00	48.00	14.75	19.00	7.50	31.00	9.00	
	50.00	8.00	37.00	5.25	27.00	4.00	22.50	13.25	30.25	6.00	45.75	8.50	34.00	12.00	38.00	15.00	16.00	7.60	26.25	8.25	
	38.00	8.50	40.50	9.00	35.00	15.00	42.00	17.25	34.75	9.00	57.00	9.00	43.25	14.50	40.00	14.75	25.75	7.50	28.00	8.00	
	31.00	9.00	50.00	8.50	45.25	14.50	46.00	15.25	44.00	8.00	33.00	6.50	38.00	14.25	23.00	15.25	12.00	4.00	15.25	7.50	
	58.00	9.00	36.00	8.00	34.00	14.00	43.75	16.00	46.00	9.00	37.00	8.00	33.00	15.25	35.50	14.00	10.00	4.25	19.00	7.50	
	34.00	3.00	33.00	4.50	52.00	14.75	31.00	16.50	35.50	7.00	48.00	8.25	30.00	15.00	43.00	15.25	34.00	9.00	18.25	7.00	
	35.00	7.00	27.00	8.00	49.75	10.00	19.00	6.00	39.75	8.00	25.50	9.00	42.75	13.50	42.00	14.25	13.00	7.50	17.00	6.50	
	39.75	6.00	23.00	6.50	36.00	14.75	30.00	12.75	40.00	0.25	81.00	6.00	35.00	12.00	36.75	14.75	35.25	6.50	21.00	8.50	
	61.00	8.00	23.00	8.00	31.00	10.50	31.00	12.75	37.50	7.75	32.50	9.00	35.00	14.75	40.00	16.50	30.00	9.00	31.25	9.00	
	35.75	8.00	25.00	1.50	34.50	15.50	27.00	13.75	40.00	7.50	47.75	7.50	38.75	15.00	39.00	15.00	18.00	7.00	19.00	8.50	
Total .....	686.00	116.50	517.25	110.75	571.50	187.00	536.25	210.50	576.25	115.25	612.25	110.75	559.00	216.00	523.00	212.25	329.00	100.50	373.75	119.25	
	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		
Recapitulation and reduction:	<i>gms.</i>	<i>grs.</i>	<i>mm.</i>	<i>p. ct.</i>	<i>gms.</i>	<i>grs.</i>	<i>mm.</i>	<i>p. ct.</i>	<i>gms.</i>	<i>grs.</i>	<i>mm.</i>	<i>p. ct.</i>	<i>gms.</i>	<i>grs.</i>	<i>mm.</i>	<i>p. ct.</i>	<i>gms.</i>	<i>grs.</i>	<i>mm.</i>	<i>p. ct.</i>	
	Highest.....	61.00	841.61	9.50	47.50	52.50	810.32	17.25	46.12	57.00	879.77	0.50	47.50	48.00	740.86	18.50	41.25	36.00	555.65	9.00	45.00
	Lowest.....	23.00	354.99	1.50	7.50	19.00	293.20	3.00	7.50	25.50	393.58	3.25	16.25	17.00	262.39	7.00	17.50	10.00	154.35	4.00	20.00
Average.....	40.10	618.93	7.57	37.85	38.92	569.85	13.25	33.12	39.61	611.36	7.83	39.15	36.06	556.57	14.27	35.67	23.42	381.48	7.52	37.00	
Tests above average.....	10		20		12		20		18		19		17		20		15		12		
Tests below average.....	20		10		18		9		12		11		13		10		15		18		
	59. SIDE.				60. SIDE.				60. SIDE.				61. SIDE.				61. SIDE.				
	4 centimeters.				2 centimeters.				4 centimeters.				2 centimeters.				4 centimeters.				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	
Actual measurement in grams and millimeters.	15.25	7.00	19.50	15.50	49.00	8.00	24.00	8.25	26.25	7.25	33.25	13.00	23.50	7.50	28.00	8.50	27.00	16.00	17.00	12.00	
	25.25	9.75	25.25	14.25	42.50	8.50	40.00	7.50	37.00	14.00	33.00	17.00	23.25	8.50	31.00	10.25	21.00	12.50	21.00	13.25	
	22.00	15.00	18.00	10.00	47.00	0.25	24.00	8.00	29.00	13.00	28.00	14.00	27.00	0.00	19.00	8.50	25.00	14.00	18.00	17.00	
	29.50	14.25	27.00	10.00	42.00	9.50	29.00	8.00	35.00	18.00	35.00	17.25	26.25	9.25	23.25	9.25	23.00	14.00	16.00	14.50	
	21.00	12.75	22.00	13.75	42.50	8.25	38.00	8.50	27.00	8.25	32.00	14.00	27.00	8.50	24.60	8.25	27.50	17.50	24.50	16.00	
	20.00	13.00	26.25	12.00	47.75	9.50	37.50	9.00	39.75	15.00	30.00	15.00	24.00	8.25	23.50	7.50	28.00	15.50	24.50	16.50	
	83.00	15.00	24.00	16.00	47.00	7.25	41.00	9.50	30.00	19.00	31.00	14.50	18.50	0.00	24.00	8.50	23.00	15.25	26.25	16.00	
	17.50	6.80	16.50	15.50	42.00	8.00	32.00	8.60	37.00	14.00	30.25	12.50	21.25	7.50	22.00	8.25	24.00	14.00	20.00	11.00	
	21.00	14.00	21.00	13.00	38.00	8.50	39.00	8.25	31.00	14.00	29.50	12.60	23.00	0.00	30.00	0.00	27.50	15.00	25.50	13.50	
	28.00	14.00	15.25	13.50	34.75	6.50	36.50	8.00	38.00	16.50	34.00	18.00	30.00	0.00	20.00	8.25	19.00	12.25	20.00	14.50	
	29.00	15.00	25.00	6.00	37.60	6.25	25.00	8.25	25.00	13.50	33.00	17.50	30.00	7.25	27.00	8.00	22.75	12.25	28.00	16.00	
	25.00	12.25	32.00	14.00	52.00	10.00	39.50	8.50	30.00	15.00	38.75	15.00	29.75	8.25	23.00	9.50	25.00	16.25	22.50	16.00	
	28.00	13.25	23.00	14.00	34.00	8.50	36.25	6.50	44.50	16.50	35.00	16.00	26.00	8.75	23.25	8.25	27.00	16.50	26.25	15.25	
	20.00	11.75	21.25	13.00	29.75	7.00	37.75	8.75	35.25	13.50	43.25	17.25	30.00	10.00	26.25	8.50	24.00	14.50	10.75	16.00	
	21.25	9.75	18.00	11.00	29.00	8.00	44.00	8.50	30.00	15.50	30.00	14.75	28.50	9.50	26.00	9.50	17.00	16.50	24.00	15.00	
Total .....	359.75	182.75	332.00	137.50	609.75	113.00	523.50	124.00	494.75	207.00	501.00	225.25	393.00	130.25	373.75	130.00	300.75	221.00	333.25	222.60	
	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		
Recapitulation and reduction:	<i>gms.</i>	<i>grs.</i>	<i>mm.</i>	<i>p. ct.</i>	<i>gms.</i>	<i>grs.</i>	<i>mm.</i>	<i>p. ct.</i>	<i>gms.</i>	<i>grs.</i>	<i>mm.</i>	<i>p. ct.</i>	<i>gms.</i>	<i>grs.</i>	<i>mm.</i>	<i>p. ct.</i>	<i>gms.</i>	<i>grs.</i>	<i>mm.</i>	<i>p. ct.</i>	
	Highest.....	33.00	509.34	16.00	40.00	52.00	802.00	10.00	50.00	44.50	686.84	18.00	45.00	31.00	473.47	10.25	51.25	28.00	432.17	17.50	43.75
	Lowest.....	15.00	231.52	6.00	15.00	24.00	370.42	6.25	31.26	25.00	385.87	7.25	18.12	13.50	285.54	7.25	36.25	18.00	246.95	11.00	27.50
Average.....	23.05	355.77	12.67	31.67	37.77	582.96	7.90	39.50	33.19	512.27	14.40	36.00	25.55	394.85	8.67	43.35	23.10	356.54	14.78	36.53	
Tests above average.....	15		21		13		24		14		18		17		14		16		16		
Tests below average.....	15		9		17		6		12		12		13		16		14		14		



TABLE XIV.—Actual measurements, showing relation between strain, stretch, and elasticity.

Catalogue No. of samples..		COTSWOLD.																			
		176.				170.				170.				170.				170.			
		Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		11.75	1.00	0.25	0.75	16.50	1.00	0.00	1.00	23.50	1.00	0.25	0.75	17.50	1.00	0.00	1.00	16.75	1.00	0.00	1.00
Actual measurements in grams and millimeters.		12.25	2.00	0.75	1.25	17.00	2.00	0.50	1.50	24.50	2.00	0.50	1.50	18.50	2.00	0.50	1.50	17.50	2.00	0.50	1.50
		12.50	3.00	1.25	1.75	17.50	3.00	1.00	2.00	25.75	2.00	1.00	2.00	19.50	3.00	1.00	2.00	18.00	3.00	1.00	2.00
Actual measurements in grams and millimeters.		13.00	4.00	1.75	2.25	18.00	4.00	1.75	2.25	26.50	4.00	1.75	2.25	20.50	4.00	1.50	2.50	18.75	4.00	1.75	2.25
		13.50	5.00	2.25	2.75	18.75	5.00	2.25	2.75	27.75	5.00	2.25	2.75	21.75	5.00	2.25	2.75	20.25	5.00	2.25	2.75
Actual measurements in grams and millimeters.		15.25	6.00	3.00	3.00	21.50	6.00	3.00	3.00	31.25	6.00	3.00	3.00	24.75	6.00	3.00	3.00	22.75	6.00	3.00	3.00
		17.50	6.50	.....	.....	24.75	7.00	3.75	3.25	30.50	7.00	3.75	3.25	28.75	7.00	3.75	3.25	27.25	7.00	3.75	3.25
Actual measurements in grams and millimeters.		15.00	1.00	0.25	0.75	16.50	1.00	0.25	0.75	17.50	1.00	0.25	0.75	18.60	1.00	0.00	1.00	10.75	1.00	0.25	0.75
		16.60	2.00	0.75	1.25	17.00	2.00	0.50	1.50	18.50	2.00	0.75	1.25	19.50	2.00	0.50	1.50	11.25	2.00	0.75	1.25
Actual measurements in grams and millimeters.		16.75	3.00	1.00	2.00	17.75	3.00	1.00	2.00	19.50	3.00	1.00	2.00	19.75	3.00	1.00	2.00	11.75	3.00	1.00	2.00
		17.50	4.00	1.75	2.25	18.50	4.00	1.75	2.25	20.50	4.00	1.75	2.25	20.75	4.00	1.75	2.25	12.50	4.00	1.75	2.25
Actual measurements in grams and millimeters.		18.50	5.00	2.25	2.75	19.50	5.00	2.25	2.75	21.75	5.00	2.25	2.75	22.60	5.00	2.25	2.75	13.50	5.00	2.25	2.75
		20.50	6.00	3.00	3.00	22.75	6.00	3.00	3.00	24.50	6.00	3.00	3.00	25.50	6.00	3.00	3.00	14.50	6.00	3.00	3.00
Actual measurements in grams and millimeters.		24.50	7.00	3.75	3.25	26.50	7.00	3.75	3.25	28.50	7.00	3.75	3.25	27.25	7.00	3.75	3.25	16.75	7.00	3.75	3.25
		26.50	7.50	.....	.....	29.50	8.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Actual measurements in grams and millimeters.		16.00	1.00	0.00	1.00	16.50	1.00	0.00	1.00	15.00	1.00	0.00	1.00	19.25	1.00	0.00	1.00	15.25	1.00	0.00	1.00
		17.50	2.00	0.50	1.50	17.00	2.00	0.75	1.25	16.25	2.00	0.50	1.50	20.25	2.00	0.50	1.50	16.25	2.00	0.50	1.50
Actual measurements in grams and millimeters.		18.50	3.00	1.00	2.00	18.25	3.00	1.00	2.00	17.25	3.00	1.00	2.00	20.75	3.00	1.00	2.00	17.25	3.00	1.00	2.00
		19.00	4.00	1.75	2.25	18.75	4.00	1.75	2.25	17.75	4.00	1.75	2.25	21.75	4.00	1.75	2.25	18.60	4.00	1.75	2.25
Actual measurements in grams and millimeters.		20.00	5.00	2.25	2.75	20.50	5.00	2.25	2.75	19.00	5.00	2.25	2.75	23.50	5.00	2.25	2.75	19.60	5.00	2.25	2.75
		23.00	6.00	3.00	3.00	23.00	6.00	3.00	3.00	21.25	6.00	3.00	3.00	26.75	6.00	3.00	3.00	21.50	6.00	3.00	3.00
Actual measurements in grams and millimeters.		26.25	6.75	.....	.....	26.75	7.00	3.75	3.25	24.25	7.00	3.75	3.25	30.75	7.00	3.75	3.25	24.75	7.00	3.75	3.25
		.....	.....	.....	.....	30.60	7.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Catalogue No. of samples..		COTSWOLD.																			
		171.				171.				171.				171.				171.			
		Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		18.75	1.00	0.00	1.00	18.75	1.00	0.00	1.00	11.75	3.00	0.25	0.75	11.75	3.00	0.25	0.75	17.50	1.00	0.25	0.75
Actual measurements in grams and millimeters.		19.50	2.00	0.75	1.25	19.50	2.00	0.75	1.25	12.50	2.00	0.75	1.25	12.50	2.00	0.75	1.25	17.50	2.00	0.75	1.25
		20.00	3.00	1.00	2.00	19.75	3.00	1.00	2.00	13.25	3.00	1.25	1.75	12.75	4.00	1.75	2.25	19.50	3.00	1.00	2.00
Actual measurements in grams and millimeters.		20.75	4.00	1.75	2.25	20.50	4.00	1.50	2.50	13.50	4.00	1.75	2.25	13.50	5.00	2.25	2.75	20.25	4.00	1.75	2.25
		22.50	5.00	2.25	2.75	21.50	5.00	2.25	2.75	14.25	5.00	2.50	2.50	14.50	6.00	3.00	3.00	22.50	5.00	2.25	2.75
Actual measurements in grams and millimeters.		25.25	6.00	3.00	3.00	24.50	6.00	3.00	3.00	15.50	6.00	3.00	3.00	16.25	7.00	3.75	3.25	23.50	6.00	3.00	3.00
		28.75	7.00	3.75	3.25	28.50	7.00	3.75	3.25	.....	.....	.....	.....	18.00	8.00	4.75	3.25	27.75	7.00	3.75	3.25
Actual measurements in grams and millimeters.		32.75	7.75	.....	.....	30.60	7.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30.75	7.75	.....	.....
		10.75	1.00	0.25	0.75	10.75	1.00	0.25	0.75	11.25	1.00	0.25	0.75	17.50	1.00	0.25	0.75	13.75	1.00	0.00	1.00
Actual measurements in grams and millimeters.		11.50	2.00	0.75	1.25	10.60	2.00	0.75	1.25	14.25	2.00	0.75	1.25	17.75	2.00	0.75	1.25	14.60	2.00	0.75	1.25
		11.75	3.00	1.25	1.75	11.00	3.00	1.25	1.75	14.50	3.00	1.25	1.75	18.50	3.00	1.00	2.00	14.75	4.00	1.75	2.25
Actual measurements in grams and millimeters.		11.75	4.00	2.00	2.00	11.60	4.00	1.75	2.25	13.00	4.00	2.00	2.00	16.80	4.00	1.75	2.25	16.25	5.00	2.25	2.75
		12.50	5.00	2.50	2.50	12.25	5.00	2.50	2.50	15.75	5.00	2.50	2.50	20.25	5.00	2.25	2.75	18.75	6.00	3.00	3.00
Actual measurements in grams and millimeters.		13.25	6.00	3.25	2.75	13.25	5.25	.....	.....	16.75	6.00	3.00	3.00	22.50	6.00	3.00	3.00	19.25	6.50	.....	.....
		14.75	7.00	3.75	3.25	.....	.....	.....	.....	18.50	7.00	3.75	3.25	25.75	7.00	3.75	3.25	.....	.....	.....	.....
Actual measurements in grams and millimeters.		15.60	7.25	.....	.....	.....	.....	.....	.....	19.75	8.00	.....	.....	27.25	7.25	.....	.....	.....	.....	.....	.....
		16.00	1.00	0.00	1.00	8.75	1.00	0.25	0.75	12.25	1.00	0.25	0.75	18.60	1.00	0.25	0.75	16.75	1.00	0.25	0.75
Actual measurements in grams and millimeters.		16.60	2.00	0.50	1.50	9.50	2.00	0.75	1.25	13.25	2.00	0.75	1.25	20.00	2.00	0.75	1.25	18.60	2.00	0.75	1.25
		17.50	3.00	1.00	2.00	10.00	3.00	1.25	1.75	13.60	3.00	1.00	2.00	21.25	3.00	1.00	2.00	19.60	3.00	1.00	2.00
Actual measurements in grams and millimeters.		18.50	4.00	1.50	2.00	10.40	4.00	2.00	2.00	14.25	4.00	1.75	2.25	21.75	4.00	1.75	2.25	20.50	4.00	1.75	2.25
		20.50	5.00	2.00	2.00	11.75	6.00	3.00	3.00	16.75	6.00	3.00	3.00	22.75	5.00	2.25	2.75	21.25	5.00	2.25	2.75
Actual measurements in grams and millimeters.		24.25	7.00	3.50	3.50	13.25	7.00	3.75	3.25	.....	.....	.....	.....	23.75	6.00	3.00	3.00	22.60	7.00	3.75	3.25
		26.50	8.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	29.75	7.00	3.75	3.25	27.60	8.00	4.75	3.25
Actual measurements in grams and millimeters.		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....







TABLE XIV.—Actual measurements, showing relation between strain, stretch, and elasticity—Continued.

COTSWOLD.

Catalogue No. of samples..	174.												174.												174.												174.											
	174.				174.				174.				174.				174.				174.				174.				174.																			
	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.																								
	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.																								
	15.50	1.00	0.00	1.00	16.50	1.00	0.25	0.75	14.75	1.00	0.00	1.00	13.25	1.00	0.25	0.75	27.25	1.00	0.25	0.75	27.25	1.00	0.25	0.75																								
	16.50	2.00	0.75	1.25	18.50	2.00	1.00	1.00	16.00	2.00	0.75	1.25	14.75	2.00	0.75	1.25	29.00	2.00	0.75	1.25	29.00	2.00	0.75	1.25																								
	17.25	3.00	1.00	2.00	20.25	3.00	1.25	1.75	16.75	3.00	1.00	2.00	15.50	3.00	1.00	2.00	30.75	3.00	1.00	2.00	30.75	3.00	1.00	2.00																								
	18.75	4.00	1.25	2.75	22.00	4.00	1.50	2.50	17.75	4.00	1.25	2.75	16.25	4.00	1.25	2.75	33.00	4.00	1.25	2.75	33.00	4.00	1.25	2.75																								
	21.75	5.00	1.50	3.50	24.00	5.00	1.75	2.25	18.75	5.00	1.50	3.50	18.50	5.00	1.50	3.50	37.50	5.00	1.50	3.50	37.50	5.00	1.50	3.50																								
	24.25	7.00	2.00	5.00	28.50	7.00	2.25	4.75	21.25	7.00	2.00	5.00	20.50	7.00	2.00	5.00	44.00	7.00	2.00	5.00	44.00	7.00	2.00	5.00																								
									25.00	7.00							45.75	7.00																														
	16.75	1.00	0.25	0.75	20.00	1.00	0.00	1.00	16.00	1.00	0.25	0.75	16.00	1.00	0.00	1.00	23.75	1.00	0.25	0.75	23.75	1.00	0.25	0.75																								
	18.75	2.00	0.75	1.25	22.00	2.00	0.75	1.25	10.50	2.00	1.00	1.00	16.75	2.00	0.75	1.25	23.75	2.00	0.75	1.25	23.75	2.00	0.75	1.25																								
	19.60	3.00	1.00	2.00	23.25	3.00	1.25	1.75	20.00	3.00	1.25	1.75	17.75	3.00	1.00	2.00	26.50	3.00	1.00	2.00	26.50	3.00	1.00	2.00																								
	20.50	4.00	1.25	2.75	24.50	4.00	1.50	2.00	21.25	4.00	1.50	2.50	18.50	4.00	1.25	2.75	27.50	4.00	1.25	2.75	27.50	4.00	1.25	2.75																								
	21.75	5.00	1.50	3.50	25.75	5.00	1.75	2.25	22.75	5.00	1.75	3.25	19.50	5.00	1.50	3.50	29.00	5.00	1.50	3.50	29.00	5.00	1.50	3.50																								
	24.25	7.00	2.00	5.00	29.00	7.00	2.25	4.75	26.00	7.00	2.00	5.00	22.25	7.00	2.00	5.00	33.25	7.00	2.00	5.00	33.25	7.00	2.00	5.00																								
	23.25	7.00	4.00	3.00	33.00	7.00							35.75	7.00			39.50	7.00			39.50	7.00																										
	15.60	1.00	0.25	0.75	15.00	1.00	0.25	0.75	11.00	1.00	0.00	1.00	14.50	1.00	0.25	0.75	26.75	1.00	0.00	1.00	26.75	1.00	0.00	1.00																								
	16.50	2.00	0.75	1.25	16.00	2.00	0.75	1.25	11.75	2.00	1.00	2.00	15.00	2.00	0.75	1.25	28.50	2.00	0.75	1.25	28.50	2.00	0.75	1.25																								
	17.50	3.00	1.00	2.00	16.50	3.00	1.00	2.00	12.50	3.00	2.00	2.00	16.50	3.00	1.00	2.00	30.60	3.00	1.00	2.00	30.60	3.00	1.00	2.00																								
	19.00	5.00	1.25	2.75	17.25	4.00	1.50	2.00	13.60	5.00	2.50	2.50	17.25	5.00	2.50	2.50	32.60	5.00	2.50	2.50	32.60	5.00	2.50	2.50																								
	21.50	6.00	1.50	3.00	18.25	5.00	1.75	2.25	14.50	6.00	3.00	3.00	19.50	6.00	3.00	3.00	34.25	6.00	3.00	3.00	34.25	6.00	3.00	3.00																								
	24.00	8.00	2.00	6.00	20.75	6.00	2.25	3.75	17.25	7.00	4.00	4.00	22.75	7.00	4.00	3.00	39.50	7.00	4.00	3.00	39.50	7.00	4.00	3.00																								
					24.50	7.00			19.00																																							
	18.75	1.00	0.25	0.75	18.00	1.00	0.25	0.75	12.00	1.00	0.00	1.00					16.75	1.00	0.25	0.75	16.75	1.00	0.25	0.75																								
	19.75	2.00	0.75	1.25	19.50	2.00	0.75	1.25	13.25	2.00	1.00	2.00					19.50	2.00	0.75	1.25	19.50	2.00	0.75	1.25																								
	20.25	3.00	1.00	2.00	20.25	3.00	1.25	1.75	14.75	3.00	1.25	2.25					21.75	3.00	1.25	1.75	21.75	3.00	1.25	1.75																								
	21.50	4.00	1.25	2.75	21.25	4.00	1.50	2.00	16.50	4.00	1.50	2.50					22.75	4.00	1.50	2.50	22.75	4.00	1.50	2.50																								
	22.75	5.00	1.50	3.50	22.50	5.00	1.75	2.25	18.00	5.00	1.75	3.25					24.00	5.00	1.75	3.25	24.00	5.00	1.75	3.25																								
	24.25	6.00	2.00	4.00	22.50	6.00	2.00	4.00	19.00	6.00	2.00	4.00					26.00	6.00	2.00	4.00	26.00	6.00	2.00	4.00																								
	30.50	7.00	2.00	5.00	21.00	6.00			19.50	7.25	4.00	3.00					29.50	7.00			29.50	7.00																										
	35.25	8.00															29.75	7.00			29.75	7.00																										

COTSWOLD.

Catalogue No. of samples..	175.												175.												175.												176.											
	175.				175.				175.				176.				176.				176.				176.																							
	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.																								
	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.																								
	25.60	1.00	0.25	0.75	24.60	1.00	0.00	1.00	15.60	1.00	0.00	1.00	10.75	1.00	0.00	1.00	15.00	1.00	0.00	1.00	15.00	1.00	0.00	1.00																								
	26.00	2.00	0.75	1.25	27.00	2.00	0.50	1.50	16.60	2.00	0.50	1.50	21.00	2.00	0.50	1.50	16.25	2.00	0.50	1.50	16.25	2.00	0.50	1.50																								
	26.50	3.00	1.25	1.75	28.00	3.00	1.00	2.00	17.25	3.00	1.00	2.00	22.50	3.00	1.00	2.00	17.75	3.00	1.00	2.00	17.75	3.00	1.00	2.00																								
	28.75	5.00	2.50	2.50	29.50	4.00	1.75	2.25	18.50	5.00	2.25	2.75	24.60	5.00	2.25	2.75	19.75	5.00	2.25	2.75	19.75	5.00	2.25	2.75																								
	32.60	6.00	3.25	2.75	31.75	5.00	2.50	2.50	21.00	6.00	3.00	3.00	28.00	6.00	3.00	3.00	23.25	7.00	4.00	3.00	23.25	7.00	4.00	3.00																								
	37.50	7.00	4.00	3.00	31.75	6.00	3.00	3.00	20.00	7.00	4.00	3.00	30.60	7.00	4.00	3.00	26.00	8.00	4.75	3.25	26.00	8.00	4.75	3.25																								
	41.75	8.00			39.50	7.00	4.00	3.00					30.60	8.00	4.75	3.25																																
					45.50	8.00	4.50	3.50																																								
	13.60	1.00	0.25	0.75	21.25	1.00	0.25	0.75	24.50	1.00	0.00	1.00	17.00	1.00	0.25	0.75	16.25	1.00	0.00	1.00	16.25	1.00	0.00	1.00																								
	14.50	2.00	0.75	1.25	23.00	2.00	0.75	1.25	26.75	2.00	0.75	1.25	18.25	2.00	0.75	1.25	17.00	2.00	0.75	1.25	17.00	2.00	0.75	1.25																								
	15.50	4.00	2.00	2.00	24.50	4.00	2.00	2.00	27.60	4.00	1.00	2.00	19.25	4.00	2.00	2.00	18.25	4.00	1.75	2.25	18.25	4.00	1.75	2.25																								
	16.50	6.00	2.50	2.50	25.75	5.00	2.75	2.25	28.60	4.00	2.00	2.00					19.50	5.00	2.25	2.75	19.50	5.00	2.25	2.75																								
	18.50	8.00	3.25	2.75	29.60	6.00	3.25	2.75	30.60	5.00	2.50	2.50					21.25	6.00	3.00	3.00	21.25	6.00	3.00	3.00																								
	21.60	7.00	4.00	3.00	33.25	7.00			31.00	5.75	2.50	2.50					24.60	7.00	3.75	3.25	24.60	7.00	3.75	3.25																								
																	28.60	8.00			28.60	8.00																										
	27.00	1.00	0.00	1.00	16.25	1.00	0.25	0.75	25.75	1.00	0.25	0.75	19.25	1.00	0.00	1.00	10.50	1.00	0.25	0.75	10.50	1.00	0.25	0.75																								
	28.00	2.00	0.75	1.25	17.25	2.00	0.75	1.25	27.00	2.00	0.75	1.25	21.60	2.00	0.75	1.25	11.75	2.00	0.75	1.25	11.75	2.00	0.75	1.25																								



TABLE XIV.—Actual measurements, showing relation between strain, stretch, and elasticity—Continued.

Catalogue No. of samples..		COTSWOLD.															
		176.				176.				177.				177.			
		Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		21.00	1.00	0.25	0.75	20.25	1.00	0.25	0.75	15.75	1.00	0.25	0.75	23.75	1.00	0.25	0.75
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		22.50	2.00	0.75	1.25	21.50	2.00	0.75	1.25	16.50	2.00	0.75	1.25	25.50	2.00	0.75	1.25
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		23.50	3.00	1.25	1.75	22.50	4.00	1.50	2.50	17.50	4.00	1.75	2.25	26.50	3.00	1.00	2.00
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		24.75	4.00	2.00	2.75	23.75	5.00	2.25	2.75	18.75	5.00	2.50	2.50	28.00	4.00	2.00	2.00
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		25.75	5.00	2.50	3.25	24.50	6.00	3.25	2.75	21.50	6.00	3.25	2.75	30.25	5.00	2.50	2.50
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		28.75	6.00	3.25	2.75	27.50	6.00	3.25	2.75	25.75	7.00	4.00	3.00	34.50	6.00	3.00	3.00
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		33.50	7.00	4.00	3.00	28.50	7.00	4.00	3.00	25.75	7.00	4.00	3.00	38.60	6.75	3.00	3.00
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		22.25	1.00	0.25	0.75	18.50	1.00	0.00	1.00	16.75	1.00	0.25	0.75	21.00	1.00	0.25	0.75
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		24.50	2.00	0.75	1.25	19.60	2.00	0.75	1.25	18.75	2.00	0.75	1.25	22.50	2.00	0.75	1.25
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		25.75	4.00	1.75	2.25	21.00	4.00	1.75	2.25	19.50	3.00	1.25	1.75	23.60	3.00	1.00	2.00
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		27.60	5.00	2.25	2.75	22.50	5.00	2.25	2.75	21.50	5.00	2.25	2.75	24.25	4.00	1.75	2.25
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		31.00	6.00	3.00	3.00	25.75	6.00	4.25	1.75	25.25	6.00	3.25	2.75	26.25	5.00	2.75	2.25
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		34.75	7.00	4.00	3.00	29.75	7.00	4.00	3.00	29.75	7.00	4.00	3.00	31.00	6.00	3.25	2.75
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		38.25	8.00	4.00	3.00	31.00	7.75	7.75	7.75	31.00	7.75	7.75	7.75	31.00	6.00	3.25	2.75
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		16.25	1.00	0.00	1.00	8.50	1.00	0.25	0.75	7.25	1.00	0.25	0.75	21.75	1.00	0.25	0.75
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		17.75	3.00	1.00	2.00	9.50	2.00	0.75	1.25	8.25	3.00	1.25	1.75	23.00	2.00	0.75	1.25
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		18.25	4.00	1.75	2.25	10.80	4.00	2.00	2.00	9.25	5.00	2.25	2.75	23.50	3.00	1.00	2.00
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		10.50	5.00	2.25	2.75	11.75	5.00	2.25	2.25	10.75	6.00	3.25	2.75	24.50	4.00	2.00	2.00
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		21.75	6.00	3.00	3.00	12.50	6.00	2.75	2.25	12.00	6.75	3.25	2.75	25.75	5.00	2.50	2.50
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		25.00	7.00	4.00	3.00	.....	.....	.....	.....	.....	.....	.....	.....	30.50	6.00	3.00	3.00
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		26.50	7.50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		21.50	1.00	0.00	1.00	.....	.....	.....	.....	4.50	1.00	0.25	0.75	3.00	1.00	0.00	1.00
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		23.00	2.00	0.60	1.50	.....	.....	.....	.....	5.25	3.00	1.00	2.00	4.00	4.00	2.00	2.00
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		24.75	4.00	1.75	2.25	.....	.....	.....	.....	6.00	5.00	2.75	2.25	6.25	6.00	3.25	2.75
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		26.60	6.00	2.25	2.75	.....	.....	.....	.....	7.50	6.50	.....	.....	6.25	7.00	.....	.....
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		29.75	6.00	3.25	2.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		33.00	6.60	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....







TABLE XIV.—Actual measurements, showing relation between strain, stretch, and elasticity—Continued.

Catalogue No. of samples.		COTSWOLD.																			
		180.				181.				181.				181.				181.			
		Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.
Actual measurements in grams and millimeters.		gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.
		22.50	1.00	0.25	0.75	19.25	1.00	0.25	0.75	26.50	1.00	0.00	1.00	19.00	1.00	0.25	0.75	30.60	1.00	0.25	0.75
Actual measurements in grams and millimeters.		23.50	2.00	0.50	1.50	16.50	2.00	0.75	1.25	20.50	2.00	0.50	1.50	20.50	2.00	0.50	1.50	32.75	2.00	0.75	1.25
		23.75	3.00	1.00	2.00	20.00	3.00	1.00	1.00	27.25	3.00	1.00	2.00	20.75	3.00	1.00	2.00	33.75	3.00	1.00	2.00
Actual measurements in grams and millimeters.		24.15	4.00	1.75	2.25	20.50	4.00	1.50	2.50	27.75	4.00	1.50	3.00	21.50	4.00	1.75	2.25	35.25	4.00	1.75	2.25
		26.50	5.00	2.25	2.75	21.75	5.00	2.25	2.75	29.75	5.00	2.00	3.00	22.50	5.00	2.25	2.75	36.75	5.00	2.25	2.75
Actual measurements in grams and millimeters.		30.00	6.00	3.00	3.00	23.75	6.00	3.00	3.00	32.75	6.00	2.75	3.25	25.25	6.00	3.00	3.00	42.25	6.00	3.00	3.00
		35.25	7.00	3.75	3.25	28.00	7.00	3.50	3.50	38.50	7.00	3.25	3.75	28.75	7.00	3.75	3.25	42.50	6.00	3.00	3.00
Actual measurements in grams and millimeters.		37.50	7.50	3.75	3.25	31.00	7.75	3.50	3.50	43.75	8.00	4.00	4.00	32.75	8.00	4.25	3.75	42.50	6.00	3.00	3.00
		23.50	1.00	0.25	0.75	14.50	1.00	0.25	0.75	18.75	1.00	0.25	0.75	23.75	1.00	0.25	0.75	22.50	1.00	0.25	0.75
Actual measurements in grams and millimeters.		24.75	2.00	0.50	1.50	16.50	2.00	0.75	1.25	20.50	2.00	0.75	1.25	26.00	2.00	0.50	1.50	24.00	2.00	0.75	1.25
		25.50	3.00	1.00	2.00	16.75	3.00	2.25	2.25	20.75	3.00	1.00	2.00	27.25	3.00	1.00	2.00	24.75	3.00	1.00	2.00
Actual measurements in grams and millimeters.		25.75	4.00	1.50	2.50	2.50	4.00	1.50	2.50	21.50	4.00	1.50	2.50	28.75	4.00	1.50	2.50	25.50	4.00	1.50	2.50
		27.00	5.00	2.25	2.75	3.00	5.00	2.00	3.00	22.75	5.00	2.25	2.75	30.75	5.00	2.25	2.75	26.25	5.00	2.25	2.75
Actual measurements in grams and millimeters.		30.75	6.00	3.00	3.00	23.50	6.00	2.75	3.25	25.50	6.00	2.75	3.25	35.50	6.00	3.00	3.00	30.00	6.00	3.00	3.00
		38.25	7.00	3.75	3.25	27.60	7.00	3.25	3.75	28.75	7.00	3.25	3.75	41.00	7.00	3.75	3.25	35.25	7.00	3.75	3.25
Actual measurements in grams and millimeters.		40.75	8.00	4.25	3.75	30.75	7.75	3.50	3.50	32.75	8.00	4.00	4.00	46.00	8.00	4.00	4.00	35.75	7.25	3.75	3.25
		23.50	1.00	0.25	0.75	18.50	1.00	0.25	0.75	20.25	1.00	0.25	0.75	25.00	1.00	0.25	0.75	21.75	1.00	0.25	0.75
Actual measurements in grams and millimeters.		24.50	2.00	0.75	1.25	19.25	2.00	0.50	1.50	21.00	2.00	0.75	1.25	26.25	2.00	0.50	1.50	23.75	2.00	0.75	1.25
		25.50	3.00	1.00	2.00	10.50	3.00	1.00	2.00	21.75	3.00	1.00	2.00	26.75	3.00	1.00	2.00	24.60	3.00	1.00	2.00
Actual measurements in grams and millimeters.		26.25	4.00	1.50	2.50	10.75	4.00	1.50	2.50	22.50	4.00	1.50	2.50	28.00	4.00	1.50	2.50	25.75	4.00	1.50	2.50
		27.60	5.00	2.00	3.00	21.25	5.00	2.00	3.00	23.25	5.00	2.00	3.00	30.00	5.00	2.25	2.75	26.75	5.00	2.00	3.00
Actual measurements in grams and millimeters.		31.00	6.00	3.00	3.00	23.50	6.00	2.75	3.25	28.00	6.00	2.75	3.25	34.75	6.00	3.20	3.00	31.75	6.00	3.00	3.00
		36.50	7.00	3.50	3.50	27.60	7.00	3.25	3.75	30.50	7.00	3.25	3.75	41.25	7.00	3.75	3.25	36.00	6.75	3.00	3.00
Actual measurements in grams and millimeters.		40.25	8.00	4.25	3.75	30.75	7.75	3.50	3.50	34.75	8.00	4.00	4.00	46.00	8.00	4.00	4.00	37.50	7.25	3.75	3.25
		23.50	1.00	0.25	0.75	18.50	1.00	0.25	0.75	20.25	1.00	0.25	0.75	25.00	1.00	0.25	0.75	21.75	1.00	0.25	0.75
Actual measurements in grams and millimeters.		24.50	2.00	0.75	1.25	19.25	2.00	0.50	1.50	21.00	2.00	0.75	1.25	26.25	2.00	0.50	1.50	23.75	2.00	0.75	1.25
		25.50	3.00	1.00	2.00	10.50	3.00	1.00	2.00	21.75	3.00	1.00	2.00	26.75	3.00	1.00	2.00	24.60	3.00	1.00	2.00
Actual measurements in grams and millimeters.		26.25	4.00	1.50	2.50	10.75	4.00	1.50	2.50	22.50	4.00	1.50	2.50	28.00	4.00	1.50	2.50	25.75	4.00	1.50	2.50
		27.60	5.00	2.00	3.00	21.25	5.00	2.00	3.00	23.25	5.00	2.00	3.00	30.00	5.00	2.25	2.75	26.75	5.00	2.00	3.00
Actual measurements in grams and millimeters.		31.00	6.00	3.00	3.00	23.50	6.00	2.75	3.25	28.00	6.00	2.75	3.25	34.75	6.00	3.20	3.00	31.75	6.00	3.00	3.00
		36.50	7.00	3.50	3.50	27.60	7.00	3.25	3.75	30.50	7.00	3.25	3.75	41.25	7.00	3.75	3.25	36.00	6.75	3.00	3.00
Actual measurements in grams and millimeters.		40.25	8.00	4.25	3.75	30.75	7.75	3.50	3.50	34.75	8.00	4.00	4.00	46.00	8.00	4.00	4.00	37.50	7.25	3.75	3.25



TABLE XIV.—Actual measurements, showing relation between strain, stretch, and elasticity—Continued.

Catalogue No. of samples..	COTSWOLD.																			
	182.				187.				187.				187.				187.			
	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.
Actual measurements in grams and millimeters.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.
	17.00	1.00	0.50	1.00	15.00	1.00	0.00	1.00	11.75	1.00	0.00	1.00	18.50	1.00	0.25	0.75	19.50	1.00	0.00	1.00
	17.00	2.00	0.50	1.50	15.75	2.00	0.75	1.25	12.25	2.00	0.75	1.25	19.50	2.00	0.75	1.25	21.25	2.00	0.75	1.25
	18.25	3.00	1.00	2.00	17.00	3.00	1.25	1.75	12.50	3.00	1.00	2.00	20.25	3.00	1.00	2.00	21.50	3.00	1.00	2.00
	18.75	4.00	1.50	2.50	18.00	4.00	2.00	2.00	13.00	4.00	1.75	2.25	21.50	4.00	1.75	2.25	22.00	4.00	1.75	2.25
	19.50	5.00	2.00	3.00	19.50	5.00	2.50	2.50	13.75	5.00	2.25	2.75	22.50	5.00	2.25	2.75	22.75	5.00	2.25	2.75
	21.75	6.00	2.75	3.25	23.50	6.00	3.25	2.75	15.25	6.00	3.00	3.00	24.50	6.00	3.00	3.00	25.00	6.00	3.00	3.00
	25.25	6.75	.....	.....	24.75	6.75	.....	.....	18.25	7.00	3.75	3.25	20.00	7.00	3.75	3.25	20.75	7.00	3.75	3.25
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30.50	7.50	.....	.....	.....	.....	.....	.....
	23.25	1.00	0.00	1.00	17.25	1.00	0.25	0.75	11.75	1.00	0.25	0.75	15.50	1.00	0.00	1.00	8.50	1.00	0.25	0.75
	24.75	2.00	0.50	1.50	18.50	2.00	0.75	1.25	12.75	2.00	0.75	1.25	15.50	2.00	0.75	1.25	10.75	2.00	0.75	1.25
	25.75	3.00	1.00	2.00	20.25	3.00	1.25	1.75	13.00	3.00	1.00	2.00	16.25	3.00	1.00	2.00	11.50	3.00	1.25	1.75
	26.75	4.00	1.50	2.50	21.50	4.00	2.00	2.00	13.50	4.00	1.75	2.25	16.50	4.00	1.75	2.25	12.50	4.00	2.00	2.00
	28.00	5.00	2.00	3.00	23.00	5.00	2.50	2.50	14.00	5.00	2.25	2.75	17.75	5.00	2.25	2.75	.....	.....	.....	.....
	30.75	6.00	2.75	3.25	25.50	6.00	3.25	2.75	15.25	6.00	3.00	3.00	20.50	6.00	3.00	3.00	.....	.....	.....	.....
	35.50	7.00	.....	.....	27.25	6.25	.....	.....	17.75	6.75	.....	.....	24.00	7.00	.....	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	23.50	1.00	0.25	0.75	12.50	1.00	0.25	0.75	14.50	1.00	0.00	1.00	18.75	1.00	0.00	1.00	14.00	1.00	0.25	0.75
	24.75	2.00	0.50	1.50	13.50	2.00	0.75	1.25	15.00	2.00	0.75	1.25	19.75	2.00	0.75	1.25	14.75	2.00	0.75	1.25
	25.75	3.00	1.00	2.00	14.50	3.00	1.00	2.00	16.25	3.00	1.00	2.00	20.25	3.00	1.00	2.00	15.50	3.00	1.25	1.75
26.50	4.00	1.50	2.50	14.75	4.00	1.75	2.25	16.50	4.00	1.75	2.25	20.75	4.00	1.75	2.25	15.75	4.00	1.75	2.25	
27.50	5.00	2.00	3.00	15.50	5.00	2.25	2.75	18.00	5.00	2.25	2.75	.....	.....	.....	.....	16.50	5.00	2.00	2.50	
30.75	6.00	2.75	3.25	16.50	6.00	3.00	3.00	19.00	6.00	3.00	3.00	22.50	6.00	3.00	3.00	17.50	6.00	3.00	3.00	
34.00	7.00	.....	.....	19.00	7.00	3.75	3.75	19.50	7.00	.....	.....	24.50	7.00	.....	.....	.....	.....	.....	.....	
36.50	7.25	.....	.....	21.50	8.00	4.25	3.75	.....	.....	.....	.....	28.50	7.00	.....	.....	.....	.....	.....	.....	

Catalogue No. of samples..	COTSWOLD.																			
	187.				188.				188.				188.				188.			
	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.
Actual measurements in grams and millimeters.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.
	11.75	1.00	0.00	1.00	16.50	1.00	0.25	0.75	13.25	1.00	0.25	0.75	18.75	1.00	0.00	1.00	10.75	1.00	0.25	0.75
	12.50	2.00	0.75	1.25	17.50	2.00	0.75	1.25	15.50	2.00	0.75	1.25	20.00	2.00	0.75	1.25	17.25	2.00	0.75	1.25
	12.75	3.00	1.25	1.75	17.75	3.00	1.25	1.75	16.50	2.75	.....	.....	20.75	3.00	1.00	2.00	17.25	2.25	.....	.....
	.....	.....	.....	.....	18.50	4.00	2.00	2.00	.....	.....	.....	.....	21.25	4.00	1.75	2.25	.....	.....	.....	.....
	.....	.....	.....	.....	19.50	5.00	2.50	2.50	.....	.....	.....	.....	22.25	5.00	2.25	2.75	.....	.....	.....	.....
	.....	.....	.....	.....	21.25	6.00	3.00	3.00	.....	.....	.....	.....	24.50	6.00	3.00	3.00	.....	.....	.....	.....
	.....	.....	.....	.....	24.75	7.00	4.00	3.00	.....	.....	.....	.....	27.50	7.00	3.75	3.25	.....	.....	.....	.....
	.....	.....	.....	.....	25.25	7.25	.....	.....	.....	.....	.....	.....	37.75	7.75	.....	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	18.25	1.00	0.00	1.00	15.25	1.00	0.25	0.75	17.25	1.00	0.00	1.00	15.00	1.00	0.00	1.00	18.75	1.00	0.00	1.00
	17.25	2.00	0.75	1.25	15.50	2.00	1.00	1.00	18.50	2.00	0.75	1.25	20.25	2.00	0.25	1.75	19.50	2.00	0.75	1.25
	18.25	3.00	1.00	2.00	15.75	3.00	1.25	1.75	18.75	3.00	1.25	1.75	21.50	3.00	1.00	2.00	19.75	3.00	1.00	2.00
	19.50	4.00	1.75	2.25	16.25	4.00	2.00	2.00	19.50	4.00	1.75	2.25	23.25	4.00	1.75	2.25	20.50	4.00	2.00	2.00
	20.75	5.00	2.25	2.75	17.00	5.00	2.75	2.75	20.75	5.00	2.50	2.50	27.00	5.00	2.25	2.75	21.75	5.00	2.50	2.50
	22.50	6.00	3.00	3.00	18.50	6.00	3.25	3.25	23.25	6.00	.....	.....	.....	.....	.....	.....	24.50	6.00	3.00	3.00
	26.50	7.00	3.75	3.25	20.75	6.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	27.25	7.00	4.00	3.00
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	31.25	7.75	.....	.....
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	17.50	1.00	0.25	0.75	15.75	1.00	0.00	1.00	16.00	1.00	0.00	1.00	17.50	1.00	0.00	1.00	13.75	1.00	0.00	1.00
18.50	2.00	0.75	1.25	17.25	2.00	0.75	1.25	18.50	2.00	1.00	1.00	18.50	2.00	0.75	1.25	14.50	2.00	0.75	1.25	
19.25	3.00	1.25	1.75	17.75	3.00	1.25	1.75	20.50	2.50	.....	.....	18.75	3.00	1.25	1.75	15.00	3.00	1.25	1.75	
20.50	4.00	2.00	2.00	18.25	4.00	2.00	2.00	.....	.....	.....	.....	19.75	4.00	2.00	2.00	15.50	4.00	2.00	2.00	
22.00	5.00	2.50	2.50	18.75	5.00	2.50	2.50	.....	.....	.....	.....	20.50	5.00	2.50	2.50	18.00	5.00	2.50	2.50	
23.50	6.00	3.00	3.00	20.50	5.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	17.75	6.00	3.00	3.00	











TABLE XIV.—Actual measurements, showing relation between strain, stretch, and elasticity—Continued.

Catalogue No. of samples ..		LINCOLN.																			
		164. HIP.				164. HIP.				164. HIP.				164. BELLY.				164. BELLY.			
		Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.
	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	
	17.75	1.00	0.25	0.75	9.50	1.00	0.00	1.00	19.75	1.00	0.25	0.75	17.50	1.00	0.25	0.75	13.50	1.00	0.25	0.75	
	10.75	2.00	1.00	1.00	10.25	8.00	1.25	1.75	21.50	2.00	0.75	1.25	18.75	2.00	0.75	1.25	14.00	2.00	1.00	1.00	
	20.75	3.00	1.25	1.75	11.25	5.00	2.75	3.25	22.25	3.00	1.25	1.75	19.75	3.00	1.25	1.75	15.50	4.00	2.00	2.00	
	21.50	4.00	2.00	2.00	12.25	6.00	3.25	3.75	23.75	4.00	2.75	2.25	20.75	4.00	2.00	2.00	.....	.....	.....	.....	
	22.25	5.00	2.75	2.25	14.25	7.00	.....	.....	25.25	5.00	3.00	2.00	22.00	5.00	3.00	2.00	.....	.....	.....	.....	
	24.50	6.00	3.50	2.50	.....	.....	.....	.....	.....	.....	.....	.....	24.00	6.00	3.50	2.50	.....	.....	.....	.....	
	28.00	7.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	24.50	6.25	.....	.....	.....	.....	.....	.....	
	8.50	1.00	0.25	0.75	15.00	1.00	0.25	0.75	15.25	1.00	0.00	1.00	9.00	1.00	0.25	0.75	10.25	1.00	0.00	1.00	
	9.50	2.00	1.00	1.00	16.50	2.00	1.00	1.00	16.25	2.00	0.75	1.25	10.25	2.00	1.00	1.00	11.00	3.00	1.00	2.00	
	10.75	4.00	.....	.....	17.75	3.00	1.50	1.50	17.50	4.00	2.00	2.00	11.25	4.00	2.00	2.00	11.50	4.00	2.00	2.00	
	.....	.....	.....	.....	19.25	4.00	2.00	2.00	18.25	5.00	2.75	2.25	12.50	6.00	3.50	2.50	12.25	5.00	3.00	2.00	
	.....	.....	.....	.....	21.00	6.00	3.50	2.50	20.00	.....	.....	.....	13.50	7.00	4.25	2.75	12.50	5.75	.....	.....	
	.....	.....	.....	.....	23.25	7.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	17.00	1.00	0.25	0.75	17.50	1.00	0.25	0.75	14.75	1.00	0.25	0.75	10.25	1.00	0.25	0.75	12.50	1.00	0.25	0.75	
	19.00	2.00	1.00	1.00	18.75	2.00	0.75	1.25	10.75	2.00	1.00	1.00	11.25	2.00	0.75	1.25	13.75	2.00	0.75	1.25	
	21.50	3.00	1.50	1.50	19.50	3.00	1.50	1.50	17.50	3.00	1.25	1.75	11.75	3.00	1.50	1.50	14.50	3.00	.....	.....	
	22.50	4.00	2.00	2.00	20.50	4.00	2.00	2.00	18.75	4.00	2.00	2.00	12.50	4.00	2.00	2.00	.....	.....	.....	.....	
	23.50	5.00	.....	.....	21.50	5.00	3.00	2.00	19.75	5.00	3.00	2.00	13.00	5.00	3.00	2.00	.....	.....	.....	.....	
	.....	.....	.....	.....	22.75	5.75	.....	.....	.....	.....	.....	.....	14.25	6.00	.....	.....	.....	.....	.....	.....	
	18.50	1.00	0.25	0.75	12.75	1.00	0.25	0.75	.....	.....	.....	.....	8.50	1.00	0.00	1.00	10.75	1.00	0.00	1.00	
	20.00	2.00	0.75	1.25	14.50	3.00	1.25	1.75	.....	.....	.....	.....	10.25	2.00	0.75	1.25	11.75	2.00	0.75	1.25	
	21.00	3.00	1.25	1.75	15.50	5.00	2.75	2.25	.....	.....	.....	.....	11.25	3.00	1.25	1.75	12.25	3.00	1.25	1.75	
	22.75	5.00	3.00	2.00	.....	.....	.....	.....	.....	.....	.....	.....	12.25	4.00	2.50	2.50	13.25	4.00	2.00	2.00	
	23.75	5.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12.25	.....	.....	.....	14.75	6.00	3.25	2.75	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15.50	6.75	.....	.....	

Catalogue No. of samples ..		LINCOLN.																			
		164. BELLY.				164. BELLY.				164.				164.				164.			
		Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.
	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	
	10.75	1.00	0.25	0.75	11.50	1.00	0.00	1.00	15.75	1.00	0.25	0.75	7.50	1.00	0.25	0.75	12.25	1.00	0.25	0.75	
	12.25	2.00	0.75	1.25	12.75	2.00	0.75	1.25	16.25	2.00	0.75	1.25	8.00	2.00	0.75	1.25	12.75	2.00	0.75	1.25	
	13.25	4.00	2.00	2.00	13.25	2.75	.....	.....	10.50	3.00	1.00	2.00	8.50	3.00	1.25	1.75	13.75	3.00	1.25	1.75	
	14.50	6.00	.....	.....	.....	.....	.....	.....	17.25	4.00	1.75	2.25	9.25	4.00	2.00	2.00	14.00	4.00	2.00	2.00	
	.....	.....	.....	.....	.....	.....	.....	.....	18.50	5.00	2.50	3.00	9.75	5.00	2.75	2.25	14.50	5.00	3.25	2.75	
	.....	.....	.....	.....	.....	.....	.....	.....	20.50	6.00	3.00	3.00	10.75	6.00	3.25	2.75	16.50	6.00	3.00	3.00	
	.....	.....	.....	.....	.....	.....	.....	.....	23.00	6.50	.....	.....	12.50	7.00	4.00	3.00	19.25	7.00	4.00	3.00	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13.50	7.50	.....	.....	20.00	7.25	.....	.....	
	11.50	1.00	0.25	0.75	10.25	1.00	0.25	0.75	10.25	1.00	0.25	0.75	13.25	1.00	0.25	0.75	6.50	1.00	0.25	0.75	
	13.00	2.00	1.00	1.00	11.50	2.00	1.00	1.00	10.50	2.00	0.75	1.25	13.75	2.00	0.75	1.25	7.50	2.00	0.75	1.25	
	14.00	4.00	2.00	2.00	12.50	4.00	2.00	2.00	10.50	3.00	1.25	1.75	14.25	3.00	1.25	1.75	7.50	3.00	1.25	1.75	
	15.00	4.75	.....	.....	13.00	5.00	.....	.....	11.00	4.00	2.00	2.00	14.50	4.00	2.00	2.00	7.75	4.00	1.75	2.25	
	.....	.....	.....	.....	.....	.....	.....	.....	11.75	5.00	2.60	2.50	15.50	5.00	2.75	2.25	8.50	5.00	2.25	2.75	
	.....	.....	.....	.....	.....	.....	.....	.....	12.50	6.00	.....	.....	17.00	6.00	3.25	2.75	9.00	6.00	3.00	3.00	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20.50	7.00	4.00	3.00	11.50	7.00	3.75	3.25	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	23.00	8.00	4.75	3.25	11.50	7.25	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	24.50	8.50	.....	.....	.....	.....	.....	.....	
	10.75	1.00	0.00	1.00	11.00	1.00	0.00	1.00	6.24	1.00	0.25	0.75	8.50	1.00	0.25	0.75	0.50	1.00	0.25	0.75	
	11.50	2.00	0.75	1.25	12.50	2.00	0.75	1.25	6.25	2.00	0.75	1.25	10.50	2.00	1.00	1.00	0.50	2.00	0.75	1.25	
	12.00	3.00	1.25	1.75	13.00	3.00	1.25	1.75	7.50	3.00	1.25	1.75	11.00	3.00	1.25	1.75	0.75	3.00	1.25	1.75	
	13.25	5.00	.....	.....	13.50	4.00	2.00	2.00	7.50	5.00	3.25	2.75	11.75	4.00	2.00	2.00	10.25	4.00	2.00	2.00	
	.....	.....	.....	.....	14.75	5.00	.....	.....	8.75	6.00	3.25	2.75	12.25	5.00	2.50	2.50	11.25	5.00	2.70	2.00	
	.....	.....	.....	.....	.....	.....	.....	.....	10.25	7.00	4.00	3.00	13.50	6.00	3.00	3.00	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	10.75	7.25	.....	.....	15.50	7.00	.....	.....	.....	.....	.....	.....	
	16.50	1.00	0.25	0.75	.....	.....	.....	.....	6.75	1.00	0.25	0.75	12.75	1.00	0.25	0.75	14.75	1.00	0.25	0.75	
	19.50	2.00	1.00	1.00	.....	.....	.....	.....	6.75	2.00	0.75	1.25	14.50	2.00	0.75	1.25	15.50	2.00	0.75	1.25	
	20.25	3.00	1.50	1.50	.....	.....	.....	.....	7.25	3.00	1.25	1.75	14.60	3.00	1.25	1.75	16.25	3.00	1.25	1.75	
	21.25	3.75	.....	.....	.....	.....	.....	.....	7.75	4.00	2.00	2.00	14.75	4.00	2.00	2.00	16.50	4.00	2.00	2.00	
	.....	.....	.....	.....	.....	.....	.....	.....	8.75	5.00	2.75	2.25	15.50	5.00	.....	.....	17.50	5.00	2.50	2.50	
	.....	.....	.....	.....	.....	.....	.....	.....	9.60	6.00	3.25	2.75	.....	.....	.....	.....	19.25	6.00	3.25	2.75	
	.....	.....	.....	.....	.....	.....	.....	.....	10.75	7.00	.....	.....	.....	.....	.....	.....	23.25	7.00	4.00	3.00	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	25.75	8.00	4.75	3.25	



TABLE XIV.—Actual measurements, showing relation between strain, stretch, and elasticity—Continued.

Catalogue No. of samples..		LINCOLN.																			
		161.				163.				165.				165.				165.			
Actual measurements in grams and millimeters.		Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.
		gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.
9.50	1.00	0.25	0.75	16.75	1.00	0.25	0.75	13.25	1.00	0.25	0.75	13.00	1.00	0.25	0.75	14.50	1.00	0.25	0.75		
10.25	1.00	0.75	1.25	18.00	3.00	1.00	1.00	14.00	3.00	1.00	1.00	15.75	2.00	1.00	1.00	16.00	2.00	1.00	1.00		
10.25	2.00	1.00	1.25	19.25	3.00	1.25	1.75	15.00	3.00	1.25	1.75	16.75	2.00	1.25	1.75	17.25	4.00	2.00	2.00		
11.50	4.00	1.50	2.50	20.00	4.00	2.00	2.00	17.50	4.00	2.00	2.00	17.75	4.00	2.00	2.00	18.00	5.00	2.75	2.25		
12.50	5.00	2.50	2.75	21.25	5.00	2.75	2.25	18.00	5.00	2.75	2.25	19.25	5.00	2.75	2.25	19.75	6.00	3.75	2.25		
14.50	7.00	3.00	4.00	23.50	6.00	3.75	2.25	19.00	6.00	3.75	2.25	20.75	6.75	3.75	3.00	22.50	7.00	4.25	2.75		
17.75	1.00	0.25	0.75	15.50	1.00	0.00	1.00	13.75	1.00	0.25	0.75	13.50	1.00	0.25	0.75	14.75	1.00	0.25	0.75		
18.50	2.00	0.75	1.25	17.25	2.00	1.00	1.00	15.50	2.00	1.00	1.00	14.75	2.00	1.00	1.00	15.75	2.00	1.00	1.00		
19.00	3.00	1.00	2.00	19.00	3.00	1.25	1.75	16.50	3.00	1.25	1.75	15.00	3.00	1.00	1.00	16.50	3.00	1.25	1.75		
19.75	4.00	1.75	2.25	19.50	4.00	2.00	2.00	17.50	4.00	2.00	2.00	15.00	4.00	2.00	2.00	17.75	5.00	2.75	2.25		
20.50	5.00	2.50	3.00	20.50	5.00	2.75	2.25	18.00	5.00	2.75	2.25	16.00	5.00	2.75	3.25	19.50	6.00	3.75	2.25		
23.50	7.00	3.00	4.00	23.50	7.00	4.25	2.75	21.75	7.00	4.25	2.75	19.00	7.00	4.25	2.75	22.25	7.00	4.50	2.50		
27.00	7.00	4.00	3.00	33.50	7.00	5.00	2.00	21.75	7.00	5.00	2.00	21.75	7.00	5.00	2.00	22.25	7.00	5.00	2.00		
0.75	1.00	0.25	0.75	13.00	1.00	0.25	0.75	11.75	1.00	0.00	1.00	14.50	1.00	0.00	1.00	12.00	1.00	0.00	1.00		
10.50	2.00	0.75	1.25	14.75	3.00	1.25	1.75	13.50	3.00	1.00	1.00	17.75	2.00	0.75	1.25	16.50	2.00	0.75	1.25		
10.50	3.00	1.25	1.75	15.50	4.00	1.75	2.00	15.00	4.00	1.25	1.75	18.75	3.00	1.25	1.75	19.50	3.00	1.00	2.00		
10.75	4.00	1.75	2.25	16.00	5.00	2.00	2.00	16.50	4.00	1.25	1.75	18.75	3.00	1.25	1.75	22.50	3.75	1.00	2.00		
11.50	5.00	2.25	2.75	16.00	5.00	2.00	2.00	16.50	4.00	1.25	1.75	18.75	3.00	1.25	1.75	22.50	3.75	1.00	2.00		
12.75	6.00	2.50	3.00	16.00	5.00	2.00	2.00	16.50	4.00	1.25	1.75	18.75	3.00	1.25	1.75	22.50	3.75	1.00	2.00		
13.50	7.00	3.00	3.00	16.00	5.00	2.00	2.00	16.50	4.00	1.25	1.75	18.75	3.00	1.25	1.75	22.50	3.75	1.00	2.00		
17.50	8.00	4.75	3.25	16.00	5.00	2.00	2.00	16.50	4.00	1.25	1.75	18.75	3.00	1.25	1.75	22.50	3.75	1.00	2.00		
18.25	8.75	5.00	3.25	16.00	5.00	2.00	2.00	16.50	4.00	1.25	1.75	18.75	3.00	1.25	1.75	22.50	3.75	1.00	2.00		
16.00	1.00	0.25	0.75	12.50	1.00	0.25	0.75	12.50	1.00	0.25	0.75	12.75	1.00	0.00	1.00	14.00	1.00	0.00	1.00		
18.25	2.00	1.00	1.00	13.00	2.00	1.00	1.00	13.00	2.00	1.00	1.00	14.75	2.00	0.75	1.25	15.00	2.00	0.75	1.25		
19.25	3.00	1.25	1.75	14.25	3.00	1.25	1.75	14.25	3.00	1.00	1.00	15.50	3.00	1.25	1.75	16.00	3.00	1.00	2.00		
20.50	4.00	1.75	2.25	15.00	4.00	1.75	2.25	15.00	4.00	1.25	1.75	16.75	4.00	1.75	2.25	17.00	4.00	1.75	2.25		
21.75	5.00	2.25	2.75	16.00	5.00	2.25	2.75	16.00	5.00	1.75	2.25	17.75	5.00	2.25	2.75	18.00	5.00	2.25	2.75		
23.50	6.00	2.75	3.00	17.00	6.00	2.75	3.00	17.00	6.00	2.00	2.00	18.75	6.00	2.75	3.00	19.00	6.00	2.75	3.00		
23.50	7.00	3.00	3.00	18.00	7.00	3.00	3.00	18.00	7.00	2.25	2.25	19.75	7.00	3.00	3.00	20.25	7.00	3.00	3.00		
23.50	8.00	3.25	3.25	19.00	8.00	3.25	3.25	19.00	8.00	2.50	2.50	20.75	8.00	3.25	3.25	21.25	8.00	3.25	3.25		
23.50	9.00	3.50	3.50	20.00	9.00	3.50	3.50	20.00	9.00	2.75	2.75	21.75	9.00	3.50	3.50	22.25	9.00	3.50	3.50		
23.50	10.00	3.75	3.75	21.00	10.00	3.75	3.75	21.00	10.00	3.00	3.00	22.75	10.00	3.75	3.75	23.25	10.00	3.75	3.75		
23.50	11.00	4.00	4.00	22.00	11.00	4.00	4.00	22.00	11.00	3.25	3.25	23.75	11.00	4.00	4.00	24.25	11.00	4.00	4.00		
23.50	12.00	4.25	4.25	23.00	12.00	4.25	4.25	23.00	12.00	3.50	3.50	24.75	12.00	4.25	4.25	25.25	12.00	4.25	4.25		
23.50	13.00	4.50	4.50	24.00	13.00	4.50	4.50	24.00	13.00	3.75	3.75	25.75	13.00	4.50	4.50	26.25	13.00	4.50	4.50		
23.50	14.00	4.75	4.75	25.00	14.00	4.75	4.75	25.00	14.00	4.00	4.00	26.75	14.00	4.75	4.75	27.25	14.00	4.75	4.75		
23.50	15.00	5.00	5.00	26.00	15.00	5.00	5.00	26.00	15.00	4.25	4.25	27.75	15.00	5.00	5.00	28.25	15.00	5.00	5.00		
23.50	16.00	5.25	5.25	27.00	16.00	5.25	5.25	27.00	16.00	4.50	4.50	28.75	16.00	5.25	5.25	29.25	16.00	5.25	5.25		
23.50	17.00	5.50	5.50	28.00	17.00	5.50	5.50	28.00	17.00	4.75	4.75	29.75	17.00	5.50	5.50	30.25	17.00	5.50	5.50		
23.50	18.00	5.75	5.75	29.00	18.00	5.75	5.75	29.00	18.00	5.00	5.00	30.75	18.00	5.75	5.75	31.25	18.00	5.75	5.75		
23.50	19.00	6.00	6.00	30.00	19.00	6.00	6.00	30.00	19.00	5.25	5.25	31.75	19.00	6.00	6.00	32.25	19.00	6.00	6.00		
23.50	20.00	6.25	6.25	31.00	20.00	6.25	6.25	31.00	20.00	5.50	5.50	32.75	20.00	6.25	6.25	33.25	20.00	6.25	6.25		
23.50	21.00	6.50	6.50	32.00	21.00	6.50	6.50	32.00	21.00	5.75	5.75	33.75	21.00	6.50	6.50	34.25	21.00	6.50	6.50		
23.50	22.00	6.75	6.75	33.00	22.00	6.75	6.75	33.00	22.00	6.00	6.00	34.75	22.00	6.75	6.75	35.25	22.00	6.75	6.75		
23.50	23.00	7.00	7.00	34.00	23.00	7.00	7.00	34.00	23.00	6.25	6.25	35.75	23.00	7.00	7.00	36.25	23.00	7.00	7.00		
23.50	24.00	7.25	7.25	35.00	24.00	7.25	7.25	35.00	24.00	6.50	6.50	36.75	24.00	7.25	7.25	37.25	24.00	7.25	7.25		
23.50	25.00	7.50	7.50	36.00	25.00	7.50	7.50	36.00	25.00	6.75	6.75	37.75	25.00	7.50	7.50	38.25	25.00	7.50	7.50		
23.50	26.00	7.75	7.75	37.00	26.00	7.75	7.75	37.00	26.00	7.00	7.00	38.75	26.00	7.75	7.75	39.25	26.00	7.75	7.75		
23.50	27.00	8.00	8.00	38.00	27.00	8.00	8.00	38.00	27.00	7.25	7.25	39.75	27.00	8.00	8.00	40.25	27.00	8.00	8.00		
23.50	28.00	8.25	8.25	39.00	28.00	8.25	8.25	39.00	28.00	7.50	7.50	40.75	28.00	8.25	8.25	41.25	28.00	8.25	8.25		
23.50	29.00	8.50	8.50	40.00	29.00	8.50	8.50	40.00	29.00	7.75	7.75	41.75	29.00	8.50	8.50	42.25	29.00	8.50	8.50		
23.50	30.00	8.75	8.75	41.00	30.00	8.75	8.75	41.00	30.00	8.00	8.00	42.75	30.00	8.75	8.75	43.25	30.00	8.75	8.75		
23.50	31.00	9.00	9.00	42.00	31.00	9.00	9.00	42.00	31.00	8.25	8.25	43.75	31.00	9.00	9.00	44.25	31.00	9.00	9.00		
23.50	32.00	9.25	9.25	43.00	32.00	9.25	9.25	43.00	32.00	8.50	8.50	44.75	32.00	9.25	9.25	45.25	32.00	9.25	9.25		
23.50	33.00	9.50	9.50	44.00	33.00	9.50	9.50	44.00	33.00	8.75	8.75	45.75	33.00	9.50	9.50	46.25	33.00	9.50	9.50		
23.50	34.00	9.75	9.75	45.00	34.00	9.75	9.75	45.00	34.00	9.00	9.00	46.75	34.00	9.75	9.75	47.25	34.00	9.75	9.75		
23.50	35.00	10.00	10.00	46.00	35.00	10.00	10.00	46.00	35.00	9.25	9.25	47.75	35.00	10.00	10.00	48.25	35.00	10.00	10.00		
23.50	36.00	10.25	10.25	47.00	36.00	10.25	10.25	47.00	36.00	9.50	9.50	48.75	36.00	10.25	10.25	49.25	36.00	10.25	10.25		
23.50	37.00	10.50	10.50	48.00	37.00	10.50	10.50	48.00	37.00	9.75	9.75	49.75	37.00	10.50	10.50	50.25	37.00	10.50	10.50		
23.50	38.00	10.75	10.75	49.00	38.00	10.75	10.75	49.00	38.00	10.00	10.00	50.75	38.00	10.75	10.75	51.25	38.00	10.75	10.75		
23.50	39.00	11.00	11.00	50.00	39.00	11.00	11.00	50.00	39.00	10.25	10.25	51.75	39.00	11.00	11.00	52.25	39.00	11			







TABLE XIV.—Actual measurements, showing relation between strain, stretch, and elasticity—Continued.

Catalogue No. of samples ..	LINCOLN.				SOUTHDOWN.																
	169.				132.				132.				132.				132.				
	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	
Actual measurements in grams and millimeters.	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	
	13.50	1.00	0.75	0.25	10.50	1.00	0.25	0.75	7.50	1.00	0.00	1.00	4.50	1.00	0.25	0.75	7.00	1.00	0.25	0.75	
	14.25	2.00	0.75	1.25	13.75	2.00	1.00	1.00	8.75	2.00	1.00	1.00	5.50	2.00	1.00	1.00	8.50	2.00	1.00	8.50	
	15.25	4.00	1.75	2.25	15.00	3.00	.....	.....	10.00	3.00	1.50	1.50	6.50	4.00	2.00	2.00	9.25	3.25	.....	.....	
	16.25	5.00	2.50	2.50	.....	.....	.....	.....	11.50	5.00	2.75	2.25	.....	.....	.....	.....	.....	.....	.....	.....	.....
	18.75	6.00	3.00	3.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	22.50	7.00	3.75	3.25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	13.50	1.00	0.25	0.75	9.75	1.00	0.25	0.75	10.75	1.00	0.00	1.00	10.25	1.00	0.00	1.00	11.50	1.00	0.25	0.75	
	14.25	3.00	1.00	2.00	14.25	2.00	1.00	1.00	12.25	2.00	0.75	1.25	11.50	2.00	0.75	1.25	12.75	2.00	1.00	1.00	
	15.50	5.00	2.00	3.00	15.75	4.00	2.00	2.00	13.00	3.00	1.25	1.75	12.50	3.00	1.25	1.75	13.75	3.00	1.25	1.75	
	18.75	6.00	3.00	3.00	16.75	5.00	2.75	2.25	14.50	5.00	2.50	2.50	13.25	4.00	2.00	2.00	14.75	4.00	2.00	2.00	
	.....	.....	.....	.....	17.75	6.00	.....	.....	15.75	6.00	3.25	2.75	13.50	4.50	.....	.....	15.25	4.75	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	16.00	6.25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	11.50	1.00	0.00	1.00	7.25	1.00	0.25	0.75	6.00	1.00	0.25	0.75	8.50	1.00	0.25	0.75	6.25	1.00	0.25	0.75	
	12.00	2.00	0.75	1.25	9.50	2.00	0.75	1.25	7.25	2.00	1.00	1.00	9.75	2.00	1.00	1.00	7.50	2.00	1.00	1.00	
	12.50	4.00	1.50	2.50	10.75	4.00	2.00	2.00	8.75	4.00	2.00	2.00	10.50	3.00	1.25	1.75	8.50	4.00	.....	.....	
	13.75	5.00	2.25	2.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	16.75	6.00	3.00	3.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	19.75	7.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Catalogue No. of samples ..	SOUTHDOWN.																
	132.				132.				132.				132.				
	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	
Actual measurements in grams and millimeters.	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	
	9.25	1.00	0.25	0.75	7.00	1.00	0.25	0.75	14.50	1.00	0.25	0.75	10.25	1.00	0.25	0.75	
	11.50	2.00	1.00	1.00	9.75	2.00	1.00	1.00	17.50	2.00	1.00	1.00	11.50	2.00	1.00	1.00	
	12.00	2.75	.....	.....	10.50	3.00	.....	.....	19.00	3.00	1.25	1.75	12.75	4.00	2.00	2.00	
	.....	.....	.....	.....	.....	.....	.....	.....	20.50	4.00	.....	.....	13.75	5.00	2.75	2.25	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14.50	6.00	.....	.....	.....
	8.00	1.00	0.25	0.75	12.25	1.00	0.00	1.00	8.00	1.00	0.25	0.75	12.50	1.00	0.25	0.75	
	10.00	2.00	0.75	1.25	13.75	2.00	0.75	1.25	9.00	2.00	1.00	1.00	15.50	2.00	1.00	1.00	
	11.25	5.00	3.00	2.00	14.75	3.00	1.25	1.75	10.50	4.00	2.00	2.0	16.50	3.00	1.25	1.75	
	12.75	6.00	3.25	2.75	16.00	5.00	2.50	2.50	11.50	5.00	2.75	2.25	17.75	4.00	2.00	2.00	
	14.00	7.00	.....	.....	16.50	5.25	.....	.....	13.50	7.00	4.00	3.00	19.25	5.00	3.00	2.00	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	19.25	5.75	.....	.....	.....
	8.25	1.00	0.00	1.00	15.75	1.00	0.25	0.75	6.75	1.00	0.25	0.75	11.75	1.00	0.00	1.00	
	9.50	2.00	1.00	1.00	17.50	2.00	1.00	1.00	7.75	2.00	1.00	1.00	13.50	2.00	0.75	1.25	
	10.25	3.00	1.25	1.75	18.50	3.00	1.25	1.75	8.50	2.75	.....	.....	14.50	3.00	1.25	1.75	
	10.50	3.75	.....	.....	19.50	4.00	.....	.....	.....	.....	.....	.....	16.00	5.00	2.75	2.25	



TABLE XIV.—Actual measurements, showing relation between strain, stretch, and elasticity—Continued.

Catalogue No. of samples..		SOUTHDOWN.																				
		132.				133.				133.				133.				133.				
		Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	
Actual measurements in grams and millimeters.		gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	
		11.50	1.00	0.25	0.75	11.75	1.00	0.25	0.75	14.50	1.00	0.25	0.75	13.75	1.00	0.25	0.75	11.25	1.00	0.25	0.75	
		13.00	2.00	1.00	1.00	14.50	2.00	1.00	1.00	15.75	2.00	0.75	1.25	15.50	2.00	0.75	1.25	15.50	2.00	0.75	1.25	
		13.75	3.00	1.25	1.75	15.50	3.00	1.25	1.75	15.50	3.00	1.25	1.75	16.50	3.00	1.25	1.75	15.75	4.00	2.00	2.00	
		15.00	4.00	2.00	2.00	16.75	5.00	2.50	2.50	18.00	5.00	2.50	2.50	.....	.....	.....	.....	16.50	5.00	3.00	2.00	
		17.50	0.00	3.25	2.75	17.75	6.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	17.75	0.00	3.25	2.75
		19.00	7.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		10.50	1.00	0.25	0.75	14.50	1.00	0.25	0.75	11.75	1.00	0.25	0.75	13.00	1.00	0.25	0.75	9.75	1.00	0.25	0.75	
		12.50	2.00	1.00	1.00	15.75	2.00	0.75	1.25	13.25	2.00	1.00	1.00	14.75	2.00	1.00	1.00	10.75	3.00	1.25	1.75	
		14.00	4.00	2.00	2.00	10.75	4.00	2.00	2.00	14.50	3.00	1.25	1.75	15.75	3.00	1.75	1.25	12.25	4.00	.....	.....	
		14.75	4.75	.....	.....	18.25	5.00	2.75	2.25	10.25	5.00	.....	.....	10.50	4.00	2.00	2.00	.....	.....	.....	.....	
		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	17.50	4.75	.....	.....	.....	.....	.....	.....
		10.75	1.00	0.25	0.75	10.25	1.00	0.25	0.75	0.50	1.00	0.25	0.75	13.75	1.00	0.25	0.75	8.25	1.00	0.25	0.75	
		12.50	2.00	1.00	1.00	11.60	2.00	0.75	1.25	1.00	2.00	1.00	1.00	14.75	2.00	1.00	1.00	9.50	2.00	1.00	1.00	
		13.50	3.00	1.25	1.75	12.50	4.00	2.00	2.00	1.75	3.00	1.50	1.50	16.50	3.00	1.25	1.25	10.50	3.00	1.25	1.75	
		14.75	5.00	2.75	2.25	13.50	5.00	2.75	2.25	13.60	5.00	3.00	2.00	17.60	4.00	2.00	2.00	11.50	4.00	2.00	2.00	
		.....	.....	.....	.....	14.75	0.00	3.25	2.75	14.50	6.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Catalogue No. of samples..		SOUTHDOWN.																				
		133.				134.				134.				134.				134.				
		Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	
Actual measurements in grams and millimeters.		gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	
		7.75	1.00	0.25	0.75	11.25	1.00	0.25	0.75	12.60	1.00	0.25	0.75	15.60	1.00	0.25	0.75	12.50	1.00	0.25	0.75	
		9.50	2.00	1.00	1.00	12.25	2.00	1.00	1.00	13.75	2.00	1.00	1.00	17.25	2.00	1.00	1.00	14.25	2.00	1.00	1.00	
		11.25	3.75	.....	.....	13.50	4.00	2.00	2.00	14.50	3.00	1.25	1.75	18.25	3.00	1.25	1.75	15.50	4.00	2.00	2.00	
		.....	.....	.....	.....	14.50	5.00	3.00	2.00	15.50	5.00	2.50	2.50	19.75	5.00	2.75	2.25	17.00	6.00	3.50	2.50	
		.....	.....	.....	.....	16.50	5.75	.....	.....	16.75	0.00	3.25	2.75	22.25	6.00	.....	.....	19.50	7.00	4.00	3.00	
		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20.50	7.50	.....	.....
		8.00	1.00	0.25	0.75	15.50	1.00	0.25	0.75	12.25	1.00	0.25	0.75	12.25	1.00	0.25	0.75	11.50	1.00	0.25	0.75	
		9.50	2.00	1.00	1.00	16.75	2.00	0.75	1.25	12.75	2.00	0.75	1.25	13.25	2.00	0.75	1.25	12.75	2.00	1.00	1.00	
		0.75	2.25	.....	.....	17.75	3.00	1.25	1.75	13.50	3.00	1.25	1.75	13.75	3.00	1.25	1.75	13.50	3.00	1.25	1.75	
		.....	.....	.....	.....	18.75	4.00	2.00	2.00	15.25	5.00	2.50	2.50	14.50	5.00	2.75	2.25	14.25	4.00	.....	.....	
		.....	.....	.....	.....	19.75	5.00	3.00	2.00	16.50	6.00	3.25	2.75	15.75	6.00	3.25	2.75	.....	.....	.....	.....	
		.....	.....	.....	.....	20.00	5.75	.....	.....	18.25	7.00	4.00	3.00	18.25	7.00	.....	.....	.....	.....	.....	.....	
		0.75	1.00	0.25	0.75	7.75	1.00	0.25	0.75	16.50	1.00	0.25	0.75	10.50	1.00	0.25	0.75	17.00	1.00	0.25	0.75	
		12.50	2.00	0.75	1.25	9.25	2.00	1.00	1.00	18.25	2.00	0.75	1.25	11.75	3.00	1.25	1.75	19.00	2.00	0.75	1.25	
		13.50	3.00	1.25	1.75	10.25	4.00	2.00	2.00	19.25	3.00	1.00	2.00	12.50	4.00	2.00	2.00	20.00	4.00	2.00	2.00	
		14.50	4.00	2.00	2.00	10.50	5.00	3.00	2.00	20.00	4.00	2.00	2.00	13.50	5.00	2.75	2.25	21.50	5.00	3.00	2.00	
		15.75	5.00	2.75	2.25	11.75	6.00	4.00	2.00	21.25	5.00	2.75	2.25	14.00	6.00	3.25	2.75	23.75	6.00	3.50	2.50	
		16.50	5.75	.....	.....	12.75	7.75	.....	.....	22.50	6.00	3.50	2.50	15.50	7.00	.....	.....	27.00	7.00	4.00	3.00	
		.....	.....	.....	.....	.....	.....	.....	.....	23.75	6.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	17.25	1.00	0.25	0.75		
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20.50	2.00	1.00	1.00		
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	21.50	4.00	2.00	2.00		
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	23.00	5.00	2.75	2.25		
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	25.25	6.00	3.25	2.75		
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	27.25	0.75	.....	.....		







TABLE XIV.—Actual measurements, showing relation between strain, stretch, and elasticity—Continued.

Catalogue No. of samples ..		SOUTHDOWN.																			
		137.				137.				137.				138.				138.			
		Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		14.50	1.00	0.25	0.75	23.25	1.00	0.25	0.75	14.50	1.00	0.25	0.75	8.25	1.00	0.25	0.75	12.00	1.00	0.25	0.75
		17.75	2.00	0.75	1.25	23.25	2.00	1.00	1.00	16.75	2.00	1.00	1.00	11.75	2.00	0.75	1.25	13.00	2.00	0.75	1.25
		18.50	3.00	1.25	1.75	26.75	3.00	1.25	1.75	17.60	3.00	1.25	1.75	12.75	3.00	1.00	2.00	14.25	4.00	2.00	2.00
		19.25	4.00	2.00	2.00	27.50	4.00	2.00	2.00	18.50	4.00	2.00	2.00	13.00	4.00	1.00	2.00	15.00	5.00	2.00	2.25
		20.25	5.00	3.00	2.00	29.50	5.00	2.75	2.25	19.25	5.00	2.75	2.25	13.25	5.00	2.00	2.00	15.50	5.00	2.00	2.00
		22.00	6.00	3.50	2.50	.....	.....	.....	.....	20.25	6.00	3.50	2.50	.....	.....	.....	.....	.....	.....	.....	.....
		24.75	7.00	.....	.....	.....	.....	.....	.....	23.25	7.00	4.25	2.75	.....	.....	.....	.....	.....	.....	.....	.....
		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		11.25	1.00	0.25	0.75	13.25	1.00	0.25	0.75	12.75	1.00	0.25	0.75	0.75	1.00	0.25	0.75	9.50	1.00	0.25	0.75
		13.60	2.00	1.00	1.00	14.50	2.00	1.00	1.00	14.50	2.00	1.00	1.00	8.00	2.00	1.00	1.00	10.50	2.00	0.75	1.25
		14.75	3.00	1.25	1.75	15.25	3.00	1.25	1.75	15.50	4.00	2.00	2.00	8.50	2.50	.....	.....	11.25	3.00	1.25	1.75
		15.75	5.00	2.75	2.25	16.25	4.25	.....	.....	16.50	5.00	3.00	2.00	.....	.....	.....	.....	.....	.....	.....	.....
		17.00	6.00	3.50	2.50	.....	.....	.....	.....	17.50	6.00	3.50	2.50	.....	.....	.....	.....	.....	.....	.....	.....
		18.75	7.00	.....	.....	.....	.....	.....	.....	19.50	7.00	4.25	2.75	.....	.....	.....	.....	.....	.....	.....	.....
		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		13.25	1.00	0.25	0.75	15.00	1.00	0.25	0.75	11.75	1.00	0.25	0.75	9.25	1.00	0.00	1.00	7.75	1.00	0.00	1.00
		14.60	2.00	1.00	1.00	16.25	2.00	1.00	1.00	12.75	2.00	1.00	1.00	10.50	3.00	1.00	2.00	8.75	2.00	0.75	1.25
		15.25	3.00	1.25	1.75	17.60	4.00	2.00	2.00	13.25	3.00	1.25	1.75	11.50	4.00	2.00	2.00	9.50	3.00	1.25	1.75
		16.00	4.00	2.00	2.00	18.75	5.00	2.75	2.25	14.25	4.00	2.00	2.00	12.25	5.00	2.75	2.25	.....	.....	.....	.....
18.00	5.00	3.25	2.75	20.50	6.00	3.25	2.75	15.25	5.00	3.00	2.00	13.25	6.00	3.25	2.75	.....	.....	.....	.....		
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
13.75	1.00	0.25	0.75	12.25	1.00	0.25	0.75	.....	.....	.....	.....	9.75	1.00	0.25	0.75	6.50	1.00	0.25	0.75		
14.75	2.00	1.00	1.00	14.25	2.00	0.75	1.25	.....	.....	.....	.....	11.25	2.00	1.00	1.00	7.00	2.00	0.75	1.25		
15.60	3.00	1.25	1.75	15.25	4.00	2.00	2.00	.....	.....	.....	.....	12.25	4.00	2.00	2.00	7.75	4.00	2.00	2.00		
.....	.....	.....	.....	16.25	5.00	3.00	2.00	.....	.....	.....	.....	13.75	6.00	3.25	2.75	.....	.....	.....	.....		
.....	.....	.....	.....	17.50	6.00	3.75	2.25	.....	.....	.....	.....	14.25	6.50	.....	.....	.....	.....	.....	.....		
.....	.....	.....	.....	18.75	6.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		

Catalogue No. of samples ..		SOUTHDOWN.																			
		138.				138.				139.				139.				139.			
		Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		6.50	1.00	0.25	0.75	9.75	1.00	0.25	0.75	12.25	1.00	0.25	0.75	8.00	1.00	0.00	1.00	11.25	1.00	0.25	0.75
		10.25	2.00	0.75	1.25	11.50	2.00	1.00	1.00	13.75	2.00	1.00	1.00	10.50	2.00	0.75	1.25	13.50	2.00	1.00	1.00
		11.25	3.00	1.25	1.75	12.25	3.00	1.25	1.75	14.75	3.00	1.50	1.50	10.75	4.00	2.00	2.00	14.50	3.00	1.50	1.50
		11.50	3.25	.....	.....	.....	.....	.....	.....	16.00	4.00	2.00	2.00	11.60	5.00	3.00	2.00	15.50	5.00	3.00	2.00
		.....	.....	.....	.....	.....	.....	.....	.....	16.75	5.00	3.00	2.00	13.00	7.00	.....	.....	17.00	0.00	3.75	2.25
		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	18.50	7.00	4.25	2.75
		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20.50	8.00	.....	.....
		7.75	1.00	0.25	0.75	7.25	1.00	0.25	0.75	12.75	1.00	0.25	0.75	5.00	1.00	0.00	1.00	13.25	1.00	0.25	0.75
		10.25	2.00	1.00	1.00	9.75	2.00	1.00	1.00	14.75	2.00	1.00	1.00	6.50	2.00	0.25	1.25	16.25	2.00	1.00	1.00
		10.75	3.00	1.25	1.75	10.50	3.00	1.25	1.75	15.25	3.00	1.50	1.50	7.75	3.75	.....	.....	17.50	4.00	2.00	2.00
		11.25	4.00	2.00	2.00	11.25	4.00	2.00	2.00	17.25	5.00	.....	.....	.....	.....	.....	.....	18.25	5.00	3.00	2.00
		12.75	6.00	3.25	2.75	11.75	5.00	2.75	2.25	.....	.....	.....	.....	.....	.....	.....	.....	19.50	6.00	3.75	2.25
		13.75	6.75	.....	.....	12.75	6.00	3.50	2.50	.....	.....	.....	.....	.....	.....	.....	.....	21.25	7.00	4.25	2.75
		.....	.....	.....	.....	14.00	7.00	4.25	2.75	.....	.....	.....	.....	.....	.....	.....	.....	22.75	7.75	.....	.....
		.....	.....	.....	.....	14.50	7.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		10.50	1.00	0.25	0.75	9.00	1.00	0.25	0.75	12.25	1.00	0.25	0.75	0.75	1.00	0.00	1.00	14.25	1.00	0.25	0.75
		12.00	2.00	0.75	1.25	10.50	2.00	1.00	1.00	15.75	2.00	1.00	1.00	0.50	2.00	0.75	1.25	15.50	2.00	1.00	1.00
		12.60	3.00	1.25	1.75	11.50	4.00	2.00	2.00	16.75	3.00	.....	.....	11.00	3.00	1.00	2.00	16.25	3.00	1.25	1.75
		13.75	5.00	2.75	2.25	12.50	5.00	2.75	2.25	.....	.....	.....	.....	.....	.....	.....	.....	18.00	5.00	2.75	2.25
15.00	6.00	3.25	2.75	13.25	6.00	3.50	2.50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
17.00	7.00	.....	.....	14.75	7.00	4.00	3.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
.....	.....	.....	.....	16.75	8.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
10.00	1.00	0.00	1.00	.....	.....	.....	.....	13.25	1.00	0.25	0.75	14.75	1.00	0.20	1.00	13.25	1.00	0.25	0.75		
11.75	2.00	0.75	1.25	.....	.....	.....	.....	20.75	2.00	1.00	1.00	17.00	2.00	1.00	1.00	17.25	2.00	0.75	1.25		
12.75	4.00	2.00	2.00	.....	.....	.....	.....	22.25	3.00	1.75	1.25	18.51	3.00	1.25	1.75	18.50	4.00	2.00	2.00		
13.50	5.00	2.75	2.25	.....	.....	.....	.....	23.25	4.00	2.25	1.75	19.75	5.00	2.75	2.25	19.25	4.75	.....	.....		
15.25	6.00	3.25	2.75	.....	.....	.....	.....	24.50	5.00	3.00	2.00	21.25	6.00	.....	.....	.....	.....	.....	.....		
15.75	6.50	.....	.....	.....	.....	.....	.....	26.00	6.00	3.75	2.25	.....	.....	.....	.....	.....	.....	.....	.....		
.....	.....	.....	.....	.....	.....	.....	.....	27.25	7.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		



TABLE XIV.—Actual measurements, showing relation between strain, stretch, and elasticity—Continued.

Catalogue No. of samples..		SOUTHDOWN.																			
		139.				140.				140.				140.				140.			
		Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.
Actual measurements in grams and millimeters.		gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.
		13.25	1.00	0.25	0.75	8.50	1.00	0.25	0.75	10.25	1.00	0.25	0.75	11.25	1.00	0.25	0.75	10.00	2.00	1.00	1.00
Actual measurements in grams and millimeters.		15.50	2.00	1.00	1.00	10.75	2.00	1.00	1.00	12.50	2.00	1.00	1.00	13.25	2.00	1.00	1.00	10.00	2.00	1.00	1.00
		17.00	4.00	2.00	2.00	11.25	3.00	1.25	1.75	13.50	3.00	1.50	1.50	14.75	3.00	1.50	1.50	10.50	3.00	1.25	1.75
Actual measurements in grams and millimeters.		18.00	4.75	.....	.....	12.25	3.50	1.75	2.25	14.60	4.00	2.00	2.00	.....	.....	.....	.....	11.25	4.00	2.00	2.00
		.....	.....	.....	.....	13.50	4.75	.....	.....	15.00	5.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Actual measurements in grams and millimeters.		10.75	1.00	0.00	1.00	11.50	1.00	0.25	0.75	6.50	1.00	0.00	1.00	0.75	1.00	0.25	0.75	9.00	1.00	0.00	1.00
		15.25	2.00	0.75	1.25	13.50	2.00	0.75	1.25	7.50	2.00	1.00	1.00	8.00	2.00	1.00	1.00	13.25	2.00	0.75	1.25
Actual measurements in grams and millimeters.		15.50	4.00	2.00	2.00	14.50	3.00	1.25	1.75	8.25	3.00	1.25	1.75	8.50	3.00	1.50	1.50	14.25	3.00	1.25	1.75
		16.50	5.00	.....	.....	15.00	4.00	2.00	2.00	0.50	5.00	2.00	2.00	9.25	5.00	2.75	2.25	15.00	4.00	2.00	2.00
Actual measurements in grams and millimeters.		.....	.....	.....	.....	.....	.....	.....	.....	11.00	7.00	4.00	3.00	.....	.....	.....	.....	17.50	5.00	2.75	2.25
		11.75	1.00	0.25	0.75	0.50	1.00	0.25	0.75	12.00	1.00	0.25	0.75	12.25	1.00	0.25	0.75	12.50	1.00	0.00	1.00
Actual measurements in grams and millimeters.		14.50	2.00	1.00	1.00	11.75	2.00	1.00	1.00	14.75	2.00	1.00	1.00	14.25	2.00	1.00	1.00	13.75	2.00	0.75	1.25
		15.50	4.00	2.00	2.00	13.75	2.75	.....	.....	15.50	3.00	1.50	1.50	14.50	3.00	.....	.....	14.75	3.00	1.25	1.75
Actual measurements in grams and millimeters.		16.00	5.00	3.00	2.00	.....	.....	.....	.....	16.50	4.00	2.00	2.00	.....	.....	.....	.....	15.50	4.00	2.00	2.00
		.....	.....	.....	.....	.....	.....	.....	.....	17.50	5.00	2.00	2.00	.....	.....	.....	.....	16.75	5.00	.....	.....
Actual measurements in grams and millimeters.		.....	.....	.....	.....	.....	.....	.....	.....	18.75	6.00	3.75	2.25	.....	.....	.....	.....	.....	.....	.....	.....
		.....	.....	.....	.....	12.75	1.00	0.50	0.50	6.50	1.00	0.25	0.75	12.00	1.00	0.25	0.75	.....	.....	.....	.....
Actual measurements in grams and millimeters.		.....	.....	.....	.....	16.00	2.00	1.00	1.00	8.25	2.00	0.75	1.25	13.50	2.00	1.00	1.00	.....	.....	.....	.....
		.....	.....	.....	.....	17.00	3.00	1.50	1.50	9.00	2.25	.....	.....	14.50	3.25	.....	.....	.....	.....	.....	.....
Actual measurements in grams and millimeters.		.....	.....	.....	.....	18.25	4.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....



TABLE XIV.—Actual measurements, showing relation between strain, stretch, and elasticity—Continued.

Catalogue No. of samples..		SOUTHDOWN.																			
		142.				142.				142.				143.				143.			
		Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		5.00	1.00	0.00	1.00	4.50	1.00	0.75	0.25	6.25	1.00	0.00	1.00	12.50	1.00	0.25	0.75	16.25	1.00	0.25	0.75
		8.00	2.00	0.75	1.25	8.75	2.00	1.00	1.00	8.25	2.00	0.75	1.25	14.50	2.00	1.00	1.00	18.00	2.00	1.00	1.00
		10.75	3.00	1.00	2.00	9.50	3.00	.....	.....	9.25	3.00	1.00	2.00	15.50	3.00	1.25	1.75	19.50	3.00	1.25	1.75
		.....	.....	.....	.....	.....	.....	.....	.....	10.25	4.00	2.00	2.00	16.50	4.00	2.00	2.00	20.50	4.00	2.00	2.00
		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	17.25	5.00	3.00	2.00	22.25	5.00	.....	.....
		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	18.50	6.00	.....	.....	.....	.....	.....	.....
		8.50	1.00	0.00	1.00	5.50	1.00	0.00	1.00	8.50	1.00	0.00	1.00	17.50	1.00	0.25	0.75	8.75	1.00	0.25	0.75
		10.50	3.00	1.25	1.75	7.75	2.00	0.75	1.25	11.00	2.00	0.75	1.25	20.50	2.00	0.75	1.25	14.75	2.00	1.00	1.00
		11.50	4.00	2.00	2.00	8.25	3.00	1.00	2.00	12.00	4.00	.....	.....	22.00	3.00	1.25	1.75	15.75	3.00	1.25	1.75
		12.50	5.00	3.00	2.00	9.00	4.00	2.00	2.00	.....	.....	.....	.....	.....	.....	.....	.....	10.75	3.75	.....	.....
		13.50	6.00	.....	.....	10.75	5.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		14.50	1.00	0.25	0.75	6.25	1.00	0.00	1.00	10.00	1.00	0.00	1.00	15.50	1.00	0.00	1.00	17.75	1.00	0.25	0.75
		15.25	2.00	0.75	1.25	7.50	2.00	0.75	1.25	13.75	2.00	0.75	1.25	17.75	2.00	1.00	1.00	18.50	2.00	1.00	1.00
		16.50	4.00	2.00	2.00	8.50	4.00	2.00	2.00	16.50	3.00	1.00	2.00	19.00	3.00	1.25	1.75	19.50	3.00	1.50	1.50
		17.50	5.00	2.75	2.25	9.25	5.00	2.75	2.25	18.50	4.00	2.00	2.00	21.25	5.00	3.00	2.00	20.75	4.00	2.00	2.00
		19.50	6.00	3.50	2.50	10.00	6.00	3.50	2.50	21.00	4.75	.....	.....	.....	.....	.....	.....	22.25	5.00	3.00	2.00
		21.75	7.00	4.25	2.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	23.50	6.00	3.50	2.50
		22.00	7.25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	25.25	6.75	.....	.....
		9.00	1.00	0.25	0.75	5.75	1.00	0.25	0.75	.....	.....	.....	.....	16.25	1.00	0.25	0.75	9.75	1.00	0.25	0.75
10.25	2.00	1.00	1.00	8.50	2.00	0.75	1.25	.....	.....	.....	.....	18.25	2.00	1.00	1.00	12.00	2.00	1.00	1.00		
11.25	4.00	2.00	2.00	9.50	3.00	.....	.....	.....	.....	.....	.....	18.50	2.75	.....	.....	14.25	3.00	.....	.....		
11.75	5.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		

Catalogue No. of samples..		SOUTHDOWN.																			
		143.				143.				144.				144.				144.			
		Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		14.75	1.00	0.25	0.75	15.00	1.00	0.25	0.75	7.60	1.00	0.00	1.00	11.00	1.00	0.00	1.00	11.25	1.00	0.00	1.00
		18.25	2.00	1.00	1.00	17.75	2.00	1.00	1.00	11.25	2.00	0.50	1.50	12.50	2.00	1.00	1.00	12.50	2.00	1.25	1.25
		19.50	3.00	1.25	1.75	18.75	3.00	1.50	1.50	13.75	3.00	1.00	2.00	.....	.....	.....	.....	13.25	2.00	2.00	2.00
		20.25	4.00	.....	.....	20.25	4.00	2.00	2.00	16.50	3.75	.....	.....	.....	.....	.....	.....	14.00	2.00	2.75	2.25
		.....	.....	.....	.....	21.60	5.00	3.00	2.00	.....	.....	.....	.....	.....	.....	.....	.....	15.25	3.00	3.00	2.00
		.....	.....	.....	.....	22.75	6.00	3.50	2.50	.....	.....	.....	.....	.....	.....	.....	.....	16.00	4.00	3.25	2.75
		.....	.....	.....	.....	25.50	7.00	4.00	3.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		.....	.....	.....	.....	25.50	7.25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		16.00	1.00	0.00	1.00	20.50	1.00	0.25	0.75	12.75	1.00	0.25	0.75	13.50	1.00	0.25	0.75	12.50	1.00	0.25	0.75
		18.50	2.00	1.00	1.00	23.25	2.00	1.00	1.00	15.00	2.00	1.00	1.00	15.00	2.00	0.75	1.25	14.00	2.00	0.75	1.25
		19.50	3.00	1.25	1.75	25.25	3.00	1.25	1.75	16.00	3.00	1.25	1.75	16.50	4.00	2.00	2.00	15.00	4.00	2.00	2.00
		20.75	4.00	2.00	2.00	.....	.....	.....	.....	17.00	3.75	.....	.....	17.50	5.00	2.75	2.25	.....	.....	.....	.....
		22.25	5.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	18.75	6.00	3.75	2.25	.....	.....	.....	.....
		14.25	1.00	0.25	0.75	9.25	1.00	0.00	1.00	8.50	1.00	0.25	0.75	12.50	1.00	0.25	0.75	0.50	1.00	0.25	0.75
		17.50	2.00	1.00	1.00	11.75	2.00	0.75	1.25	11.75	2.00	0.75	1.25	15.00	2.00	1.00	1.00	10.75	2.00	0.75	1.25
		18.50	3.00	1.25	1.75	12.50	3.00	1.25	1.75	14.50	3.00	1.00	2.00	16.75	4.00	2.00	2.00	11.25	3.00	1.00	2.00
		19.75	4.00	2.00	2.00	13.25	4.00	2.00	2.00	17.25	4.00	.....	.....	18.25	5.00	3.00	2.00	12.50	5.00	.....	.....
		21.50	5.00	2.75	2.25	15.75	5.75	.....	.....	.....	.....	.....	.....	19.25	6.00	3.75	2.25	.....	.....	.....	.....
		23.75	6.00	3.50	2.50	.....	.....	.....	.....	.....	.....	.....	.....	22.00	7.00	.....	.....	.....	.....	.....	.....
24.00	6.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
9.60	1.00	0.25	0.75	.....	.....	.....	.....	10.75	1.00	0.25	0.75	10.75	1.00	0.25	0.75	10.75	1.00	0.00	1.00		
12.50	2.00	1.00	1.00	.....	.....	.....	.....	11.75	2.00	1.00	1.00	12.25	2.00	1.00	1.00	11.50	2.00	0.50	1.50		
13.75	3.00	1.25	1.75	.....	.....	.....	.....	13.00	2.00	1.00	1.00	12.75	3.00	1.25	1.75	12.25	3.00	1.00	2.00		
14.50	4.00	2.00	2.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13.50	5.00	2.25	2.75		
15.75	5.00	3.00	2.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15.50	6.00	3.25	2.75		
17.25	6.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		







TABLE XIV.—Actual measurements, showing relation between strain, stretch, and elasticity—Continued.

Catalogue No. of samples ..	SOUTHDOWN.																			
	147.				147.				147.				148.				148.			
	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.
Actual measurements in grams and millimeters.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.
	9.50	1.00	0.25	0.75	11.25	1.00	0.00	1.00	9.25	1.00	0.25	0.75	11.25	1.00	0.25	0.75	9.75	1.00	0.25	0.75
	11.25	2.00	1.00	1.00	12.25	2.00	0.75	1.25	10.60	2.00	0.75	1.25	10.60	2.00	0.75	1.25	12.75	2.00	1.00	1.00
	12.25	3.00	.....	.....	13.25	3.50	.....	.....	11.50	3.00	1.00	2.00	11.50	3.00	1.00	2.00	13.00	3.00	.....	.....
	.....	.....	.....	.....	.....	.....	.....	.....	12.75	5.00	2.75	.....	12.75	5.00	2.75	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....	.....	.....	.....	13.75	6.00	.....	.....	13.75	6.00	.....	.....	.....	.....	.....	.....
	14.50	1.00	0.00	1.00	11.00	1.00	0.00	1.00	11.75	1.00	0.25	0.75	7.50	1.00	0.00	1.00	9.75	1.00	0.25	0.75
	16.00	2.00	0.75	1.25	14.75	2.00	0.75	1.25	14.00	2.00	1.00	1.00	8.50	2.00	1.00	1.00	12.25	2.00	1.00	1.00
	10.50	3.00	1.25	1.75	16.00	3.00	1.00	2.00	15.50	3.00	1.25	1.75	9.25	3.00	1.25	1.75	13.25	3.00	1.50	1.50
	17.50	4.00	2.00	2.00	17.00	4.00	2.00	2.00	16.00	4.00	2.00	2.00	10.25	5.00	2.75	2.25	14.25	4.25	.....	.....
	18.25	5.00	2.75	2.25	18.50	4.75	.....	.....	17.00	5.00	2.75	2.25	.....	.....	.....	.....	.....	.....	.....	.....
	19.75	6.00	3.25	2.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	23.25	7.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	12.25	1.00	0.25	0.75	10.50	1.00	0.00	1.00	11.50	1.00	0.25	0.75	7.75	1.00	0.25	0.75	14.00	1.00	0.25	0.75
	14.50	2.00	0.75	1.25	12.00	2.00	0.75	1.25	13.75	2.00	1.00	1.00	11.25	2.00	1.00	1.00	15.25	2.00	1.00	1.00
	15.25	3.00	1.25	1.75	12.75	3.00	1.25	1.75	14.50	3.00	1.25	1.75	12.50	3.00	.....	.....	16.00	3.00	1.25	1.75
	16.25	4.00	2.00	2.00	13.25	4.00	2.00	2.00	15.50	4.00	2.00	2.00	.....	.....	.....	.....	17.50	5.00	2.75	2.25
	.....	.....	.....	.....	14.50	5.00	2.75	2.25	16.50	5.00	2.00	2.00	.....	.....	.....	.....	19.75	0.00	3.25	2.75
	.....	.....	.....	.....	15.50	6.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	21.50	7.00	.....	.....
8.50	1.00	0.25	0.75	9.50	1.00	0.00	1.00	.....	.....	.....	.....	8.25	1.00	0.25	0.75	10.25	1.00	0.25	0.75	
10.50	2.00	0.75	1.25	10.50	2.00	0.50	1.50	.....	.....	.....	.....	11.00	2.00	0.75	1.25	11.75	2.00	0.75	1.25	
11.75	4.00	2.00	2.00	11.25	3.00	1.25	1.75	.....	.....	.....	.....	11.75	3.00	1.25	1.75	12.50	3.00	1.25	1.75	
12.50	5.00	2.75	2.25	12.50	5.00	2.75	2.25	.....	.....	.....	.....	12.25	4.00	2.00	2.00	13.50	5.00	2.75	2.25	
13.75	6.00	.....	.....	13.75	6.00	3.25	2.75	.....	.....	.....	.....	13.25	5.00	.....	.....	14.25	6.50	.....	.....	
.....	.....	.....	.....	15.00	7.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Catalogue No. of samples ..	SOUTHDOWN.								HAMPSHIRE.											
	148.				148.				163.				163.				163.			
	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.
Actual measurements in grams and millimeters.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.
	8.25	1.00	0.25	0.75	7.50	1.00	0.25	0.75	9.75	1.00	0.25	0.75	13.25	1.00	0.25	0.75	12.75	1.00	0.25	0.75
	10.50	2.00	0.75	1.25	9.25	2.00	1.00	1.00	13.75	2.00	1.00	1.00	17.00	2.00	0.75	1.25	16.50	2.00	1.00	1.00
	11.50	2.75	.....	.....	10.00	3.00	1.50	1.50	15.00	3.00	.....	.....	17.75	3.00	1.50	1.50	17.00	3.00	1.25	1.75
	.....	.....	.....	.....	11.25	4.50	.....	.....	.....	.....	.....	.....	18.00	3.50	.....	.....	18.00	4.00	.....	.....
	10.75	1.00	0.25	0.75	7.50	1.00	0.25	0.75	11.25	1.00	0.25	0.75	12.25	1.00	0.25	0.75	11.50	1.00	0.25	0.75
	12.00	2.00	0.75	1.25	11.00	2.00	1.00	1.00	16.50	2.00	1.00	1.00	15.00	2.00	1.00	1.00	17.75	2.00	1.00	1.00
	12.75	3.00	1.25	1.75	11.50	3.00	1.25	1.75	17.50	3.00	1.25	1.75	16.25	3.00	1.25	1.75	19.25	3.00	1.50	1.50
	.....	.....	.....	.....	12.00	4.00	.....	.....	18.00	3.75	.....	.....	18.75	4.25	.....	.....	20.25	4.00	2.00	2.00
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	23.75	0.00	3.25	2.75
	9.75	1.00	0.25	0.75	7.25	1.00	0.25	0.75	9.75	1.00	0.25	0.75	11.75	1.00	0.25	0.75	11.75	1.00	0.25	0.75
	11.75	2.00	1.00	1.00	8.75	2.00	0.75	1.25	14.75	2.00	0.75	1.25	16.75	2.00	0.75	1.25	16.50	2.00	0.75	1.25
	13.00	2.75	.....	.....	9.50	3.00	1.25	1.75	17.00	2.75	.....	.....	18.75	2.75	.....	.....	18.00	3.00	.....	.....
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	10.50	1.00	0.25	0.75	.....	.....	.....	.....	9.50	1.00	0.25	0.75	10.75	1.00	0.25	0.75	12.50	1.00	0.50	0.50
	12.50	2.00	1.00	1.00	.....	.....	.....	.....	12.75	2.00	0.75	1.25	15.25	2.00	1.00	1.00	16.50	2.00	1.00	1.00
	13.75	2.75	.....	.....	.....	.....	.....	.....	13.50	3.00	1.25	1.75	17.25	3.00	1.50	1.50	18.75	4.00	2.00	2.00
	.....	.....	.....	.....	.....	.....	.....	.....	14.00	3.75	.....	.....	18.00	4.00	.....	.....	20.50	4.75	.....	.....



TABLE XIV.—Actual measurements, showing relation between strain, stretch, and elasticity—Continued.

Catalogue No. of samples ..	HAMPSHIRE.																			
	163.				163.				163.				163.				163.			
	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.
	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.
	10.75	1.00	0.35	0.75	8.50	1.00	0.25	0.75	13.50	1.00	0.25	0.75	12.25	1.00	0.25	0.75	14.25	1.00	0.25	0.75
	10.25	2.00	0.75	1.25	10.50	2.00	1.00	1.00	16.00	2.00	1.00	1.00	14.75	2.00	1.00	1.00	17.50	2.00	1.00	1.00
	17.75	3.00	1.00	2.00	11.50	2.00	1.25	1.75	17.25	4.00	2.25	1.75	16.25	3.00	1.25	1.75	19.00	3.00	1.50	1.50
					12.50	4.00	2.00	2.00	18.75	6.00	3.75	2.25					20.00	3.00	1.50	1.50
									21.00	9.00										
	16.25	1.00	0.25	0.75	15.50	1.00	0.25	0.75	13.25	1.00	0.50	0.50	12.75	1.00	0.25	0.75	11.50	1.00	0.00	1.00
	19.50	2.00	1.00	1.00	10.60	2.00	1.00	1.00	19.00	2.00	1.00	1.00	17.50	2.00	1.00	1.00	15.75	2.00	0.75	1.25
	21.50	3.00	1.25	1.75	20.75	3.00	1.75	1.25	18.50	3.00	1.75	1.25	18.25	2.50			17.75	2.00	1.00	2.00
	23.25	4.00	2.00	2.00	21.50	4.00	2.00	2.00	19.75	4.00	2.00	1.75					10.25	4.00	1.75	2.25
	24.25	5.00	2.00	2.00	22.50	5.00	3.00	2.00	22.00	6.00	3.25	2.75								
	27.50	7.00			24.50	6.00	3.50	2.50	23.25	6.75										
					27.00	7.00														
Actual measurements in grams and millimeters.	10.50	1.00	0.25	0.75	13.60	1.00	0.25	0.75	7.75	1.00	0.25	0.75	10.50	1.00	0.25	0.75				
	15.25	2.00	0.75	1.25	15.75	2.00	1.00	1.00	10.75	2.00	0.75	1.25	15.25	2.00	1.00	1.00				
	18.00	3.00			16.50	3.00	1.50	1.50	12.25	3.00	1.00	2.00	17.00	3.00	1.25	1.75				
					17.50	4.00	2.00	2.00	14.25	4.00	1.75	2.25	18.00	4.00	2.00	2.00				
					18.25	5.00	2.75	2.25					19.50	5.00	2.00	2.00				
					19.50	6.00	3.00	3.00												
					21.50	7.00														
	10.50	1.00	0.25	0.75	8.75	1.00	0.25	0.75	13.25	1.00	0.25	0.75	14.00	1.00	0.25	0.75				
	12.00	2.00	1.00	1.00	14.00	2.00	0.75	1.25	16.75	2.00	1.00	1.00	17.00	2.00	1.00	1.00				
	13.00	3.00			15.50	3.00	1.25	1.75	17.00	2.50			18.00	3.00	1.25	1.75				
					16.50	4.00	2.00	2.00					19.25	4.00	2.25	1.75				
					17.75	5.00	2.00	2.00					20.25	5.00	3.00	2.00				
													25.25	6.00						

Catalogue No. of samples ..	OXFORDDOWN.																			
	150.				150.				150.				150.				150.			
	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.
	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.
	17.25	1.00	0.75	0.25	18.25	1.00	0.50	0.50	25.50	1.00	0.25	0.75	35.75	1.00	0.25	0.75	38.00	1.00	0.25	0.75
	28.00	2.00	1.00	1.00	22.00	3.25	1.50	1.75	31.25	2.25	1.00	1.25	43.00	2.00	1.00	1.00	42.00	3.50	1.75	1.75
	31.25	4.00	2.25	1.75					33.00	4.00	2.00	2.00	45.00	4.25	2.25	2.00	45.00	5.00	3.50	2.50
	35.00	6.00	3.75	2.25					37.25	6.00	3.75	2.25	46.50	6.00	3.50	2.50	51.00	6.00	4.00	2.00
	35.25	8.50	Ruptured.						40.00	7.00	4.25	2.75	60.00	9.00	7.00	2.00	55.00	7.00	4.00	3.00
									47.00	8.00	5.00	3.00	55.00	14.00	11.00	3.00	69.00	8.00		
													60.00	15.00	11.75	3.25				
													63.00	16.00						
	32.00	1.00	0.25	0.75	28.60	1.00	0.25	0.75	33.00	1.00	0.25	0.75	40.00	1.00	0.00	1.00	31.25	1.00	0.00	1.00
	31.25	2.50	1.00	1.50	32.25	2.00	0.75	1.25	40.00	5.00	2.50	2.50	45.00	3.00	0.75	2.25	35.00	3.00	1.25	1.75
	35.25	4.25	2.25	2.00	35.75	5.00	2.75	2.25	43.75	6.25	4.00	2.25	47.00	4.25			37.25	5.00	3.00	2.00
	40.00	5.25	3.00	2.25	42.50	6.75	4.00	2.75	47.00	7.00	4.25	2.75					41.00	6.00	4.00	2.00
	45.00	6.00			46.75	7.50											47.00	7.00	4.50	2.50
																	52.50	8.25		
Actual measurements in grams and millimeters.	34.00	1.00	0.25	0.75	26.25	2.00	1.00	1.00	35.00	1.00	0.00	1.00	28.50	1.00	0.25	0.75	45.00	1.00	0.25	0.75
	37.25	3.25	1.75	1.50	35.25	5.00	3.00	2.00	41.60	3.00	2.00	1.00	34.75	2.00	1.00	1.00	47.00	3.00	1.50	1.60
	42.25	5.00	2.75	2.25	39.00	6.00	3.75	2.25	46.00	5.00	2.25	2.75	36.75	4.00	2.00	2.00	50.00	5.00	3.00	2.00
	46.75	6.00	3.75	2.25	43.60	7.00	4.00	3.00	53.50	6.00			41.00	6.00	3.50	2.50	54.00	6.00		
	51.25	7.00	4.25	2.75									46.00	7.00	4.25	2.75				



TABLE XIV.—Actual measurements, showing relation between strain, stretch, and elasticity—Continued.

Catalogue No. of samples..		OXFORDDOWN.																			
		150.				150.				150.				150.				150.			
		Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.
Actual measurements in grams and millimeters.	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	
	20.75	1.00	0.25	0.75	39.00	1.00	0.00	1.00	33.75	1.00	0.25	0.75	31.75	1.00	0.25	0.75	24.25	1.00	0.25	0.75	
	23.50	2.50	1.25	1.25	44.00	3.50	1.75	1.75	39.25	2.00	1.00	1.00	35.25	3.00	1.50	1.50	28.50	4.00	2.00	2.00	
	25.00	4.00	2.50	1.50	49.50	6.00	3.50	2.50	42.25	4.00	2.00	2.00	38.50	4.50	.....	.....	32.00	5.50	3.00	2.50	
	28.75	6.00	3.25	2.75	56.50	7.00	.....	.....	43.25	5.00	3.00	2.00	.....	.....	.....	.....	35.00	6.50	4.00	2.50	
	31.59	7.00	4.25	2.75	.....	.....	.....	.....	0.00	7.00	4.00	3.00	.....	.....	.....	.....	40.00	7.50	.....	.....	
	35.00	8.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	30.75	1.00	0.25	0.75	39.00	1.00	0.25	0.75	29.75	1.00	0.25	0.75	38.00	1.00	0.25	0.75	19.00	1.00	0.00	1.00	
	40.00	2.50	1.00	1.00	43.00	3.00	1.25	1.75	37.50	4.00	2.00	2.00	43.75	2.50	1.00	1.50	19.00	4.00	1.75	2.25	
	43.00	5.00	3.00	2.00	46.00	5.00	2.75	2.25	41.00	5.75	3.25	2.50	45.00	4.00	2.00	2.00	24.25	7.00	.....	.....	
	47.00	6.00	3.50	2.50	50.00	6.00	4.00	2.00	45.00	6.25	4.00	2.25	47.00	5.00	2.50	2.50	.....	.....	.....	.....	
	52.00	7.00	4.00	3.00	.....	.....	.....	.....	50.00	7.00	4.25	2.75	51.00	6.00	3.50	2.50	.....	.....	.....	.....	
	55.00	7.75	.....	.....	.....	.....	.....	.....	55.00	8.00	5.00	3.00	53.00	7.00	.....	.....	.....	.....	.....	.....	
	29.00	1.00	0.00	1.00	23.50	1.00	0.25	0.75	15.75	1.00	0.25	0.75	22.00	1.00	0.75	0.25	28.00	1.00	0.50	0.50	
	33.50	3.00	1.25	1.75	27.75	2.00	1.00	1.00	18.00	5.00	.....	.....	34.00	3.00	1.25	1.75	30.00	2.00	1.00	1.00	
	84.00	6.00	3.00	3.00	30.00	5.50	3.25	2.25	.....	.....	.....	.....	37.00	4.75	2.25	2.50	33.00	4.75	2.50	2.25	
	45.00	7.00	4.00	3.00	35.00	6.50	4.00	2.50	.....	.....	.....	.....	40.00	6.00	3.50	2.50	35.00	6.00	3.50	2.50	
	.....	.....	.....	.....	40.00	7.50	.....	.....	.....	.....	.....	.....	45.00	7.00	4.25	2.75	39.00	7.00	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	50.00	8.00	5.25	2.75	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	53.00	9.00	.....	.....	.....	.....	.....	.....	

Catalogue No. of samples..		OXFORDDOWN.																			
		150.				150.				150.				150.				150.			
		Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.
Actual measurements in grams and millimeters.	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	
	26.00	1.00	0.00	1.00	33.00	1.00	0.25	0.75	22.25	1.00	0.25	0.75	39.00	1.00	0.25	0.75	28.00	1.00	0.25	0.75	
	29.00	2.75	1.00	1.75	33.00	2.00	1.00	1.00	27.50	2.00	1.00	1.00	41.00	3.00	1.25	1.75	28.00	1.25	.....	.....	
	32.00	5.00	2.75	2.25	42.00	4.00	2.00	2.00	30.00	4.25	2.25	2.00	45.00	5.00	3.00	2.00	.....	.....	.....	.....	
	36.50	7.50	4.00	3.50	46.00	5.75	3.00	2.75	33.00	6.00	3.50	2.50	.....	.....	.....	.....	.....	.....	.....	.....	
	44.00	8.00	.....	.....	50.00	6.25	4.00	2.25	36.00	7.00	4.00	3.00	.....	.....	.....	.....	.....	.....	.....	.....	
	.....	.....	.....	.....	55.00	7.00	4.25	2.75	40.25	8.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	.....	.....	.....	59.00	8.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	37.50	1.00	0.25	0.75	27.50	1.00	0.25	0.75	29.00	1.00	0.00	1.00	32.25	1.00	0.25	0.75	38.00	1.00	0.00	1.00	
	43.00	2.00	0.75	1.25	31.00	2.50	1.00	1.50	33.00	2.00	1.00	1.00	42.00	2.00	1.00	1.00	42.00	2.00	1.00	1.00	
	45.50	4.00	2.00	2.00	35.00	5.00	3.00	2.00	35.75	4.00	2.25	1.75	45.00	4.25	2.25	2.00	45.00	4.75	2.25	2.50	
	50.00	6.00	3.25	2.75	40.00	6.25	4.00	2.25	40.00	5.75	.....	.....	48.75	6.00	3.75	2.25	50.00	6.00	3.50	2.50	
	55.00	7.00	4.00	3.00	45.00	7.50	4.75	2.75	.....	.....	.....	.....	54.00	7.00	4.25	2.75	55.75	7.00	4.00	3.00	
	61.00	8.00	.....	.....	49.50	8.50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	63.00	8.00	.....	.....	
	22.75	1.00	0.25	0.75	24.00	1.00	0.25	0.85	39.00	1.00	0.00	1.00	34.00	1.00	0.00	1.00	25.75	1.00	0.25	0.75	
	28.25	2.00	1.00	1.00	27.00	2.00	1.00	1.00	42.25	2.00	1.00	1.00	38.00	2.00	1.00	1.00	34.00	2.00	1.00	1.00	
	30.00	4.00	2.00	2.00	30.00	5.00	2.25	2.75	45.00	4.00	2.25	1.75	42.00	5.00	2.25	2.75	37.00	3.25	.....	.....	
	34.00	6.00	3.25	2.75	35.00	6.25	4.00	2.25	50.00	6.00	3.25	2.75	48.00	6.00	4.00	2.00	.....	.....	.....	.....	
	35.00	6.75	.....	.....	40.00	7.25	4.75	2.50	55.75	7.00	4.50	2.50	53.00	7.00	4.25	2.75	.....	.....	.....	.....	
	.....	.....	.....	.....	42.00	8.00	.....	.....	61.25	8.00	5.00	3.00	59.00	8.00	5.25	2.75	.....	.....	.....	.....	







TABLE XIV.—Actual measurements, showing relation between strain, stretch, and elasticity—Continued.

Catalogue No. of samples..		OXFORDDOWN.																			
		151.				151.				151.				151.							
		Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.				
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		24.25	1.00	0.25	0.75	26.25	1.00	0.00	1.00	10.25	1.00	0.25	0.75	23.00	1.00	0.25	0.75	14.75	1.00	0.25	0.75
		29.25	2.00	1.00	1.00	29.50	3.00	1.00	2.00	20.00	3.25	1.50	1.75	28.00	2.00	1.00	1.00	16.50	2.00	1.25	0.75
		31.00	4.00	2.00	2.00	32.50	5.00	3.50	1.50	21.00	5.00	2.50	2.50	30.00	5.00	3.25	1.75	18.00	5.00	2.50	2.50
		34.25	0.00	4.00	2.00	35.00	6.00	3.50	2.50	24.00	6.75	4.00	2.75	32.00	6.00	3.25	2.75	18.75	5.25	.....	.....
		39.00	9.00	.....	.....	40.00	9.00	4.00	5.00	27.00	7.50	.....	.....	35.00	7.00	4.00	3.00	.....	.....	.....	.....
		.....	.....	.....	.....	45.00	8.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		21.00	1.00	0.00	1.00	15.00	1.00	0.25	0.75	17.00	1.00	0.25	0.75	18.75	1.00	0.25	0.75	20.25	1.00	0.00	1.00
		24.00	3.25	1.75	1.50	19.00	2.00	0.75	1.25	20.00	3.00	1.25	1.75	22.00	3.25	1.50	1.75	22.00	2.00	0.75	1.25
		26.00	5.25	2.75	2.50	18.00	3.00	.....	.....	22.00	5.50	3.00	2.00	25.00	6.00	3.50	2.50	21.50	3.00	.....	.....
		30.00	6.75	4.00	2.75	.....	.....	.....	.....	.....	.....	.....	.....	29.00	7.50	4.50	3.00	.....	.....	.....	.....
		34.75	7.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		29.00	1.00	0.00	1.00	15.75	1.00	0.00	1.00	27.50	1.00	0.25	0.75	20.00	1.00	0.00	1.00	21.50	1.00	0.00	1.00
		33.25	3.00	1.00	2.00	17.75	3.00	1.25	1.75	30.75	3.00	1.00	2.00	22.00	3.00	1.00	2.00	28.75	2.00	1.00	1.00
		36.50	5.00	.....	.....	20.00	0.00	3.00	8.00	32.50	5.00	2.50	2.50	25.00	6.00	.....	.....	29.25	5.00	2.25	2.75
		.....	.....	.....	.....	21.00	6.75	.....	.....	36.00	6.00	3.25	2.75	.....	.....	.....	.....	32.00	6.00	3.00	3.00
		.....	.....	.....	.....	.....	.....	.....	.....	40.00	7.00	.....	.....	.....	.....	.....	.....	37.00	7.00	4.00	3.00

Catalogue No. of samples..		OXFORDDOWN.																			
		151.				151.				151.				151.							
		Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.				
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		22.75	1.00	0.25	0.75	24.00	1.00	0.25	0.75	20.00	1.00	0.25	0.75	24.75	1.00	0.25	0.75	26.00	1.00	0.25	0.75
		26.00	2.50	1.00	1.50	28.75	2.00	1.00	1.00	24.00	2.00	1.00	1.00	28.75	2.00	1.00	1.00	32.00	2.00	1.00	1.00
		28.00	4.00	1.75	2.25	30.25	4.00	2.00	2.00	25.25	4.00	1.75	2.75	30.00	3.00	1.25	1.75	33.25	3.00	1.25	1.75
		30.00	6.00	3.00	3.00	33.00	5.00	3.00	2.00	27.50	6.00	3.00	3.00	33.50	5.00	2.50	2.50	35.00	5.00	2.25	2.75
		35.00	7.00	4.00	3.00	28.00	6.75	3.25	3.50	31.50	7.00	4.00	3.00	34.75	6.00	.....	.....	37.50	6.00	3.25	2.75
		40.00	8.00	5.00	3.00	41.00	7.00	.....	.....	33.75	7.75	.....	.....	.....	.....	.....	.....	41.25	7.00	.....	.....
		10.75	1.00	0.25	0.75	26.00	1.00	0.25	0.75	24.95	1.00	0.25	0.75	19.50	1.00	0.25	0.75	19.00	1.00	0.25	0.75
		17.75	3.00	1.25	1.75	29.25	3.00	1.00	2.00	26.00	2.50	1.00	1.50	22.00	2.00	1.00	1.00	19.25	2.00	0.75	1.25
		19.25	5.00	2.50	2.50	31.50	5.00	3.50	1.50	28.25	5.00	2.25	2.75	25.25	4.00	2.00	2.00	20.00	4.00	1.00	3.00
		21.00	6.25	.....	.....	35.00	6.50	3.75	2.75	30.00	6.00	3.00	3.00	30.00	5.25	2.75	2.50	21.25	5.00	2.50	2.50
		.....	.....	.....	.....	37.00	7.00	.....	.....	33.00	7.00	4.00	3.00	28.00	6.25	3.75	2.60	23.50	6.25	3.50	2.75
		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	33.00	7.50	.....	.....	27.00	8.00	.....	.....
		18.75	1.00	0.25	0.75	19.75	1.00	0.25	0.75	21.50	1.00	0.00	1.00	17.50	1.00	0.25	0.75	18.75	1.00	0.25	0.75
		23.00	2.00	0.75	1.25	24.25	2.00	1.00	1.00	22.00	3.00	1.00	2.00	20.00	2.25	1.00	1.25	20.75	2.00	1.00	1.00
		25.00	4.00	2.00	2.00	26.00	4.25	2.00	2.25	23.75	5.00	2.60	2.50	21.75	4.00	2.00	2.00	22.00	4.00	2.00	2.00
		27.50	6.00	3.25	2.75	28.00	6.00	3.00	3.00	25.25	6.00	3.00	3.00	23.00	6.00	3.00	3.00	23.75	6.00	3.25	2.75
		80.25	7.00	.....	.....	31.50	7.00	4.00	3.00	28.75	7.00	.....	.....	26.00	7.00	4.00	3.00	26.25	7.00	.....	.....
		.....	.....	.....	.....	34.50	8.00	.....	.....	.....	.....	.....	.....	29.00	8.00	4.75	3.25	.....	.....	.....	.....
		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	31.25	8.75	.....	.....	.....	.....	.....	.....















TABLE XIV.—Actual measurements, showing relation between strain, stretch, and elasticity—Continued.

OXFORDDOWN.																					
Catalogue No. of samples..		153.				153.				153.				153.				153.			
		Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.
		gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.
Actual measurements in grams and millimeters.	18.75	1.00	0.25	0.75	17.75	1.00	0.25	0.75	22.25	1.00	0.25	0.75	9.75	1.00	0.25	0.75	17.00	1.00	0.25	0.75	
	23.00	2.00	1.00	1.00	22.00	2.00	0.75	1.25	25.00	2.00	0.75	1.25	12.50	2.00	1.00	1.00	19.25	2.00	0.75	1.25	
	24.00	4.00	1.75	2.25	23.25	4.00	1.75	2.25	27.00	3.50	.....	.....	13.00	3.00	1.25	1.75	20.00	3.50	.....	.....	
	25.00	5.00	2.75	2.25	24.25	5.00	2.50	2.50	.....	.....	.....	.....	14.50	5.00	2.25	2.25	.....	.....	.....	.....	
	26.25	6.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15.25	6.00	3.00	3.00	.....	.....	.....	.....	
	18.00	1.00	0.25	0.75	13.25	1.00	0.50	0.50	12.75	1.00	0.50	0.50	12.00	1.00	0.75	0.25	18.75	1.00	0.25	0.75	
	19.50	2.00	0.75	1.25	20.75	2.00	1.00	1.00	23.00	2.00	1.00	1.00	22.00	2.00	1.00	1.00	20.75	2.00	0.75	1.25	
	20.75	3.00	.....	.....	21.50	3.00	1.25	1.75	24.50	4.00	2.00	2.00	23.50	4.00	2.00	2.00	21.75	2.75	.....	.....	
	.....	.....	.....	.....	22.00	3.25	.....	.....	25.50	5.00	2.75	2.25	24.75	5.00	2.75	2.25	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	26.75	6.00	3.50	2.50	25.50	6.00	3.25	2.75	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	28.25	6.75	.....	.....	27.50	7.00	4.25	2.75	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30.50	8.00	5.00	3.00	.....	.....	.....	.....	
	14.00	1.00	0.00	1.00	31.25	1.00	0.25	0.75	11.25	1.00	0.50	0.50	20.00	1.00	0.00	1.00	18.00	1.00	0.25	0.75	
	16.75	2.00	0.50	1.50	33.00	2.00	0.75	1.25	25.75	2.00	1.00	1.00	24.50	2.00	0.50	1.00	20.25	2.00	1.00	1.00	
	17.50	3.00	1.00	2.00	40.25	3.00	1.25	1.75	28.75	3.00	1.75	1.25	21.25	3.00	1.00	2.00	21.25	4.00	2.00	2.00	
	18.00	4.00	2.00	2.00	41.50	4.00	2.00	2.00	30.75	5.00	.....	.....	22.25	4.00	1.75	2.25	22.25	5.00	2.75	2.25	
	19.00	5.00	2.75	2.25	43.50	5.00	2.75	2.25	.....	.....	.....	.....	23.75	5.00	2.50	2.50	24.25	6.00	.....	.....	
	20.75	6.25	.....	.....	45.75	6.00	.....	.....	.....	.....	.....	.....	27.25	6.00	3.25	2.75	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	29.25	7.00	.....	.....	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

OXFORDDOWN.																					
Catalogue No. of samples..		153.				153.				153.				153.				153.			
		Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.
		gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.
Actual measurements in grams and millimeters.	20.00	1.00	0.00	1.00	19.50	1.00	0.25	0.75	21.25	1.00	0.25	0.75	18.75	1.00	0.00	1.00	22.75	1.00	0.25	0.75	
	22.50	2.00	0.75	1.25	22.00	2.25	1.00	1.25	24.50	2.00	1.00	1.00	21.00	2.00	1.00	1.00	26.00	2.00	0.75	1.25	
	24.00	3.00	.....	.....	23.25	4.00	2.00	2.00	25.50	3.00	1.25	1.75	21.75	3.00	1.50	1.50	26.50	4.00	1.75	2.25	
	.....	.....	.....	.....	24.75	5.00	2.75	2.25	26.50	4.00	2.00	2.00	23.00	4.00	2.00	2.00	28.25	5.00	2.75	2.25	
	.....	.....	.....	.....	26.75	5.75	.....	.....	27.75	5.00	3.75	2.25	25.25	5.50	.....	.....	31.50	6.00	3.25	2.75	
	.....	.....	.....	.....	.....	.....	.....	.....	28.00	5.25	.....	.....	.....	.....	.....	.....	32.50	6.50	.....	.....	
	18.25	1.00	0.25	0.75	23.50	1.00	0.25	0.75	19.50	1.00	0.25	0.75	19.50	1.00	0.00	1.00	15.75	1.00	0.25	0.75	
	10.25	3.00	1.00	2.00	27.50	2.00	1.00	1.00	21.75	2.00	0.75	1.25	21.25	2.00	0.75	1.25	17.25	2.00	0.75	1.25	
	20.25	3.75	.....	.....	28.00	3.00	1.25	1.75	22.50	4.00	1.75	2.25	22.25	4.00	1.75	2.25	18.50	4.00	2.00	2.00	
	.....	.....	.....	.....	29.25	4.00	2.00	2.00	.....	.....	.....	.....	.....	.....	.....	.....	20.75	6.00	3.25	2.75	
	.....	.....	.....	.....	30.25	5.00	2.75	2.25	.....	.....	.....	.....	.....	.....	.....	.....	22.75	7.00	4.25	2.75	
	.....	.....	.....	.....	33.50	6.00	3.50	2.50	.....	.....	.....	.....	.....	.....	.....	.....	23.75	9.00	.....	.....	
	.....	.....	.....	.....	38.00	7.00	4.00	3.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	.....	.....	.....	.....	42.25	8.00	5.00	3.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	18.25	1.00	0.25	0.75	17.50	1.00	0.25	0.75	22.00	1.00	0.00	1.00	13.25	1.00	0.25	0.75	25.25	1.00	0.25	0.75	
	21.75	2.00	0.75	1.25	21.50	2.00	1.00	1.00	23.50	2.00	0.75	1.25	14.75	2.00	0.75	1.25	26.75	2.00	1.00	1.00	
	22.00	3.00	1.00	2.00	22.50	3.00	1.50	1.50	24.00	3.00	1.00	2.00	16.00	2.25	.....	.....	27.75	3.00	1.25	1.75	
	22.75	4.00	2.00	2.00	25.00	5.00	2.75	2.25	25.25	4.00	2.00	2.00	.....	.....	.....	.....	28.75	4.00	2.00	2.00	
	24.00	5.00	2.75	2.25	26.25	6.00	3.75	2.25	29.75	6.00	3.00	3.00	.....	.....	.....	.....	29.75	5.00	2.75	2.25	
	25.75	6.00	3.25	2.75	28.75	7.00	.....	.....	33.75	7.00	.....	.....	.....	.....	.....	.....	32.50	6.00	3.50	2.50	
20.25	7.00	4.00	3.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	34.25	7.00	.....	.....		







TABLE XIV.—Actual measurements, showing relation between strain, stretch, and elasticity—Continued.

Catalogue No. of samples ..		OXFORDDOWN.																			
		154.				154.				154.				154.				154.			
		Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		35.00	1.00	0.25	0.75	40.75	1.00	0.25	0.75	35.25	1.00	0.25	0.75	25.25	1.00	0.50	0.50	50.00	1.00	0.25	0.75
		37.25	2.00	1.00	1.00	43.50	2.00	1.00	1.00	42.00	2.00	0.75	1.25	32.50	2.00	1.00	1.00	44.50	2.00	1.00	1.00
		39.50	3.00	2.00	2.00	45.75	3.00	2.00	2.00	44.00	3.00	2.00	2.00	34.00	3.00	2.00	2.00	46.75	3.00	2.00	2.00
		44.50	4.00	3.00	3.00	47.75	4.00	3.00	3.00	49.50	4.00	3.00	3.00	35.25	4.00	3.00	2.00	48.50	4.00	3.00	2.00
		49.50	5.00	4.00	3.00	52.50	5.00	4.00	3.00	56.25	5.00	4.00	3.00	38.50	5.00	4.00	3.00	53.00	5.00	4.00	3.00
		49.50	7.00	.....	.....	52.50	7.00	.....	.....	56.25	7.00	.....	.....	38.50	7.00	.....	.....	53.00	7.00	.....	.....
		33.25	1.00	0.25	0.75	36.50	1.00	0.25	0.75	37.25	1.00	0.25	0.75	29.00	1.00	0.25	0.75	34.50	1.00	0.00	1.00
		37.50	2.00	0.75	1.25	42.50	2.00	1.00	1.00	43.00	2.00	1.00	1.00	36.00	2.00	1.00	1.00	42.00	2.00	1.00	1.00
		38.25	3.00	1.25	1.75	44.50	3.00	2.00	2.00	45.75	3.00	2.00	2.00	38.00	3.00	2.00	2.00	44.25	3.00	2.00	2.00
		41.00	4.00	2.25	2.75	49.50	4.00	3.25	2.25	47.25	4.00	3.00	2.00	40.50	4.00	3.00	2.00	45.75	4.00	3.00	2.00
		45.75	5.00	3.25	2.75	55.00	5.00	4.00	3.00	51.00	5.00	4.00	3.00	43.75	5.00	4.00	2.00	50.00	5.00	4.00	2.00
		52.00	6.00	4.00	3.00	.....	.....	.....	.....	.....	.....	.....	.....	46.50	6.00	.....	.....	.....	.....	.....	.....
		30.75	1.00	0.25	0.75	31.00	1.00	0.25	0.75	37.75	1.00	0.25	0.75	27.75	1.00	0.25	0.75	31.75	1.00	0.25	0.75
		33.50	2.00	1.00	1.00	36.50	2.00	1.00	1.00	42.50	2.00	1.00	1.00	39.75	2.00	1.00	1.00	41.50	2.00	1.00	1.00
		36.00	3.00	2.00	2.00	39.00	3.00	2.00	2.00	45.25	3.00	2.00	2.00	41.50	3.00	1.50	1.50	42.00	3.00	1.50	1.50
		37.50	4.00	3.00	2.00	41.00	4.00	3.00	2.00	47.00	4.00	3.00	2.00	44.00	4.00	2.75	2.25	45.50	4.00	2.75	2.25
		40.75	5.00	3.75	2.25	43.75	5.00	3.50	2.50	.....	.....	.....	.....	48.50	5.00	.....	.....	.....	.....	.....	.....
		45.00	6.00	.....	.....	49.00	6.00	.....	.....	.....	.....	.....	.....	.....	6.00	.....	.....	.....	.....	.....	.....
		45.00	7.00	.....	.....	.....	7.00	.....	.....	.....	.....	.....	.....	.....	7.00	.....	.....	.....	.....	.....	.....

Catalogue No. of samples ..		OXFORDDOWN.																			
		157.				157.				157.				157.				157.			
		Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		22.25	1.00	0.25	0.75	20.50	1.00	0.25	0.75	23.50	1.00	0.25	0.75	19.75	1.00	0.25	0.75	15.25	1.00	0.25	0.75
		23.25	2.00	1.00	1.00	25.25	2.00	1.00	1.00	25.00	2.00	1.00	1.00	20.50	2.00	1.00	1.00	17.00	2.00	1.00	1.00
		24.25	3.00	2.00	2.00	26.00	3.00	1.25	1.75	26.00	3.00	1.50	1.50	21.00	3.00	1.25	1.75	.....	.....	.....	.....
		27.25	4.00	3.25	2.75	28.00	4.00	2.75	2.25	.....	.....	.....	.....	20.00	4.00	2.00	2.00	.....	.....	.....	.....
		.....	.....	.....	.....	30.25	5.00	5.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		23.75	1.00	0.25	0.75	16.00	1.00	0.25	0.75	18.75	1.00	0.25	0.75	24.25	1.00	0.25	0.75	21.75	1.00	0.25	0.75
		25.00	2.00	1.00	1.00	21.25	2.00	1.00	1.00	19.75	2.00	1.25	1.75	25.50	2.00	1.00	1.00	23.75	2.00	1.00	1.00
		26.50	3.00	2.00	2.00	.....	.....	.....	.....	21.00	3.00	4.00	.....	26.75	3.00	2.00	2.00	24.50	3.00	.....	.....
		27.25	4.00	3.00	2.00	.....	.....	.....	.....	.....	.....	.....	.....	28.00	4.00	2.75	2.25	.....	.....	.....	.....
		29.00	5.00	3.50	2.50	.....	.....	.....	.....	.....	.....	.....	.....	30.50	5.00	6.00	.....	.....	.....	.....	.....
		32.75	6.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6.00	.....	.....	.....	.....	.....	.....
		22.60	1.00	0.25	0.75	13.50	1.00	0.25	0.75	14.25	1.00	0.50	0.50	23.50	1.00	0.25	0.75	18.00	1.00	0.25	0.75
		24.75	2.00	1.00	1.00	17.50	2.00	1.00	1.00	17.75	2.00	1.00	1.00	25.25	2.00	1.00	1.00	18.50	2.00	1.00	1.00
		25.60	3.00	1.25	1.75	19.25	3.00	.....	.....	.....	.....	.....	.....	26.60	3.00	2.00	2.00	19.25	3.00	1.75	2.25
		26.00	4.00	2.00	2.00	.....	.....	.....	.....	.....	.....	.....	.....	27.25	4.00	3.00	2.00	20.75	4.00	2.75	2.25
		27.60	5.00	3.00	2.00	.....	.....	.....	.....	.....	.....	.....	.....	29.75	5.00	3.50	2.50	21.50	5.00	6.00	.....
		30.25	6.00	3.75	2.25	.....	.....	.....	.....	.....	.....	.....	.....	34.00	6.00	4.00	3.00	.....	.....	.....	.....
		31.75	7.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	38.50	7.00	8.00	.....	.....	.....	.....	.....







TABLE XIV.—Actual measurements, showing relation between strain, stretch, and elasticity—Continued.

Catalogue No. of samples..		OXFORDDOWN.															
		158.				158.				158.				158.			
		Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		23.75	1.00	0.25	0.75	20.50	1.00	0.00	1.00	19.25	1.00	0.25	0.75	18.75	1.00	0.00	1.00
		24.75	2.00	1.00	1.00	22.75	2.00	0.75	1.25	22.50	2.00	1.00	1.00	20.00	2.00	0.75	1.25
		26.00	3.00	1.25	1.75	23.75	3.00	1.25	1.75	23.75	3.00	1.25	1.75	20.75	3.00	1.25	1.75
		27.50	4.00	2.00	2.00	26.50	4.00	.....	.....	25.00	4.00	2.00	2.00	21.75	4.00	2.00	2.00
		28.50	5.00	2.75	2.25	.....	.....	.....	.....	26.25	5.00	2.75	2.25	23.50	5.00	3.00	2.00
		31.25	6.00	3.75	2.25	.....	.....	.....	.....	28.50	6.00	3.50	2.50	25.50	6.00	3.50	2.50
		34.50	7.00	4.00	3.00	.....	.....	.....	.....	32.50	7.00	4.25	2.75	28.50	7.00	.....	.....
		39.25	8.00	.....	.....	.....	.....	.....	.....	30.75	8.00	5.00	3.00	.....	.....	.....	.....
		27.75	1.00	0.25	0.75	21.00	1.00	0.00	1.00	14.25	1.00	0.25	0.75	17.25	1.00	0.25	0.75
		30.25	2.00	1.00	1.00	22.75	2.00	0.75	1.25	16.50	2.00	1.00	1.00	18.50	2.00	1.00	1.00
		31.00	3.00	1.25	1.75	23.75	3.00	1.25	1.75	17.50	3.00	1.25	1.75	20.50	3.00	1.25	1.75
		31.75	4.00	2.00	2.00	24.75	4.00	2.00	2.00	18.50	4.00	2.00	2.00	21.50	4.00	2.00	2.00
		34.00	5.00	2.75	2.25	27.00	5.00	2.75	2.25	19.50	5.00	3.00	2.00	22.50	5.00	3.00	2.00
		35.00	6.00	3.75	2.25	29.75	6.00	3.50	2.50	21.00	6.00	3.50	2.50	24.00	6.00	3.50	2.50
		42.00	7.00	.....	.....	33.75	7.00	4.00	3.00	24.00	7.00	.....	.....	25.00	6.50	.....	.....
		.....	.....	.....	.....	37.50	8.00	5.00	3.00	.....	.....	.....	.....	.....	.....	.....	.....
		24.00	1.00	0.25	0.75	25.00	1.00	0.00	1.00	22.50	1.00	0.25	0.75	16.75	1.00	0.00	1.00
		27.50	2.00	1.00	1.00	26.50	2.00	0.75	1.25	23.75	2.00	0.75	1.25	18.00	2.00	0.75	1.25
		28.50	3.00	1.25	1.75	27.00	3.00	1.00	2.00	25.00	3.00	1.25	1.75	18.50	3.00	1.25	1.75
29.25	4.00	2.00	2.00	28.25	4.00	2.00	2.00	25.75	4.00	2.00	2.00	19.50	4.00	2.00	2.00		
31.25	5.00	3.00	2.00	29.75	5.00	2.75	2.25	27.50	5.00	3.00	2.00	21.50	5.00	3.25	2.75		
33.75	6.00	3.75	2.25	33.00	6.00	3.25	2.75	30.00	6.00	3.25	2.75	24.50	6.00	4.00	3.00		
36.50	6.50	.....	.....	35.00	7.00	.....	.....	33.50	7.00	4.00	3.00	28.00	8.00	.....	.....		
.....	.....	.....	.....	.....	.....	.....	.....	34.50	8.00	.....	.....	.....	.....	.....	.....		

Catalogue No. of samples..		OXFORDDOWN.															
		159.				159.				159.				159.			
		Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		26.50	1.00	0.25	0.75	19.00	1.00	0.00	1.00	15.50	1.00	0.25	0.75	19.50	1.00	0.25	0.75
		28.00	2.00	1.00	1.00	19.50	2.00	0.75	1.25	16.50	3.00	1.25	1.75	20.25	2.50	1.00	1.50
		28.50	3.00	1.50	1.50	20.75	3.00	1.00	2.00	17.25	4.00	2.00	2.00	21.50	4.00	2.00	2.00
		29.60	4.00	2.00	2.00	21.00	4.00	2.00	2.00	18.25	5.00	3.00	2.00	22.75	5.00	3.00	2.00
		30.75	5.00	3.00	2.00	22.25	5.00	3.00	2.00	19.50	6.00	3.50	2.50	24.50	6.00	3.75	2.25
		34.25	6.00	3.75	2.25	24.00	6.00	3.75	2.25	.....	.....	.....	.....	27.50	7.00	.....	.....
		38.25	7.00	4.25	2.75	26.50	7.00	4.25	2.75	.....	.....	.....	.....	.....	.....	.....	.....
		43.25	8.00	.....	.....	29.00	8.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		18.25	1.00	0.25	0.75	27.75	1.00	0.00	1.00	23.50	1.00	0.25	0.75	14.00	1.00	0.00	1.00
		20.50	2.00	1.00	1.00	29.50	2.00	0.75	1.25	28.25	2.00	1.00	1.00	15.00	2.00	0.75	1.25
		21.75	3.00	1.50	1.50	30.50	3.75	.....	.....	29.00	3.00	1.25	1.75	16.25	4.00	2.00	2.00
		22.75	4.00	2.00	2.00	.....	.....	.....	.....	30.50	5.00	2.75	2.25	17.25	5.00	2.75	2.25
		24.00	5.00	3.00	2.00	.....	.....	.....	.....	33.25	6.00	3.50	2.50	18.50	6.00	3.25	2.75
		25.50	6.00	3.75	2.25	.....	.....	.....	.....	30.75	7.00	4.00	3.00	21.25	7.00	.....	.....
		27.00	7.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		21.50	1.00	0.25	0.75	18.50	1.00	0.25	0.75	26.50	1.00	0.25	0.75	11.75	1.00	0.25	0.75
		23.00	2.00	1.00	1.00	19.25	2.00	0.75	1.25	28.25	2.00	1.00	1.00	12.00	2.00	1.00	1.00
		23.75	3.00	1.25	1.75	20.75	4.00	2.00	2.00	29.50	3.00	1.25	1.75	13.25	4.00	2.00	2.00
		24.75	4.00	2.00	2.00	21.75	5.00	3.00	2.00	30.25	4.00	2.00	2.00	14.25	5.00	2.75	2.25
26.75	5.00	3.00	2.00	23.75	6.00	3.50	2.50	31.50	5.00	3.00	2.00	15.50	6.00	3.75	2.25		
28.00	6.00	3.75	2.25	27.50	7.00	4.25	2.75	34.25	6.00	3.25	2.75	17.50	7.00	4.00	3.00		
32.25	7.00	4.00	3.00	29.75	8.00	5.00	3.00	39.75	7.00	4.25	2.75	19.25	8.00	5.00	3.00		
.....	.....	.....	.....	.....	.....	.....	.....	43.25	8.00	.....	.....	.....	.....	.....	.....		



TABLE XIV.—Actual measurements, showing relation between strain, stretch, and elasticity—Continued.

Catalogue No. of samples ..		OXFORDDOWN.																			
		159.				159.				159.				159.				159.			
		Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.
Actual measurements in grams and millimeters.	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	
	17.00	1.00	0.25	0.75	25.25	1.00	0.25	0.75	11.25	1.00	0.25	0.75	22.50	1.00	0.25	0.75	15.00	1.00	0.25	0.75	
	18.50	2.00	1.00	1.00	26.25	3.00	1.25	1.75	11.50	2.00	0.75	1.25	23.75	2.00	1.00	1.00	16.25	2.00	1.00	1.00	
	19.25	3.00	1.25	1.75	28.25	6.00	2.75	3.25	12.25	3.00	1.00	2.00	24.25	3.00	1.25	1.75	17.00	4.00	2.00	2.00	
	20.50	3.00	2.50	2.50	31.00	6.00	3.50	2.50	12.75	4.00	2.00	2.00	25.25	4.00	2.00	2.00	18.75	5.00	3.00	2.25	
	22.25	6.00	3.50	2.50	34.75	7.00	4.25	2.75	13.75	5.00	2.75	2.25	26.75	5.00	3.00	2.00	20.25	6.00	3.00	2.75	
	25.00	7.00	4.00	3.00	37.00	8.00	4.00	4.00	14.75	6.00	3.25	2.75	26.00	6.00	3.25	2.75	21.75	7.00	4.00	3.00	
	28.00	7.75	.....	.....	.....	.....	.....	.....	15.50	6.25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	20.75	1.00	0.25	0.75	21.25	1.00	0.25	0.75	22.25	1.00	0.25	0.75	23.25	1.00	0.00	1.00	19.00	1.00	0.25	0.75	
	21.75	2.00	1.00	1.00	22.75	2.00	1.00	1.00	23.25	3.00	1.25	1.75	25.50	2.00	1.00	1.00	20.75	2.00	1.00	1.00	
	22.50	3.00	1.25	1.75	23.75	3.00	1.50	1.50	23.75	4.00	2.00	2.00	26.75	4.00	2.00	2.00	21.25	3.00	1.25	1.75	
	23.25	4.00	2.00	2.00	24.75	4.00	2.00	2.00	25.00	5.00	3.00	2.00	29.00	5.00	3.00	2.00	22.00	4.00	2.00	2.00	
	24.75	5.00	2.75	2.25	25.75	5.00	3.00	2.00	27.75	6.00	3.50	2.50	31.25	6.00	3.75	2.25	24.00	5.00	3.25	2.75	
	26.50	6.00	3.50	2.50	28.00	6.00	3.75	2.25	30.60	6.25	.....	.....	35.75	7.00	4.25	2.75	27.25	6.00	4.00	3.00	
	30.25	7.00	4.00	3.00	31.25	7.00	4.25	2.75	.....	.....	.....	.....	.....	.....	.....	.....	29.75	8.00	.....	.....	
	32.50	8.00	.....	.....	33.50	7.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	24.75	1.00	0.09	1.00	21.00	1.00	0.25	0.75	22.00	1.00	0.00	1.00	21.50	1.00	0.25	0.75	13.50	1.00	0.00	1.00	
	26.75	2.00	0.75	1.25	24.25	2.00	0.75	1.25	22.75	3.00	1.00	2.00	23.75	2.00	1.00	1.00	18.00	2.00	0.25	1.75	
	27.00	3.00	1.00	2.00	25.25	3.00	1.25	1.75	23.75	4.00	2.00	2.00	25.00	3.00	1.75	1.25	10.25	3.00	1.00	2.00	
	29.00	5.00	2.50	2.50	26.25	4.00	2.00	2.00	24.75	5.00	3.00	2.00	26.00	4.00	2.00	2.00	20.75	4.00	2.00	2.00	
	32.50	6.00	3.25	2.75	28.25	5.00	3.00	2.00	27.50	6.00	.....	.....	26.25	6.00	3.00	2.00	23.00	5.00	2.50	2.50	
	36.75	7.00	4.00	3.00	30.75	6.00	3.25	2.75	.....	.....	.....	.....	29.25	6.00	3.50	2.50	24.75	5.75	.....	.....	
	42.25	8.00	.....	.....	34.50	7.00	4.00	3.00	.....	.....	.....	.....	33.00	7.00	4.00	3.00	.....	.....	.....	.....	
	.....	.....	.....	.....	38.50	8.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Catalogue No. of samples ..		OXFORDDOWN.																			
		160.				160.				160.				160.				160.			
		Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.
Actual measurements in grams and millimeters.	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	
	26.75	1.00	0.25	0.75	26.00	1.00	0.00	1.00	21.50	1.00	0.25	0.75	22.75	1.00	0.00	1.00	28.50	1.00	0.25	0.75	
	29.75	2.00	1.00	1.00	29.75	2.00	1.00	1.00	23.75	2.00	1.00	1.00	24.75	2.00	0.75	1.25	30.25	2.00	1.00	1.00	
	31.50	3.00	1.25	1.75	30.50	4.00	2.00	2.00	24.75	3.00	1.50	1.50	25.50	3.00	.....	.....	32.00	3.00	1.25	1.75	
	.....	.....	.....	.....	31.75	6.00	2.75	2.25	25.75	4.00	2.00	2.00	.....	.....	.....	.....	34.50	5.00	3.75	2.25	
	.....	.....	.....	.....	35.00	6.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	37.75	6.00	3.25	2.75	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	43.50	7.00	4.00	3.00	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	48.00	8.00	.....	.....	
	29.75	1.00	0.25	0.75	22.50	1.00	0.25	0.75	24.00	1.00	0.25	0.75	19.75	1.00	0.25	0.75	19.25	1.00	0.25	0.75	
	31.50	2.00	1.00	1.00	24.50	2.00	1.00	1.00	28.00	2.00	1.00	1.00	20.75	2.00	0.75	1.25	20.25	3.00	1.25	1.75	
	33.75	4.00	2.00	2.00	25.25	3.00	1.25	1.75	20.25	3.00	1.25	1.75	21.50	3.00	1.00	2.00	21.75	5.00	2.75	2.25	
	34.50	5.00	3.00	2.00	30.75	5.00	2.75	2.25	30.50	4.00	.....	.....	22.75	5.00	2.75	2.25	.....	.....	.....	.....	
	37.25	6.00	3.50	2.50	30.25	6.00	3.50	2.50	.....	.....	.....	.....	25.00	6.00	3.50	2.50	.....	.....	.....	.....	
	41.00	7.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	27.50	6.75	.....	.....	.....	.....	.....	.....	
	21.25	1.00	0.25	0.75	25.25	1.00	0.25	0.75	27.50	1.00	0.25	0.75	21.50	1.00	0.25	0.75	24.75	1.00	0.25	0.75	
	23.25	2.00	1.00	1.00	27.75	2.00	0.75	1.25	30.50	2.00	0.75	1.25	23.75	2.00	1.00	1.00	26.75	2.00	1.00	1.00	
	23.50	3.00	1.25	1.75	28.50	3.00	1.25	1.75	31.75	3.00	1.25	1.75	24.50	3.00	1.25	1.75	28.00	3.00	1.25	1.75	
	24.50	4.00	2.00	2.00	29.50	4.00	2.00	2.00	32.25	4.00	.....	.....	26.25	3.00	1.00	2.00	29.75	5.00	3.75	2.25	
	.....	.....	.....	.....	31.25	5.00	3.00	2.00	.....	.....	.....	.....	28.00	6.00	.....	.....	32.75	6.00	3.25	2.75	
	.....	.....	.....	.....	34.25	6.00	3.75	2.25	.....	.....	.....	.....	.....	.....	.....	.....	37.50	7.00	4.00	3.00	
	.....	.....	.....	.....	37.50	7.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	41.50	8.00	.....	.....	











TABLE XIV.—Actual measurements, showing relation between strain, stretch, and elasticity—Continued.

Catalogue No. of samples..		MERINO.																			
		87.				87.				87.				87.				87.			
		Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		7.25	1.00	0.00	1.00	2.75	1.00	0.00	1.00	3.50	1.00	0.00	1.00	3.50	1.00	0.00	1.00	5.25	1.00	0.00	1.00
		7.75	2.00	0.75	1.25	4.25	2.00	0.75	1.25	4.75	2.00	0.75	1.25	4.60	2.00	0.75	1.25	6.00	2.00	0.75	1.25
		8.25	3.00	1.25	1.75	4.50	3.00	1.00	2.00	5.00	3.00	1.00	2.00	4.75	3.00	1.25	1.75	6.25	3.00	1.25	1.75
		8.75	4.00	2.00	2.00	5.00	4.00	2.00	2.00	5.25	4.00	2.00	2.00	5.25	4.00	2.00	2.00	6.25	4.00	2.00	2.00
		9.25	5.00	2.75	2.25	5.50	5.00	2.75	2.25	6.00	5.00	2.75	2.25	5.50	5.00	2.75	2.25	7.25	5.00	2.75	2.25
		10.25	6.00	3.25	2.75	.....	.....	.....	.....	6.75	6.00	3.25	2.75	5.75	5.25	.....	.....	7.75	6.00	3.50	2.50
		11.75	7.00	4.25	2.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8.75	7.00	4.25	2.75
		12.60	8.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		3.75	1.00	0.00	1.00	3.75	1.00	0.00	1.00	3.75	1.00	0.00	1.00	4.50	1.00	0.00	1.00	4.00	1.00	0.00	1.00
		4.25	2.00	0.75	1.25	4.25	2.00	0.75	1.25	4.75	2.00	0.75	1.25	4.75	2.00	0.25	1.75	4.60	2.00	0.75	1.25
		4.50	2.25	.....	.....	4.50	3.00	1.25	1.75	5.25	3.00	1.00	2.00	5.25	3.00	1.00	2.00	4.75	3.00	1.00	2.00
		.....	.....	.....	.....	4.75	4.00	2.00	2.00	5.75	3.75	.....	.....	6.00	3.75	.....	.....	5.25	3.50	.....	.....
		.....	.....	.....	.....	5.00	5.00	2.75	2.25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		.....	.....	.....	.....	5.75	6.00	3.25	2.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		2.75	1.00	0.00	1.00	4.25	1.00	0.00	1.00	4.60	1.00	0.00	1.00	3.50	1.00	0.25	0.75	4.25	1.00	0.00	1.00
		3.25	2.00	0.75	1.25	4.75	2.00	0.75	1.25	4.25	2.00	0.75	1.25	4.25	2.00	1.00	1.00	5.25	2.00	0.75	1.25
		3.60	3.00	1.25	1.75	5.25	3.00	1.25	1.75	5.75	3.00	1.25	1.75	4.75	3.00	1.25	1.75	5.25	2.25	.....	.....
		3.75	4.00	2.00	2.00	5.25	4.00	2.00	2.00	6.00	4.00	2.00	2.00	5.00	4.00	2.00	2.00	.....	.....	.....	.....
		4.25	5.00	2.75	2.25	5.75	5.00	2.75	2.25	0.25	5.00	2.75	2.25	5.50	5.00	.....	.....	.....	.....	.....	.....
4.50	6.00	3.25	2.75	6.25	5.75	.....	.....	7.00	6.00	3.25	2.75	.....	.....	.....	.....	.....	.....	.....	.....		

Catalogue No. of samples..		MERINO.																			
		88.				88.				88.				88.				88.			
		Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		5.50	1.00	0.00	1.00	3.50	1.00	0.00	1.00	4.25	1.00	0.00	1.00	4.75	1.00	0.00	1.00	7.75	1.00	0.25	0.75
		7.75	2.00	0.25	1.75	5.25	2.00	0.25	1.75	5.50	2.00	0.75	1.25	5.75	2.00	0.75	1.25	8.50	2.00	1.00	1.00
		8.75	3.00	1.00	2.00	6.00	3.00	.....	.....	6.00	3.00	1.25	1.75	6.00	3.00	1.25	1.75	9.50	3.00	1.50	1.50
		9.50	4.00	.....	.....	.....	.....	.....	.....	6.50	4.00	2.00	2.00	6.50	4.00	2.00	2.00	9.75	4.00	2.00	2.00
		.....	.....	.....	.....	.....	.....	.....	.....	7.25	5.00	2.75	2.25	7.25	4.75	.....	.....	10.60	5.00	2.75	2.25
		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11.25	6.00	3.50	2.50
		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12.50	7.00	4.25	2.75
		4.00	1.00	0.00	1.00	2.75	1.00	0.00	1.00	5.25	1.00	0.00	1.00	3.75	1.00	0.00	1.00	3.75	1.00	0.00	1.00
		4.50	2.00	0.75	1.25	3.75	2.00	0.50	1.50	5.75	2.00	0.75	1.25	4.50	2.00	1.75	1.25	4.25	2.00	0.75	1.25
		5.00	3.00	1.25	1.75	4.00	3.00	1.00	2.00	5.75	2.25	.....	.....	5.25	3.00	1.25	1.75	4.75	3.00	1.25	1.75
		5.50	4.00	.....	.....	4.50	4.00	2.00	2.00	.....	.....	.....	.....	5.75	4.00	2.00	2.00	.....	.....	.....	.....
		.....	.....	.....	.....	5.00	5.00	.....	.....	.....	.....	.....	.....	6.50	5.00	.....	.....	.....	.....	.....	.....
		5.50	1.00	0.00	1.00	3.75	1.00	0.00	1.00	2.25	1.00	0.00	1.00	1.75	1.00	0.00	1.00	2.50	1.00	0.25	0.75
		7.50	2.00	0.50	1.50	5.25	2.00	0.50	1.50	3.25	2.00	0.25	1.75	2.25	2.00	0.75	1.25	3.75	2.00	0.75	1.25
		8.75	3.00	1.00	2.00	6.00	2.75	.....	.....	3.50	3.00	1.00	2.00	2.50	3.00	1.25	1.75	4.25	3.00	1.25	1.75
		.....	.....	.....	.....	.....	.....	.....	.....	4.00	4.00	1.75	2.25	2.50	4.00	2.00	2.00	4.50	4.00	2.00	2.00
		.....	.....	.....	.....	.....	.....	.....	.....	4.25	4.00	.....	.....	2.75	5.00	2.75	2.25	5.00	5.00	2.75	2.25
		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.00	5.75	.....	.....	5.50	6.00	3.25	2.75
		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5.50	0.25	.....	.....











TABLE XIV.—Actual measurements, showing relation between strain, stretch, and elasticity—Continued.

Catalogue No. of samples..		MERINO.																			
		99.				99.				99.				99.				99.			
		Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>
		1.25	1.00	0.25	0.75	2.75	1.00	0.00	1.00	2.50	1.00	0.00	1.00	2.50	1.00	0.00	1.00	2.50	1.00	0.00	1.00
Actual measurements in grams and millimeters.		2.50	1.00	0.00	1.00	2.00	1.00	0.00	1.00	2.75	1.00	0.00	1.00	2.75	1.00	0.25	0.75	4.50	1.00	0.25	0.75
		2.75	1.00	1.00	1.00	2.50	2.00	1.00	1.00	3.25	2.00	0.75	1.25	4.25	2.00	1.00	1.00	5.25	2.00	1.00	1.00
Actual measurements in grams and millimeters.		3.50	1.00	1.50	1.50	2.75	3.00	1.25	1.75	3.75	3.00	1.25	1.75	3.75	4.00	.....	.....	4.75	4.00	2.00	2.00
		3.75	1.00	2.00	2.00	2.75	4.00	.....	.....	2.75	4.00	.....	.....	4.75	4.00	.....	.....	5.25	5.00	.....	.....
Actual measurements in grams and millimeters.		4.00	5.25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Actual measurements in grams and millimeters.		1.25	1.00	0.00	1.00	2.25	1.00	0.25	0.75	1.75	1.00	0.00	1.00	3.75	1.00	0.00	1.00	3.75	1.00	0.00	1.00
		2.25	2.00	0.75	1.25	2.75	2.00	1.00	1.00	2.25	2.00	0.75	1.25	4.00	2.00	0.75	1.25	4.00	2.00	0.75	1.25
Actual measurements in grams and millimeters.		3.25	3.00	1.25	1.75	3.25	3.00	1.25	1.75	3.25	3.00	1.25	1.75	4.25	3.00	1.00	1.00	4.25	3.00	1.00	1.00
		3.25	4.00	2.00	2.00	3.50	4.00	.....	.....	2.75	3.25	.....	.....	4.50	4.00	2.00	2.00	4.50	4.00	2.00	2.00
Actual measurements in grams and millimeters.		3.50	5.00	2.75	2.25	2.75	4.50	.....	.....	2.75	4.50	.....	.....	4.50	5.00	2.75	2.25	4.50	5.00	2.75	2.25
		3.75	5.25	.....	.....	4.00	4.50	.....	.....	.....	.....	.....	.....	5.25	6.00	3.25	2.75	5.25	6.00	3.25	2.75
Actual measurements in grams and millimeters.		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Actual measurements in grams and millimeters.		2.00	1.00	0.25	0.75	3.50	1.00	0.25	0.75	3.75	1.00	0.25	0.75	3.50	1.00	0.25	0.75	3.50	1.00	0.25	0.75
		3.00	2.00	1.00	1.00	4.50	2.00	1.00	1.00	4.50	2.00	0.75	1.25	4.25	2.00	1.00	1.00	4.25	2.00	1.00	1.00
Actual measurements in grams and millimeters.		3.50	3.00	1.25	1.75	4.75	3.00	1.50	1.50	4.75	3.00	1.25	1.75	4.50	3.00	1.50	1.50	4.75	3.00	1.50	1.50
		3.75	4.00	2.00	2.00	5.00	3.25	.....	.....	5.25	4.00	2.00	2.00	4.75	4.00	2.00	2.00	5.50	4.00	2.25	1.75
Actual measurements in grams and millimeters.		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Actual measurements in grams and millimeters.		2.50	1.00	0.00	1.00	2.75	1.00	0.25	0.75	3.25	1.00	0.00	1.00	2.25	1.00	0.25	0.75	2.75	1.00	0.00	1.00
		3.50	2.00	0.25	1.75	4.25	2.00	0.75	1.25	3.50	2.00	0.75	1.25	3.25	2.00	1.00	1.00	3.00	2.00	0.75	1.25
Actual measurements in grams and millimeters.		3.75	3.00	1.00	2.00	4.50	3.00	1.50	1.50	3.75	3.00	1.25	1.75	3.50	3.00	1.75	1.25	3.25	3.00	1.25	1.75
		4.25	4.00	2.00	2.00	5.00	4.00	2.00	2.00	4.00	4.00	2.00	2.00	3.75	4.00	2.25	1.75	3.50	4.00	2.00	2.00
Actual measurements in grams and millimeters.		4.25	5.00	2.25	2.75	5.25	4.25	.....	.....	4.25	5.00	2.75	2.25	4.00	5.00	3.00	2.00	4.00	4.75	.....	.....
		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....







TABLE XIV.—Actual measurements, showing relation between strain, stretch, and elasticity—Continued.

Catalogue No. of samples..		BOSTON GRADES.																			
		289.				289.				289.				289.				289.			
		Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.
Actual measurements in grams and millimeters.		gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.
		2.50	1.00	0.125	0.875	1.75	1.00	0.145	0.875	4.50	1.00	0.125	0.875	6.50	1.00	0.125	0.875	8.25	1.00	0.125	0.875
		2.75	2.00	0.875	0.125	1.75	2.00	0.75	1.25	4.75	2.00	0.75	1.25	7.25	2.00	0.75	1.25	8.50	2.00	0.75	1.25
		3.25	3.00	1.25	1.75	2.00	3.00	1.25	1.75	4.75	3.00	1.125	1.875	7.50	3.00	1.25	1.75	8.75	3.00	1.25	1.75
		3.25	4.00	2.00	2.00	2.00	4.00	2.00	2.00	5.00	4.00	1.75	2.125	8.00	4.00	2.00	2.00	.....	.....	.....	.....
		3.50	5.00	2.75	2.25	2.25	5.00	2.75	2.25	5.25	5.00	2.50	2.50	8.50	5.00	2.75	2.25	.....	.....	.....	.....
		3.50	6.00	3.25	2.75	2.50	6.00	3.25	2.75	5.75	6.00	3.125	2.875	9.00	6.00	3.25	2.75	.....	.....	.....	.....
		3.75	7.00	4.00	3.00	2.75	7.00	4.00	3.00	6.25	7.00	4.00	3.00	10.25	7.00	4.00	3.00	.....	.....	.....	.....
		4.25	8.00	4.75	3.25	.....	.....	.....	.....	7.00	8.00	4.75	3.25	11.50	7.75	.....	.....	.....	.....	.....	.....
		.....	.....	.....	.....	.....	.....	.....	.....	7.50	9.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		4.75	1.00	0.125	0.875	4.00	1.00	0.125	0.875	2.50	1.00	0.125	0.875	2.75	1.00	0.125	0.875	7.50	1.00	0.125	0.875
		5.25	2.00	0.75	1.25	4.25	2.00	0.75	1.25	2.75	2.00	0.75	1.25	3.25	2.00	0.75	1.25	8.25	2.00	0.75	1.25
		5.50	3.00	1.25	1.75	4.50	3.00	1.125	1.875	3.00	3.00	1.125	1.875	3.50	3.00	1.25	1.75	8.75	3.00	1.25	1.75
		5.75	4.00	2.00	2.00	4.75	4.00	1.875	2.125	3.25	4.00	1.875	2.125	3.75	4.00	2.00	2.00	9.25	4.00	1.875	2.125
		6.00	5.00	2.50	2.50	5.00	5.00	2.375	2.625	3.25	5.00	2.50	2.50	4.25	5.00	2.50	2.50	10.25	5.00	2.375	2.625
		6.50	6.00	3.125	2.875	5.25	6.00	3.125	2.875	3.75	6.00	3.125	2.875	4.25	5.25	.....	.....	11.00	6.00	3.00	3.00
		7.25	7.00	4.00	3.00	4.50	6.25	.....	.....	4.00	7.00	4.00	3.00	.....	.....	.....	.....	11.75	7.00	3.75	3.25
		8.25	8.00	4.75	3.25	.....	.....	.....	.....	4.25	7.75	.....	.....	.....	.....	.....	.....	13.25	7.50	.....	.....
		8.50	8.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		3.75	1.00	0.25	0.75	3.00	1.00	0.25	0.75	4.75	1.00	0.125	0.875	1.25	1.00	0.25	0.75	2.00	1.00	0.125	0.875
4.50	2.00	0.875	1.125	3.50	2.00	1.00	1.00	5.25	2.00	0.75	1.25	1.50	2.00	1.00	1.00	2.25	2.00	0.75	1.25		
5.50	3.00	1.25	1.75	3.75	3.00	1.50	1.50	5.50	3.00	1.25	1.75	1.75	3.00	1.625	1.875	2.50	3.00	1.125	1.875		
5.75	4.00	2.00	2.00	4.25	4.00	2.125	1.875	5.75	3.25	.....	.....	.....	.....	.....	.....	3.25	3.75	.....	.....		
6.25	5.00	2.75	2.25	4.50	5.00	2.875	2.125	.....	.....	.....	.....	.....	.....	.....	.....	3.75	.....	.....	.....		
.....	.....	.....	.....	4.75	6.00	3.50	2.50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		

Catalogue No. of samples..		PHILADELPHIA GRADES.																			
		299.				299.				299.				299.				299.			
		Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.
Actual measurements in grams and millimeters.		gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.	gms.	mm.	mm.	mm.
		2.50	1.00	0.25	0.875	3.25	1.00	0.125	0.875	3.50	1.00	0.25	0.75	3.00	1.00	0.25	0.75	3.50	1.00	0.25	0.75
		2.75	2.00	1.00	1.00	3.75	2.00	0.75	1.25	4.00	2.00	0.75	1.25	3.50	2.00	0.75	1.25	4.00	2.00	0.75	1.25
		3.25	3.00	1.25	1.75	4.00	3.00	1.00	2.00	4.25	3.00	1.00	2.00	3.75	3.00	1.125	1.875	4.50	3.00	1.00	2.00
		3.50	4.00	1.75	2.25	4.25	4.00	1.50	2.50	4.25	4.00	1.75	2.25	4.00	4.00	1.60	2.50	4.75	4.00	1.75	2.25
		3.75	5.00	2.25	2.75	4.25	5.00	2.00	3.00	4.50	5.00	2.00	3.00	4.25	5.00	2.25	2.75	5.00	5.00	2.25	2.75
		4.75	5.75	.....	.....	4.75	5.875	.....	.....	5.00	6.00	3.25	3.25	4.50	6.00	2.875	3.125	5.25	6.00	2.875	3.125
		.....	.....	.....	.....	.....	.....	.....	.....	5.75	7.00	3.25	3.75	5.25	7.00	3.25	3.75	5.75	7.00	3.25	3.75
		.....	.....	.....	.....	.....	.....	.....	.....	6.50	8.00	4.00	4.00	4.50	8.00	4.00	4.00	.....	.....	.....	.....
		.....	.....	.....	.....	.....	.....	.....	.....	7.25	9.00	4.75	4.25	6.25	8.75	.....	.....	.....	.....	.....	.....
		4.75	1.00	0.50	0.50	2.25	1.00	0.125	0.875	2.25	1.00	0.25	0.75	3.00	1.00	0.25	0.75	2.50	1.00	0.25	0.75
		5.50	2.00	0.875	1.125	2.50	2.00	0.75	1.25	2.75	2.00	0.75	1.25	3.50	2.00	0.75	1.25	3.25	2.00	0.75	1.25
		5.75	3.00	1.125	1.875	2.75	3.00	1.00	2.00	3.75	3.00	1.00	2.00	3.75	3.00	1.00	2.00	3.75	3.00	1.00	2.00
		6.25	4.00	1.75	2.25	3.00	4.00	1.50	2.50	3.00	4.00	1.50	2.50	4.00	4.00	1.50	2.50	4.00	4.00	1.75	2.25
		7.50	5.00	2.00	3.00	3.25	5.00	2.00	3.00	3.50	5.00	2.25	2.75	4.25	5.00	2.00	3.00	4.25	5.00	2.25	2.75
		7.00	6.00	2.75	3.25	3.75	5.75	.....	.....	3.75	6.00	2.75	3.25	4.50	6.00	2.875	3.125	4.50	6.00	2.875	3.125
		7.75	7.00	3.25	3.75	.....	.....	.....	.....	4.00	6.25	.....	.....	5.25	7.00	3.25	3.75	5.25	7.00	3.25	3.75
		8.75	8.00	4.00	4.00	.....	.....	.....	.....	.....	.....	.....	.....	5.50	7.25	.....	.....	5.75	7.50	.....	.....
		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		2.75	1.00	0.25	0.75	3.50	1.00	0.125	0.875	2.75	1.00	0.125	0.875	1.50	1.00	0.125	0.875	2.25	1.00	0.125	0.875
3.50	2.00	0.75	1.25	4.00	2.00	0.75	1.25	2.00	2.00	0.75	1.25	2.00	2.00	0.875	1.125	2.50	2.00	0.75	1.25		
3.75	3.00	1.00	2.00	4.25	3.00	1.00	2.00	3.50	3.00	1.00	2.00	2.25	3.00	1.25	1.75	2.75	3.00	1.125	2.875		
4.25	4.00	1.50	2.50	4.50	4.00	1.875	2.625	3.75	3.50	.....	.....	2.50	4.00	1.75	2.25	3.00	4.00	1.75	2.25		
4.50	5.00	2.00	3.00	4.75	5.00	2.00	3.00	.....	.....	.....	.....	2.50	5.00	2.25	2.75	3.25	5.00	2.25	2.75		
5.25	6.00	2.25	3.75	5.25	6.00	2.25	3.75	.....	.....	.....	.....	2.75	6.00	2.75	3.00	3.50	6.00	2.875	3.125		
6.50	7.00	3.00	4.00	6.00	7.00	3.00	4.00	.....	.....	.....	.....	.....	.....	.....	.....	4.00	7.00	3.50	3.50		
7.25	8.00	.....	.....	6.75	8.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		



TABLE XIV.—Actual measurements, showing relation between strain, stretch, and elasticity—Continued.

Catalogue No. of samples..		PHILADELPHIA GRADES.																							
		300.				300.				300.				300.				300.							
		Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.				
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>				
		2.75	1.00	0.00	1.00	3.00	1.00	0.25	0.75	2.75	1.00	0.125	0.875	2.75	1.00	0.125	0.875	2.00	1.00	0.25	0.75	4.75	1.00	0.50	0.50
		3.00	2.00	0.75	1.25	3.50	2.00	0.75	1.25	3.25	2.00	0.75	1.25	3.25	2.00	0.75	1.25	2.50	2.00	0.75	1.25	6.50	2.00	1.00	1.00
		3.25	3.00	1.125	1.875	3.75	2.75	.....	.....	3.25	3.00	1.125	1.875	2.75	3.00	1.25	1.75	2.75	3.00	1.25	1.75	6.75	3.00	1.25	1.75
		3.50	4.00	1.875	2.125	.....	.....	.....	.....	3.75	4.00	1.875	2.125	3.00	4.00	1.875	2.125	3.00	4.00	1.875	2.125	7.50	4.00	2.00	2.00
		3.75	5.00	2.50	2.50	.....	.....	.....	.....	4.00	5.00	2.625	2.375	3.25	5.00	2.50	2.50	3.25	5.00	2.50	2.50	7.75	5.00	2.50	2.50
		4.00	6.00	3.125	2.875	.....	.....	.....	.....	4.50	5.75	.....	.....	3.25	5.25	.....	.....	3.25	5.25	.....	.....	7.75	5.00	3.125	2.875
		4.25	6.25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9.25	7.00	3.875	3.125
		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9.75	7.75	.....	.....
		1.00	1.00	0.25	0.75	2.50	1.00	0.125	0.875	1.75	1.00	0.125	0.875	4.75	1.00	0.25	0.75	1.75	1.00	0.125	0.875	1.75	1.00	0.125	0.875
		1.60	2.00	0.75	1.25	3.75	2.00	0.025	1.375	2.50	2.00	0.50	1.50	6.50	2.00	0.875	1.125	2.25	2.00	0.75	1.25	2.25	2.00	0.75	1.25
		1.75	3.00	1.125	1.875	4.60	3.00	1.00	2.00	2.75	3.00	1.00	2.00	7.00	3.00	1.25	1.75	2.75	2.50	.....	.....	.....	.....	.....	.....
		1.72	4.00	1.875	2.125	4.75	4.00	1.75	2.25	.....	.....	.....	.....	7.50	4.00	2.00	2.00	.....	.....	.....	.....	.....	.....	.....	.....
		2.00	5.00	2.50	2.50	5.00	4.25	.....	.....	.....	.....	.....	.....	8.00	5.00	2.75	2.25	.....	.....	.....	.....	.....	.....	.....	.....
		2.25	6.00	3.125	2.875	.....	.....	.....	.....	.....	.....	.....	.....	8.75	6.00	3.25	2.75	.....	.....	.....	.....	.....	.....	.....	.....
		2.75	6.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9.50	7.00	4.00	3.00	.....	.....	.....	.....	.....	.....	.....	.....
		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10.25	8.00	4.75	3.25	.....	.....	.....	.....	.....	.....	.....	.....
		1.50	1.00	0.125	0.875	1.25	1.00	0.125	0.875	3.50	1.00	0.125	0.875	2.75	1.00	0.25	0.75	2.75	1.00	0.125	0.875	2.75	1.00	0.125	0.875
		2.00	2.00	0.75	1.25	1.50	2.00	0.75	1.25	4.25	2.00	0.75	1.25	3.25	2.00	0.875	1.125	3.25	2.00	0.75	1.25	3.25	2.00	0.75	1.25
		2.60	3.00	1.125	1.875	1.75	3.00	1.25	1.75	4.25	3.00	1.125	1.875	3.50	3.00	1.25	1.75	3.50	3.00	1.125	1.875	3.50	3.00	1.125	1.875
2.75	4.00	.....	.....	1.75	4.00	2.00	2.00	4.50	4.00	1.875	2.125	3.75	4.00	2.00	2.00	3.75	4.00	2.00	2.00	3.75	4.00	2.00	2.00		
.....	.....	.....	.....	1.75	5.00	2.75	2.25	4.50	5.00	2.50	2.50	4.25	5.00	2.75	2.25	4.00	5.00	2.50	2.50	4.00	5.00	2.50	2.50		
.....	.....	.....	.....	2.00	6.00	3.25	2.75	5.00	6.00	3.125	2.875	4.25	6.00	3.25	2.75	4.50	6.00	3.125	2.875	4.50	6.00	3.125	2.875		
.....	.....	.....	.....	2.25	7.00	.....	.....	5.75	6.875	.....	.....	4.75	7.00	4.00	3.00	5.00	7.00	4.00	3.00	5.00	7.00	4.00	3.00		

Catalogue No. of samples..		PHILADELPHIA GRADES.																							
		302.				302.				302.				302.				302.							
		Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.				
Actual measurements in grams and millimeters.		<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>mm.</i>	<i>mm.</i>				
		2.00	1.00	0.25	0.75	2.25	1.00	0.25	0.75	0.50	1.00	0.00	1.00	3.50	1.00	0.125	0.875	3.25	1.00	0.25	0.75	1.00	0.25	0.75	1.25
		2.50	2.00	0.75	1.25	2.75	2.00	0.875	1.125	1.25	2.00	0.25	1.75	4.50	2.00	0.75	1.25	4.00	2.00	0.875	1.125	4.00	2.00	0.875	1.125
		2.75	3.00	1.25	1.75	3.25	3.00	1.25	1.75	1.75	3.00	0.875	2.125	4.75	3.00	.....	.....	4.50	3.00	1.25	1.75	4.50	3.00	1.25	1.75
		3.25	4.00	2.00	2.00	3.50	4.00	2.00	2.00	2.00	4.00	1.25	2.75	.....	.....	.....	.....	5.25	4.00	.....	.....	5.25	4.00	.....	.....
		3.25	4.50	.....	.....	3.75	5.00	2.625	2.375	2.50	4.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		.....	.....	.....	.....	4.00	6.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		0.50	1.00	0.00	1.00	3.00	1.00	0.00	1.00	3.25	1.00	0.25	0.75	3.75	1.00	0.25	0.75	4.75	1.00	0.25	0.75	4.75	1.00	0.25	0.75
		1.00	2.00	0.50	1.50	3.25	2.00	0.50	1.50	3.75	2.00	0.875	1.125	4.50	2.00	0.875	1.125	5.75	2.00	0.75	1.25	5.75	2.00	0.75	1.25
		1.25	3.00	1.00	2.00	3.25	3.00	1.00	2.00	4.25	3.00	1.125	1.875	5.50	2.75	.....	.....	6.50	3.00	1.25	1.75	6.50	3.00	1.25	1.75
		1.60	4.00	1.60	2.50	3.50	4.00	1.60	2.50	4.75	4.00	1.875	2.125	.....	.....	.....	.....	7.00	3.75	.....	.....	7.00	3.75	.....	.....
		1.50	5.00	2.125	2.875	3.50	5.00	2.50	2.50	5.25	5.00	2.25	2.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		.....	.....	.....	.....	3.75	6.00	3.00	3.00	5.50	6.00	3.00	3.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		.....	.....	.....	.....	4.25	7.00	3.50	3.50	6.00	6.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		.....	.....	.....	.....	4.75	8.00	4.25	3.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		3.00	1.00	0.125	0.875	2.25	1.00	0.25	0.75	1.75	1.00	0.25	0.75	2.75	1.00	0.25	0.75	2.75	1.00	0.50	0.50	2.75	1.00	0.50	0.50
		3.25	2.00	0.75	1.25	2.75	2.00	0.75	1.25	2.25	2.00	0.75	1.25	3.50	2.00	0.875	1.125	5.00	2.00	1.00	1.00	5.00	2.00	1.00	1.00
		3.75	3.00	1.00	2.00	3.00	3.00	1.00	2.00	2.75	3.00	1.125	1.875	3.75	3.00	1.125	1.875	5.75	3.00	1.625	1.875	5.75	3.00	1.625	1.875
		3.75	4.00	1.75	2.25	3.25	4.00	1.75	2.25	3.25	4.00	1.75	2.25	4.25	4.00	1.875	2.125	6.25	4.00	2.125	1.875	6.25	4.00	2.125	1.875
		4.25	5.00	2.125	2.875	3.25	5.00	2.50	2.50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
4.75	5.75	.....	.....	3.75	6.00	3.00	3.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
.....	.....	.....	.....	4.25	7.00	3.75	3.25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
.....	.....	.....	.....	4.50	8.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		







TABLE XIV.—Actual measurements, showing relation between strain, stretch, and elasticity—Continued.

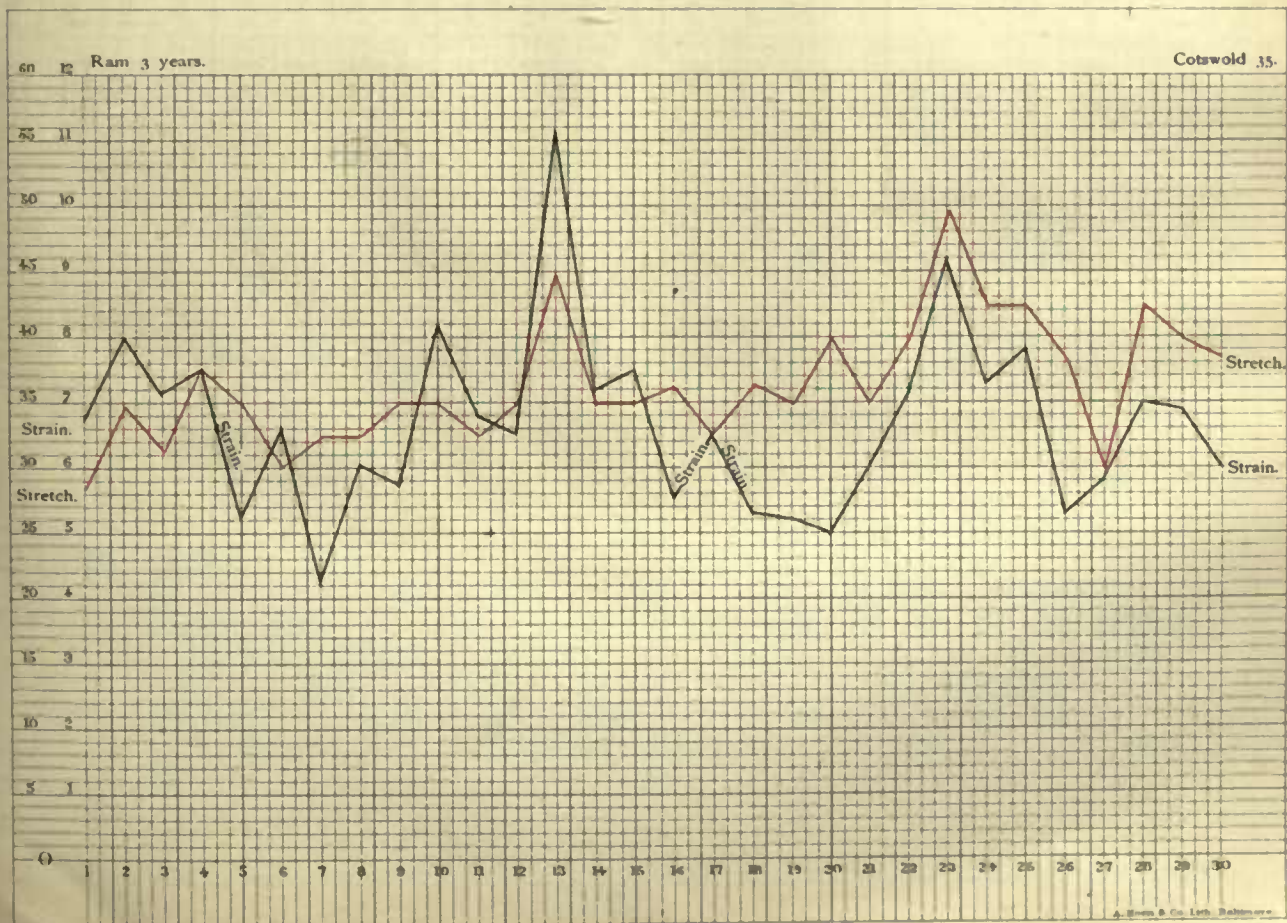
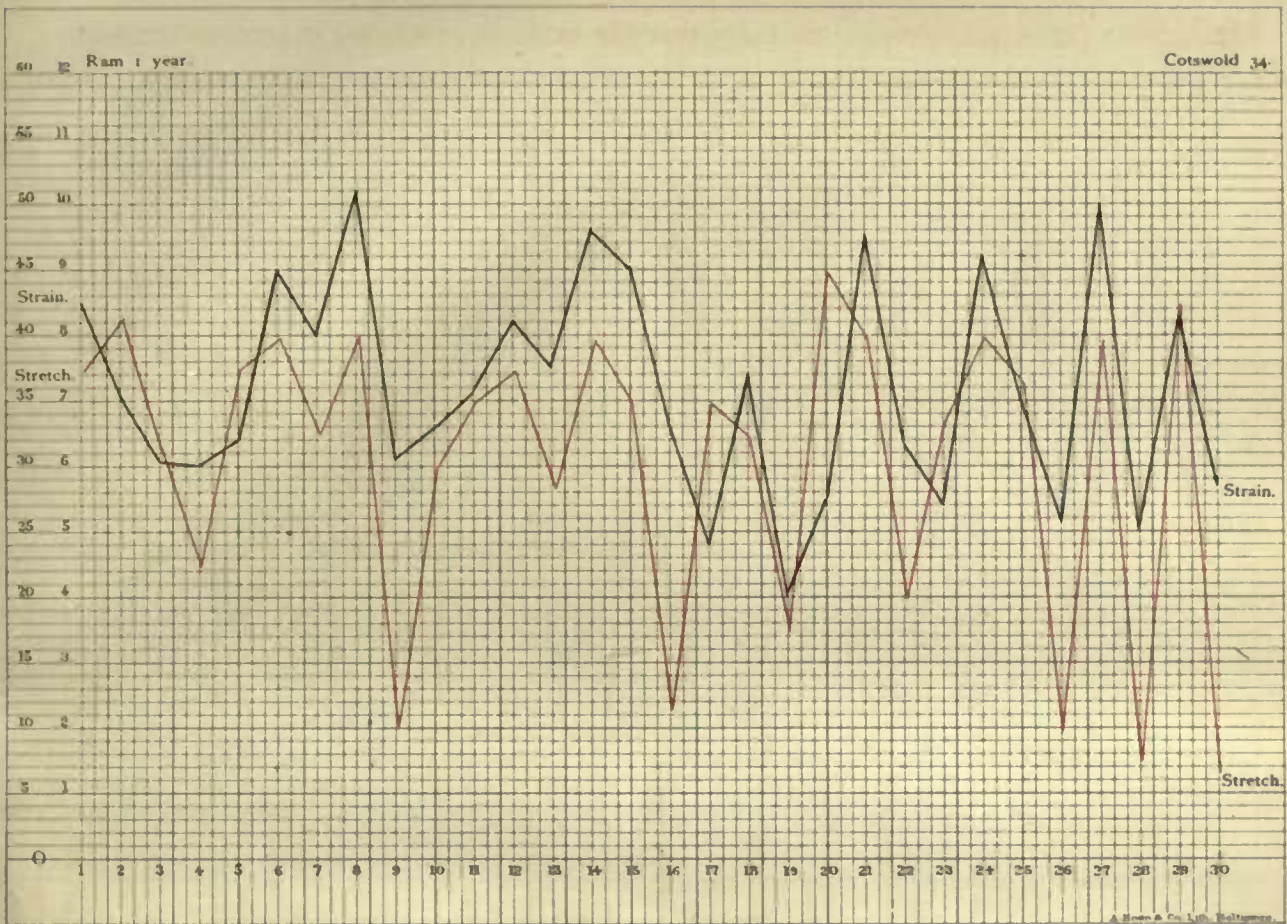
Catalogue No. of samples..		PHILADELPHIA GRADES.																							
		317.				317.				317.				317.				317.							
		Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.				
Actual measurements in grams and millimeters.	gms.	1.75	1.00	0.25	0.75	2.25	1.00	0.50	0.50	4.25	1.00	0.25	0.75	2.75	1.00	0.25	0.75	2.00	1.00	0.25	0.75	2.00	1.00	0.25	0.75
	mm.	2.25	2.00	0.75	1.25	4.25	2.00	1.00	1.00	4.75	2.00	1.00	1.00	3.75	2.00	0.75	1.25	2.50	2.00	0.75	1.25	2.75	3.00	1.25	1.75
	mm.	2.50	3.00	1.25	1.75	4.75	3.00	1.25	1.75	5.75	3.00	1.50	1.50	4.25	3.00	1.25	1.75	4.50	4.00	1.875	2.125	2.75	3.00	1.25	1.75
	mm.	2.75	4.00	2.00	2.00	.....	.....	.....	.....	6.50	4.00	2.00	2.00	4.50	4.00	2.25	2.75	.....	.....	.....	.....	.....	.....	.....	.....
	mm.	2.75	5.00	2.75	2.25	.....	.....	.....	.....	7.00	4.00	.....	.....	4.75	6.00	2.25	2.75	.....	.....	.....	.....	.....	.....	.....	.....
	mm.	5.75	1.00	0.50	0.50	4.00	1.00	0.25	0.75	2.50	1.00	0.25	0.75	6.25	1.00	0.50	0.50	3.75	1.00	0.25	0.75	.....	.....	.....	.....
	mm.	8.00	2.00	1.00	1.00	4.75	2.00	0.875	1.125	3.25	2.00	0.875	1.125	8.25	2.00	1.00	1.00	4.50	2.00	1.00	1.00	.....	.....	.....	.....
	mm.	8.75	3.00	1.50	1.50	5.00	2.50	.....	.....	8.50	3.00	1.25	1.75	9.25	2.25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	mm.	9.75	4.00	2.125	1.875	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	mm.	10.75	5.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	mm.	4.75	1.00	0.50	0.60	3.50	1.00	0.25	0.75	2.25	1.00	0.00	1.00	3.00	1.00	0.25	0.75	3.25	1.00	0.50	0.50	.....	.....	.....	.....
	mm.	7.25	2.00	1.00	1.00	5.50	2.00	0.75	1.25	3.25	2.00	0.75	1.25	4.25	2.00	0.75	1.25	4.50	2.00	1.00	1.00	.....	.....	.....	.....
	mm.	8.50	3.00	1.50	1.50	6.00	3.00	1.125	1.875	3.50	3.00	1.00	2.00	4.50	2.50	.....	.....	5.00	3.00	1.25	1.75	.....	.....	.....	.....
	mm.	9.25	4.00	2.125	1.875	6.75	4.00	1.875	2.125	.....	.....	.....	.....	.....	.....	.....	.....	5.50	4.00	2.00	2.00	.....	.....	.....	.....
	mm.	10.00	4.50	.....	.....	7.25	4.50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6.25	5.00	2.50	2.50	.....	.....	.....	.....

Catalogue No. of samples..		PHILADELPHIA GRADES.																							
		318.				318.				318.				318.				318.							
		Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.	Strain.	Total stretch.	Permanent stretch.	Difference.				
Actual measurements in grams and millimeters.	gms.	0.75	1.00	0.125	0.875	10.75	1.00	0.125	0.875	5.75	1.00	0.00	1.00	10.50	1.00	0.125	0.875	2.00	1.00	0.00	1.00	3.00	2.00	0.25	1.75
	mm.	10.25	2.00	0.75	1.25	11.50	2.00	0.75	1.25	6.00	2.00	0.50	1.50	11.25	2.00	0.625	1.375	3.00	2.00	0.25	1.75	3.75	3.00	0.75	2.25
	mm.	10.75	3.00	1.125	1.875	11.50	3.00	1.125	1.875	6.50	3.00	1.00	2.00	11.50	3.00	1.00	2.00	3.75	3.00	0.75	2.25	4.00	4.00	1.00	3.00
	mm.	11.50	4.00	1.875	2.125	11.75	4.00	1.50	2.50	6.75	4.00	1.50	2.50	12.00	4.00	1.75	2.25	5.25	4.00	1.00	3.00	5.25	4.00	1.00	3.00
	mm.	12.50	4.75	.....	.....	12.50	5.00	2.125	2.875	7.00	5.00	2.125	2.875	12.50	5.00	2.25	2.75	6.50	5.00	1.75	3.25	.....	.....	.....	.....
	mm.	.....	.....	.....	.....	13.25	6.00	2.75	3.25	7.75	6.00	2.75	3.25	13.50	6.00	2.875	3.125	6.75	6.00	.....	.....	.....	.....	.....	.....
	mm.	.....	.....	.....	.....	15.00	7.00	3.375	3.625	8.50	7.00	3.25	3.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	mm.	.....	.....	.....	.....	17.50	8.00	4.00	9.75	8.00	8.00	4.00	4.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	mm.	.....	.....	.....	.....	19.50	0.00	5.00	4.00	10.75	8.50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	mm.	.....	.....	.....	.....	19.50	8.25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	mm.	11.25	1.00	0.125	0.875	6.50	1.00	0.125	0.875	5.50	1.00	0.125	0.875	6.00	1.00	0.125	0.875	8.50	1.00	0.25	0.75	.....	.....	.....	.....
	mm.	12.50	2.00	0.625	1.375	7.00	2.00	0.625	1.375	6.25	2.00	0.75	1.25	7.00	2.00	0.75	1.25	11.00	2.00	0.875	1.125	.....	.....	.....	.....
	mm.	12.50	3.00	1.00	2.00	7.25	3.00	1.125	1.875	6.50	3.00	1.125	1.875	7.50	3.00	.....	.....	12.00	3.00	1.125	1.875	.....	.....	.....	.....
	mm.	12.75	4.00	1.50	2.50	7.50	4.00	1.75	2.25	6.75	4.00	1.875	2.125	.....	.....	.....	.....	12.50	4.00	1.75	2.25	.....	.....	.....	.....
	mm.	13.00	5.00	2.25	2.75	7.75	5.00	2.25	2.75	7.00	5.00	2.25	2.75	.....	.....	.....	.....	13.25	5.00	2.25	2.75	.....	.....	.....	.....
mm.	14.00	6.00	2.75	3.25	8.50	6.00	2.875	3.125	7.50	6.00	3.00	3.00	.....	.....	.....	.....	13.75	6.00	2.875	3.125	.....	.....	.....	.....	
mm.	17.00	7.00	3.25	3.75	9.50	7.00	3.50	3.625	8.25	7.00	3.625	3.375	.....	.....	.....	.....	15.00	7.00	3.50	3.625	.....	.....	.....	.....	
mm.	19.50	7.75	.....	.....	10.75	8.00	4.25	3.75	9.50	8.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
mm.	5.50	1.00	0.125	0.875	5.50	1.00	0.125	0.875	8.25	1.00	0.00	1.00	8.75	1.00	0.125	0.875	6.50	1.00	0.125	0.875	.....	.....	.....	.....	
mm.	6.00	2.00	0.75	1.25	6.00	2.00	0.75	1.25	8.50	2.00	0.025	1.375	10.60	2.00	0.75	1.25	7.25	2.00	0.75	1.25	.....	.....	.....	.....	
mm.	6.25	3.00	1.125	1.875	6.00	3.00	1.125	1.875	8.50	3.00	1.00	2.00	10.50	3.00	1.125	1.875	7.50	3.00	1.125	1.875	.....	.....	.....	.....	
mm.	6.50	4.00	1.75	2.25	6.50	4.00	1.75	2.25	8.75	4.00	1.50	2.50	11.00	4.00	1.75	2.25	7.75	4.00	1.75	2.25	.....	.....	.....	.....	
mm.	6.50	5.00	2.25	2.75	7.00	5.00	2.25	2.75	9.00	5.00	2.25	2.75	11.50	5.00	2.25	2.75	8.50	5.00	2.25	2.75	.....	.....	.....	.....	
mm.	6.75	6.00	2.875	3.125	7.25	6.00	3.00	3.00	10.25	6.00	2.875	3.125	12.25	6.00	2.875	3.125	9.00	6.00	2.875	3.125	.....	.....	.....	.....	
mm.	7.75	7.00	3.50	3.60	8.25	7.00	3.625	3.375	.....	.....	.....	.....	13.75	7.00	3.625	3.375	10.00	7.00	3.50	3.60	.....	.....	.....	.....	
mm.	9.25	8.00	.....	.....	9.75	8.00	.....	.....	.....	.....	.....	.....	15.75	8.00	4.125	3.875	10.75	7.25	.....	.....	.....	.....	.....	.....	
mm.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	16.75	8.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	







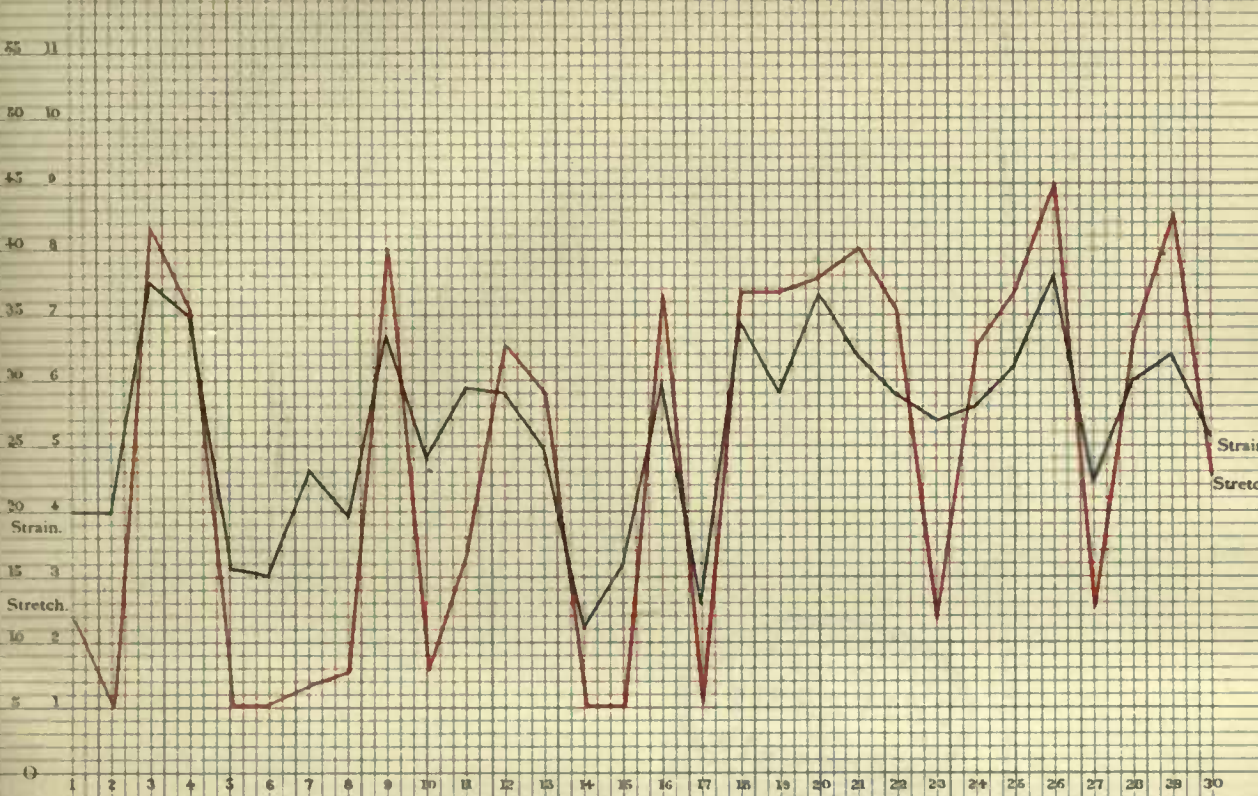






Ewe.

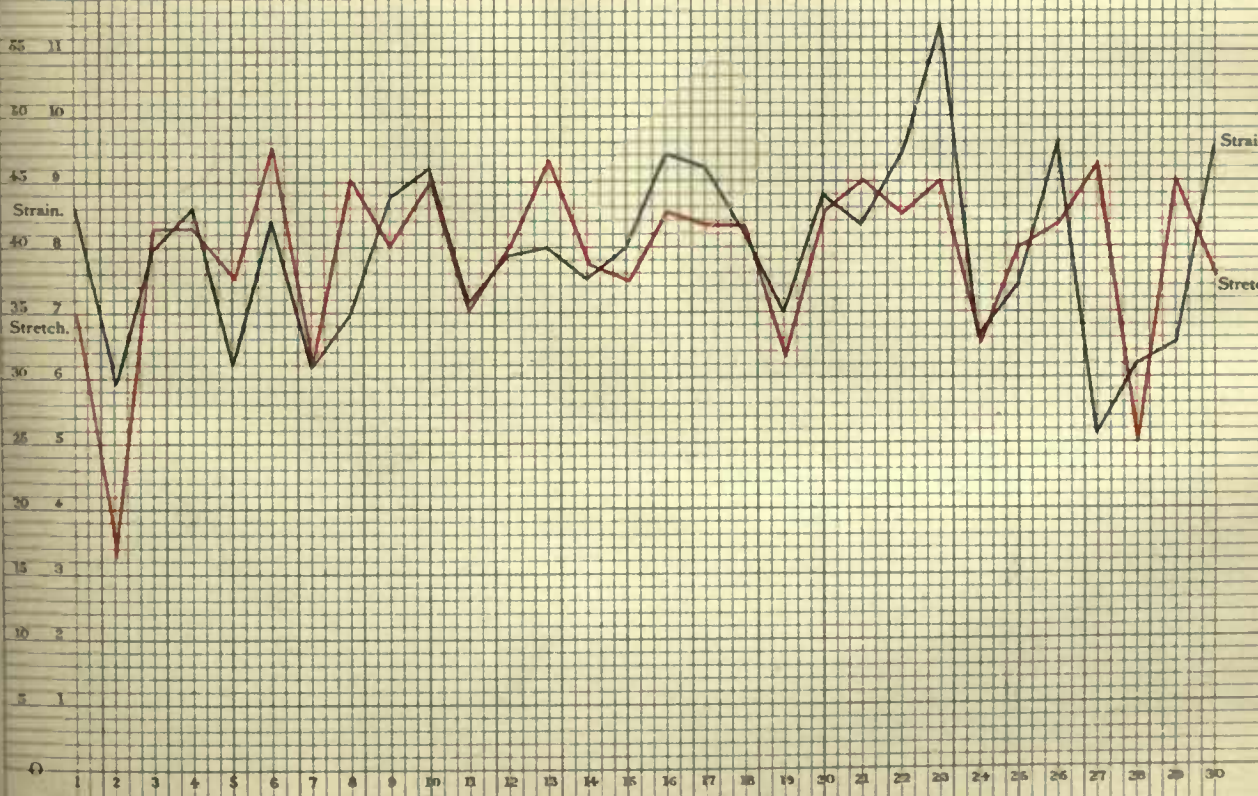
Cotswold 37.



A. Horn & Co. Lith. Baltimore.

Ewe 1 year.

Cotswold 39.

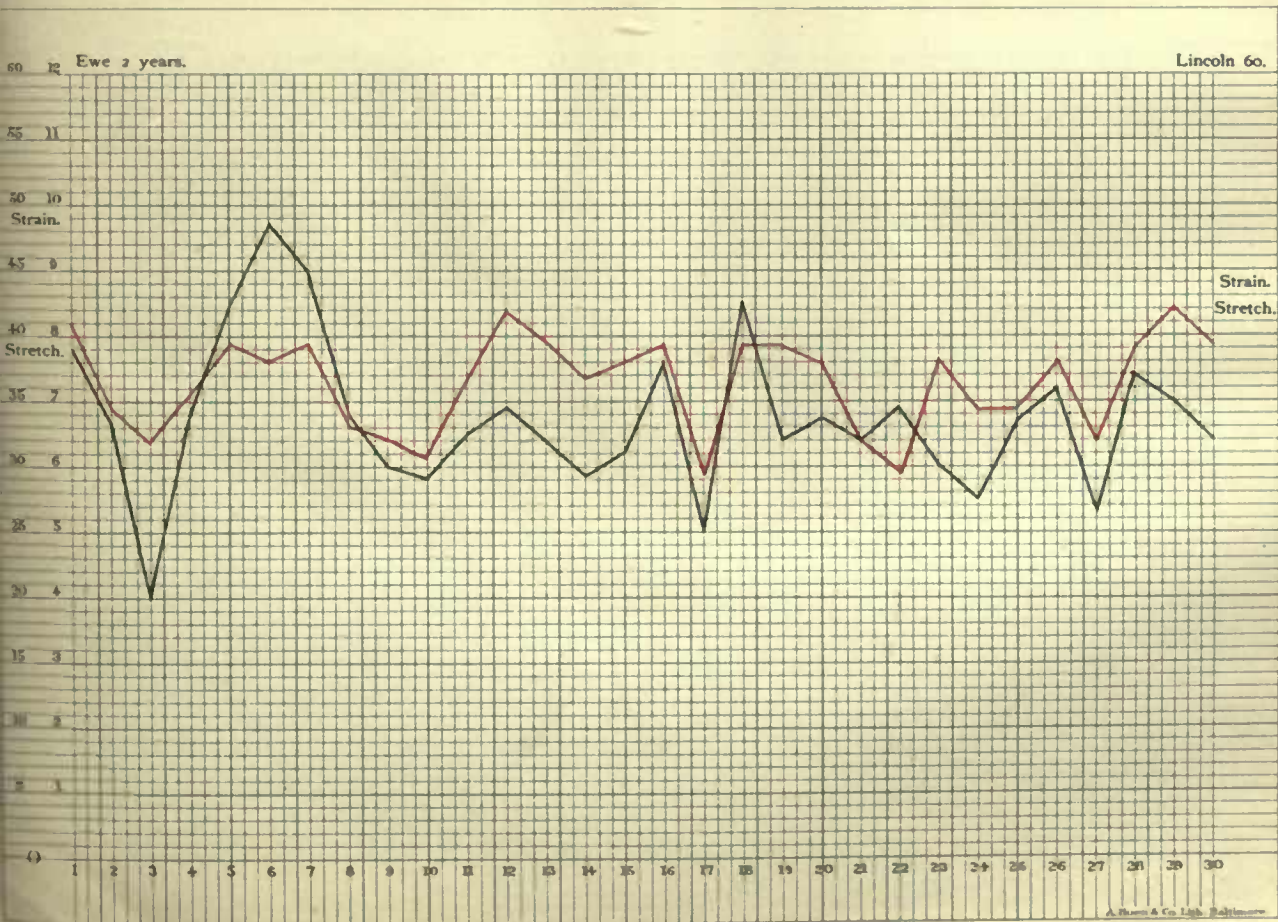
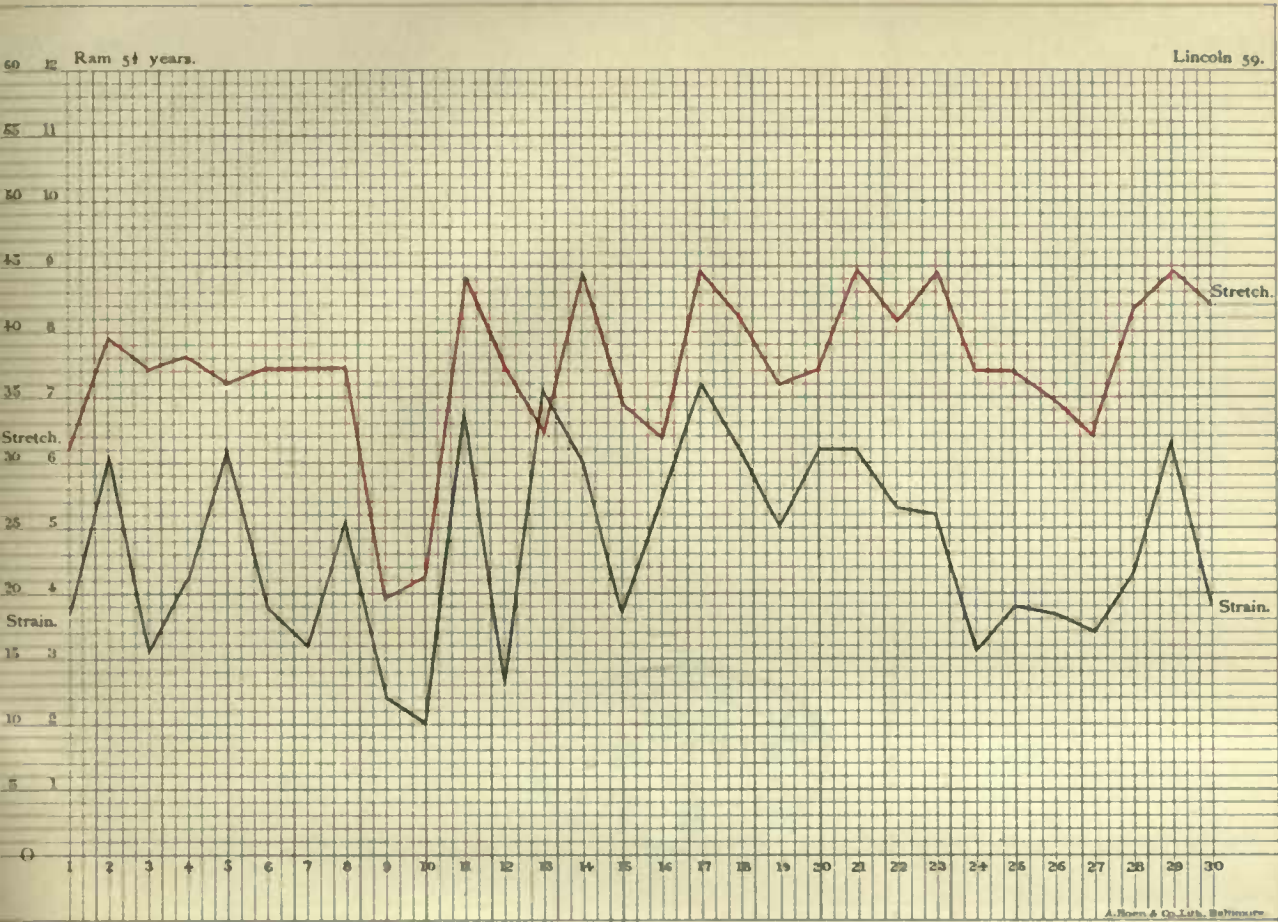


A. Horn & Co. Lith. Baltimore.





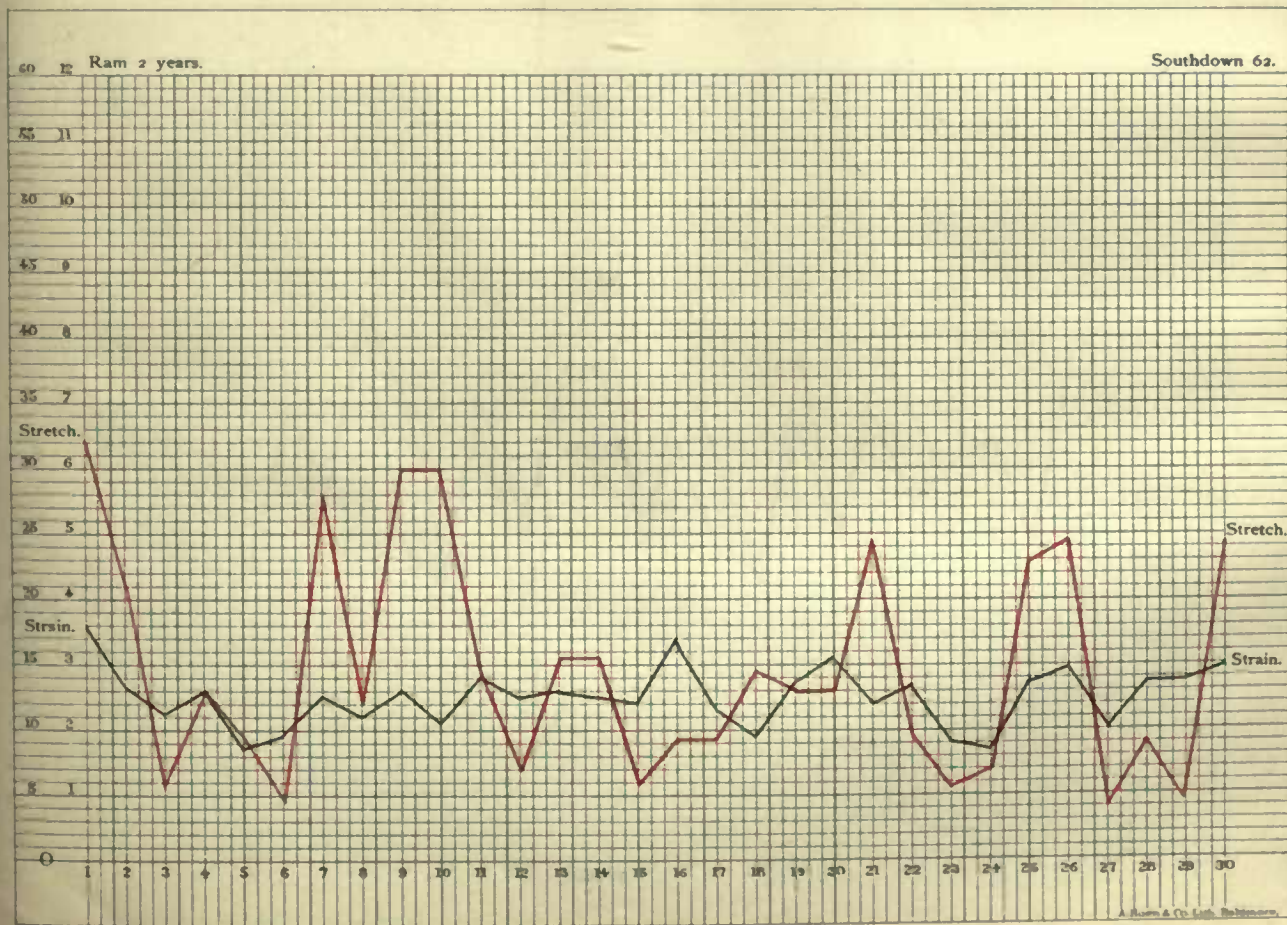
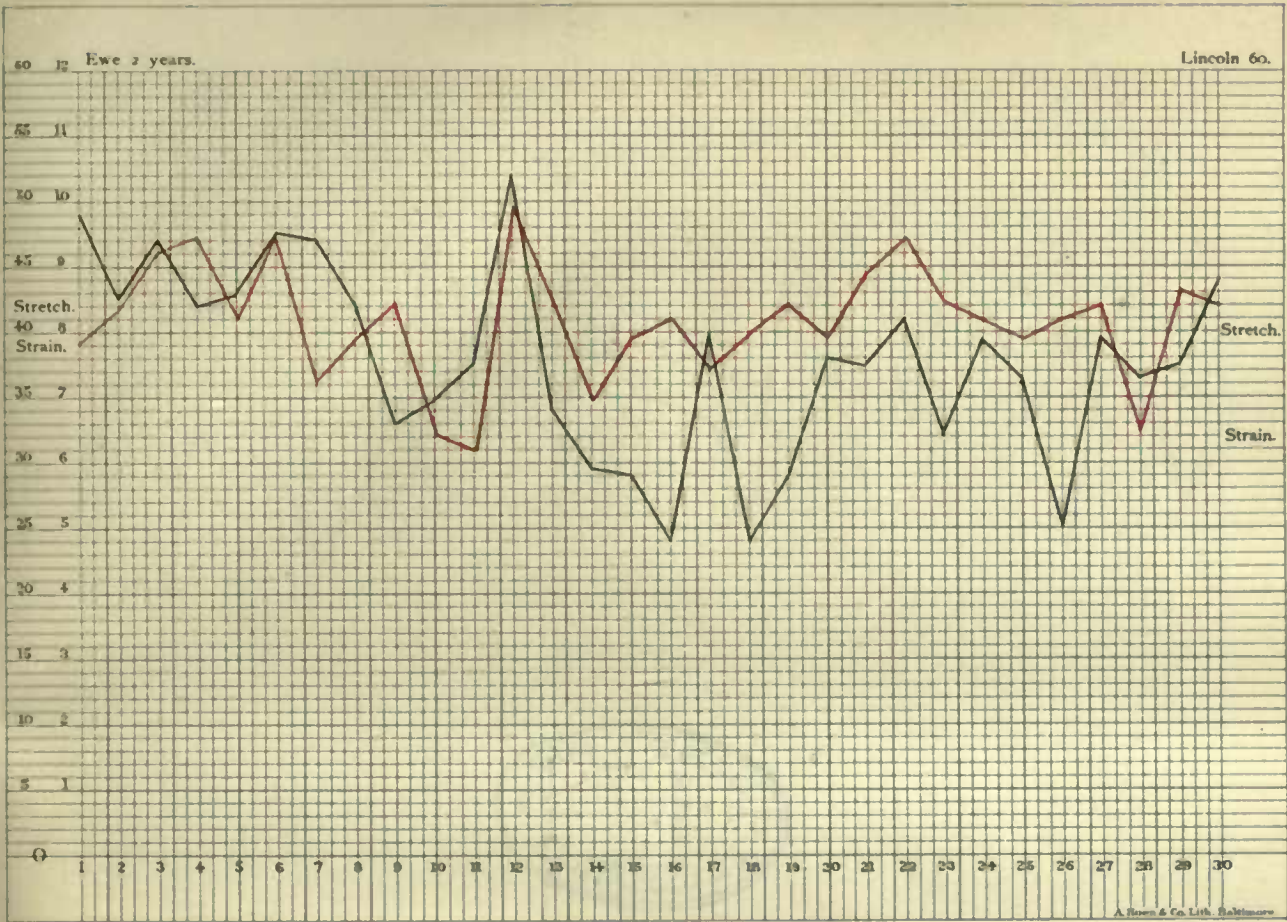




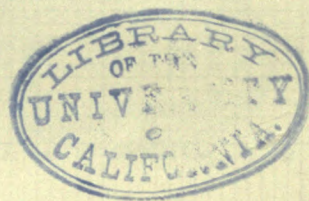




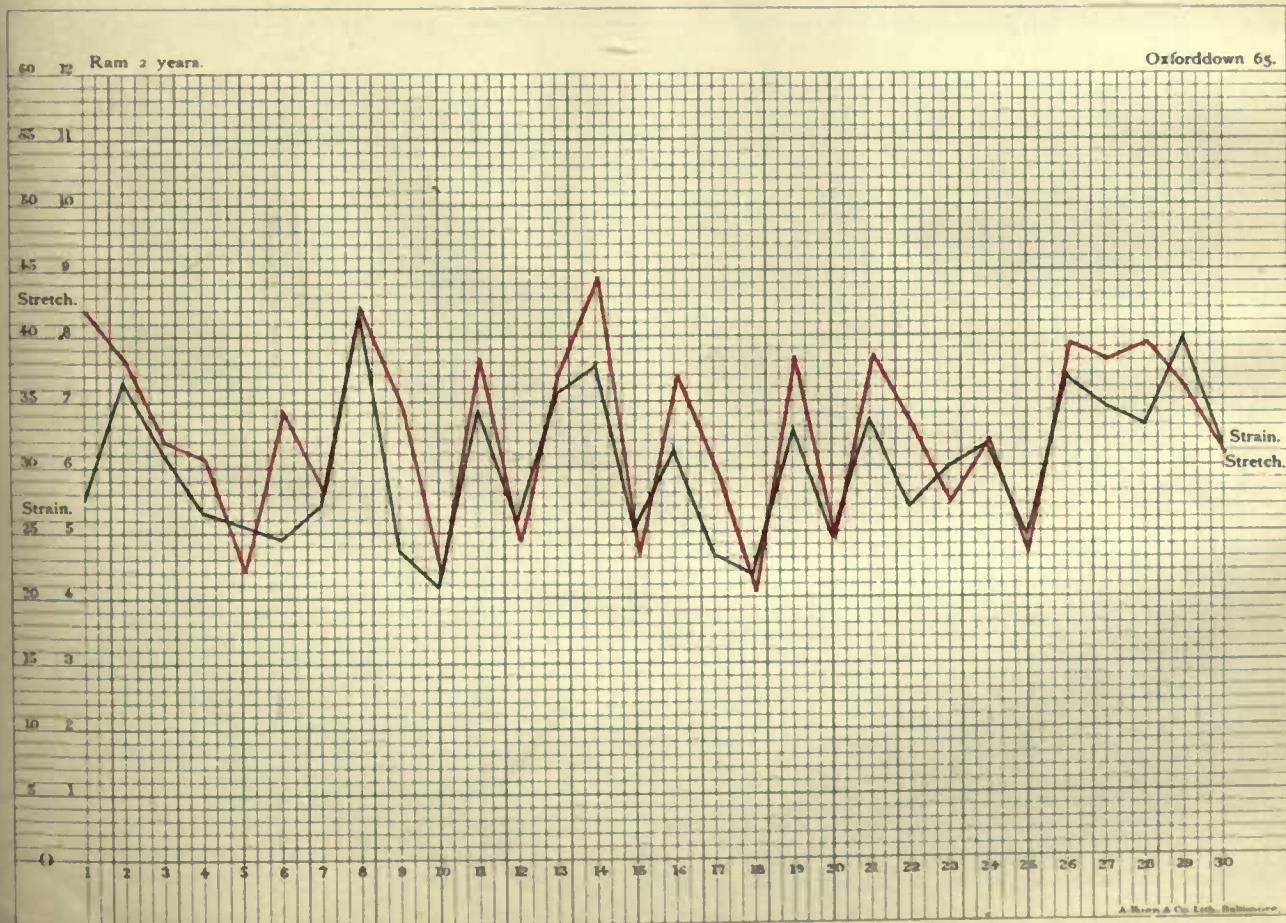
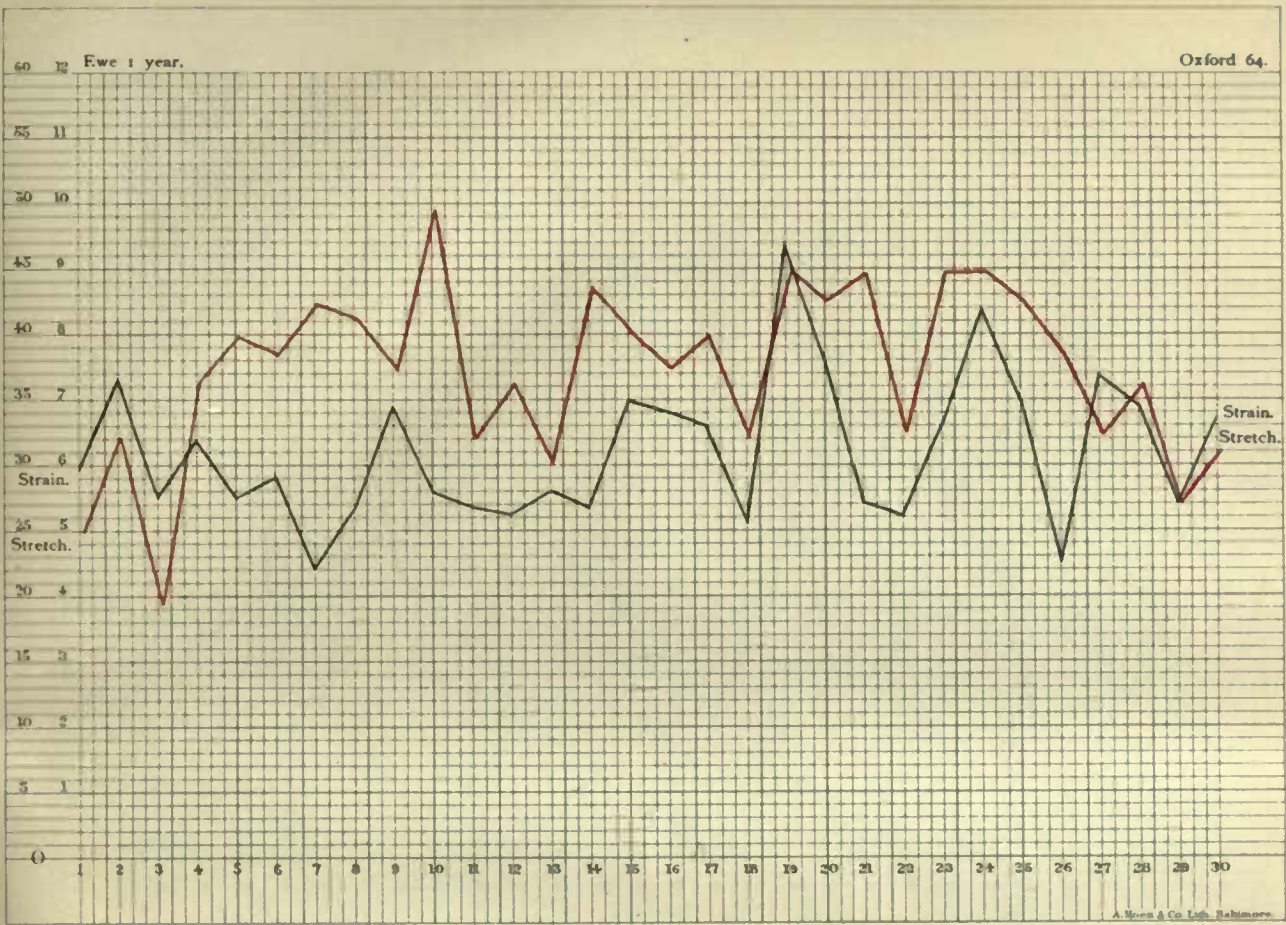








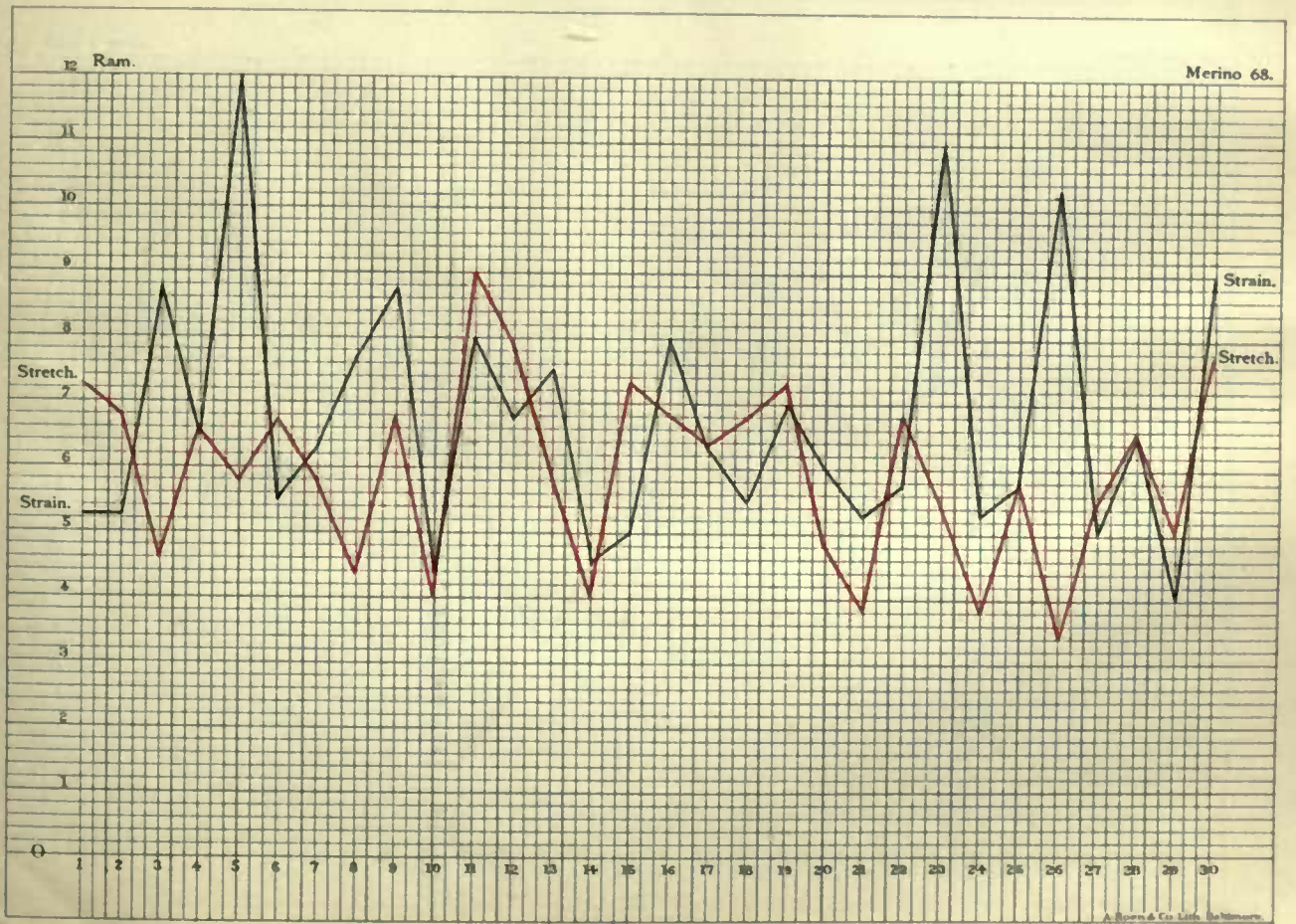
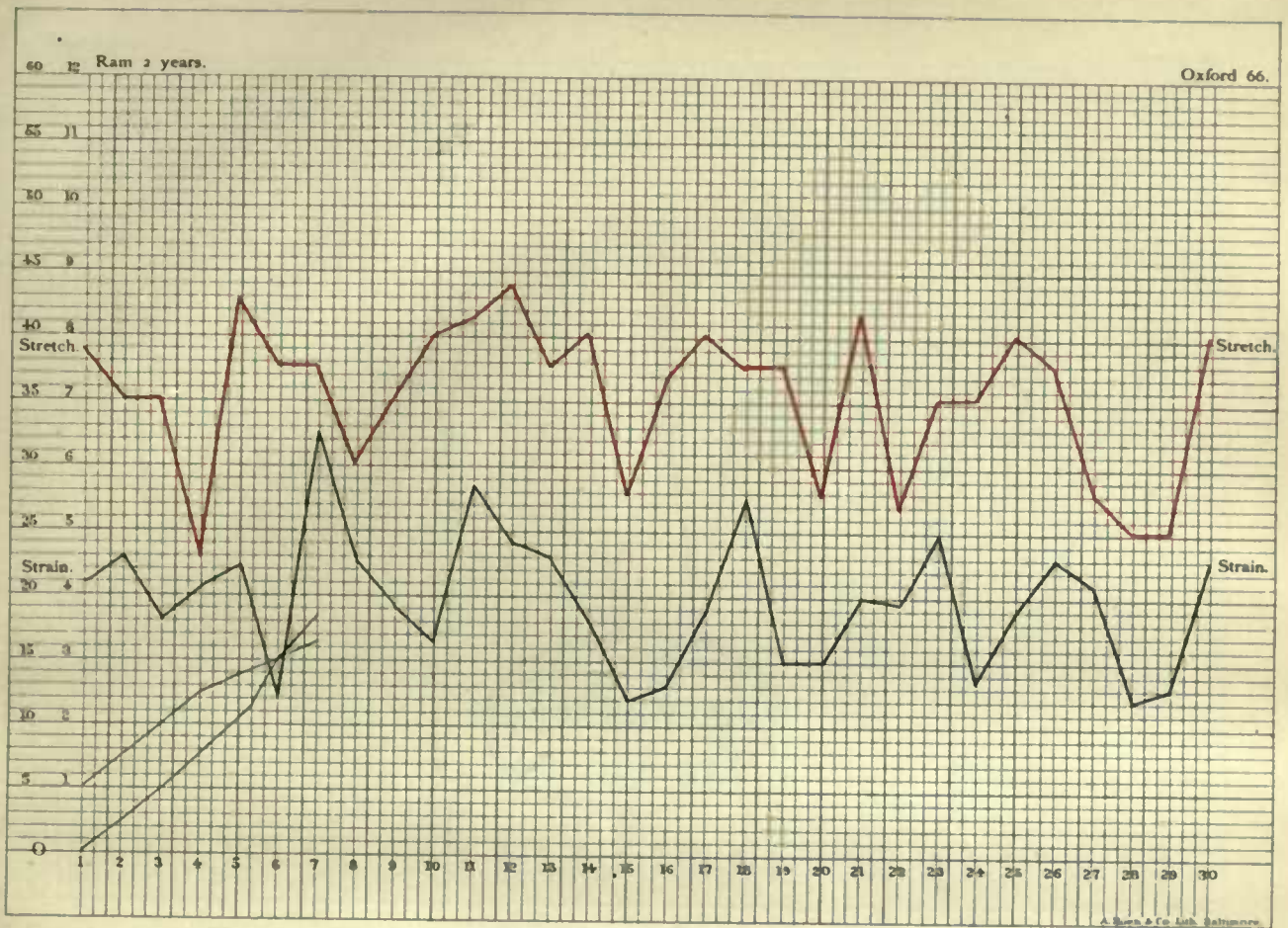








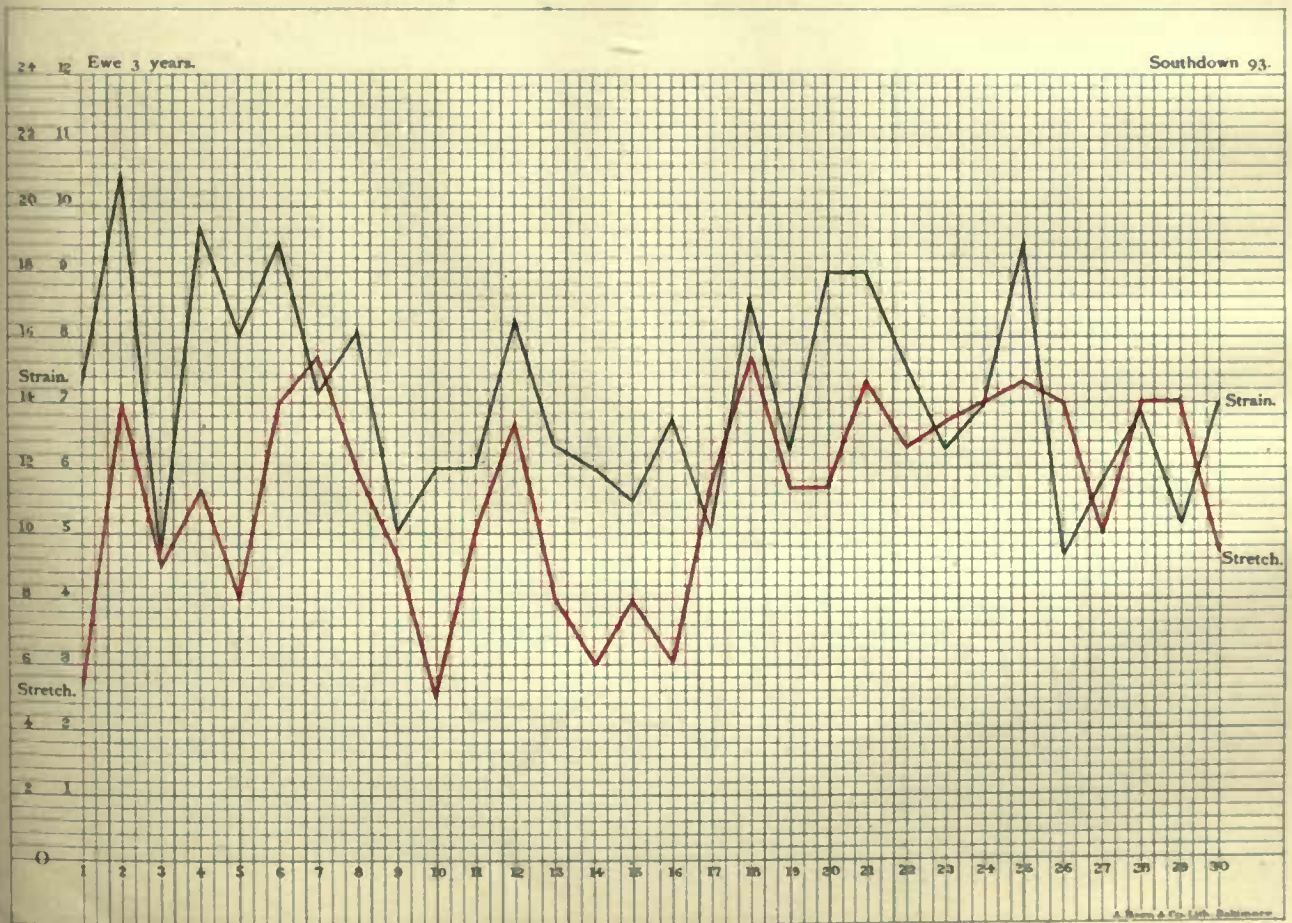
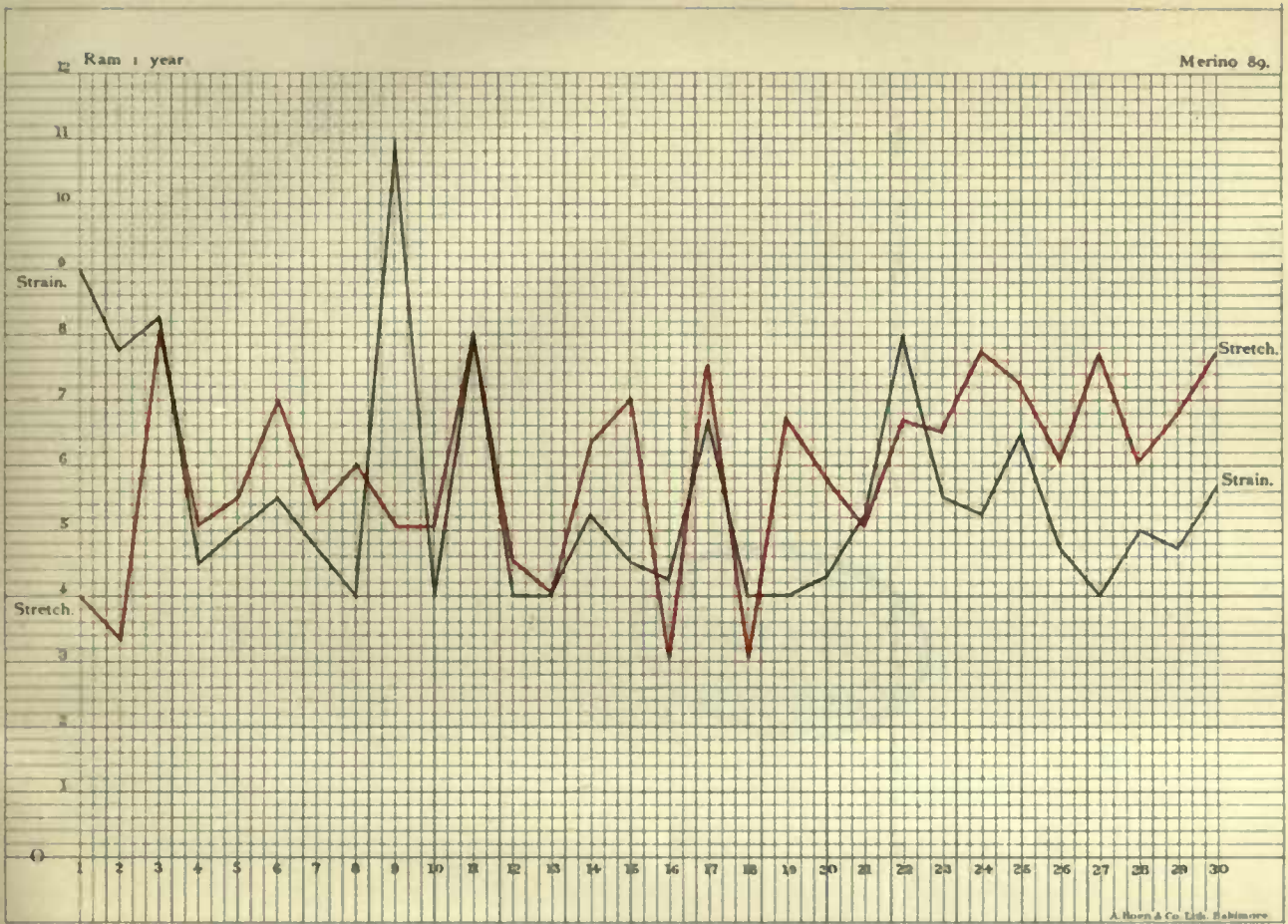












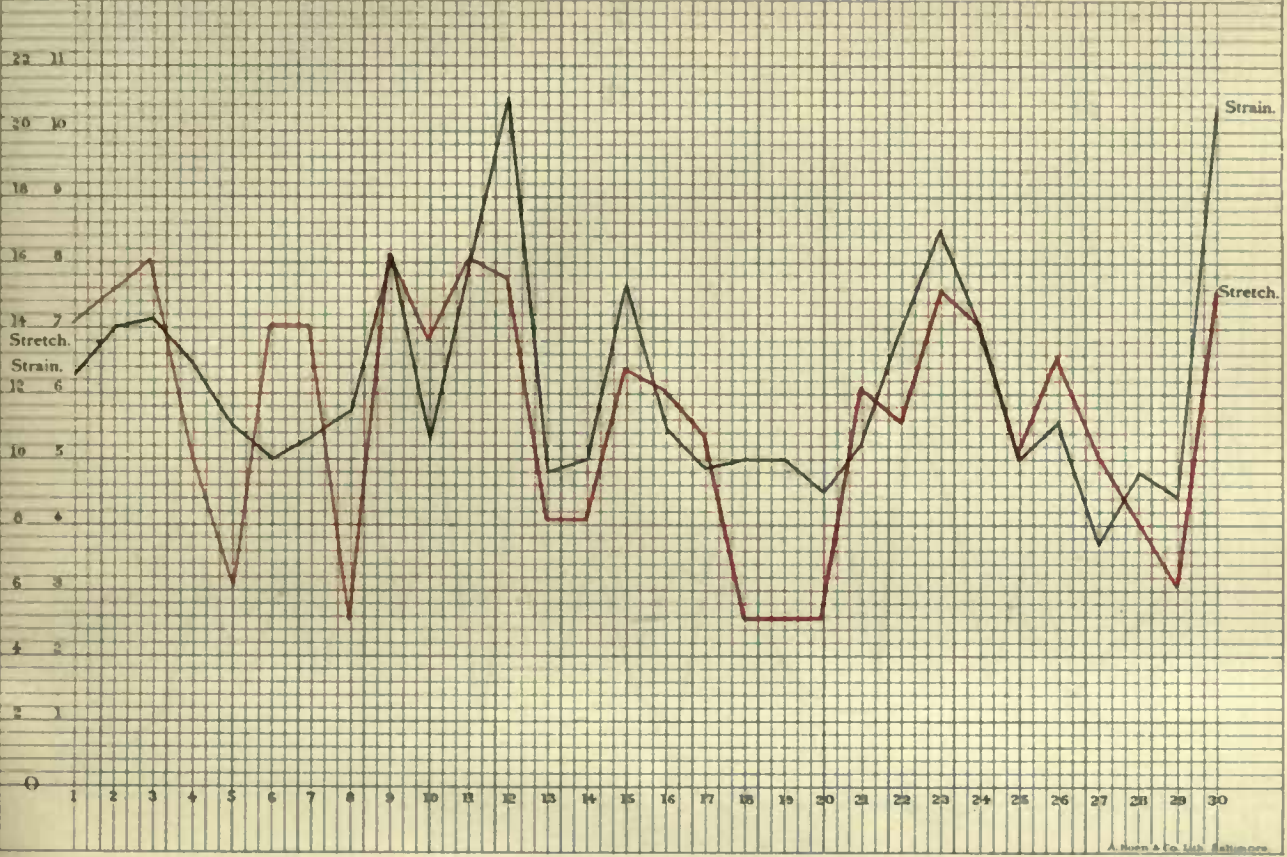






24 12 Ewe 1 year.

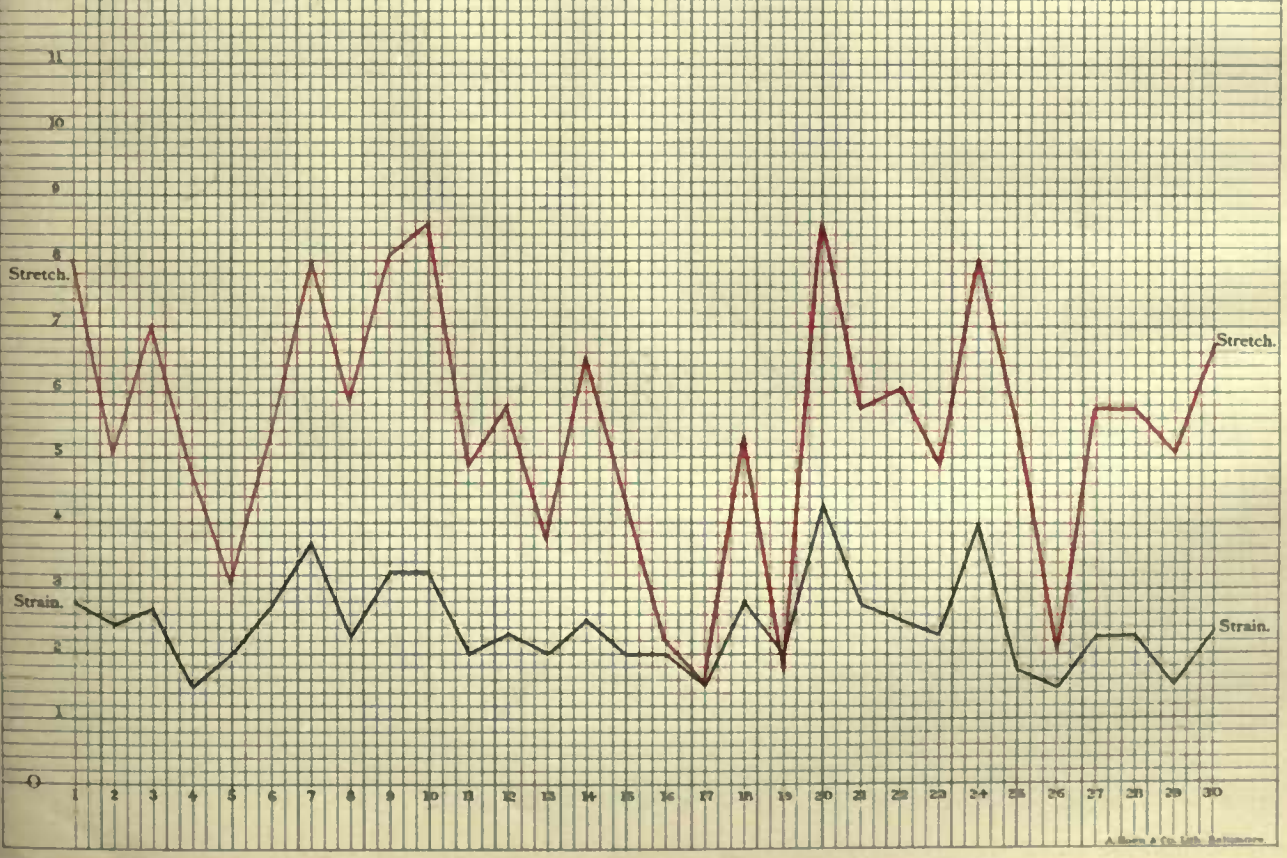
Southdown 94.



A. Horn & Co. Ltd. Baltimore.

12 Lamb 17 months.

Merino 97.



A. Horn & Co. Ltd. Baltimore.

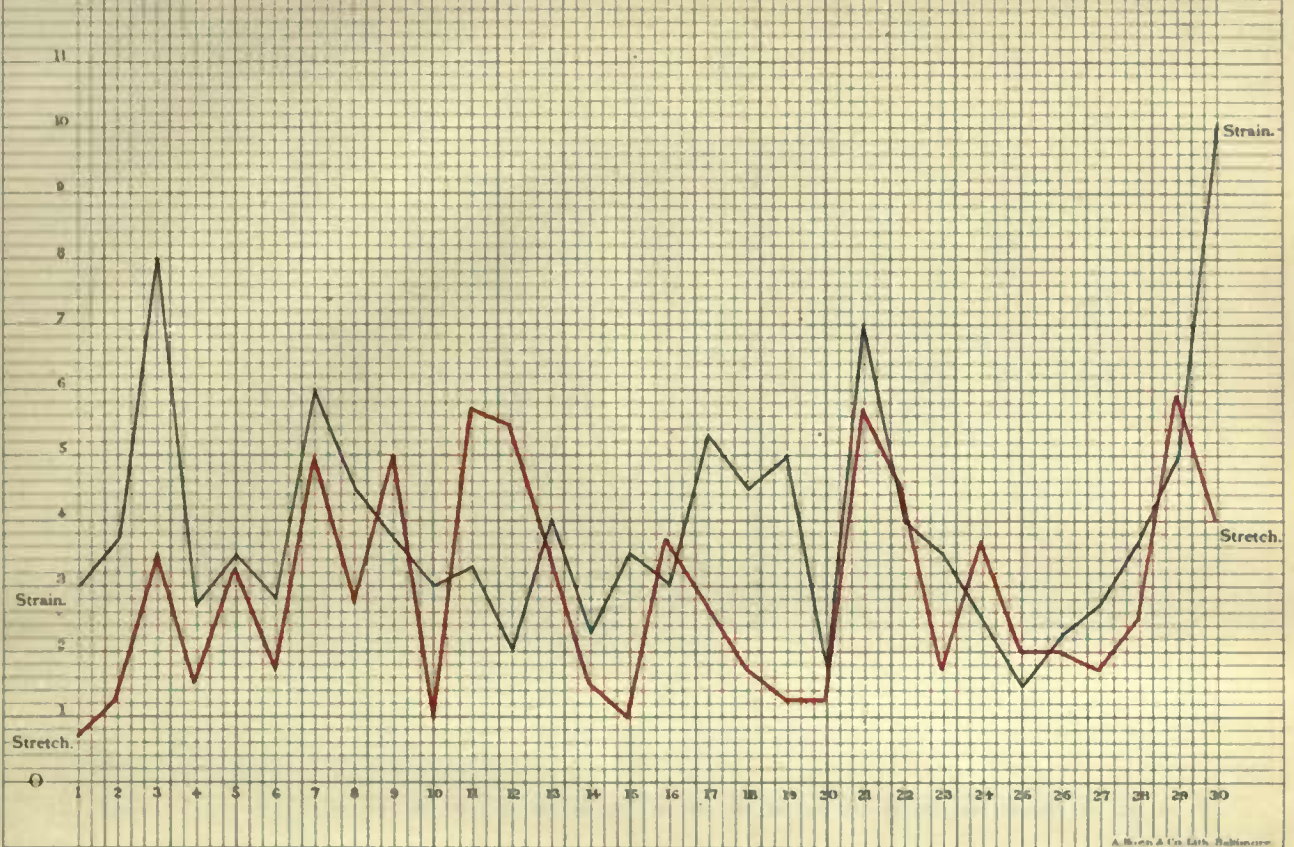






12 Between X and No. 1.

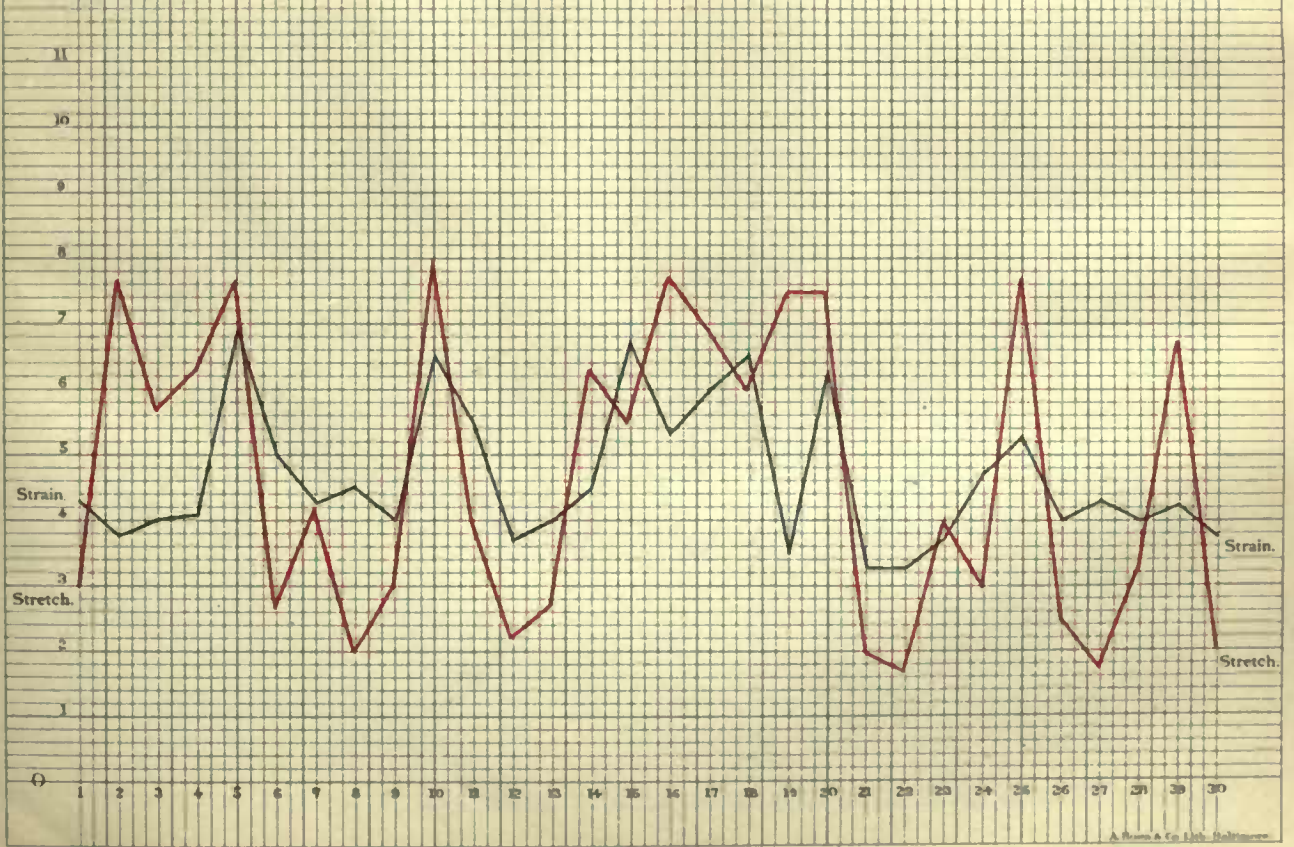
Boston Grade 274.



A. Brown & Co. Lith. Baltimore

12 Fine.

Boston Grade 276.

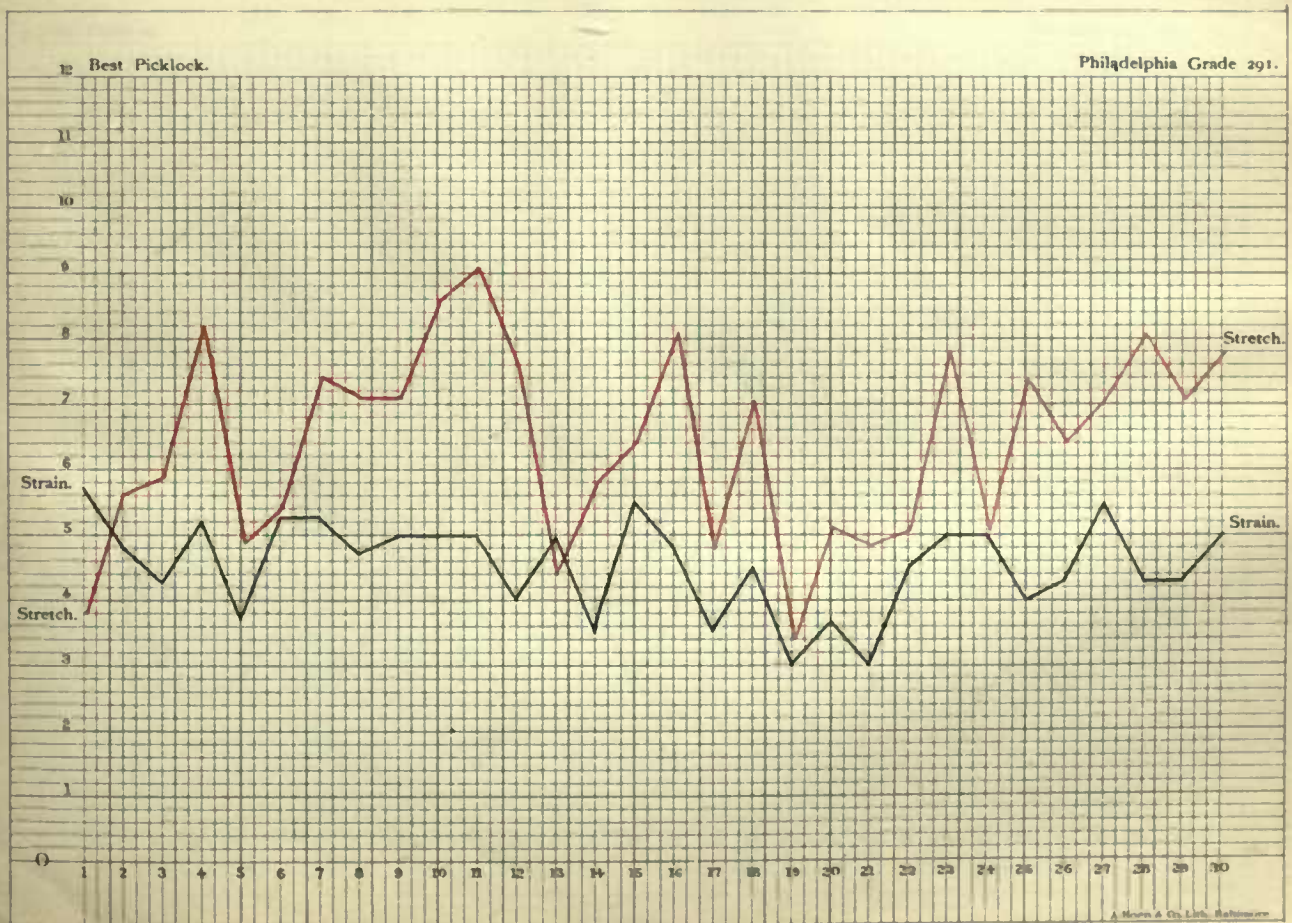
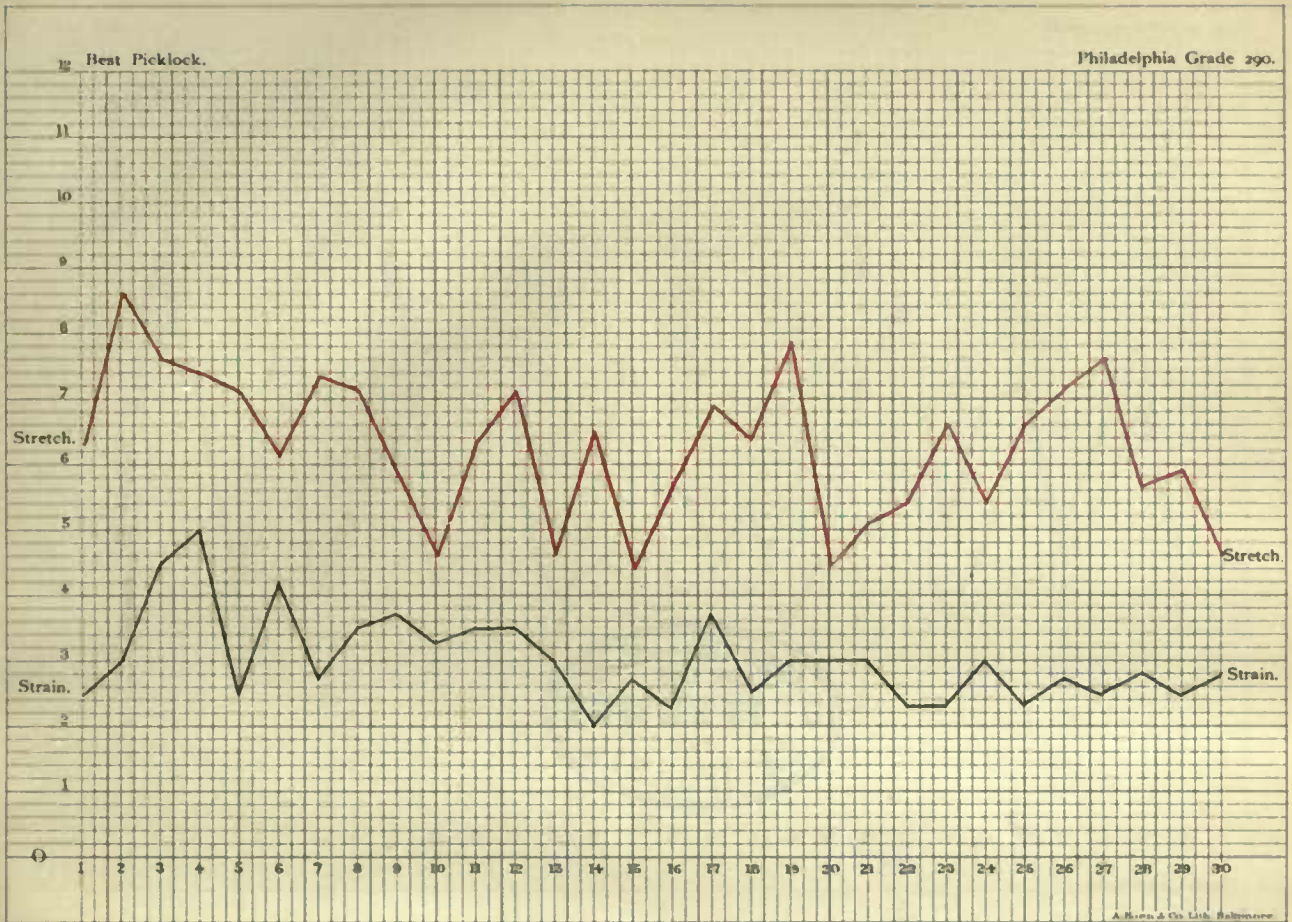


A. Brown & Co. Lith. Baltimore





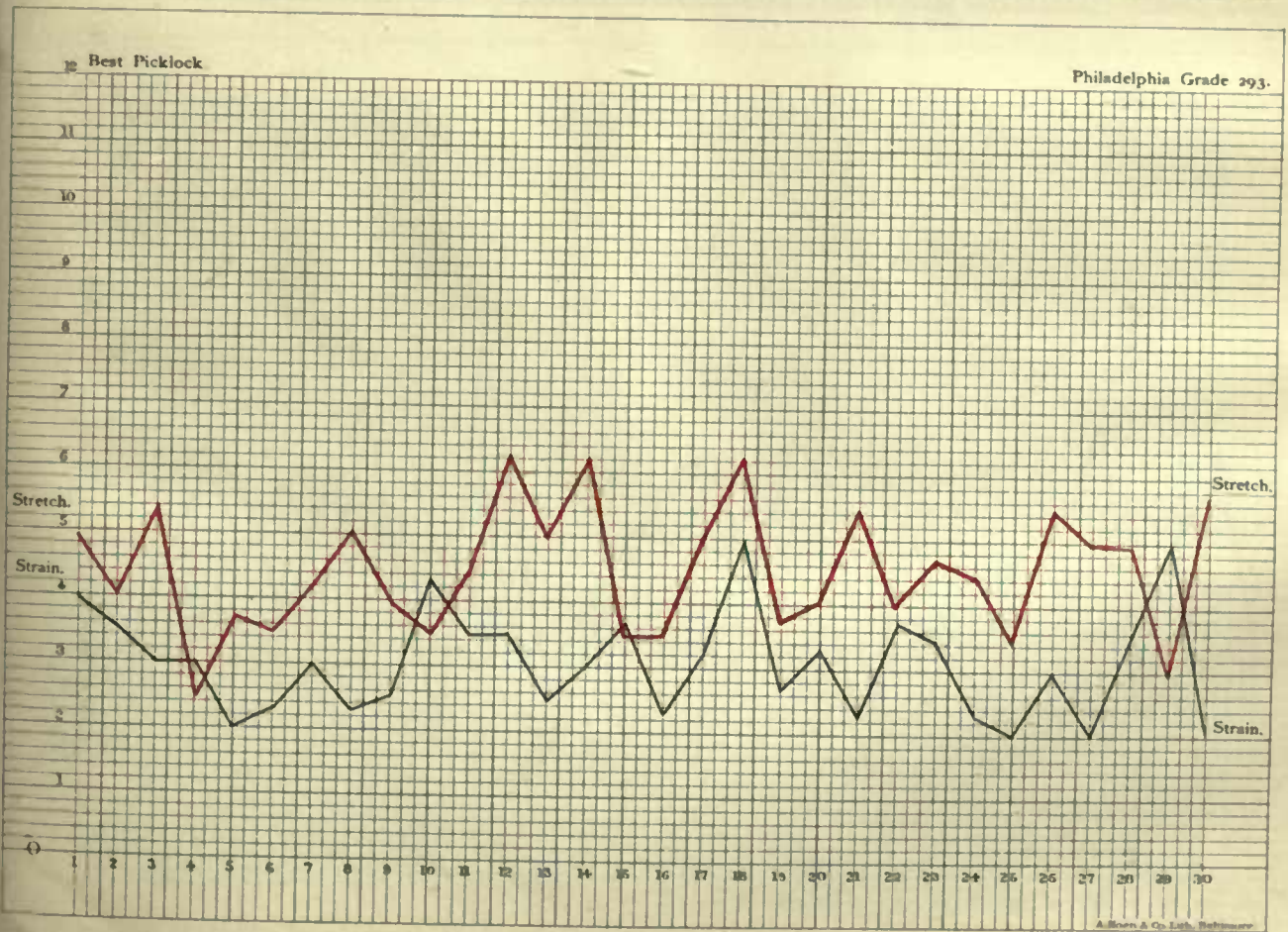
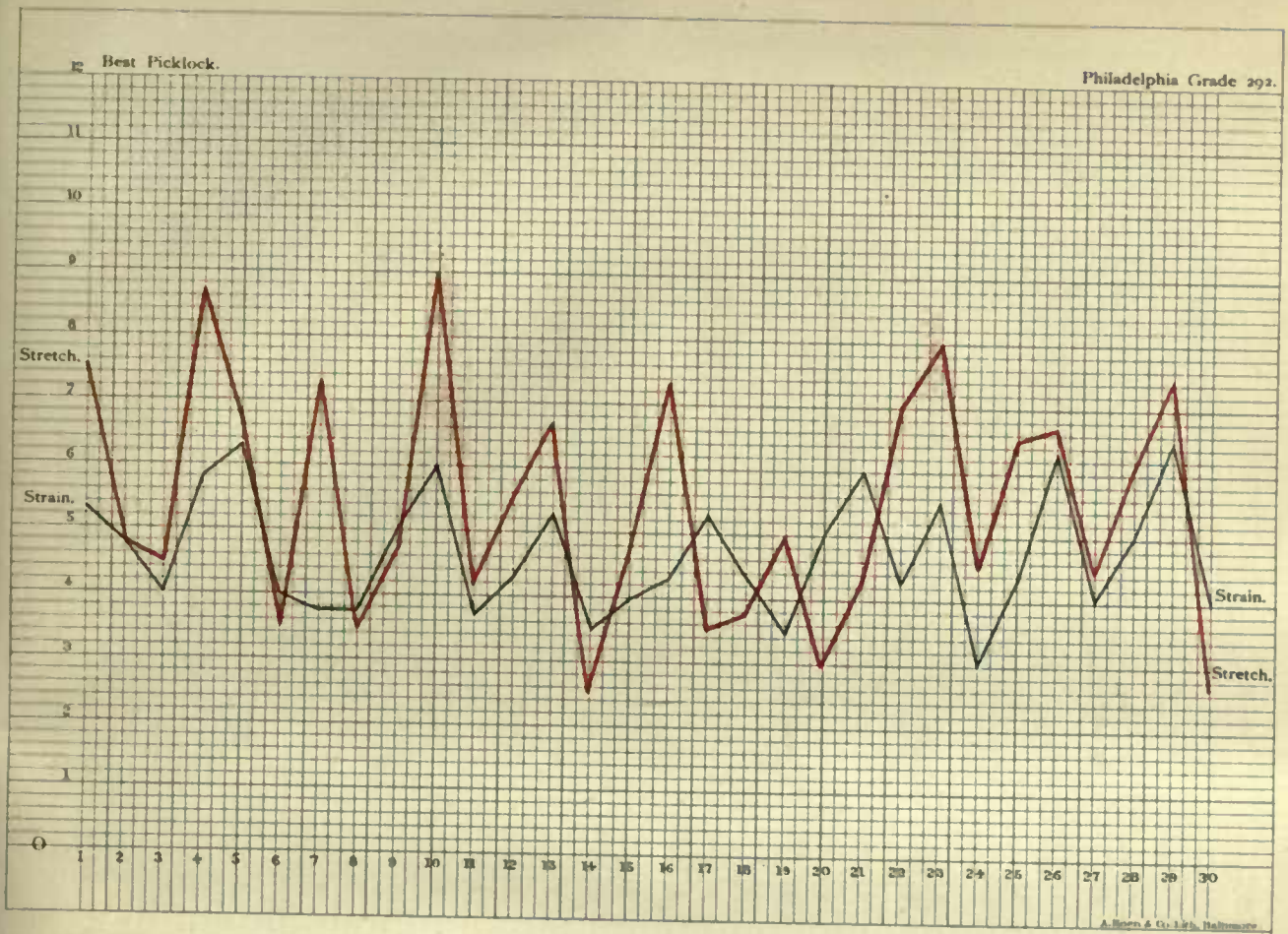








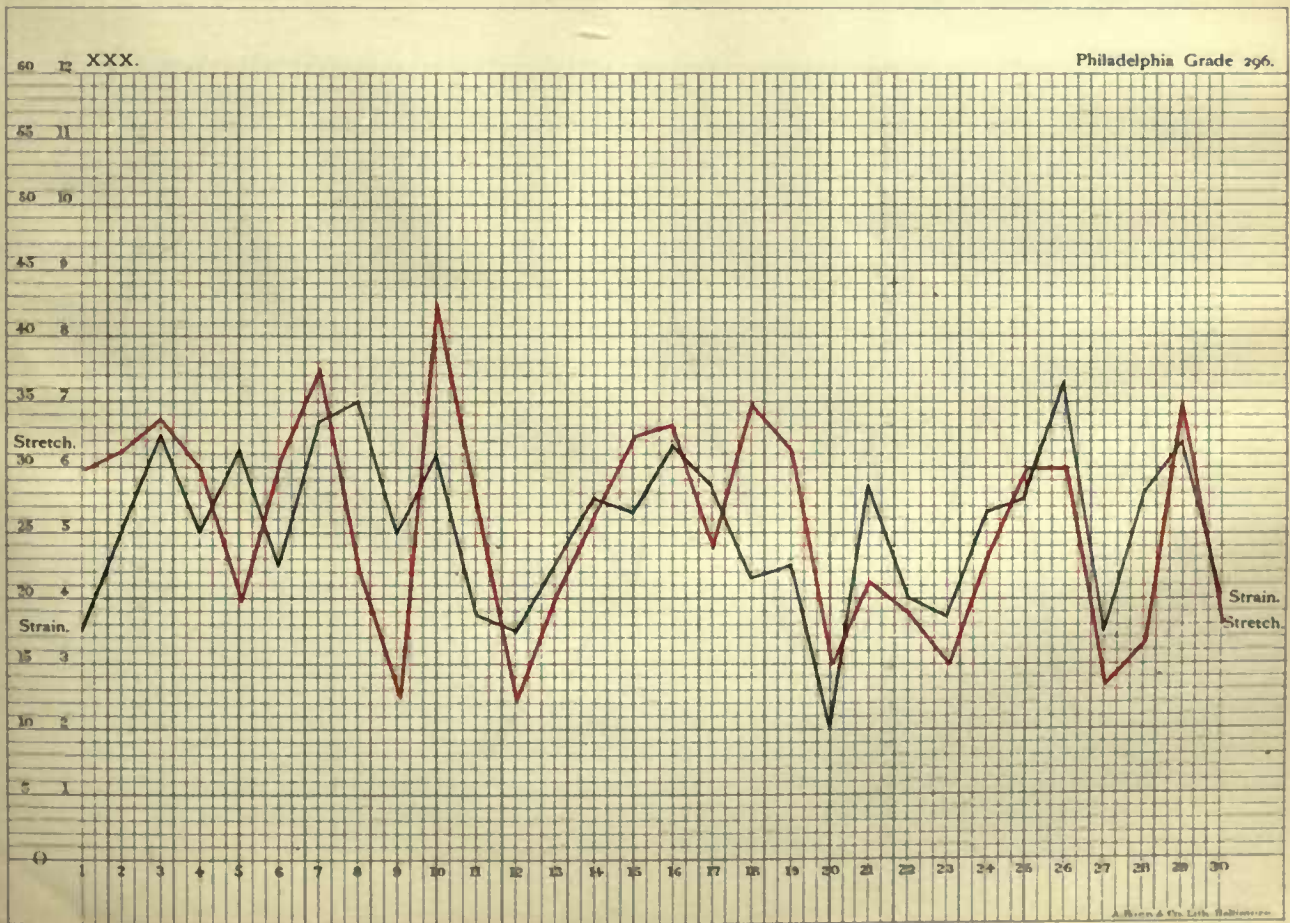
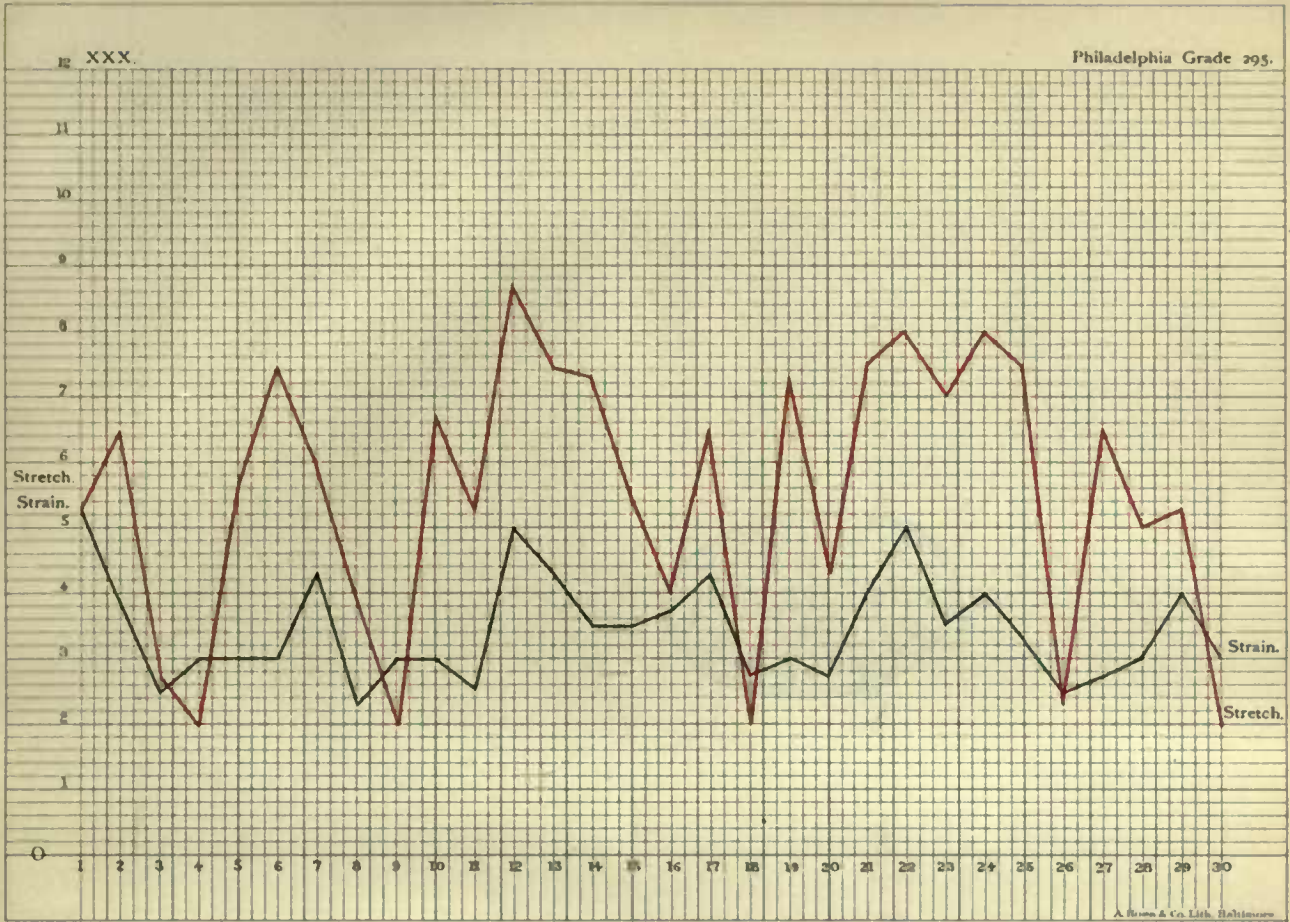




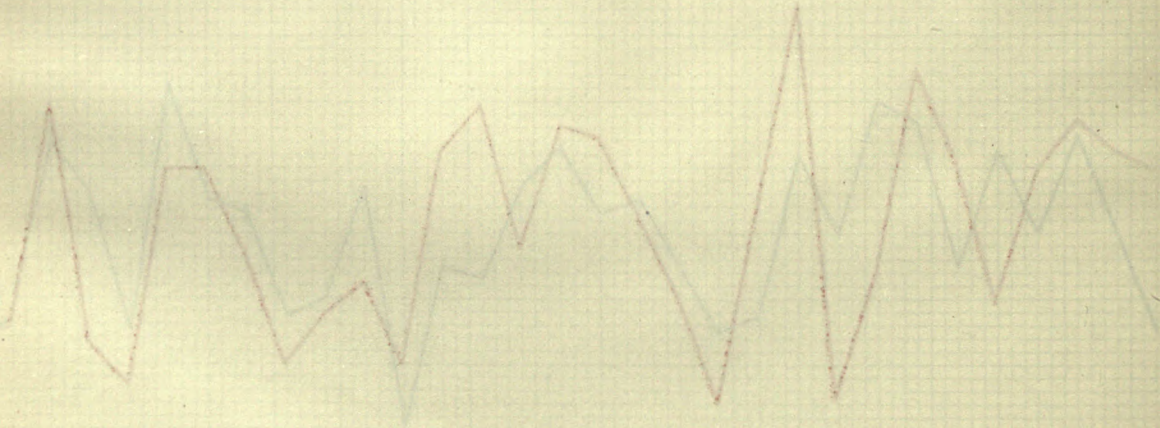








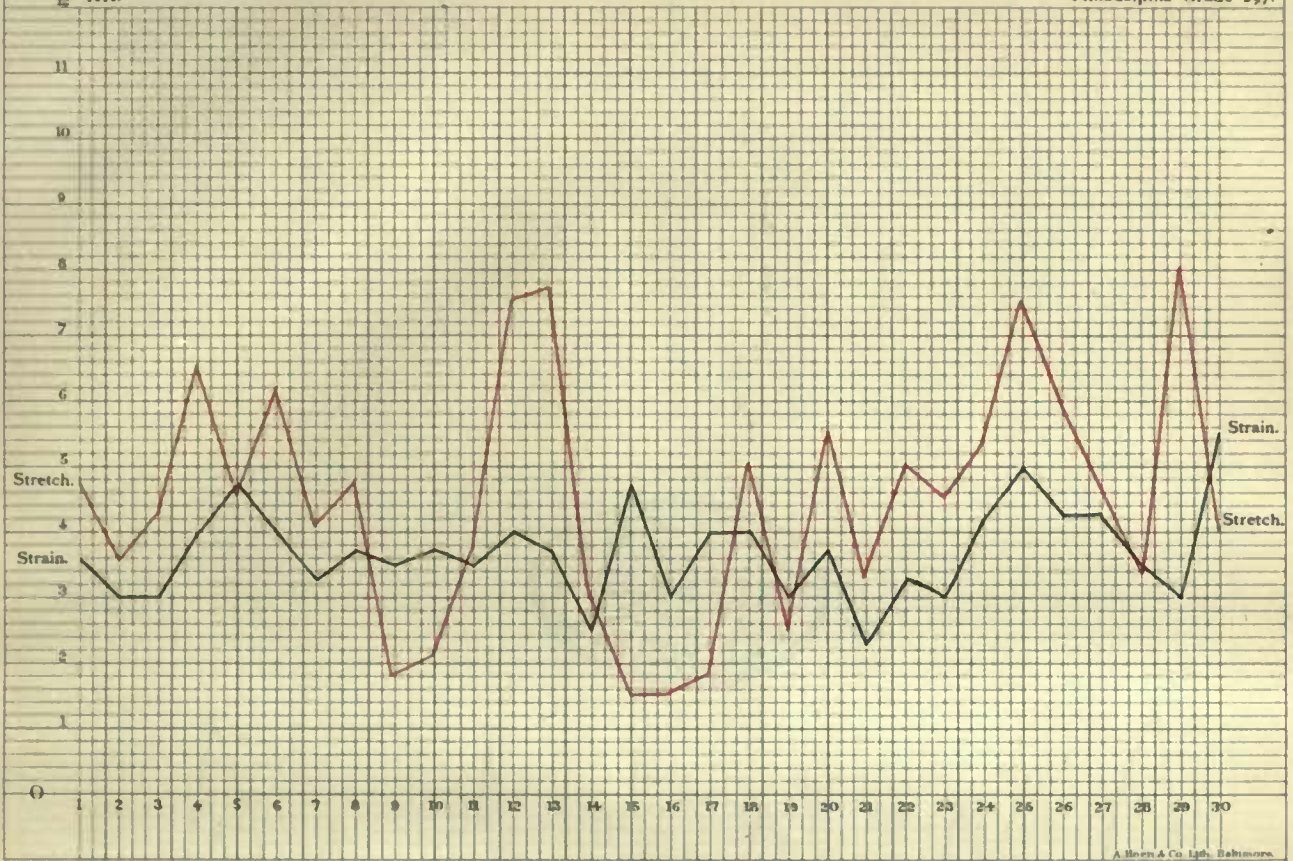






XX.

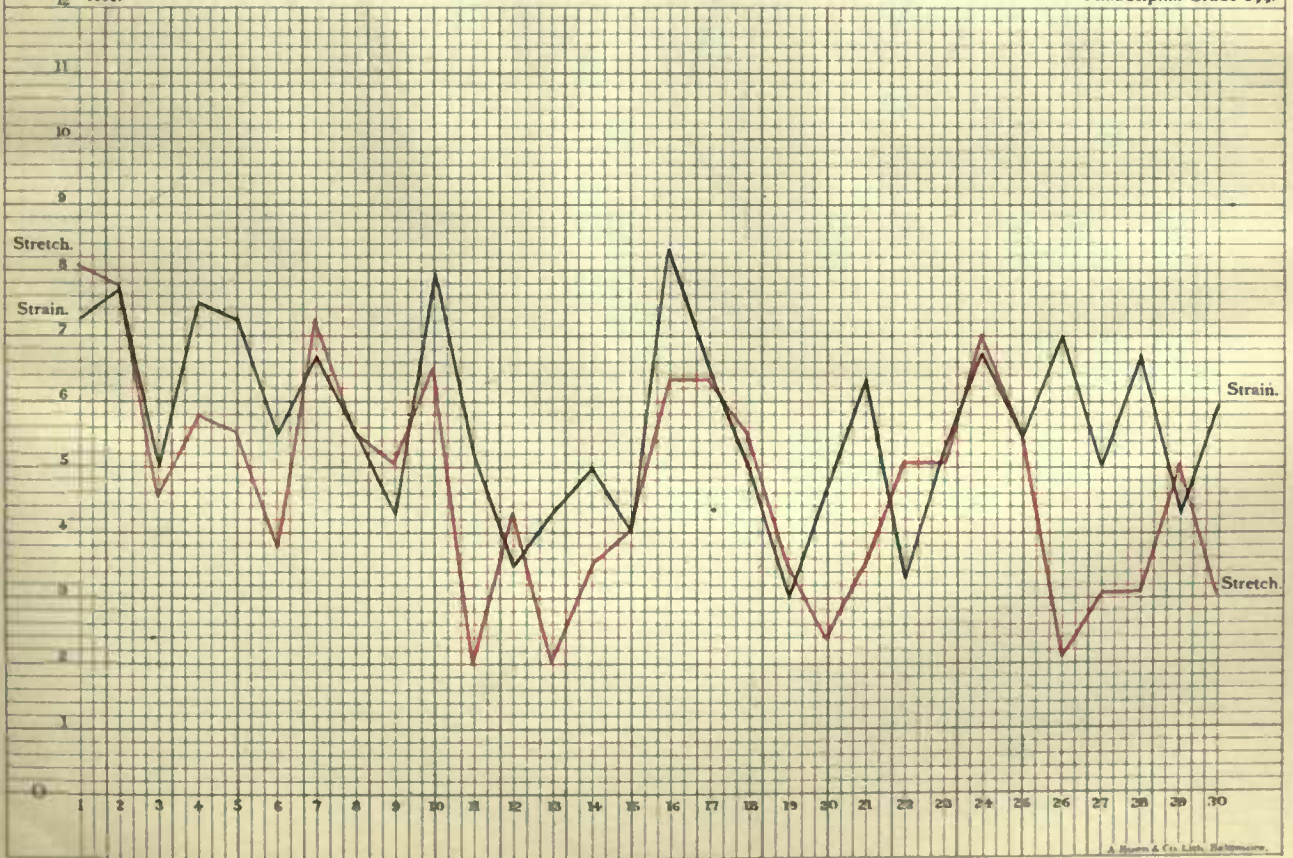
Philadelphia Grade 297.



A. Breen & Co. Lth. Baltimore.

XX.

Philadelphia Grade 299.



A. Breen & Co. Lth. Baltimore.

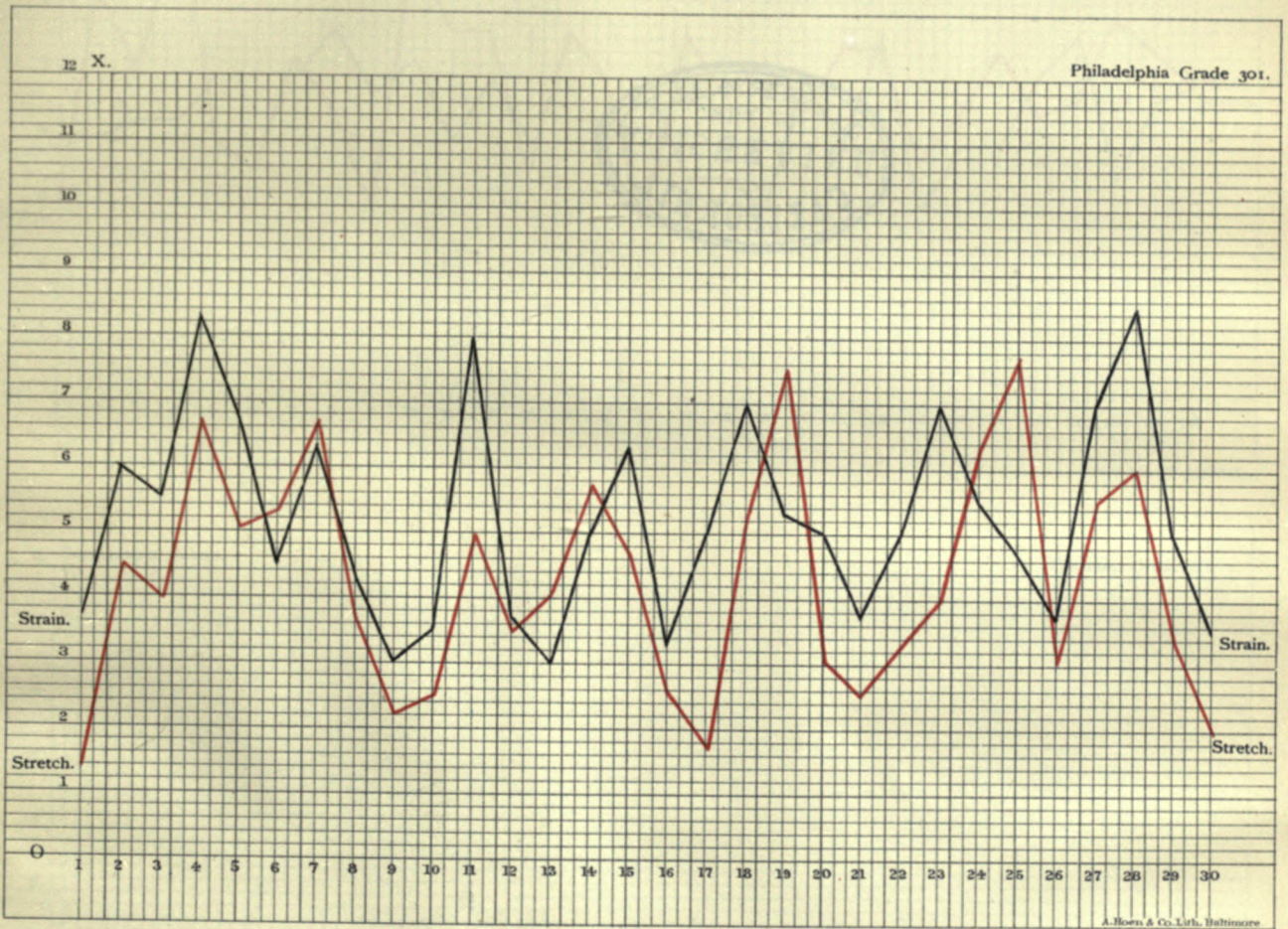




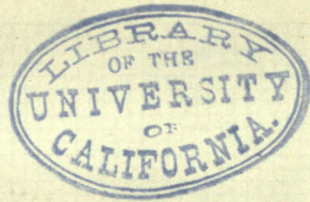


12 X.

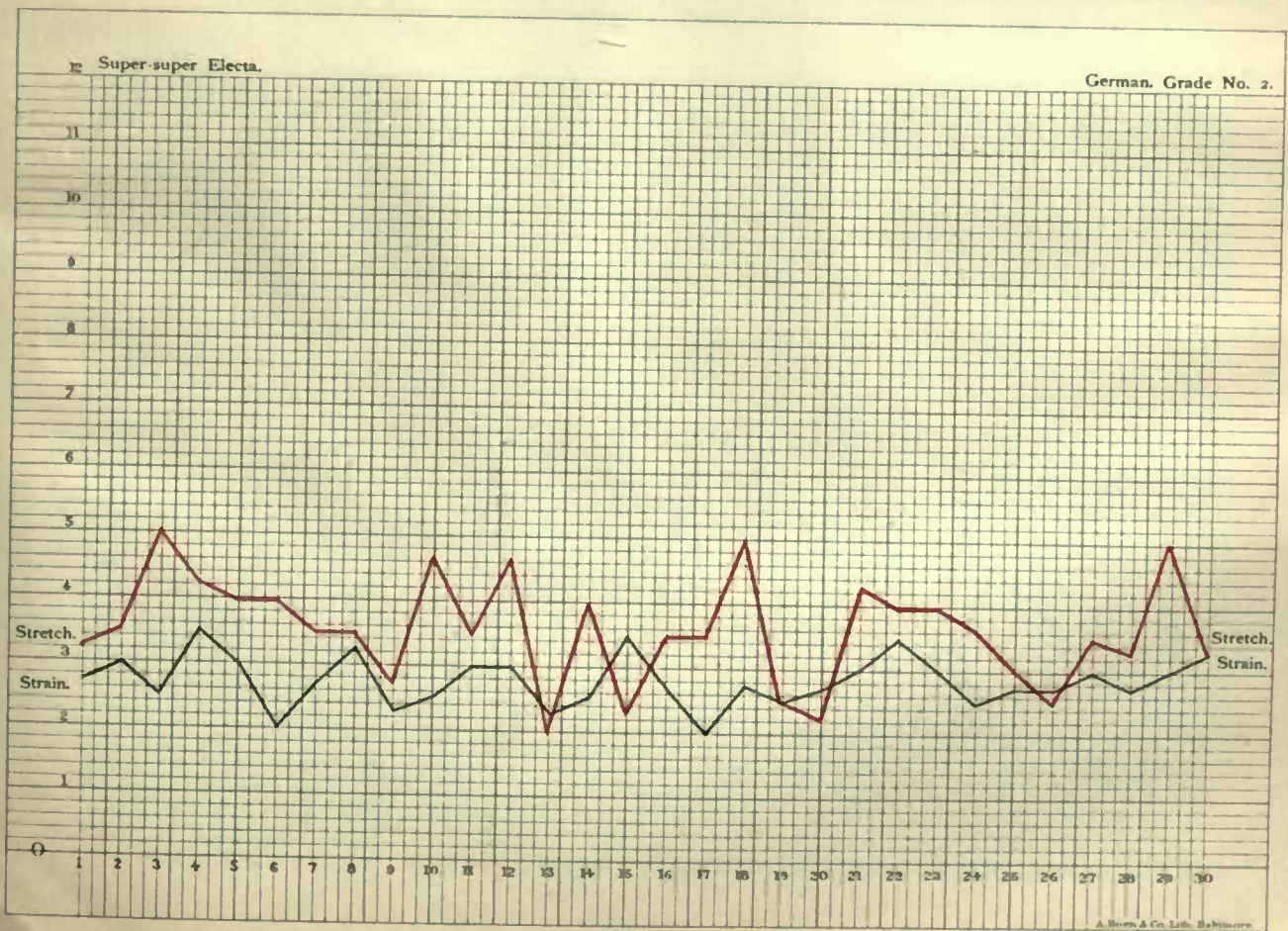
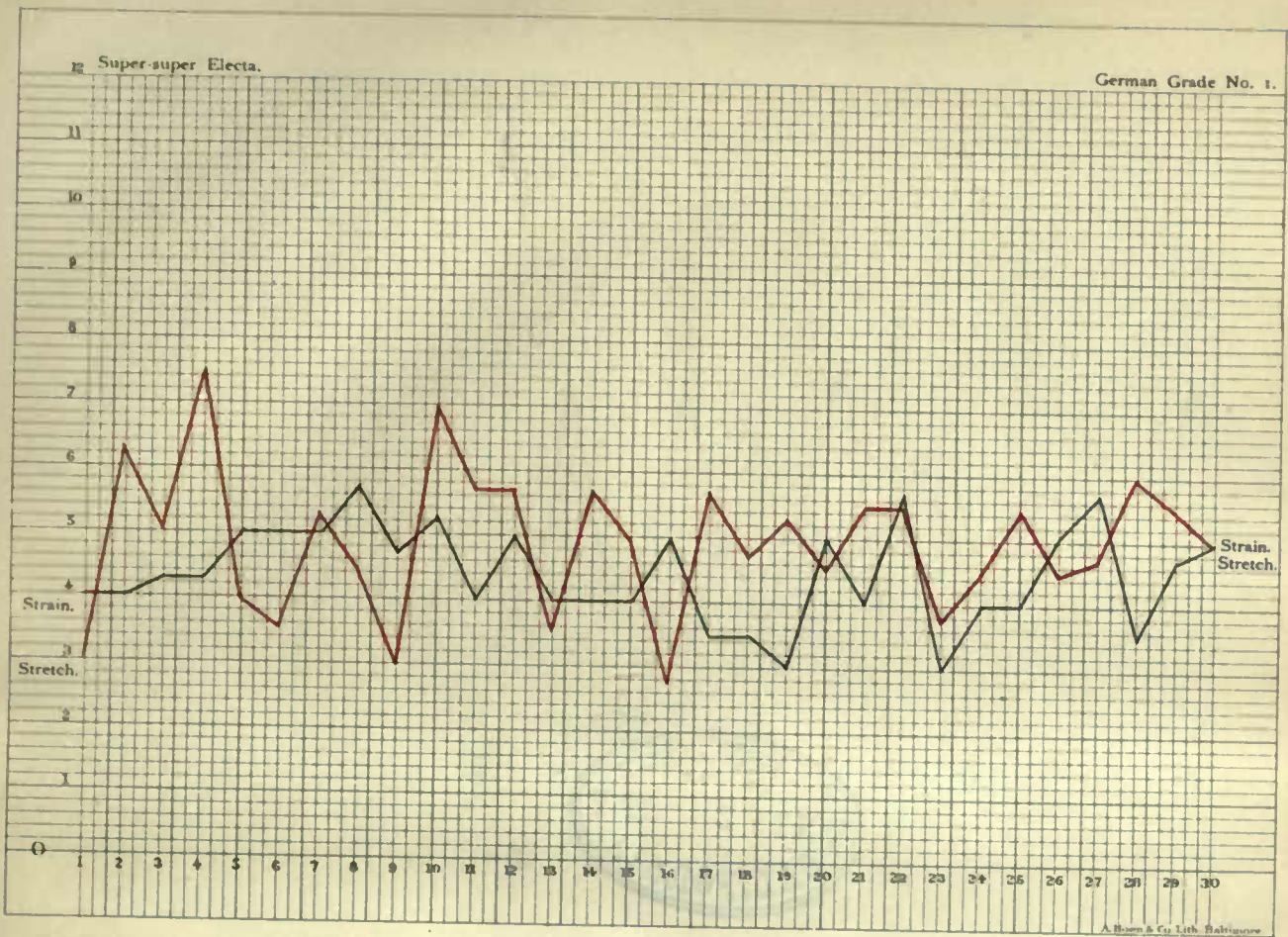
Philadelphia Grade 301.







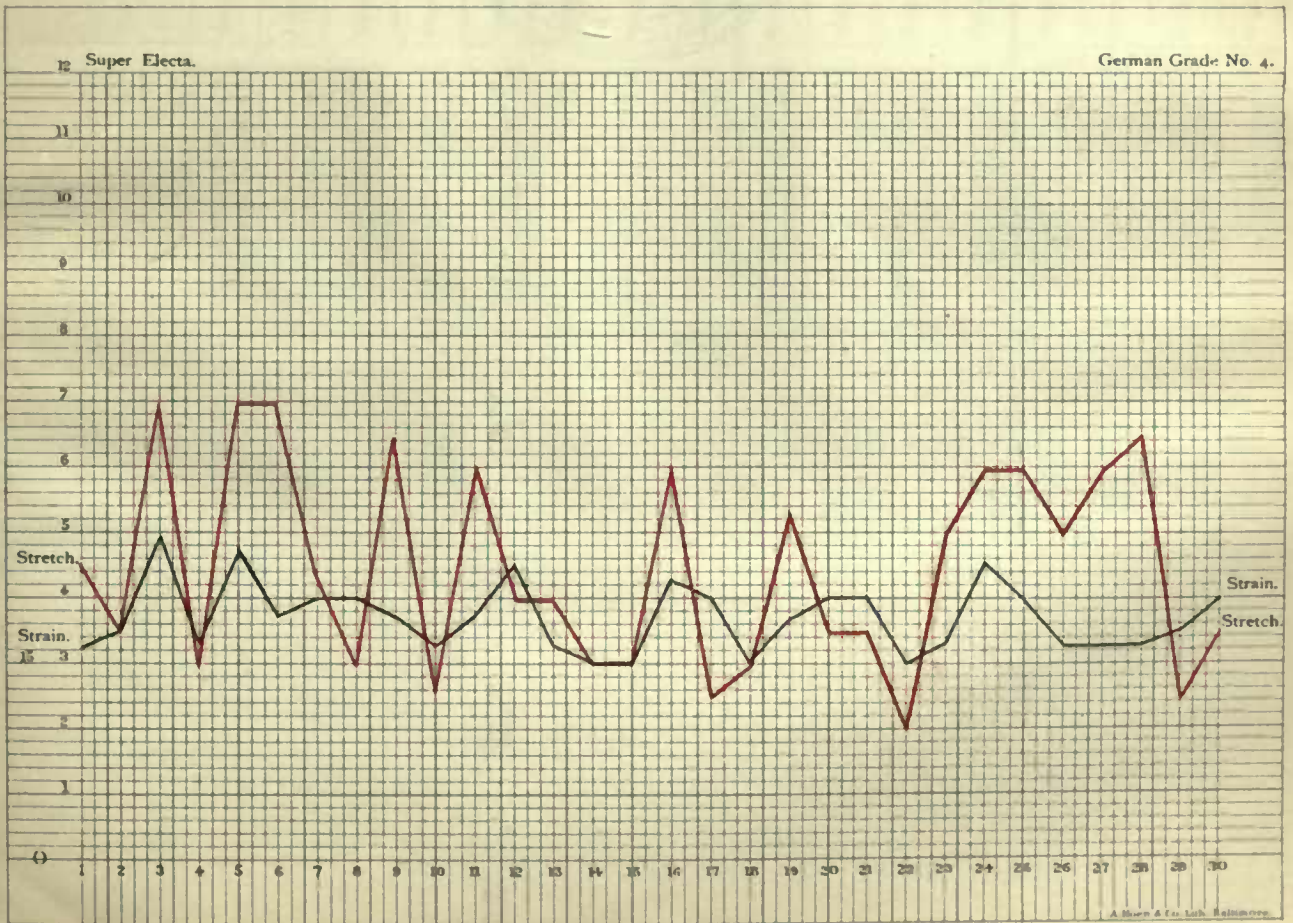
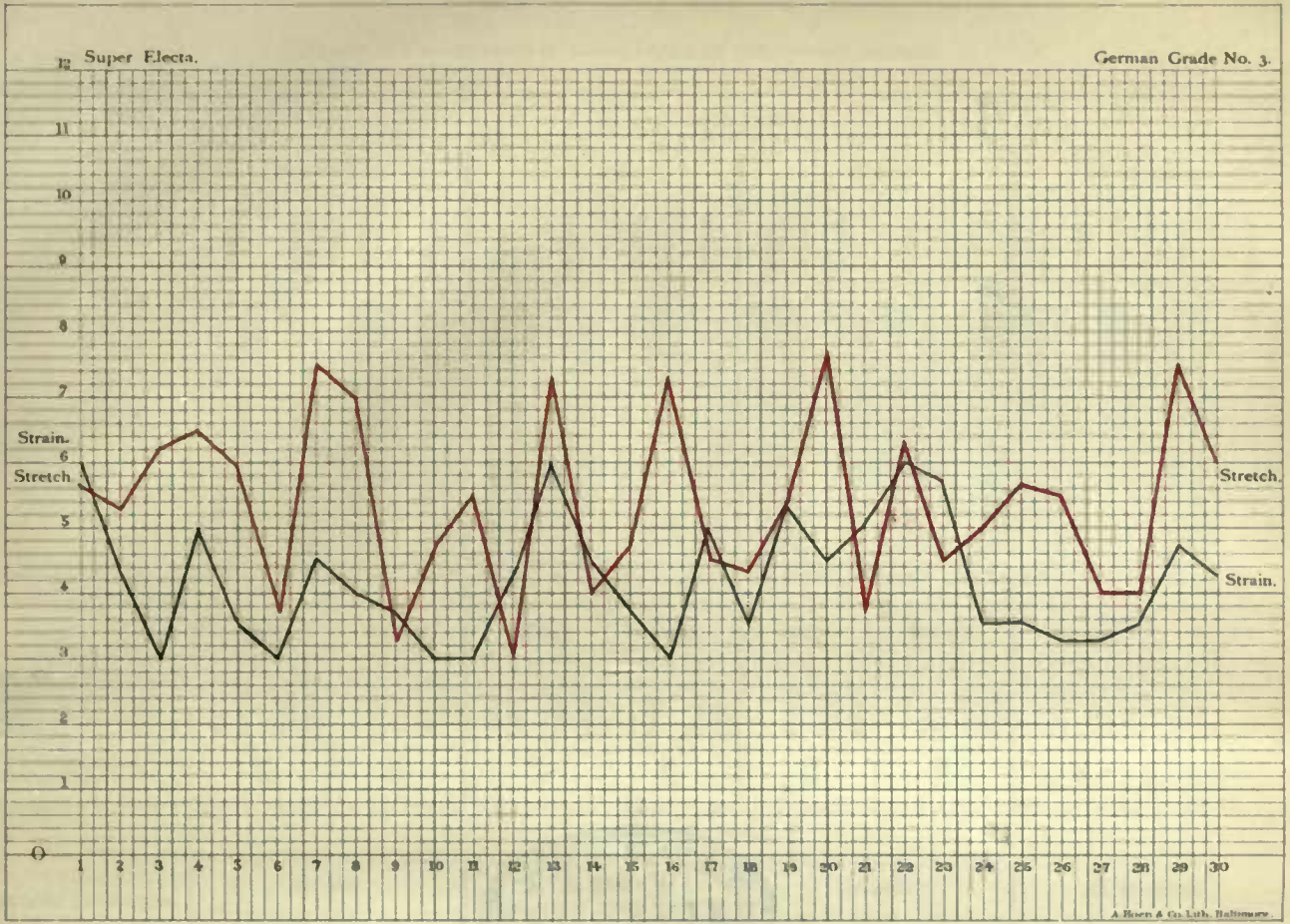














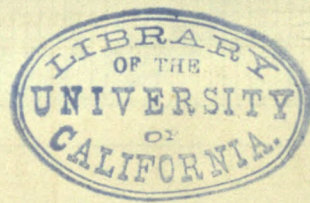




TABLE XV.—Results of actual tests of strain and stretch.

COTSWOLD.																
Catalogue number of samples..	34. SHOULDER.				34. SIDE.				34. HIP.				35. SHOULDER.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	26.00	6.50	28.50	6.50	42.50	7.00	33.00	2.25	31.00	6.00	41.50	8.25	32.50	5.75	27.50	7.25
	25.00	7.50	35.50	6.25	35.25	8.25	24.00	7.00	27.75	8.25	41.50	8.50	40.00	7.00	32.50	6.50
	30.00	6.00	41.00	7.50	30.25	6.25	37.00	6.50	37.50	8.00	27.50	5.25	36.50	6.25	26.50	7.25
	21.50	6.00	26.00	7.00	30.00	4.50	20.00	8.50	48.00	9.00	47.50	8.00	37.50	7.50	26.00	7.00
	20.50	8.00	28.00	6.50	32.00	7.50	27.75	9.00	27.00	7.00	34.50	7.00	25.75	7.00	25.00	8.00
	32.00	8.00	30.75	8.00	45.00	8.00	47.75	8.00	28.00	6.50	31.50	8.50	33.00	6.00	30.00	7.00
	26.00	6.50	27.50	7.50	39.75	6.50	31.75	4.00	42.50	8.50	39.75	7.00	21.00	6.50	35.63	8.00
	26.00	6.00	28.50	6.00	51.00	8.00	27.00	6.75	33.00	8.25	60.00	10.00	30.25	6.50	40.00	10.00
	28.00	7.50	21.00	5.50	30.25	2.50	46.00	8.00	48.00	8.00	35.00	7.00	28.75	7.00	30.25	8.50
	31.50	7.00	23.50	7.00	33.00	6.00	35.00	7.25	54.00	8.50	44.50	7.25	41.00	7.00	39.00	8.50
	27.50	7.00	24.00	4.00	35.50	7.00	25.75	2.00	37.50	8.25	47.50	7.25	34.00	6.50	26.50	7.75
	18.50	7.00	19.00	8.00	41.00	7.50	50.00	8.00	62.00	8.75	46.00	9.00	32.50	7.00	29.00	6.00
	17.25	2.00	20.00	5.50	37.50	5.75	25.00	1.50	54.75	9.50	35.00	10.00	55.75	9.00	35.00	8.50
	16.50	5.50	25.00	5.50	48.00	8.00	41.50	8.50	42.50	7.00	36.50	7.50	35.75	7.00	34.50	8.00
	24.50	6.00	25.00	6.00	45.00	7.00	28.25	1.25	47.50	9.50	44.00	8.25	37.50	7.00	30.00	7.75
Total .....	376.75	96.5	393.25	90.75	573.00	99.25	499.75	83.50	622.50	121.00	614.75	118.75	522.75	103.00	470.25	116.00
Recapitulation and reduction:																
Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Lowest .....	16.50	254.67	2.00	10.00	20.00	308.00	1.25	6.25	27.50	424.45	5.25	26.25	21.00	324.13	5.75	28.75
Average .....	25.60	306.95	6.44	32.2	35.75	551.79	6.09	30.45	41.24	636.52	7.00	39.85	33.40	515.52	7.30	36.50
Tests above average .....	18		17		13		20		10		19		15		11	
Tests below average .....	14		13		17		10		14		11		15		10	

COTSWOLD.																
Catalogue number of samples..	35. SIDE.				35. SIDE.*				35. HIP.				36. SHOULDER.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	49.00	8.50	37.00	9.00	47.00	16.00	31.75	15.00	50.00	8.00	42.00	7.50	18.50	8.00	16.00	4.50
	53.50	9.00	47.00	7.50	30.00	11.00	44.50	17.00	30.50	9.00	35.00	6.00	22.50	6.50	29.00	6.25
	57.00	8.50	45.75	9.50	43.00	6.50	38.00	15.75	50.75	9.00	45.50	7.50	25.50	7.00	17.25	6.50
	33.50	8.00	36.00	7.50	35.00	12.50	25.50	10.00	35.00	7.00	47.50	8.25	28.75	7.75	15.50	7.00
	52.75	8.50	24.00	9.00	46.00	12.00	52.50	14.50	48.00	8.00	37.00	7.25	26.50	7.50	23.50	7.00
	49.75	7.50	33.00	9.00	20.00	3.00	43.75	14.25	51.00	8.50	34.00	3.00	26.00	7.50	29.50	8.50
	50.00	8.00	37.00	5.25	27.00	4.00	22.50	13.25	48.50	7.00	47.00	8.50	30.00	7.50	19.00	8.50
	38.00	8.50	40.50	9.00	35.00	15.00	42.00	17.25	64.00	9.00	46.00	7.50	25.75	6.25	23.50	6.25
	31.00	9.00	50.00	8.50	45.25	14.50	46.00	15.25	46.75	8.50	52.00	8.50	23.00	6.50	30.50	7.00
	53.00	9.00	36.00	8.00	34.00	14.00	48.75	16.00	51.00	7.00	46.00	9.00	27.50	6.50	21.25	4.50
	34.00	2.00	33.00	4.50	52.00	14.75	31.00	16.50	39.00	8.25	41.00	7.00	31.00	7.00	27.50	6.00
	35.00	7.00	27.00	8.00	42.75	16.00	19.00	6.00	30.75	8.50	53.50	9.25	26.00	5.50	24.50	5.50
	39.75	6.00	23.00	6.50	36.00	14.75	30.00	12.75	40.00	5.25	43.00	7.75	21.00	1.50	22.00	6.00
	61.00	8.00	23.00	8.00	31.00	16.50	31.00	12.75	38.00	8.25	61.00	9.00	27.50	6.50	25.50	6.00
	35.75	8.00	25.00	1.50	34.50	15.50	27.00	12.75	43.50	9.50	55.00	7.50	27.50	6.75	19.00	8.50
Total .....	686.00	116.50	517.25	110.75	571.50	187.00	536.25	210.50	672.75	120.75	601.00	113.5	387.00	92.25	343.50	88.00
Recapitulation and reduction:																
Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Lowest .....	23.00	354.99	1.50	7.50	10.00	293.26	3.00	7.50	30.50	470.76	8.00	15.00	15.50	239.24	1.50	7.50
Average .....	49.10	618.93	7.87	37.85	36.92	509.85	12.25	33.12	45.45	701.5	7.80	39.00	24.85	375.83	6.01	30.85
Tests above average .....	10		20		12		20		17		17		17		18	
Tests below average .....	20		10		18		9		13		13		13		12	

\* Length of fiber tested, 4 centimeters.



TABLE XV.—Results of actual tests of strain and stretch—Continued.

Catalogue number of samples.		COTSWOLD.															
		30. SIDE.				36. HIP.				37. SHOULDER.				37. SIDE.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	20.50	7.50	22.00	4.75	23.60	8.00	31.00	7.00	32.00	7.50	44.00	8.75	20.00	2.25	30.00	7.25	
	38.75	9.75	25.50	7.50	35.00	7.50	34.00	8.00	30.00	6.25	23.50	7.00	20.00	1.00	13.00	1.00	
	18.00	8.75	29.00	7.25	20.00	5.25	34.00	9.00	22.25	6.00	27.00	8.00	37.50	8.25	34.50	7.25	
	37.00	9.00	18.00	3.00	36.00	8.00	31.00	8.00	30.00	7.00	27.00	4.00	35.00	7.00	29.00	7.25	
	31.00	7.75	29.75	7.00	32.00	8.00	24.25	5.50	28.00	4.00	32.75	6.50	15.50	1.00	36.50	7.50	
	25.00	9.50	34.00	10.75	24.00	6.00	31.00	7.75	15.50	4.00	38.00	8.00	15.00	1.00	32.00	8.00	
	20.50	7.50	24.75	5.00	27.50	7.00	19.75	4.75	48.00	8.75	43.50	8.25	23.00	1.25	23.75	7.00	
	13.00	5.00	15.00	1.50	31.00	8.25	30.00	7.00	32.75	6.50	40.00	7.25	19.75	1.50	27.00	6.25	
	17.00	2.50	25.50	7.00	22.50	2.0	30.00	7.75	42.50	8.00	29.00	6.00	33.75	8.00	23.00	6.50	
	12.50	1.50	25.00	9.50	24.50	6.50	35.00	9.00	27.25	6.00	51.00	8.50	24.00	1.50	31.00	7.25	
	35.00	8.50	21.75	2.25	34.00	6.50	25.00	4.75	31.00	5.75	22.00	4.50	29.25	3.25	34.00	9.00	
	30.75	8.50	17.50	1.50	23.0	7.25	22.50	6.00	36.50	6.50	21.00	5.75	29.00	6.60	22.00	2.50	
	15.50	2.00	19.50	2.25	30.50	8.00	23.00	7.00	25.00	6.25	41.00	7.50	24.75	5.75	30.00	6.50	
	23.75	4.25	9.50	1.25	26.00	6.50	32.00	7.00	30.00	6.50	25.00	6.00	11.00	1.00	32.00	8.50	
	23.25	8.25	31.00	7.75	39.00	9.00	31.00	8.00	33.50	7.50	37.00	7.50	10.00	1.00	25.50	4.50	
	Total .....	360.5	90.75	347.75	78.25	433.5	108.75	442.5	116.50	464.25	96.5	501.75	103.5	353.50	50.25	437.25	92.25
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest.....		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Lowest.....		38.75	598.09	10.25	53.75	39.00	601.95	9.00	45.00	51.00	737.16	8.75	43.75	33.00	536.52	9.00	45.00
Average.....		9.50	146.63	1.25	6.25	19.75	304.83	2.00	10.00	15.50	239.24	4.00	20.00	11.00	169.73	1.00	5.00
Tests above average.....		16		17		17		12		13		14		17		16	
Tests below average.....		14		13		13		17		17		16		13		14	

Catalogue number of samples.		COTSWOLD.															
		37. HIP.				38. SHOULDER.				38. SIDE.				38. HIP.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	33.50	8.00	31.50	3.50	23.50	6.50	33.50	8.00	42.00	9.75	32.00	4.00	37.50	8.00	53.00	9.00	
	33.75	8.00	32.5	9.50	30.00	8.00	25.00	5.50	44.75	9.00	27.00	7.00	48.00	9.00	42.00	9.00	
	33.25	7.50	27.00	8.00	18.00	5.00	17.00	5.00	44.25	8.50	46.00	8.50	41.00	8.00	60.00	10.00	
	33.00	8.75	32.00	7.50	30.00	8.50	23.50	8.50	43.00	9.00	35.50	8.25	54.50	8.50	56.50	9.50	
	36.00	9.00	40.00	9.00	33.50	6.50	29.50	7.00	31.50	10.00	33.00	6.50	41.00	8.50	33.00	3.00	
	40.00	8.25	39.00	8.75	37.00	8.0	27.00	5.75	28.00	8.50	31.00	8.00	59.00	9.50	57.50	9.00	
	23.50	6.50	39.00	7.00	20.00	5.75	35.00	6.50	40.00	8.00	20.00	7.50	44.00	3.50	40.00	9.00	
	23.00	0.50	25.00	1.00	20.50	6.50	30.00	6.50	32.00	4.00	47.25	9.00	56.00	0.25	55.00	9.00	
	20.50	6.50	20.00	3.00	23.00	6.50	40.50	7.50	52.50	7.50	26.00	5.50	41.50	8.00	43.00	8.75	
	33.75	7.00	32.00	7.00	42.75	7.00	20.00	5.00	46.00	8.25	24.00	6.50	41.50	8.50	47.50	8.75	
	33.00	8.00	26.00	2.50	37.25	8.50	25.00	7.00	44.00	8.50	41.00	8.75	46.00	7.75	52.50	7.00	
	34.00	7.25	23.00	7.00	39.00	8.25	20.00	7.00	45.00	9.00	46.00	9.50	67.50	10.00	40.00	8.50	
	33.00	7.00	30.00	9.00	47.00	8.75	32.00	6.50	42.00	9.00	39.25	8.00	50.00	9.00	20.00	7.00	
	26.00	8.00	18.00	4.00	35.75	6.25	27.50	7.50	32.75	9.00	23.50	6.25	50.00	8.50	45.00	9.50	
	25.00	1.50	24.00	1.00	26.00	6.00	25.00	7.00	25.00	7.00	26.75	6.50	47.50	0.00	52.00	9.00	
	Total .....	483.75	101.75	430.00	88.25	471.25	105.00	427.50	100.25	584.75	110.00	503.25	109.75	715.00	125.00	708.00	120.00
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest.....		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Lowest.....		40.00	617.38	9.50	47.50	47.00	723.43	8.75	43.75	62.50	810.32	10.00	50.00	60.00	732.06	10.00	50.00
Average.....		18.00	277.82	0.50	2.50	16.00	245.95	5.00	25.0	20.00	308.60	4.00	20.00	20.00	925.03	3.00	15.00
Tests above average.....		16		22		15		15		16		18		10		22	
Tests below average.....		14		8		15		15		14		12		14		8	



TABLE XV.—Result of actual tests of strain and stretch—Continued.

COTSWOLD.																
Catalogue number of samples..	39. SHOULDER.				39. SIDE.*				39. SIDE.				39. HIP.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	33.25	6.50	31.60	6.75	41.00	7.00	47.00	8.50	36.00	12.50	39.75	14.75	33.00	7.75	40.50	9.00
	46.50	8.00	33.00	7.25	29.50	8.25	46.00	8.25	34.00	15.50	38.00	11.60	31.00	8.00	39.00	8.50
	40.50	7.25	45.25	8.00	40.00	8.25	41.00	8.25	41.25	15.25	22.00	13.50	26.50	6.75	36.00	9.00
	41.00	8.00	38.50	6.50	43.00	8.25	35.00	6.25	39.75	15.00	28.00	16.00	37.00	8.00	27.50	8.00
	44.00	7.50	36.50	6.50	31.00	7.60	44.00	8.50	36.50	14.50	17.00	7.00	32.50	9.00	62.00	8.50
	19.00	6.50	26.00	7.00	42.00	6.50	41.75	9.00	36.75	16.00	48.00	14.75	28.00	8.00	34.75	8.50
	38.00	6.25	39.00	7.50	30.25	6.00	45.75	8.50	34.00	12.00	38.00	15.00	23.60	8.00	24.50	8.00
	44.00	7.50	30.50	6.25	34.75	9.00	57.00	9.00	43.25	14.50	40.00	14.75	31.50	8.00	35.00	7.60
	30.00	6.00	32.50	6.75	41.00	8.00	33.00	6.50	38.00	14.25	26.00	15.25	38.00	8.75	27.60	7.00
	47.75	6.50	37.00	8.50	46.00	9.00	37.00	8.00	34.00	15.25	35.50	14.00	30.00	8.00	38.00	8.00
	30.25	6.00	16.75	5.25	35.50	7.00	48.00	8.25	30.00	15.00	43.00	15.25	33.00	8.75	28.00	6.00
	30.00	6.25	32.25	6.25	39.75	8.00	25.50	9.25	42.75	13.50	42.00	14.25	32.50	8.00	38.50	9.00
	40.75	8.00	36.00	6.75	40.00	9.25	31.00	6.00	35.00	12.00	36.75	14.75	38.00	8.75	28.50	9.00
	16.00	6.25	31.50	7.00	37.50	7.75	32.50	9.00	35.00	14.75	30.00	16.50	31.00	7.75	40.00	9.00
	32.50	5.75	30.00	6.50	40.00	7.50	47.75	7.50	38.75	15.00	39.00	15.00	34.00	9.00	38.50	8.75
	Total .....	531.50	102.25	495.25	102.75	576.25	115.25	612.25	110.75	650.00	216.00	523.00	212.25	479.50	122.50	502.25
Recapitulation and reduction:																
Highest .....	47.75	737.00	8.50	42.50	57.00	879.77	9.50	47.50	48.00	740.86	18.50	41.25	40.50	505.02	9.00	45.00
Lowest .....	16.00	246.95	6.25	26.25	25.50	393.58	8.25	18.25	17.00	262.39	7.00	17.5	23.50	625.10	6.00	30.00
Average .....	34.32	520.72	6.83	34.18	33.61	611.36	7.83	39.15	36.08	656.57	14.27	35.67	32.72	302.71	8.20	41.00
Tests above average .....	14		12		18		19		17		20		15		14	
Tests below average .....	18		18		12		11		13		10		15		10	

COTSWOLD.																
Catalogue number of samples..	170.				171.				172.				173.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	36.00	17.00	27.00	9.50	12.00	8.25	28.25	8.00	30.00	10.75	12.00	65.0	41.00	8.50	31.75	9.50
	33.50	9.00	27.00	12.00	23.50	7.00	14.50	1.50	10.50	1.00	14.25	6.50	24.25	2.00	13.00	4.00
	28.00	7.00	33.50	9.00	17.50	7.75	16.50	8.25	20.00	7.25	9.00	6.50	33.00	6.00	27.00	9.25
	40.75	9.00	43.50	10.50	12.00	1.00	22.50	8.25	13.00	6.25	25.60	7.75	31.00	9.00	27.00	7.00
	32.50	9.25	37.50	18.75	14.50	7.00	15.00	7.75	13.00	8.75	13.00	7.00	22.50	3.50	33.00	7.75
	22.50	8.75	37.00	8.50	16.75	7.25	26.50	8.25	21.75	7.00	16.50	7.75	24.75	5.00	36.50	7.75
	38.50	17.75	12.60	8.50	20.50	7.00	17.75	8.00	16.75	7.50	14.25	6.75	37.75	8.00	17.00	6.25
	12.50	7.75	32.50	9.75	28.75	8.25	19.00	9.00	19.00	7.25	11.50	5.00	15.00	1.26	19.00	1.75
	20.60	11.25	16.50	7.25	25.00	7.75	23.00	9.00	20.50	6.00	20.25	6.00	11.50	8.00	23.00	10.00
	28.50	18.00	36.00	8.00	29.50	7.25	18.75	4.00	20.75	6.75	19.60	8.00	27.75	7.75	39.25	9.00
	44.00	24.00	40.50	23.00	25.50	7.25	30.50	8.25	17.00	5.25	13.60	7.00	40.25	7.75	39.00	8.25
	26.00	7.75	24.60	8.00	20.00	7.00	17.25	8.00	11.00	5.00	23.50	8.25	25.00	6.50	32.50	6.75
	32.00	10.75	34.50	17.60	23.25	9.75	10.50	7.75	14.75	2.75	17.00	5.00	19.00	5.25	32.25	6.50
	32.50	8.50	25.60	9.25	18.25	8.25	24.75	7.75	12.25	3.00	13.00	7.00	34.60	8.00	25.50	7.75
	38.50	15.00	23.60	2.50	23.75	7.50	24.00	10.00	20.00	6.25	19.75	5.75	13.50	2.75	24.00	2.00
	Total .....	476.25	179.25	448.60	154.00	309.75	108.25	301.75	113.75	200.25	90.75	254.50	100.75	410.75	83.25	424.75
Recapitulation and reduction:																
Highest .....	44.00	679.12	24.00	120.00	30.50	479.78	10.00	50.00	30.00	463.04	10.75	53.75	44.00	679.12	10.00	50.00
Lowest .....	12.50	192.93	2.50	12.60	10.50	162.06	1.00	5.00	9.00	138.91	1.00	5.00	13.00	200.03	125.00	6.25
Average .....	30.83	473.85	11.11	55.55	20.38	314.56	7.40	37.00	17.16	264.86	6.38	31.00	27.85	429.85	6.30	31.80
Tests above average .....	13		9		15		20		14		17		14		19	
Tests below average .....	12		21		15		10		16		13		10		11	

\* Length of fiber tested, 4 centimeters.



TABLE XV.—Results of actual tests of strain and stretch—Continued.

Catalogue number of samples..		COTSWOLD.															
		174.				175.				176.				177.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	30.00	20.50	16.00	12.00	43.50	8.50	24.00	2.00	37.00	19.00	28.00	7.25	38.25	11.75	25.75	8.75	
	28.50	16.25	27.50	8.00	43.00	13.25	45.50	18.25	47.50	26.00	12.00	1.25	29.00	7.25	31.00	9.00	
	30.50	18.00	34.50	17.60	18.75	8.00	48.50	24.25	47.00	25.00	39.50	20.75	39.75	17.25	20.50	9.25	
	27.00	14.00	26.50	8.00	31.00	7.75	20.00	6.00	37.75	15.50	36.00	10.50	33.50	19.00	32.50	7.25	
	12.50	2.50	31.75	11.00	48.75	10.25	30.75	8.00	26.00	6.25	23.75	6.25	38.50	20.50	33.75	8.25	
	35.50	10.00	29.25	9.50	47.50	10.00	35.50	19.00	40.50	17.25	20.50	8.00	40.00	21.75	21.50	2.25	
	13.50	6.50	27.50	11.50	31.75	7.00	46.75	25.00	29.50	9.25	37.00	10.00	25.25	10.00	39.50	7.00	
	19.50	2.00	23.75	7.50	51.50	10.75	41.50	22.50	39.50	15.25	33.00	8.25	15.50	8.75	35.00	9.75	
	13.50	5.00	27.75	7.50	18.00	10.00	47.50	25.00	21.50	7.50	28.50	8.25	38.25	7.00	31.50	19.25	
	22.50	3.00	38.00	9.00	30.00	18.50	31.75	8.75	35.00	8.00	39.00	9.00	33.60	18.75	25.25	10.00	
	21.50	7.00	16.00	10.50	22.00	9.00	38.25	11.00	27.00	10.25	37.00	9.25	24.00	9.50	44.75	8.75	
	22.50	4.60	16.75	8.50	38.25	10.25	35.00	10.00	37.50	20.25	46.00	20.00	19.75	8.75	35.00	10.75	
	40.50	10.00	21.75	13.00	40.00	12.50	39.50	15.00	30.50	18.00	44.75	11.25	27.50	2.50	42.75	8.00	
	17.50	8.00	39.50	13.00	31.00	7.75	29.50	10.00	29.00	10.25	16.00	2.00	33.75	7.50	25.50	9.75	
Total .....	351.50	134.25	404.25	158.00	514.50	153.25	551.75	213.75	504.75	219.00	482.50	151.75	467.00	177.25	468.00	130.75	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Lowest .....		40.50	625.10	20.50	102.50	48.50	748.58	25.00	125.00	47.50	733.14	20.00	130.00	44.75	690.70	21.75	108.7
Average .....		12.50	192.93	2.00	10.00	16.00	240.95	2.00	10.00	12.00	185.22	1.25	6.25	15.60	239.24	2.25	11.2
Tests above average.....		16		13		14		10		17		12		16		8	
Tests below average.....		14		17		16		20		13		18		14		22	

Catalogue number of samples..		COTSWOLD.															
		178.				179.				180.				181.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	34.00	9.00	16.50	1.75	28.25	7.50	31.00	7.25	28.00	5.00	31.00	9.00	27.00	mm.	8.75	34.50	8.00
	37.50	8.75	20.00	6.00	24.25	7.00	16.25	2.75	31.50	8.00	27.00	6.75	29.75	7.50	27.00	1.50	
	27.75	8.75	39.00	8.25	38.50	8.25	20.00	2.75	26.75	8.00	33.25	7.75	32.00	8.25	37.00	8.50	
	27.50	7.00	18.50	8.75	28.00	2.50	21.50	6.75	33.25	7.75	26.25	6.25	41.00	8.50	39.50	7.00	
	27.25	4.00	28.25	4.00	35.00	8.00	23.25	3.75	22.25	3.50	21.00	6.75	33.75	8.00	40.00	9.50	
	20.25	8.25	27.50	8.50	18.00	6.25	25.00	7.75	24.50	7.25	44.00	8.25	24.50	3.50	38.00	6.75	
	39.00	7.75	20.50	8.50	24.50	6.00	28.00	7.50	25.50	7.25	29.25	6.25	49.60	9.00	32.75	7.25	
	20.25	2.00	30.00	9.25	33.00	7.25	23.75	3.75	27.75	7.75	41.00	9.00	33.00	6.25	45.00	10.00	
	24.00	6.75	35.00	7.75	28.75	7.75	27.00	7.00	31.00	8.00	41.25	8.75	40.50	7.50	42.00	9.00	
	32.00	2.50	20.50	2.25	33.00	8.25	32.00	8.00	29.75	7.25	20.00	7.25	33.75	10.00	42.75	8.50	
	12.00	1.50	45.50	10.50	32.00	7.00	27.00	8.25	31.75	7.25	38.00	8.25	35.00	9.50	24.50	2.50	
	22.00	7.75	30.25	7.25	29.50	7.75	32.00	8.75	38.00	8.75	26.75	6.25	48.75	8.25	42.00	9.00	
	29.00	7.00	22.00	6.50	18.50	5.60	21.00	8.25	31.50	8.00	38.00	8.75	31.00	1.25	11.00	2.00	
	36.75	8.25	22.50	6.75	37.00	7.75	13.75	3.00	40.00	8.75	34.00	8.00	22.50	2.00	27.50	9.25	
18.00	9.00	18.50	5.00	25.00	7.25	24.00	6.50	20.50	1.25	31.25	6.75	38.75	8.25	40.00	7.75		
Total .....	413.25	98.25	392.50	101.00	431.25	104.00	363.50	92.00	442.00	103.75	492.00	114.00	518.75	106.50	532.50	106.50	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Lowest .....		45.60	702.27	10.50	52.50	38.50	594.23	8.75	43.75	44.00	679.12	9.00	43.33	49.50	764.01	10.00	58.00
Average .....		12.00	185.22	1.50	7.60	13.75	212.23	2.50	12.50	21.00	324.13	1.25	6.25	11.00	169.78	1.25	6.25
Tests above average.....		15		20		14		20		14		16		15		22	
Tests below average.....		15		10		16		10		16		14		15		8	



TABLE XV.—Results of actual tests of strain and stretch—Continued.

Catalogue number of samples..		COTSWOLD.															
		182.				183.				184.				185.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
		12.00	1.00	30.00	8.25	25.00	0.25	36.75	9.00	28.50	6.25	36.00	7.00	26.75	6.00	25.75	4.75
		20.50	6.00	31.50	8.25	20.75	1.75	32.00	7.75	20.50	1.25	30.25	7.25	33.00	8.00	20.25	1.50
		30.50	8.25	36.25	7.00	34.00	7.00	26.75	8.50	36.00	7.75	18.75	1.50	27.75	7.00	20.00	0.25
		42.00	8.00	22.00	7.50	32.25	7.50	22.75	6.50	33.75	7.75	33.75	6.75	15.00	1.00	30.75	0.00
		40.50	7.50	36.25	8.50	34.75	7.75	34.75	8.50	21.00	1.00	30.00	5.25	24.50	3.00	20.00	6.50
		37.75	7.75	27.25	7.25	20.75	0.50	15.25	7.75	35.00	6.75	37.00	6.50	27.00	7.00	34.00	7.25
		32.25	7.25	39.00	5.00	20.25	7.75	18.50	8.50	27.75	7.00	36.75	6.75	25.75	5.25	21.00	1.25
		26.00	6.25	36.50	7.75	21.75	8.25	20.50	7.00	33.75	8.25	43.75	7.25	23.75	6.00	22.75	3.75
		33.00	8.00	30.00	8.75	24.75	0.75	26.25	7.75	27.00	8.00	25.50	5.25	34.00	6.25	19.25	1.00
		19.00	7.00	22.00	4.00	22.00	8.25	12.25	6.75	38.00	6.00	27.00	5.50	28.00	6.50	27.00	0.25
		30.75	8.00	21.00	6.75	21.25	8.25	21.00	8.25	31.00	4.00	36.75	7.25	20.25	1.00	20.00	1.50
		41.00	8.00	13.50	2.25	23.00	3.75	27.00	7.25	24.00	1.25	34.25	6.00	19.00	2.00	22.00	4.00
		20.50	1.25	29.00	7.25	18.25	1.25	15.00	7.75	22.25	6.72	25.00	2.50	38.25	6.25	27.00	6.75
		30.00	7.25	24.00	1.25	30.75	7.50	29.75	7.25	33.50	6.25	30.00	6.75	26.00	4.00	23.72	2.50
34.00	8.00	22.00	8.50	10.50	1.50	30.00	7.50	35.00	1.75	33.75	7.00	24.00	1.50	21.25	8.00		
Total .....	449.75	99.00	409.25	98.25	351.00	93.00	368.50	116.00	447.00	75.50	400.50	87.50	383.00	70.75	360.75	62.25	
		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:		grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Highest .....		42.00	648.25	8.75	43.75	36.75	567.23	9.75	48.75	43.00	66.60	8.25	41.25	34.00	524.78	8.00	40.00
Lowest .....		12.00	188.22	1.00	6.00	10.50	162.06	1.25	6.25	18.75	289.40	1.25	6.25	15.00	321.63	1.00	5.00
Average .....		23.63	441.89	6.68	32.90	24.08	371.66	6.97	34.85	31.25	482.33	5.43	27.13	24.70	382.62	4.43	22.15
Tests above average .....		17		22		13		23		17		20		15		16	
Tests below average .....		13		8		17		7		13		10		15		14	
Catalogue number of samples..		COTSWOLD.															
		186.				187.				188.				189.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
		30.75	7.00	36.75	7.25	28.75	8.00	25.00	7.50	19.75	6.75	6.00	0.50	25.00	2.00	38.75	7.75
		27.00	3.00	25.25	2.00	22.75	6.00	35.00	8.00	30.75	7.50	14.25	1.00	20.25	4.00	27.25	0.75
		32.00	6.75	41.75	8.25	19.50	1.25	20.50	2.00	8.00	0.50	0.75	0.25	26.50	2.00	35.25	3.00
		41.00	0.25	23.23	1.00	30.75	8.25	35.00	7.75	19.00	4.00	25.50	5.75	81.25	7.50	35.00	7.25
		17.75	1.00	25.50	8.00	34.60	8.00	27.00	1.25	11.00	0.75	10.00	3.00	33.00	7.00	36.25	7.75
		27.75	1.25	31.25	7.00	28.75	3.25	39.50	8.00	16.60	1.75	21.25	5.25	39.00	7.75	33.00	7.50
		30.00	6.00	18.00	7.25	35.00	7.75	30.00	6.00	14.25	0.75	10.00	8.00	42.00	7.00	41.00	7.75
		25.50	7.50	32.00	6.25	16.50	1.00	21.25	1.00	7.00	0.25	23.00	4.25	41.50	7.50	18.00	1.00
		33.75	3.00	30.50	5.25	27.75	8.50	16.25	3.75	10.00	0.50	15.00	1.00	39.75	7.25	29.00	5.75
		20.00	2.00	42.25	8.25	31.75	8.00	40.75	8.75	17.25	2.00	6.50	0.75	31.00	7.25	36.00	6.50
		23.75	1.00	20.00	7.50	21.00	1.25	27.00	3.25	10.00	0.75	17.75	0.75	32.00	0.50	24.00	1.25
		23.00	5.75	19.50	0.00	30.00	5.00	30.75	8.00	16.75	2.00	0.00	1.00	37.00	7.50	43.20	8.00
		35.00	6.00	32.50	7.75	24.25	5.00	22.50	1.00	9.00	0.25	8.25	0.50	33.00	6.00	13.75	6.00
		18.75	5.50	21.00	3.00	20.00	8.00	25.25	7.00	16.25	3.25	16.50	1.00	33.25	7.00	30.75	5.50
20.00	2.00	23.00	7.75	25.75	6.75	33.75	8.00	12.75	0.75	12.25	1.00	37.00	7.50	22.00	7.25		
Total .....	411.00	64.00	422.50	92.50	397.00	75.00	435.50	81.25	218.25	31.75	210.00	29.00	507.50	93.75	453.25	89.00	
		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:		grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Highest .....		42.25	652.11	8.25	41.25	40.75	628.90	8.75	43.75	30.75	470.61	7.50	37.50	43.25	667.35	8.00	40.00
Lowest .....		17.75	273.96	1.00	6.00	16.25	250.81	1.00	6.00	5.00	77.17	0.25	1.25	13.75	212.23	1.00	5.00
Average .....		27.78	428.77	6.22	26.10	27.75	428.31	5.21	26.05	14.58	225.04	2.08	16.15	32.03	404.37	6.09	30.45
Tests above average .....		14		20		14		15		16		9		16		20	
Tests below average .....		16		10		15		15		14		21		14		10	



TABLE XV.—Results of actual tests of strain and stretch—Continued.

Catalogue number of samples..	COTSWOLD.				LEICESTER.				LINCOLN.								
	190.				113.				59. SHOULDER.				59. SIDE.				
	Length of fiber tested.....				—				—				—				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
Actual measurement in grams and millimeters.	21.00	1.25	28.00	8.25	10.00	6.00	20.00	4.00	24.50	0.75	21.00	6.00	18.50	6.25	26.75	6.50	
	27.50	7.75	39.50	8.00	22.50	6.00	24.50	6.00	36.00	7.50	30.00	8.00	30.25	8.00	30.00	9.00	
	24.75	7.75	18.50	7.00	24.00	6.00	22.00	6.00	29.00	8.00	23.00	7.25	15.25	7.50	31.00	8.25	
	24.00	7.00	40.00	7.00	25.25	7.00	30.00	7.25	23.25	6.00	29.50	7.50	21.00	7.75	23.00	7.25	
	36.00	6.75	26.25	2.00	24.75	4.00	13.50	5.00	24.00	5.00	26.50	7.25	31.00	7.25	31.00	7.50	
	13.75	1.60	30.50	3.25	26.50	4.25	29.75	6.50	27.00	6.00	18.50	5.25	19.00	7.50	31.00	9.00	
	19.75	3.25	32.75	7.75	22.75	7.00	21.75	5.25	26.75	7.75	22.50	7.00	16.00	7.50	20.25	8.25	
	29.75	7.25	34.00	5.00	26.25	3.00	19.75	4.75	17.00	7.50	29.50	7.00	25.75	7.50	26.00	9.00	
	22.25	1.25	31.00	7.00	26.00	5.50	22.25	4.00	24.50	5.25	34.75	8.00	12.00	4.00	15.25	7.50	
	23.00	6.50	36.75	7.50	21.00	6.75	29.00	7.00	23.75	7.75	24.00	7.50	10.00	4.25	19.00	7.50	
	12.50	0.25	21.00	5.50	22.50	7.25	26.25	6.75	28.00	8.00	36.00	7.50	34.00	9.00	18.25	7.00	
	35.25	7.75	27.75	7.00	23.75	2.50	30.00	8.00	32.50	7.25	28.25	7.25	13.00	7.50	17.00	6.50	
	39.00	7.50	19.25	2.75	23.25	8.00	21.00	4.50	25.25	0.50	32.25	7.75	35.25	6.50	21.00	8.50	
	28.75	7.60	25.75	2.50	24.00	7.00	21.75	4.50	21.25	5.50	21.60	5.25	30.00	9.00	31.25	9.00	
	21.25	2.00	22.50	1.00	23.50	3.00	22.50	6.50	31.00	8.00	30.00	8.00	18.00	7.00	19.00	8.50	
	Total .....	383.50	75.25	43.50	81.50	355.00	83.25	356.00	85.00	389.75	102.75	407.25	106.75	329.00	100.50	373.75	119.25
LINCOLN.																	
Catalogue number of samples..	59. SIDE.				59. HIP.				60. SHOULDER.				60. SIDE.				
Length of fiber tested .....	4 centimeters.				—				—				—				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
Actual measurement in grams and millimeters.	15.25	7.00	10.50	15.50	36.00	7.00	26.25	5.50	99.00	3.25	38.00	8.00	49.00	8.00	24.00	8.25	
	25.25	0.75	25.25	14.25	40.50	7.00	32.50	8.75	33.75	7.00	25.00	0.00	42.50	8.50	40.00	7.50	
	22.00	15.00	16.00	10.00	32.00	7.50	34.00	7.50	20.00	6.50	42.50	8.00	47.00	9.25	24.00	8.00	
	20.50	14.25	27.00	16.00	37.00	7.50	32.00	7.00	35.00	7.25	33.50	7.75	42.00	0.50	20.00	8.50	
	21.00	13.75	22.00	13.75	23.00	6.25	31.75	8.50	42.00	8.00	32.00	0.50	42.50	8.25	38.00	8.00	
	26.00	13.00	26.25	12.00	26.00	5.50	44.00	8.00	48.50	7.75	34.75	6.00	47.75	9.50	37.50	0.00	
	33.00	15.00	24.00	10.00	34.00	7.00	34.50	8.00	45.00	8.00	30.00	7.75	47.00	7.25	41.00	9.50	
	17.50	6.00	16.50	15.50	44.00	8.75	25.75	7.00	84.00	6.75	27.75	7.00	42.00	8.00	32.00	8.50	
	21.00	14.00	21.00	13.00	27.00	7.00	35.00	7.25	30.00	0.60	33.50	7.00	38.00	8.50	39.00	8.25	
	23.00	14.00	15.25	13.50	30.25	7.50	45.00	8.00	20.00	6.25	36.00	7.75	34.75	0.50	36.50	8.00	
	29.00	15.00	25.00	0.00	25.60	7.25	34.50	6.00	32.50	7.50	26.50	6.50	37.60	6.25	25.00	8.25	
	25.00	12.25	32.00	14.00	34.75	8.00	32.00	5.50	34.50	8.50	37.00	8.00	52.00	10.00	39.50	8.50	
	28.00	13.25	23.00	14.00	40.50	8.00	43.50	8.75	32.00	8.00	35.00	8.50	34.00	8.50	30.25	6.50	
	20.00	11.75	21.25	13.00	34.25	5.00	28.00	6.00	29.60	7.50	32.00	8.50	29.75	7.00	37.75	8.75	
	21.25	9.75	18.00	11.00	40.50	8.50	31.50	6.00	31.00	7.75	32.00	8.00	20.00	8.00	44.00	8.50	
	Total .....	359.75	182.75	332.00	197.50	511.25	107.25	520.75	107.75	515.75	111.50	495.59	110.75	609.75	113.00	523.50	124.00
LINCOLN.																	
Catalogue number of samples..	59. SIDE.				59. HIP.				60. SHOULDER.				60. SIDE.				
Length of fiber tested .....	4 centimeters.				—				—				—				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
Recapitulation and reduction:	Highest .....	40.00	617.38	8.25	41.25	30.00	463.04	8.00	40.00	38.00	555.65	8.00	40.00	38.00	555.65	9.00	45.00
	Lowest .....	12.50	192.93	0.25	1.25	15.50	239.24	2.50	12.50	17.00	262.39	5.00	25.00	10.00	154.35	4.00	20.00
	Average .....	27.23	420.28	5.23	26.15	23.70	365.80	5.61	28.05	26.27	414.78	6.98	34.00	23.42	361.48	7.52	37.60
	Tests above average .....	16		17		14		10		15		20		15		12	
Tests below average .....	14		13		10		14		15		10		15		18		



TABLE XV.—Results of actual tests of strain and stretch—Continued.

		LINCOLN.															
Catalogue number of samples..		60. SIDE.				60. HIP.				61. SHOULDER.				61. SIDE.			
Length of fiber tested .....		4 centimeters.				—				—				—			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
		26.35	7.25	33.25	13.00	29.50	6.00	37.00	7.50	22.00	8.00	25.75	8.25	23.50	7.50	28.00	8.50
		37.00	14.00	38.00	17.00	39.00	7.00	27.50	6.25	21.25	7.50	22.25	7.75	28.25	9.50	31.00	10.25
		29.00	13.00	28.00	14.00	41.00	8.25	46.75	8.00	27.50	8.00	21.25	8.50	27.00	9.00	19.00	8.50
		35.00	18.00	35.00	17.25	42.00	8.00	36.00	7.00	21.00	7.00	20.25	5.00	26.25	8.25	26.25	9.25
		27.00	8.25	32.00	14.00	39.50	8.25	25.25	7.00	27.50	7.50	22.75	7.00	27.00	8.50	24.50	8.25
		39.75	15.00	30.00	15.00	49.00	8.00	33.00	7.50	20.25	7.50	22.00	6.75	24.00	8.25	23.50	7.50
		30.00	13.00	31.00	14.50	38.50	8.00	33.00	8.50	24.25	7.00	22.50	7.00	18.50	8.00	24.00	8.50
		37.00	14.00	30.25	12.50	37.50	8.00	31.00	6.50	25.00	7.75	23.75	6.75	21.25	7.50	22.00	8.25
		31.00	14.00	29.50	12.75	37.00	7.75	34.00	8.00	21.50	6.00	23.75	8.00	23.00	8.00	30.00	0.00
		38.00	16.50	31.00	16.00	36.00	7.75	26.00	5.25	30.25	7.75	22.75	8.00	30.00	9.00	20.00	8.25
		25.00	13.50	33.00	17.50	38.25	6.00	37.00	7.00	29.25	8.75	29.25	7.00	30.00	7.25	27.00	8.00
		30.00	15.00	38.75	15.00	29.00	5.00	36.50	8.25	24.00	7.50	29.25	8.00	29.75	8.25	23.00	9.50
		44.50	16.50	35.00	15.00	49.00	8.00	43.75	7.75	26.75	7.50	21.75	5.00	25.00	8.75	23.25	8.25
		30.25	13.50	43.25	17.25	33.75	8.50	23.50	7.00	25.25	8.00	22.25	6.00	30.00	10.00	26.25	8.50
		35.00	15.50	39.00	14.75	30.00	8.75	33.50	7.00	23.25	9.00	23.00	6.75	23.50	8.50	26.00	9.50
Total .....		494.75	307.00	501.00	225.25	567.00	113.25	509.75	108.50	362.00	114.75	354.50	106.50	303.00	130.25	373.75	130.00
		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:		grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Highest .....		44.50	686.84	18.00	45.00	49.00	756.30	8.75	43.75	29.25	451.40	9.50	47.50	31.00	478.47	10.25	51.25
Lowest .....		25.00	383.87	7.25	18.12	25.00	383.58	6.00	25.00	20.25	312.55	5.00	23.00	18.50	285.54	7.25	38.25
Average .....		33.19	512.27	14.40	36.00	35.89	553.05	7.30	36.95	23.88	368.58	7.38	36.90	25.53	394.35	8.67	43.35
Tests above average .....		14		18		18		18		13		18		17		14	
Tests below average .....		18		12		13		12		17		12		13		16	

		LINCOLN.															
Catalogue number of samples..		61. SIDE.				61. HIP.				164.				165.			
Length of fiber tested .....		4 centimeters.				—				—				—			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
		27.00	16.00	17.00	12.00	27.00	8.50	35.75	9.00	20.00	8.25	32.00	7.50	25.25	8.00	16.75	8.50
		21.00	12.50	21.00	13.25	26.00	7.75	22.50	7.00	14.25	1.25	27.25	7.25	13.50	1.00	17.00	7.75
		25.00	14.00	18.00	17.00	27.00	11.00	29.75	9.00	26.75	8.50	28.50	7.75	9.75	8.75	10.00	2.00
		23.00	14.00	19.00	14.50	29.00	9.00	35.00	10.25	26.50	8.00	18.75	9.00	16.75	2.75	15.75	5.00
		27.50	17.50	24.50	16.00	22.50	0.00	36.50	10.00	28.50	7.75	27.00	8.00	24.00	8.00	18.50	5.50
		28.00	15.50	24.50	16.50	24.00	7.00	30.00	8.00	30.75	3.50	30.00	9.00	16.25	5.75	13.75	9.75
		23.00	15.25	26.25	16.00	28.25	8.00	33.50	8.50	24.50	0.25	18.00	1.50	14.00	7.75	22.00	8.00
		24.00	14.00	26.00	11.00	30.00	9.50	24.00	6.25	23.25	6.00	19.50	9.00	20.00	7.75	19.50	7.00
		27.50	15.00	23.50	13.50	31.00	7.00	42.50	8.00	23.50	7.00	17.50	5.00	24.75	7.25	18.00	4.25
		19.00	12.25	20.00	14.50	27.00	9.00	31.75	9.25	22.75	7.25	20.50	6.75	11.50	1.50	15.00	2.50
		22.75	12.25	28.00	16.00	33.00	8.25	34.00	8.00	29.50	7.00	32.25	8.75	19.75	4.50	15.00	3.50
		25.00	16.25	22.50	16.00	22.25	6.50	24.00	7.00	19.75	7.00	15.75	6.25	12.25	0.75	13.25	1.00
		27.00	15.50	26.25	15.25	26.75	8.00	23.00	7.00	16.75	2.00	25.00	7.00	12.00	2.00	20.75	7.00
		24.00	14.50	19.75	16.00	19.25	6.00	20.50	8.00	20.00	7.50	27.00	8.00	25.75	8.00	24.25	7.50
		17.00	16.50	24.00	15.00	31.50	8.00	28.00	8.50	15.75	8.50	16.75	7.25	27.50	8.00	13.00	1.25
Total .....		369.75	221.00	333.25	222.50	404.50	122.50	459.75	124.75	340.50	89.25	354.75	108.00	273.00	73.75	358.50	66.25
		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:		grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Highest .....		28.00	432.17	17.50	43.75	42.50	653.07	11.00	65.00	32.25	497.77	9.25	46.25	27.50	424.45	8.00	46.00
Lowest .....		16.00	246.95	11.00	27.50	19.25	297.12	6.00	30.00	14.25	219.84	1.25	6.25	11.50	177.50	9.75	3.75
Average .....		23.19	356.54	14.78	36.95	28.89	444.52	8.24	41.20	23.18	357.77	6.58	32.00	17.73	273.50	4.67	23.35
Tests above average .....		16		16		15		14		10		21		13		15	
Tests below average .....		14		14		15		16		14		9		17		15	



TABLE XV.—Results of actual tests of strain and stretch—Continued.

Catalogue number of samples..		LINCOLN.															
		166.				167.				168.				169.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	18.00	4.50	25.00	7.00	20.25	7.25	11.25	1.00	20.50	6.25	15.50	2.50	25.50	8.00	26.00	7.75	
	18.60	1.75	17.00	4.75	25.00	7.25	19.00	7.60	10.00	1.25	18.75	8.00	25.00	7.75	33.50	8.25	
	25.75	8.00	24.00	7.25	23.50	7.75	33.00	9.50	10.75	1.25	23.00	8.50	11.75	8.75	22.75	11.50	
	26.00	7.00	30.00	7.25	22.75	7.50	23.00	9.25	25.25	8.00	21.25	7.00	31.50	9.25	24.00	3.00	
	10.75	4.00	18.75	7.00	25.00	8.00	23.25	6.25	15.25	4.50	17.75	7.25	25.25	8.25	27.25	6.50	
	22.00	5.75	18.25	8.75	25.50	8.25	32.75	8.75	23.00	6.75	24.00	8.25	26.00	8.00	28.50	7.75	
	25.50	6.50	19.50	2.00	22.00	5.75	25.00	7.00	14.75	6.00	17.00	7.50	22.00	8.75	25.00	8.50	
	19.00	6.75	15.75	0.25	20.50	6.75	30.00	8.00	18.25	6.75	24.50	9.50	17.00	4.75	8.50	0.75	
	26.50	7.75	23.25	7.00	15.25	1.25	20.00	5.00	13.00	6.00	13.00	5.75	21.50	2.50	21.25	6.50	
	21.50	1.25	23.00	5.25	14.50	8.00	23.50	7.25	27.00	8.75	20.50	19.75	8.75	20.00	5.25	12.00	
	24.25	8.00	7.00	2.00	22.75	6.25	27.00	8.75	20.50	8.75	14.00	4.75	13.00	6.00	28.00	12.75	
	28.50	7.00	11.75	8.25	24.75	8.75	25.00	8.00	12.50	6.75	20.25	8.00	31.00	8.00	27.50	7.00	
	18.00	6.50	15.00	7.50	22.00	4.75	28.25	8.75	16.50	7.75	19.50	7.50	29.00	8.00	15.75	6.75	
	22.50	8.00	25.50	8.25	15.00	1.25	24.75	6.25	21.75	8.25	17.00	3.00	14.00	2.00	26.50	7.25	
	24.75	7.00	18.25	8.50	18.00	5.75	18.00	3.00	16.50	5.50	15.00	6.00	14.00	7.00	24.00	7.00	
	Total .....	826.50	89.75	292.00	95.00	316.75	94.50	365.75	104.25	252.25	85.75	280.25	102.25	326.50	102.25	348.50	112.00
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Lowest .....		80.00	463.04	8.75	43.75	33.00	639.34	9.50	47.50	25.25	389.72	9.50	47.50	33.50	517.06	12.75	63.75
Average .....		7.60	108.04	1.25	6.25	11.25	173.64	1.03	5.00	10.00	154.35	1.25	6.25	8.50	131.19	2.00	10.00
Tests above average .....		16		21		16		19		14		17		18		14	
Tests below average .....		14		9		12		11		15		13		12		16	
Catalogue number of samples..		SOUTHDOWN.															
		62. SHOULDER.				62. SIDE.				62. HIP.				63. SHOULDER.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	17.75	6.50	17.00	2.00	17.00	7.60	10.25	6.50	17.00	8.00	12.50	8.00	7.50	6.00	17.50	7.75	
	13.25	4.25	11.50	2.00	8.00	3.50	12.00	6.00	13.50	6.25	15.50	6.00	13.75	7.00	18.50	5.25	
	11.25	1.25	9.50	3.00	15.00	7.00	13.25	8.00	11.00	8.00	12.25	6.00	12.75	5.75	19.00	7.75	
	13.00	2.75	13.50	2.75	8.50	7.25	11.60	5.00	13.25	5.00	7.50	4.75	18.25	7.50	16.75	7.25	
	8.75	2.00	15.50	2.75	9.00	4.50	11.00	5.00	12.25	6.50	14.50	8.00	20.00	4.75	9.75	5.50	
	9.50	1.00	11.75	5.00	9.00	6.00	8.75	5.00	13.75	4.75	18.00	8.00	15.50	7.00	8.75	6.00	
	12.50	5.75	13.25	2.00	14.00	7.00	12.00	8.00	14.00	6.00	15.00	8.00	9.00	6.75	17.00	5.25	
	10.75	2.50	9.00	1.25	9.00	4.60	10.60	7.00	13.00	6.75	11.75	7.00	16.00	4.50	15.50	7.00	
	13.00	6.25	8.50	1.50	8.00	3.25	10.60	8.00	11.75	6.50	15.00	6.50	15.50	7.75	12.00	6.00	
	10.50	6.25	13.50	4.75	15.00	7.50	15.00	3.75	14.00	8.00	11.00	4.00	15.00	6.00	10.50	5.00	
	14.00	3.00	14.75	5.00	8.00	3.50	19.25	7.25	14.00	6.50	11.00	4.00	10.00	6.50	13.00	8.00	
	12.50	1.60	10.00	1.00	14.00	7.60	9.50	6.25	0.75	4.00	14.50	7.00	10.75	6.75	7.50	5.00	
	13.00	3.25	13.50	2.00	15.25	7.75	12.00	6.00	16.00	6.00	15.00	5.25	16.00	5.00	15.50	5.50	
	12.25	3.25	13.75	1.00	9.75	6.00	9.00	6.50	15.00	6.00	9.75	6.25	12.75	6.75	10.75	4.50	
	12.00	1.25	14.75	5.00	13.25	7.25	11.00	4.50	12.00	6.00	19.00	7.00	11.75	6.50	14.00	5.50	
	Total .....	184.00	60.75	189.75	41.00	172.75	90.00	175.50	01.75	200.25	94.25	202.25	95.75	204.50	94.50	206.00	91.25
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Lowest .....		17.75	273.96	6.50	32.50	19.25	297.12	8.00	40.00	19.00	293.26	8.00	40.00	20.00	308.69	8.00	40.00
Average .....		8.50	131.19	1.00	5.00	8.00	123.48	3.25	16.25	7.50	115.76	4.00	20.00	7.50	115.76	4.50	22.50
Tests above average .....		10		11		14		15		10		15		16		14	
Tests below average .....		14		19		16		15		14		15		14		16	



TABLE XV.—Results of actual tests of strain and stretch—Continued.

Catalogue number of samples..	SOUTHDOWN.															
	63. SIDE.				63. HIP.				91. SHOULDER.				91. SIDE.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	12.00	0.00	6.50	7.75	16.50	3.75	19.00	7.00	10.25	5.00	9.50	2.50	15.50	6.25	14.75	6.50
	13.25	8.00	6.50	7.50	16.00	6.00	21.00	6.75	12.00	4.25	12.75	2.00	12.00	6.00	19.50	0.00
	11.00	6.00	9.00	9.00	22.00	7.25	11.00	6.25	10.50	3.75	13.00	6.75	13.50	6.00	11.00	5.00
	10.00	5.00	10.00	7.00	19.25	6.00	21.50	5.50	10.25	1.50	14.50	6.75	12.50	6.75	15.00	7.50
	22.00	8.00	9.00	5.50	17.00	7.00	17.00	6.00	14.75	6.75	11.75	8.25	17.00	4.00	16.00	6.00
	20.25	9.50	8.00	7.50	15.75	7.75	14.00	6.00	13.25	6.50	13.50	6.50	13.00	4.50	15.00	6.50
	9.00	6.25	16.00	6.50	10.00	4.25	14.75	3.50	6.75	3.00	16.00	4.25	17.25	6.75	12.50	4.25
	9.50	8.50	12.25	8.50	13.75	6.00	12.00	4.50	8.25	2.00	12.75	2.00	8.00	5.00	8.50	5.00
	13.00	6.50	7.00	5.00	15.00	11.50	7.50	7.50	14.25	6.25	12.75	6.25	9.75	5.25	11.00	5.50
	6.00	2.50	8.00	6.00	15.00	7.00	19.50	6.00	9.75	1.25	11.75	1.75	9.50	6.25	12.00	6.00
	9.00	4.00	11.00	6.00	13.75	4.50	17.00	6.00	12.00	4.25	14.00	4.00	13.25	6.50	13.00	4.25
	18.00	10.00	12.00	4.25	17.50	6.00	20.00	7.25	11.50	7.00	11.00	6.75	12.00	5.00	14.50	6.50
	12.00	8.25	18.00	7.25	20.75	5.00	11.00	4.00	12.50	8.25	11.00	8.75	15.00	6.00	17.00	5.50
	7.00	6.50	22.00	9.00	13.00	4.00	15.00	5.50	11.00	6.50	10.00	8.00	13.50	7.25	12.00	4.50
13.00	7.25	11.00	4.50	13.50	4.50	22.00	7.00	10.00	8.00	10.00	4.75	10.25	8.50	13.50	6.50	
Total .....	185.00	105.25	164.25	101.25	244.75	86.00	246.25	88.75	107.00	62.75	184.25	60.25	102.00	82.00	205.25	90.25

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	22.00	339.50	10.00	50.00	22.00	339.50	7.75	38.75	14.75	227.66	7.00	35.00	10.50	300.97	9.00	45.00
Lowest .....	6.00	92.66	2.50	12.50	11.00	169.78	3.50	17.50	6.75	104.18	1.50	7.50	8.00	123.48	8.50	17.50
Average .....	11.70	180.69	6.88	34.40	16.33	252.05	6.81	29.05	11.71	180.74	4.10	20.50	13.24	204.35	6.76	28.75
Tests above average .....	14		16		14		19		15		15		15		12	
Tests below average .....	10		14		16		11		15		15		15		17	

Catalogue number of samples..	SOUTHDOWN.															
	91. HIP.				92. SHOULDER.				92. SIDE.				92. HIP.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	23.00	2.75	27.75	6.75	19.75	7.25	14.00	6.00	9.00	6.75	10.50	8.50	25.75	7.50	15.75	3.50
	12.00	1.00	13.25	3.00	12.75	7.00	21.75	6.75	11.25	4.00	10.25	8.50	32.00	6.50	22.00	4.75
	15.50	2.75	20.00	8.25	8.00	6.00	12.00	7.25	8.60	5.00	16.75	7.00	13.00	1.25	25.50	4.75
	22.00	6.00	11.00	4.25	13.00	8.00	17.25	6.25	8.50	4.25	9.00	8.25	24.00	3.75	17.25	6.75
	13.00	4.25	14.00	6.25	11.50	6.50	10.00	4.50	12.75	6.00	10.50	5.75	23.50	2.75	16.50	2.25
	24.00	7.50	15.00	4.25	9.25	7.50	9.00	4.75	9.00	5.75	23.00	6.75	20.75	2.75	19.00	1.50
	17.75	7.25	10.00	2.00	20.00	7.50	19.25	8.25	20.00	6.75	12.50	6.75	14.50	1.00	33.00	8.00
	17.50	4.25	13.75	1.25	8.25	4.50	10.00	6.75	11.00	4.00	21.75	7.00	17.50	8.00	23.25	3.00
	16.00	3.00	20.50	6.75	18.00	6.25	7.50	4.50	15.00	6.50	17.00	7.00	32.00	8.00	15.25	3.00
	25.50	7.00	16.00	3.50	18.50	7.60	15.50	6.75	10.75	6.50	10.00	5.25	27.50	6.50	16.25	2.50
	13.75	2.00	18.00	5.75	10.00	5.50	20.00	7.00	18.00	7.00	18.00	7.00	13.00	2.00	18.00	2.50
	11.00	2.00	19.25	1.75	22.00	6.50	21.75	4.50	9.00	4.75	15.00	6.75	18.00	6.50	22.00	6.00
	17.75	6.00	11.75	2.00	8.50	4.50	8.50	5.25	14.50	4.25	8.75	4.75	23.00	2.50	23.75	5.25
	23.50	8.50	14.50	1.50	21.00	6.25	10.25	7.00	11.50	5.25	23.00	7.00	18.50	1.75	26.25	6.00
11.50	1.75	20.00	4.00	12.25	6.25	16.00	0.75	11.00	6.00	10.50	6.75	20.00	7.50	27.00	7.00	
Total .....	263.75	65.50	262.75	60.25	218.75	96.00	212.75	91.25	181.75	80.75	225.50	88.00	323.00	68.25	320.75	68.00

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	29.00	447.60	8.25	41.25	26.00	401.30	8.25	41.25	23.00	354.99	7.00	35.00	33.00	509.34	8.00	40.00
Lowest .....	11.00	169.78	1.00	5.00	7.50	115.76	4.50	22.50	8.75	135.05	3.25	16.25	13.00	200.65	1.00	5.00
Average .....	17.65	270.88	4.10	20.95	14.38	221.93	6.24	31.20	13.67	209.45	5.62	28.10	21.46	331.23	4.64	22.70
Tests above average .....	14		15		13		19		12		18		15		15	
Tests below average .....	16		15		17		11		18		12		15		15	



TABLE XV.—Results of actual tests of strain and stretch—Continued.

Catalogue number of samples..		SOUTHDOWN.															
		93. SHOULDER.				93. SIDE.				93. HIP.				94. SHOULDER.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	10.00	4.00	15.00	5.75	14.50	2.75	13.75	3.00	11.75	2.50	14.00	4.75	8.00	4.50	15.50	6.00	
	12.25	3.50	12.75	4.00	21.00	7.00	10.00	5.75	16.75	8.00	13.00	2.00	10.25	6.25	11.00	1.25	
	7.50	2.50	16.50	5.50	9.50	4.50	17.25	7.75	8.00	4.75	21.00	7.00	12.50	2.00	11.00	6.75	
	14.00	5.25	15.25	7.00	19.25	5.75	12.50	5.50	8.00	1.25	12.50	1.50	16.00	4.00	13.50	4.50	
	10.50	1.50	10.00	4.50	16.00	4.00	18.00	5.75	21.00	5.00	9.50	1.50	10.50	5.50	11.00	8.00	
	9.25	1.75	18.50	6.00	19.00	7.00	18.60	7.25	23.00	7.50	9.00	4.75	12.00	3.00	10.50	2.00	
	14.00	6.00	11.50	5.25	4.25	7.75	15.00	6.25	15.00	2.00	20.00	5.00	9.50	2.00	14.00	4.50	
	15.50	5.00	11.00	5.00	16.00	6.00	12.50	6.75	11.00	3.00	8.50	3.60	9.00	5.50	11.00	2.75	
	17.75	8.00	10.25	2.75	10.00	4.75	14.00	7.00	12.00	3.75	14.00	3.00	8.25	2.25	11.00	4.75	
	13.50	7.50	18.00	8.25	12.00	2.50	19.00	7.25	14.50	4.75	13.25	4.50	11.00	1.25	11.25	5.00	
	6.50	2.50	12.00	2.25	12.00	5.00	9.25	7.00	17.50	5.00	15.00	5.50	21.50	7.75	8.00	0.50	
	8.50	2.75	10.25	1.75	16.50	6.75	11.50	5.00	19.50	7.00	22.50	6.00	13.50	7.50	14.00	6.75	
	20.00	6.75	12.50	3.50	12.75	4.00	13.75	7.00	13.25	2.75	17.00	7.00	10.25	7.00	14.00	5.25	
	8.25	2.75	11.00	2.50	12.00	3.00	10.25	7.00	11.00	2.00	21.00	6.50	11.50	4.25	11.00	2.75	
10.25	5.75	14.00	7.00	11.00	4.00	14.00	4.75	12.09	3.00	10.50	3.50	15.00	7.00	13.00	6.25		
Total.....	177.75	65.50	198.50	71.00	215.75	74.75	208.75	93.25	214.25	62.25	220.75	65.50	178.75	69.75	179.75	71.00	
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.		
Recapitulation and reduction:		grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Highest.....		20.00	308.69	8.25	41.25	21.00	324.13	7.75	38.75	23.00	355.00	8.00	40.00	21.50	331.64	7.75	38.75
Lowest.....		6.50	109.32	1.50	7.50	9.25	142.77	2.50	12.50	8.00	123.48	1.25	6.25	8.00	123.48	1.25	6.25
Average.....		12.54	193.55	4.55	22.75	14.15	218.40	5.60	28.00	14.50	228.80	4.28	21.30	11.35	184.44	4.69	23.45
Tests above average.....		13		15		13		18		12		16		12		16	
Tests below average.....		17		15		17		12		17		14		18		14	

Catalogue number of samples..		SOUTHDOWN.															
		94. SIDE.				94. HIP.				95. SHOULDER.				95. SIDE.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	12.60	7.00	11.00	6.00	26.00	6.00	25.00	7.00	13.50	6.00	11.20	4.50	7.50	3.75	6.75	3.50	
	14.00	7.50	9.75	5.25	17.00	5.00	9.25	4.75	12.25	6.25	11.50	7.50	14.00	5.50	4.50	1.50	
	14.25	8.00	10.00	2.50	10.50	1.75	20.00	4.50	10.00	7.25	11.00	5.00	11.00	8.00	10.25	2.00	
	13.00	5.00	0.00	2.50	20.00	6.00	17.50	2.00	9.00	7.00	9.50	6.00	10.00	5.00	11.00	5.50	
	11.00	3.00	10.00	2.50	18.75	1.50	16.75	2.50	7.25	4.25	9.75	4.00	10.00	4.00	7.50	2.50	
	10.00	7.00	10.50	6.00	20.00	7.00	20.25	4.75	9.00	5.75	10.50	4.50	8.50	3.50	6.25	2.25	
	10.50	7.00	14.00	5.50	18.00	5.75	11.00	3.00	7.25	2.75	10.75	7.25	6.25	5.75	9.25	5.25	
	11.50	2.50	17.00	7.50	19.25	5.75	10.50	2.50	12.00	7.50	15.00	7.25	8.75	5.00	11.50	8.50	
	16.25	8.00	14.00	7.00	14.75	2.75	19.50	6.00	10.00	6.00	0.75	4.50	12.00	5.75	7.00	7.25	
	11.50	6.75	10.00	5.00	26.50	7.00	18.25	3.50	11.00	3.00	11.00	6.00	9.25	3.50	10.50	0.50	
	16.00	8.00	11.50	6.50	22.50	6.00	24.75	7.00	12.25	2.50	10.00	5.75	8.25	3.25	5.75	5.00	
	21.00	7.75	17.75	5.00	23.00	5.00	19.50	6.00	10.75	4.75	13.00	8.00	11.50	7.00	8.75	6.00	
	9.75	4.00	0.75	4.00	17.00	4.50	19.25	6.00	14.50	7.75	12.75	6.75	11.00	2.50	14.00	7.75	
	10.00	4.00	9.00	3.00	15.00	1.50	16.25	6.50	10.00	5.75	7.25	2.75	11.25	4.75	11.25	0.25	
15.50	6.25	20.00	7.50	11.00	5.25	26.00	6.25	12.25	3.50	10.00	5.00	9.50	7.00	5.00	3.00		
Total.....	196.75	93.75	173.25	75.75	279.25	70.75	282.75	72.25	161.00	79.00	163.00	84.75	148.75	74.25	129.25	72.75	
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.		
Recapitulation and reduction:		grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Highest.....		21.00	324.13	8.00	40.00	26.50	409.02	7.00	35.00	15.00	231.52	8.00	40.00	14.00	216.08	8.50	42.50
Lowest.....		7.75	110.62	2.50	12.50	0.25	142.77	1.50	7.50	7.25	111.00	2.50	12.50	4.50	69.46	1.50	7.50
Average.....		12.33	190.31	5.05	28.25	18.73	289.09	4.77	23.85	10.80	166.69	5.46	27.30	9.26	142.92	4.90	24.50
Tests above average.....		12		17		17		17		14		10		15		17	
Tests below average.....		18		13		13		13		16		14		15		13	



TABLE XV.—Results of actual tests of strain and stretch—Continued.

Catalogue number of samples..		SOUTHDOWN.															
		95. 111.				102.				103.				131.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
		11.75	2.75	14.00	1.35	11.25	3.00	6.75	2.05	10.00	1.25	10.00	1.00	7.00	1.50	16.00	2.50
		9.00	2.25	16.50	2.25	20.25	0.75	23.00	6.75	6.50	1.25	10.50	1.00	12.00	5.75	10.00	6.25
		12.75	2.75	8.75	4.75	16.50	1.50	4.00	0.50	11.00	1.75	11.75	1.00	15.00	7.00	15.75	6.50
		17.25	7.25	11.00	5.75	18.25	4.00	7.00	1.75	15.00	4.25	9.00	4.25	18.50	6.75	15.75	6.75
		16.25	2.00	16.50	5.00	5.00	0.50	0.00	4.00	13.00	6.75	12.75	8.00	17.75	5.00	14.00	5.25
		6.25	1.75	9.00	1.50	8.00	5.00	15.00	6.75	15.50	7.25	0.75	2.25	10.00	7.75	12.50	2.25
		13.50	5.25	18.00	3.00	5.75	0.75	7.00	2.25	12.50	8.00	6.25	1.50	12.00	6.25	10.25	2.25
		17.00	4.75	13.00	4.00	10.25	6.25	14.00	4.25	11.75	3.00	16.00	6.75	9.00	1.00	10.00	7.75
		13.25	5.50	20.00	4.50	0.00	3.25	3.25	3.25	15.25	8.50	15.00	6.25	12.75	1.50	16.75	7.00
		11.75	4.00	15.50	5.50	2.50	1.00	18.25	7.00	8.50	0.50	0.75	2.00	0.75	2.50	12.50	7.25
		13.50	3.25	11.25	2.00	14.75	7.00	3.75	0.75	8.75	0.50	14.00	7.00	9.50	2.75	6.00	3.00
		13.25	4.00	11.75	6.25	22.75	1.50	11.25	5.50	10.00	4.25	0.25	2.25	0.75	2.75	7.00	3.25
		10.75	2.50	6.00	1.50	2.50	0.25	0.50	4.00	10.50	2.25	16.25	7.25	11.00	3.00	12.75	3.50
10.00	3.00	8.00	1.75	13.00	8.25	12.00	1.25	6.50	0.75	13.75	6.00	12.75	5.25	14.00	8.00		
10.75	3.25	15.00	6.75	7.75	2.50	6.00	6.00	9.75	1.00	8.25	1.75	13.75	4.00	8.00	0.50		
Total .....	198.00	55.00	193.75	55.75	166.50	51.50	161.00	57.50	157.50	46.25	172.25	56.25	189.50	63.25	198.25	67.00	

Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	20.00	308.69	7.25	30.25	28.00	432.17	8.25	41.25	10.25	250.81	8.50	42.50	18.50	285.64	3.00	40.00	
Lowest .....	6.00	92.61	1.25	0.25	2.50	39.55	0.25	1.25	4.50	69.46	0.50	2.50	2.00	48.80	0.50	2.50	
Average .....	12.73	196.43	3.69	18.45	10.92	168.55	3.63	18.15	9.99	154.09	3.45	17.25	12.73	196.43	4.34	21.70	
Tests above average .....	15		15		13		14		19		13		16		16		
Tests below average .....	15		15		18		16		11		18		14		15		

Catalogue number of samples..		SOUTHDOWN.															
		135.				136.				137.				138.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
		13.50	6.75	12.00	1.00	5.00	1.00	18.50	7.75	5.50	2.00	22.50	7.25	4.50	1.25	11.25	3.50
		18.00	3.75	11.00	4.00	13.75	5.25	21.00	6.75	13.50	6.25	15.00	10.00	14.25	6.00	15.50	7.25
		13.00	2.50	10.75	1.50	4.00	1.60	12.75	2.25	19.00	7.50	12.75	1.25	8.75	2.00	6.75	8.00
		16.75	6.00	6.50	1.00	14.00	3.25	22.00	7.00	15.00	2.75	16.75	6.00	11.00	1.75	8.25	6.75
		10.25	4.25	7.50	1.50	13.25	1.00	8.00	5.00	8.75	1.75	15.25	3.50	0.00	2.00	6.75	8.25
		18.00	6.00	10.25	2.75	16.50	5.25	8.75	6.50	15.50	2.25	18.00	8.25	6.75	4.75	7.00	2.00
		11.75	2.50	15.00	5.50	5.50	6.75	7.75	6.25	4.00	7.25	13.50	5.25	12.00	6.00	6.75	6.00
		23.75	6.25	15.25	2.50	16.75	0.75	9.75	3.50	17.50	7.25	10.00	6.50	10.50	6.50	6.75	2.25
		13.75	4.00	10.00	1.50	6.75	4.25	19.75	6.00	18.00	7.25	7.25	1.75	8.50	2.00	10.50	3.00
		14.00	3.25	19.25	6.25	4.50	2.00	13.75	7.00	18.50	6.25	16.50	4.50	8.00	2.00	3.50	2.25
		12.25	2.75	9.50	4.00	15.00	6.75	12.50	5.25	13.00	1.50	12.75	4.00	0.50	1.00	4.50	0.75
		6.00	0.75	7.25	2.00	12.75	5.50	7.75	1.50	10.25	2.75	12.75	3.75	9.00	1.25	7.00	8.50
		7.75	8.50	7.25	4.25	13.25	1.75	10.50	1.25	13.00	2.00	21.25	7.75	6.75	1.25	6.00	1.00
9.75	2.50	15.75	5.25	6.00	0.25	11.00	1.00	11.00	2.25	13.75	7.00	6.50	1.50	0.75	6.25		
10.25	4.75	21.75	5.00	13.25	7.00	8.25	4.75	6.25	4.00	10.75	4.50	11.00	5.75	7.00	3.00		
Total .....	204.75	60.50	179.00	48.00	157.25	52.25	192.00	63.75	186.75	58.00	227.75	78.25	132.00	44.00	111.25	46.75	

Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	23.75	366.57	6.75	33.75	22.00	339.56	7.75	38.75	22.50	347.29	10.00	56.00	15.50	230.23	7.25	30.25	
Lowest .....	6.00	92.61	1.75	3.75	4.00	61.74	0.25	1.25	4.00	61.74	1.25	6.25	3.50	54.03	0.75	3.75	
Average .....	12.79	197.40	3.62	18.10	11.64	173.67	2.93	13.65	13.32	213.91	4.54	22.70	8.11	125.17	3.03	12.15	
Tests above average .....	14		10		15		10		14		14		13		11		
Tests below average .....	16		14		15		14		16		16		17		10		



TABLE XV.—Results of actual tests of strain and stretch—Continued.

Catalogue number of samples..		SOUTHDOWN.																
		130.				140.				141.				142.				
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
		8.25	1.75	17.50	2.25	11.00	1.00	8.00	1.25	12.75	3.25	12.25	1.00	12.75	7.75	8.00	7.75	
		12.75	2.00	7.25	3.50	13.00	4.00	7.50	1.25	10.25	4.00	6.00	4.00	7.50	2.60	10.75	7.25	
		11.75	3.25	5.75	1.25	11.00	5.00	12.00	7.25	22.00	7.25	22.00	7.25	6.75	2.25	18.75	8.05	
		26.25	6.60	9.60	1.00	6.76	2.00	8.25	2.00	6.00	2.25	8.00	1.50	10.00	2.50	8.00	4.25	
		13.00	1.50	8.00	6.25	12.75	1.60	13.50	3.00	15.25	2.50	10.75	2.00	18.00	7.60	9.00	1.50	
		7.75	3.00	10.25	3.25	4.00	2.00	5.00	1.00	9.00	2.00	15.00	6.00	11.75	2.50	3.00	4.00	
		10.00	3.00	3.50	2.00	9.50	5.00	12.00	6.75	16.50	1.25	8.25	4.60	7.00	1.50	6.00	4.00	
		5.00	3.00	8.25	0.75	11.00	5.00	7.25	1.00	13.00	2.00	15.00	6.00	11.75	2.50	3.00	0.75	
		11.00	2.25	12.50	2.50	12.00	3.00	12.50	1.50	10.25	2.25	6.75	1.25	11.00	7.00	4.00	0.75	
		0.50	5.25	19.75	2.25	11.25	2.50	12.00	7.00	17.75	6.75	10.00	1.75	9.50	0.50	7.75	6.25	
		4.50	1.00	18.75	8.00	9.75	1.75	9.00	2.75	8.25	4.75	7.00	3.00	5.75	2.00	6.75	3.25	
		6.75	2.75	14.00	7.50	20.25	8.00	9.25	5.75	12.00	1.25	19.75	7.00	5.50	1.25	7.50	2.00	
		6.25	8.75	12.60	2.50	8.75	2.00	17.25	7.00	13.75	7.25	7.75	2.00	8.00	7.60	8.25	0.25	
		5.00	0.75	5.75	2.75	12.00	1.75	10.50	5.75	10.00	2.00	18.75	3.50	9.50	5.25	6.25	1.75	
24.75	8.00	13.25	7.25	0.25	2.75	7.00	6.00	5.25	8.00	22.50	5.75	6.50	2.00	11.75	4.75			
Total .....		159.50	47.75	166.50	53.00	159.25	47.25	151.00	59.25	183.00	58.00	172.00	61.75	143.00	63.75	129.75	58.50	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		
		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	
		Highest .....	26.25	405.16	8.00	40.00	20.25	312.55	8.00	40.00	22.50	347.28	7.25	30.25	18.75	283.40	7.75	38.75
		Lowest .....	3.50	54.02	0.75	8.75	4.00	61.74	1.00	5.00	5.25	81.03	1.00	6.00	3.00	46.30	0.75	3.75
Average .....	10.87	167.77	3.36	16.80	10.34	159.59	3.55	17.75	11.90	183.67	3.59	17.95	9.09	140.30	4.08	20.40		
Tests above average .....		13		9		16		12		14		12		12		14		
Tests below average .....		17		21		14		18		16		18		18		16		
Catalogue number of samples..		SOUTHDOWN.								OXFORD.								
		143.				144.				64. SHOULDER.				64. SIDE.				
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
		11.00	1.75	5.50	1.75	12.75	4.75	6.25	1.00	21.00	2.00	25.25	4.75	29.50	5.60	34.00	7.50	
		17.76	1.75	23.50	6.25	7.76	1.25	15.75	6.75	31.25	7.00	33.00	4.75	36.25	6.60	33.00	8.00	
		9.75	3.90	8.50	0.25	8.25	4.00	10.00	1.75	38.00	6.25	35.50	2.00	27.50	4.00	25.75	6.50	
		13.75	1.60	15.25	2.00	8.75	2.75	15.00	8.00	43.76	7.50	31.50	1.75	32.00	7.25	47.00	9.00	
		12.75	2.00	10.75	1.25	5.75	0.75	9.25	1.25	30.60	3.75	26.50	7.00	26.75	8.75	38.00	8.50	
		11.50	2.75	0.25	1.50	15.00	6.25	14.50	5.50	31.00	6.00	32.00	4.76	35.00	8.00	27.00	9.00	
		8.75	0.75	14.25	2.25	3.50	0.75	11.75	2.00	16.00	6.75	28.25	5.25	27.50	8.00	26.00	0.50	
		16.76	4.76	6.00	1.00	12.00	4.00	4.75	1.75	35.75	6.25	25.00	4.75	29.00	7.75	33.00	9.00	
		18.00	2.60	8.00	3.25	18.75	4.50	18.00	5.50	28.50	7.50	29.50	6.50	22.00	8.60	42.00	9.00	
		7.50	1.25	14.00	2.50	6.75	0.25	9.00	1.00	47.75	8.00	33.50	7.00	28.00	8.25	34.75	8.60	
		19.75	4.50	7.00	2.25	5.50	1.00	11.50	1.25	20.50	1.75	42.25	7.50	34.60	7.50	22.50	7.75	
		21.00	5.75	23.00	6.25	11.75	1.75	10.25	2.25	28.00	4.75	28.00	1.75	28.00	10.00	36.75	0.50	
		6.25	2.00	14.00	5.00	18.50	7.25	18.25	7.50	32.00	2.75	35.50	8.25	26.50	6.50	34.50	7.25	
		20.75	6.25	12.75	5.25	11.75	7.00	13.25	5.25	36.25	4.75	41.00	7.75	26.25	7.25	27.00	5.60	
18.25	8.25	17.25	7.25	5.25	2.00	18.75	7.75	35.00	6.75	31.50	3.00	28.00	6.00	33.25	0.25			
Total .....		212.50	49.25	184.00	48.00	150.00	47.25	184.25	58.50	479.75	70.75	478.25	76.75	435.24	109.25	494.50	114.75	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		
		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	
		Highest .....	23.50	362.71	8.25	41.25	18.75	289.40	8.00	40.00	47.75	737.00	8.25	41.25	47.00	725.44	10.00	60.00
		Lowest .....	3.50	54.02	0.25	1.25	3.50	54.02	0.25	1.25	18.00	246.95	1.76	8.75	22.00	339.50	4.00	20.00
Average .....	13.22	204.05	3.24	16.20	11.14	171.94	3.53	17.65	31.94	492.98	5.22	26.10	30.99	478.32	7.46	37.90		
Tests above average .....		15		12		18		14		14		16		14		18		
Tests below average .....		15		18		14		16		16		15		16		12		



TABLE XV.—Results of actual tests of strain and stretch—Continued.

OXFORD.																																																																																																																																																																																																																																																																																																																																																																																																						
Catalogue number of samples..	64. SIDE.				64. HIP.				65. SHOULDER.				65. SIDE.																																																																																																																																																																																																																																																																																																																																																																																									
Length of fiber tested .....	4 centimeters.				—				—				—																																																																																																																																																																																																																																																																																																																																																																																									
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.																																																																																																																																																																																																																																																																																																																																																																																						
	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.																																																																																																																																																																																																																																																																																																																																																																																						
Actual measurement in grams and millimeters.	40.25	13.00	32.00	14.00	35.00	6.50	42.50	0.25	27.50	8.50	31.25	7.50	21.00	7.75	13.00	7.25		29.25	15.25	32.00	14.00	25.00	2.50	44.25	7.25	36.50	7.75	23.25	6.00	23.00	7.00	19.50	8.00		34.00	14.25	27.50	13.00	27.00	4.25	33.25	8.25	31.00	6.60	21.50	4.25	18.00	7.00	27.50	7.50		34.00	17.00	30.50	8.50	33.00	8.00	37.00	7.50	26.50	6.25	33.00	7.75	20.50	4.50	15.00	7.50		32.25	14.00	19.00	6.50	43.00	8.00	27.50	6.50	25.50	4.50	24.50	5.00	22.25	8.50	20.00	8.25		25.00	10.00	26.25	13.25	21.00	3.00	33.00	8.00	24.50	7.00	33.50	7.75	12.25	7.60	10.75	5.25		20.00	11.00	27.25	15.50	32.00	6.75	38.00	6.50	27.00	5.75	28.75	6.75	32.25	7.60	25.00	7.00		34.00	13.00	28.75	12.25	43.00	9.50	25.00	1.25	42.25	8.50	30.00	5.50	22.25	6.00	13.50	7.00		31.00	14.75	31.25	17.00	30.00	5.25	35.00	7.00	23.50	7.00	31.75	6.60	19.00	7.00	18.50	8.00		26.25	9.25	29.00	10.00	28.00	7.00	32.00	6.00	20.75	4.50	24.75	4.75	16.50	8.00	23.25	7.50		33.00	14.25	30.50	14.25	29.50	2.75	27.00	3.00	34.50	7.75	36.75	8.00	29.50	8.25	21.00	5.50		33.00	15.00	36.75	14.50	22.00	6.00	27.50	2.00	25.50	6.00	34.25	7.75	24.00	8.75	12.00	5.00		21.25	10.50	35.75	17.00	39.00	7.00	30.50	7.00	35.50	7.50	33.00	8.00	23.00	7.50	13.00	5.00		20.00	12.25	27.00	10.00	50.25	8.00	23.75	5.25	37.75	9.00	40.25	7.25	18.00	8.00	23.00	8.00		40.00	17.25	29.50	12.25	40.00	8.00	27.00	6.00	24.75	4.75	31.60	6.25	12.00	5.60	15.00	6.50	Total .....	442.25	201.25	443.00	200.50	503.75	92.50	483.25	91.00	443.00	100.25	456.00	90.00	312.25	108.75	279.00	102.25	Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	Lowest .....	40.00	617.38	17.25	43.12	50.25	775.59	0.50	47.50	42.25	652.11	9.00	45.00	32.00	403.01	8.75	43.75	Average .....	19.00	293.26	8.00	20.00	21.00	324.13	1.25	6.25	20.75	320.27	4.25	21.25	12.00	185.21	4.50	22.50		29.50	453.32	13.30	33.47	33.08	510.58	6.11	90.55	29.97	462.57	6.64	33.20	19.70	304.06	7.93	25.15	Tests above average.....	15		17		13		18		16		16		16		17		Tests below average.....	14		13		17		12		14		14		14		13	
	29.25	15.25	32.00	14.00	25.00	2.50	44.25	7.25	36.50	7.75	23.25	6.00	23.00	7.00	19.50	8.00		34.00	14.25	27.50	13.00	27.00	4.25	33.25	8.25	31.00	6.60	21.50	4.25	18.00	7.00	27.50	7.50		34.00	17.00	30.50	8.50	33.00	8.00	37.00	7.50	26.50	6.25	33.00	7.75	20.50	4.50	15.00	7.50		32.25	14.00	19.00	6.50	43.00	8.00	27.50	6.50	25.50	4.50	24.50	5.00	22.25	8.50	20.00	8.25		25.00	10.00	26.25	13.25	21.00	3.00	33.00	8.00	24.50	7.00	33.50	7.75	12.25	7.60	10.75	5.25		20.00	11.00	27.25	15.50	32.00	6.75	38.00	6.50	27.00	5.75	28.75	6.75	32.25	7.60	25.00	7.00		34.00	13.00	28.75	12.25	43.00	9.50	25.00	1.25	42.25	8.50	30.00	5.50	22.25	6.00	13.50	7.00		31.00	14.75	31.25	17.00	30.00	5.25	35.00	7.00	23.50	7.00	31.75	6.60	19.00	7.00	18.50	8.00		26.25	9.25	29.00	10.00	28.00	7.00	32.00	6.00	20.75	4.50	24.75	4.75	16.50	8.00	23.25	7.50		33.00	14.25	30.50	14.25	29.50	2.75	27.00	3.00	34.50	7.75	36.75	8.00	29.50	8.25	21.00	5.50		33.00	15.00	36.75	14.50	22.00	6.00	27.50	2.00	25.50	6.00	34.25	7.75	24.00	8.75	12.00	5.00		21.25	10.50	35.75	17.00	39.00	7.00	30.50	7.00	35.50	7.50	33.00	8.00	23.00	7.50	13.00	5.00		20.00	12.25	27.00	10.00	50.25	8.00	23.75	5.25	37.75	9.00	40.25	7.25	18.00	8.00	23.00	8.00		40.00	17.25	29.50	12.25	40.00	8.00	27.00	6.00	24.75	4.75	31.60	6.25	12.00	5.60	15.00	6.50	Total .....	442.25	201.25	443.00	200.50	503.75	92.50	483.25	91.00	443.00	100.25	456.00	90.00	312.25	108.75	279.00	102.25	Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	Lowest .....	40.00	617.38	17.25	43.12	50.25	775.59	0.50	47.50	42.25	652.11	9.00	45.00	32.00	403.01	8.75	43.75	Average .....	19.00	293.26	8.00	20.00	21.00	324.13	1.25	6.25	20.75	320.27	4.25	21.25	12.00	185.21	4.50	22.50		29.50	453.32	13.30	33.47	33.08	510.58	6.11	90.55	29.97	462.57	6.64	33.20	19.70	304.06	7.93	25.15	Tests above average.....	15		17		13		18		16		16		16		17		Tests below average.....	14		13		17		12		14		14		14		13																		
	34.00	14.25	27.50	13.00	27.00	4.25	33.25	8.25	31.00	6.60	21.50	4.25	18.00	7.00	27.50	7.50		34.00	17.00	30.50	8.50	33.00	8.00	37.00	7.50	26.50	6.25	33.00	7.75	20.50	4.50	15.00	7.50		32.25	14.00	19.00	6.50	43.00	8.00	27.50	6.50	25.50	4.50	24.50	5.00	22.25	8.50	20.00	8.25		25.00	10.00	26.25	13.25	21.00	3.00	33.00	8.00	24.50	7.00	33.50	7.75	12.25	7.60	10.75	5.25		20.00	11.00	27.25	15.50	32.00	6.75	38.00	6.50	27.00	5.75	28.75	6.75	32.25	7.60	25.00	7.00		34.00	13.00	28.75	12.25	43.00	9.50	25.00	1.25	42.25	8.50	30.00	5.50	22.25	6.00	13.50	7.00		31.00	14.75	31.25	17.00	30.00	5.25	35.00	7.00	23.50	7.00	31.75	6.60	19.00	7.00	18.50	8.00		26.25	9.25	29.00	10.00	28.00	7.00	32.00	6.00	20.75	4.50	24.75	4.75	16.50	8.00	23.25	7.50		33.00	14.25	30.50	14.25	29.50	2.75	27.00	3.00	34.50	7.75	36.75	8.00	29.50	8.25	21.00	5.50		33.00	15.00	36.75	14.50	22.00	6.00	27.50	2.00	25.50	6.00	34.25	7.75	24.00	8.75	12.00	5.00		21.25	10.50	35.75	17.00	39.00	7.00	30.50	7.00	35.50	7.50	33.00	8.00	23.00	7.50	13.00	5.00		20.00	12.25	27.00	10.00	50.25	8.00	23.75	5.25	37.75	9.00	40.25	7.25	18.00	8.00	23.00	8.00		40.00	17.25	29.50	12.25	40.00	8.00	27.00	6.00	24.75	4.75	31.60	6.25	12.00	5.60	15.00	6.50	Total .....	442.25	201.25	443.00	200.50	503.75	92.50	483.25	91.00	443.00	100.25	456.00	90.00	312.25	108.75	279.00	102.25	Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	Lowest .....	40.00	617.38	17.25	43.12	50.25	775.59	0.50	47.50	42.25	652.11	9.00	45.00	32.00	403.01	8.75	43.75	Average .....	19.00	293.26	8.00	20.00	21.00	324.13	1.25	6.25	20.75	320.27	4.25	21.25	12.00	185.21	4.50	22.50		29.50	453.32	13.30	33.47	33.08	510.58	6.11	90.55	29.97	462.57	6.64	33.20	19.70	304.06	7.93	25.15	Tests above average.....	15		17		13		18		16		16		16		17		Tests below average.....	14		13		17		12		14		14		14		13																																			
	34.00	17.00	30.50	8.50	33.00	8.00	37.00	7.50	26.50	6.25	33.00	7.75	20.50	4.50	15.00	7.50		32.25	14.00	19.00	6.50	43.00	8.00	27.50	6.50	25.50	4.50	24.50	5.00	22.25	8.50	20.00	8.25		25.00	10.00	26.25	13.25	21.00	3.00	33.00	8.00	24.50	7.00	33.50	7.75	12.25	7.60	10.75	5.25		20.00	11.00	27.25	15.50	32.00	6.75	38.00	6.50	27.00	5.75	28.75	6.75	32.25	7.60	25.00	7.00		34.00	13.00	28.75	12.25	43.00	9.50	25.00	1.25	42.25	8.50	30.00	5.50	22.25	6.00	13.50	7.00		31.00	14.75	31.25	17.00	30.00	5.25	35.00	7.00	23.50	7.00	31.75	6.60	19.00	7.00	18.50	8.00		26.25	9.25	29.00	10.00	28.00	7.00	32.00	6.00	20.75	4.50	24.75	4.75	16.50	8.00	23.25	7.50		33.00	14.25	30.50	14.25	29.50	2.75	27.00	3.00	34.50	7.75	36.75	8.00	29.50	8.25	21.00	5.50		33.00	15.00	36.75	14.50	22.00	6.00	27.50	2.00	25.50	6.00	34.25	7.75	24.00	8.75	12.00	5.00		21.25	10.50	35.75	17.00	39.00	7.00	30.50	7.00	35.50	7.50	33.00	8.00	23.00	7.50	13.00	5.00		20.00	12.25	27.00	10.00	50.25	8.00	23.75	5.25	37.75	9.00	40.25	7.25	18.00	8.00	23.00	8.00		40.00	17.25	29.50	12.25	40.00	8.00	27.00	6.00	24.75	4.75	31.60	6.25	12.00	5.60	15.00	6.50	Total .....	442.25	201.25	443.00	200.50	503.75	92.50	483.25	91.00	443.00	100.25	456.00	90.00	312.25	108.75	279.00	102.25	Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	Lowest .....	40.00	617.38	17.25	43.12	50.25	775.59	0.50	47.50	42.25	652.11	9.00	45.00	32.00	403.01	8.75	43.75	Average .....	19.00	293.26	8.00	20.00	21.00	324.13	1.25	6.25	20.75	320.27	4.25	21.25	12.00	185.21	4.50	22.50		29.50	453.32	13.30	33.47	33.08	510.58	6.11	90.55	29.97	462.57	6.64	33.20	19.70	304.06	7.93	25.15	Tests above average.....	15		17		13		18		16		16		16		17		Tests below average.....	14		13		17		12		14		14		14		13																																																				
	32.25	14.00	19.00	6.50	43.00	8.00	27.50	6.50	25.50	4.50	24.50	5.00	22.25	8.50	20.00	8.25		25.00	10.00	26.25	13.25	21.00	3.00	33.00	8.00	24.50	7.00	33.50	7.75	12.25	7.60	10.75	5.25		20.00	11.00	27.25	15.50	32.00	6.75	38.00	6.50	27.00	5.75	28.75	6.75	32.25	7.60	25.00	7.00		34.00	13.00	28.75	12.25	43.00	9.50	25.00	1.25	42.25	8.50	30.00	5.50	22.25	6.00	13.50	7.00		31.00	14.75	31.25	17.00	30.00	5.25	35.00	7.00	23.50	7.00	31.75	6.60	19.00	7.00	18.50	8.00		26.25	9.25	29.00	10.00	28.00	7.00	32.00	6.00	20.75	4.50	24.75	4.75	16.50	8.00	23.25	7.50		33.00	14.25	30.50	14.25	29.50	2.75	27.00	3.00	34.50	7.75	36.75	8.00	29.50	8.25	21.00	5.50		33.00	15.00	36.75	14.50	22.00	6.00	27.50	2.00	25.50	6.00	34.25	7.75	24.00	8.75	12.00	5.00		21.25	10.50	35.75	17.00	39.00	7.00	30.50	7.00	35.50	7.50	33.00	8.00	23.00	7.50	13.00	5.00		20.00	12.25	27.00	10.00	50.25	8.00	23.75	5.25	37.75	9.00	40.25	7.25	18.00	8.00	23.00	8.00		40.00	17.25	29.50	12.25	40.00	8.00	27.00	6.00	24.75	4.75	31.60	6.25	12.00	5.60	15.00	6.50	Total .....	442.25	201.25	443.00	200.50	503.75	92.50	483.25	91.00	443.00	100.25	456.00	90.00	312.25	108.75	279.00	102.25	Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	Lowest .....	40.00	617.38	17.25	43.12	50.25	775.59	0.50	47.50	42.25	652.11	9.00	45.00	32.00	403.01	8.75	43.75	Average .....	19.00	293.26	8.00	20.00	21.00	324.13	1.25	6.25	20.75	320.27	4.25	21.25	12.00	185.21	4.50	22.50		29.50	453.32	13.30	33.47	33.08	510.58	6.11	90.55	29.97	462.57	6.64	33.20	19.70	304.06	7.93	25.15	Tests above average.....	15		17		13		18		16		16		16		17		Tests below average.....	14		13		17		12		14		14		14		13																																																																					
	25.00	10.00	26.25	13.25	21.00	3.00	33.00	8.00	24.50	7.00	33.50	7.75	12.25	7.60	10.75	5.25		20.00	11.00	27.25	15.50	32.00	6.75	38.00	6.50	27.00	5.75	28.75	6.75	32.25	7.60	25.00	7.00		34.00	13.00	28.75	12.25	43.00	9.50	25.00	1.25	42.25	8.50	30.00	5.50	22.25	6.00	13.50	7.00		31.00	14.75	31.25	17.00	30.00	5.25	35.00	7.00	23.50	7.00	31.75	6.60	19.00	7.00	18.50	8.00		26.25	9.25	29.00	10.00	28.00	7.00	32.00	6.00	20.75	4.50	24.75	4.75	16.50	8.00	23.25	7.50		33.00	14.25	30.50	14.25	29.50	2.75	27.00	3.00	34.50	7.75	36.75	8.00	29.50	8.25	21.00	5.50		33.00	15.00	36.75	14.50	22.00	6.00	27.50	2.00	25.50	6.00	34.25	7.75	24.00	8.75	12.00	5.00		21.25	10.50	35.75	17.00	39.00	7.00	30.50	7.00	35.50	7.50	33.00	8.00	23.00	7.50	13.00	5.00		20.00	12.25	27.00	10.00	50.25	8.00	23.75	5.25	37.75	9.00	40.25	7.25	18.00	8.00	23.00	8.00		40.00	17.25	29.50	12.25	40.00	8.00	27.00	6.00	24.75	4.75	31.60	6.25	12.00	5.60	15.00	6.50	Total .....	442.25	201.25	443.00	200.50	503.75	92.50	483.25	91.00	443.00	100.25	456.00	90.00	312.25	108.75	279.00	102.25	Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	Lowest .....	40.00	617.38	17.25	43.12	50.25	775.59	0.50	47.50	42.25	652.11	9.00	45.00	32.00	403.01	8.75	43.75	Average .....	19.00	293.26	8.00	20.00	21.00	324.13	1.25	6.25	20.75	320.27	4.25	21.25	12.00	185.21	4.50	22.50		29.50	453.32	13.30	33.47	33.08	510.58	6.11	90.55	29.97	462.57	6.64	33.20	19.70	304.06	7.93	25.15	Tests above average.....	15		17		13		18		16		16		16		17		Tests below average.....	14		13		17		12		14		14		14		13																																																																																						
	20.00	11.00	27.25	15.50	32.00	6.75	38.00	6.50	27.00	5.75	28.75	6.75	32.25	7.60	25.00	7.00		34.00	13.00	28.75	12.25	43.00	9.50	25.00	1.25	42.25	8.50	30.00	5.50	22.25	6.00	13.50	7.00		31.00	14.75	31.25	17.00	30.00	5.25	35.00	7.00	23.50	7.00	31.75	6.60	19.00	7.00	18.50	8.00		26.25	9.25	29.00	10.00	28.00	7.00	32.00	6.00	20.75	4.50	24.75	4.75	16.50	8.00	23.25	7.50		33.00	14.25	30.50	14.25	29.50	2.75	27.00	3.00	34.50	7.75	36.75	8.00	29.50	8.25	21.00	5.50		33.00	15.00	36.75	14.50	22.00	6.00	27.50	2.00	25.50	6.00	34.25	7.75	24.00	8.75	12.00	5.00		21.25	10.50	35.75	17.00	39.00	7.00	30.50	7.00	35.50	7.50	33.00	8.00	23.00	7.50	13.00	5.00		20.00	12.25	27.00	10.00	50.25	8.00	23.75	5.25	37.75	9.00	40.25	7.25	18.00	8.00	23.00	8.00		40.00	17.25	29.50	12.25	40.00	8.00	27.00	6.00	24.75	4.75	31.60	6.25	12.00	5.60	15.00	6.50	Total .....	442.25	201.25	443.00	200.50	503.75	92.50	483.25	91.00	443.00	100.25	456.00	90.00	312.25	108.75	279.00	102.25	Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	Lowest .....	40.00	617.38	17.25	43.12	50.25	775.59	0.50	47.50	42.25	652.11	9.00	45.00	32.00	403.01	8.75	43.75	Average .....	19.00	293.26	8.00	20.00	21.00	324.13	1.25	6.25	20.75	320.27	4.25	21.25	12.00	185.21	4.50	22.50		29.50	453.32	13.30	33.47	33.08	510.58	6.11	90.55	29.97	462.57	6.64	33.20	19.70	304.06	7.93	25.15	Tests above average.....	15		17		13		18		16		16		16		17		Tests below average.....	14		13		17		12		14		14		14		13																																																																																																							
	34.00	13.00	28.75	12.25	43.00	9.50	25.00	1.25	42.25	8.50	30.00	5.50	22.25	6.00	13.50	7.00		31.00	14.75	31.25	17.00	30.00	5.25	35.00	7.00	23.50	7.00	31.75	6.60	19.00	7.00	18.50	8.00		26.25	9.25	29.00	10.00	28.00	7.00	32.00	6.00	20.75	4.50	24.75	4.75	16.50	8.00	23.25	7.50		33.00	14.25	30.50	14.25	29.50	2.75	27.00	3.00	34.50	7.75	36.75	8.00	29.50	8.25	21.00	5.50		33.00	15.00	36.75	14.50	22.00	6.00	27.50	2.00	25.50	6.00	34.25	7.75	24.00	8.75	12.00	5.00		21.25	10.50	35.75	17.00	39.00	7.00	30.50	7.00	35.50	7.50	33.00	8.00	23.00	7.50	13.00	5.00		20.00	12.25	27.00	10.00	50.25	8.00	23.75	5.25	37.75	9.00	40.25	7.25	18.00	8.00	23.00	8.00		40.00	17.25	29.50	12.25	40.00	8.00	27.00	6.00	24.75	4.75	31.60	6.25	12.00	5.60	15.00	6.50	Total .....	442.25	201.25	443.00	200.50	503.75	92.50	483.25	91.00	443.00	100.25	456.00	90.00	312.25	108.75	279.00	102.25	Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	Lowest .....	40.00	617.38	17.25	43.12	50.25	775.59	0.50	47.50	42.25	652.11	9.00	45.00	32.00	403.01	8.75	43.75	Average .....	19.00	293.26	8.00	20.00	21.00	324.13	1.25	6.25	20.75	320.27	4.25	21.25	12.00	185.21	4.50	22.50		29.50	453.32	13.30	33.47	33.08	510.58	6.11	90.55	29.97	462.57	6.64	33.20	19.70	304.06	7.93	25.15	Tests above average.....	15		17		13		18		16		16		16		17		Tests below average.....	14		13		17		12		14		14		14		13																																																																																																																								
	31.00	14.75	31.25	17.00	30.00	5.25	35.00	7.00	23.50	7.00	31.75	6.60	19.00	7.00	18.50	8.00		26.25	9.25	29.00	10.00	28.00	7.00	32.00	6.00	20.75	4.50	24.75	4.75	16.50	8.00	23.25	7.50		33.00	14.25	30.50	14.25	29.50	2.75	27.00	3.00	34.50	7.75	36.75	8.00	29.50	8.25	21.00	5.50		33.00	15.00	36.75	14.50	22.00	6.00	27.50	2.00	25.50	6.00	34.25	7.75	24.00	8.75	12.00	5.00		21.25	10.50	35.75	17.00	39.00	7.00	30.50	7.00	35.50	7.50	33.00	8.00	23.00	7.50	13.00	5.00		20.00	12.25	27.00	10.00	50.25	8.00	23.75	5.25	37.75	9.00	40.25	7.25	18.00	8.00	23.00	8.00		40.00	17.25	29.50	12.25	40.00	8.00	27.00	6.00	24.75	4.75	31.60	6.25	12.00	5.60	15.00	6.50	Total .....	442.25	201.25	443.00	200.50	503.75	92.50	483.25	91.00	443.00	100.25	456.00	90.00	312.25	108.75	279.00	102.25	Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	Lowest .....	40.00	617.38	17.25	43.12	50.25	775.59	0.50	47.50	42.25	652.11	9.00	45.00	32.00	403.01	8.75	43.75	Average .....	19.00	293.26	8.00	20.00	21.00	324.13	1.25	6.25	20.75	320.27	4.25	21.25	12.00	185.21	4.50	22.50		29.50	453.32	13.30	33.47	33.08	510.58	6.11	90.55	29.97	462.57	6.64	33.20	19.70	304.06	7.93	25.15	Tests above average.....	15		17		13		18		16		16		16		17		Tests below average.....	14		13		17		12		14		14		14		13																																																																																																																																									
	26.25	9.25	29.00	10.00	28.00	7.00	32.00	6.00	20.75	4.50	24.75	4.75	16.50	8.00	23.25	7.50		33.00	14.25	30.50	14.25	29.50	2.75	27.00	3.00	34.50	7.75	36.75	8.00	29.50	8.25	21.00	5.50		33.00	15.00	36.75	14.50	22.00	6.00	27.50	2.00	25.50	6.00	34.25	7.75	24.00	8.75	12.00	5.00		21.25	10.50	35.75	17.00	39.00	7.00	30.50	7.00	35.50	7.50	33.00	8.00	23.00	7.50	13.00	5.00		20.00	12.25	27.00	10.00	50.25	8.00	23.75	5.25	37.75	9.00	40.25	7.25	18.00	8.00	23.00	8.00		40.00	17.25	29.50	12.25	40.00	8.00	27.00	6.00	24.75	4.75	31.60	6.25	12.00	5.60	15.00	6.50	Total .....	442.25	201.25	443.00	200.50	503.75	92.50	483.25	91.00	443.00	100.25	456.00	90.00	312.25	108.75	279.00	102.25	Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	Lowest .....	40.00	617.38	17.25	43.12	50.25	775.59	0.50	47.50	42.25	652.11	9.00	45.00	32.00	403.01	8.75	43.75	Average .....	19.00	293.26	8.00	20.00	21.00	324.13	1.25	6.25	20.75	320.27	4.25	21.25	12.00	185.21	4.50	22.50		29.50	453.32	13.30	33.47	33.08	510.58	6.11	90.55	29.97	462.57	6.64	33.20	19.70	304.06	7.93	25.15	Tests above average.....	15		17		13		18		16		16		16		17		Tests below average.....	14		13		17		12		14		14		14		13																																																																																																																																																										
	33.00	14.25	30.50	14.25	29.50	2.75	27.00	3.00	34.50	7.75	36.75	8.00	29.50	8.25	21.00	5.50		33.00	15.00	36.75	14.50	22.00	6.00	27.50	2.00	25.50	6.00	34.25	7.75	24.00	8.75	12.00	5.00		21.25	10.50	35.75	17.00	39.00	7.00	30.50	7.00	35.50	7.50	33.00	8.00	23.00	7.50	13.00	5.00		20.00	12.25	27.00	10.00	50.25	8.00	23.75	5.25	37.75	9.00	40.25	7.25	18.00	8.00	23.00	8.00		40.00	17.25	29.50	12.25	40.00	8.00	27.00	6.00	24.75	4.75	31.60	6.25	12.00	5.60	15.00	6.50	Total .....	442.25	201.25	443.00	200.50	503.75	92.50	483.25	91.00	443.00	100.25	456.00	90.00	312.25	108.75	279.00	102.25	Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	Lowest .....	40.00	617.38	17.25	43.12	50.25	775.59	0.50	47.50	42.25	652.11	9.00	45.00	32.00	403.01	8.75	43.75	Average .....	19.00	293.26	8.00	20.00	21.00	324.13	1.25	6.25	20.75	320.27	4.25	21.25	12.00	185.21	4.50	22.50		29.50	453.32	13.30	33.47	33.08	510.58	6.11	90.55	29.97	462.57	6.64	33.20	19.70	304.06	7.93	25.15	Tests above average.....	15		17		13		18		16		16		16		17		Tests below average.....	14		13		17		12		14		14		14		13																																																																																																																																																																											
	33.00	15.00	36.75	14.50	22.00	6.00	27.50	2.00	25.50	6.00	34.25	7.75	24.00	8.75	12.00	5.00		21.25	10.50	35.75	17.00	39.00	7.00	30.50	7.00	35.50	7.50	33.00	8.00	23.00	7.50	13.00	5.00		20.00	12.25	27.00	10.00	50.25	8.00	23.75	5.25	37.75	9.00	40.25	7.25	18.00	8.00	23.00	8.00		40.00	17.25	29.50	12.25	40.00	8.00	27.00	6.00	24.75	4.75	31.60	6.25	12.00	5.60	15.00	6.50	Total .....	442.25	201.25	443.00	200.50	503.75	92.50	483.25	91.00	443.00	100.25	456.00	90.00	312.25	108.75	279.00	102.25	Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	Lowest .....	40.00	617.38	17.25	43.12	50.25	775.59	0.50	47.50	42.25	652.11	9.00	45.00	32.00	403.01	8.75	43.75	Average .....	19.00	293.26	8.00	20.00	21.00	324.13	1.25	6.25	20.75	320.27	4.25	21.25	12.00	185.21	4.50	22.50		29.50	453.32	13.30	33.47	33.08	510.58	6.11	90.55	29.97	462.57	6.64	33.20	19.70	304.06	7.93	25.15	Tests above average.....	15		17		13		18		16		16		16		17		Tests below average.....	14		13		17		12		14		14		14		13																																																																																																																																																																																												
	21.25	10.50	35.75	17.00	39.00	7.00	30.50	7.00	35.50	7.50	33.00	8.00	23.00	7.50	13.00	5.00		20.00	12.25	27.00	10.00	50.25	8.00	23.75	5.25	37.75	9.00	40.25	7.25	18.00	8.00	23.00	8.00		40.00	17.25	29.50	12.25	40.00	8.00	27.00	6.00	24.75	4.75	31.60	6.25	12.00	5.60	15.00	6.50	Total .....	442.25	201.25	443.00	200.50	503.75	92.50	483.25	91.00	443.00	100.25	456.00	90.00	312.25	108.75	279.00	102.25	Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	Lowest .....	40.00	617.38	17.25	43.12	50.25	775.59	0.50	47.50	42.25	652.11	9.00	45.00	32.00	403.01	8.75	43.75	Average .....	19.00	293.26	8.00	20.00	21.00	324.13	1.25	6.25	20.75	320.27	4.25	21.25	12.00	185.21	4.50	22.50		29.50	453.32	13.30	33.47	33.08	510.58	6.11	90.55	29.97	462.57	6.64	33.20	19.70	304.06	7.93	25.15	Tests above average.....	15		17		13		18		16		16		16		17		Tests below average.....	14		13		17		12		14		14		14		13																																																																																																																																																																																																													
	20.00	12.25	27.00	10.00	50.25	8.00	23.75	5.25	37.75	9.00	40.25	7.25	18.00	8.00	23.00	8.00		40.00	17.25	29.50	12.25	40.00	8.00	27.00	6.00	24.75	4.75	31.60	6.25	12.00	5.60	15.00	6.50	Total .....	442.25	201.25	443.00	200.50	503.75	92.50	483.25	91.00	443.00	100.25	456.00	90.00	312.25	108.75	279.00	102.25	Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	Lowest .....	40.00	617.38	17.25	43.12	50.25	775.59	0.50	47.50	42.25	652.11	9.00	45.00	32.00	403.01	8.75	43.75	Average .....	19.00	293.26	8.00	20.00	21.00	324.13	1.25	6.25	20.75	320.27	4.25	21.25	12.00	185.21	4.50	22.50		29.50	453.32	13.30	33.47	33.08	510.58	6.11	90.55	29.97	462.57	6.64	33.20	19.70	304.06	7.93	25.15	Tests above average.....	15		17		13		18		16		16		16		17		Tests below average.....	14		13		17		12		14		14		14		13																																																																																																																																																																																																																														
	40.00	17.25	29.50	12.25	40.00	8.00	27.00	6.00	24.75	4.75	31.60	6.25	12.00	5.60	15.00	6.50	Total .....	442.25	201.25	443.00	200.50	503.75	92.50	483.25	91.00	443.00	100.25	456.00	90.00	312.25	108.75	279.00	102.25	Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	Lowest .....	40.00	617.38	17.25	43.12	50.25	775.59	0.50	47.50	42.25	652.11	9.00	45.00	32.00	403.01	8.75	43.75	Average .....	19.00	293.26	8.00	20.00	21.00	324.13	1.25	6.25	20.75	320.27	4.25	21.25	12.00	185.21	4.50	22.50		29.50	453.32	13.30	33.47	33.08	510.58	6.11	90.55	29.97	462.57	6.64	33.20	19.70	304.06	7.93	25.15	Tests above average.....	15		17		13		18		16		16		16		17		Tests below average.....	14		13		17		12		14		14		14		13																																																																																																																																																																																																																																															
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Lowest .....	40.00	617.38	17.25	43.12	50.25	775.59	0.50	47.50	42.25	652.11	9.00	45.00	32.00	403.01	8.75	43.75																																																																																																																																																																																																																																																																																																																																																																																						
Average .....	19.00	293.26	8.00	20.00	21.00	324.13	1.25	6.25	20.75	320.27	4.25	21.25	12.00	185.21	4.50	22.50																																																																																																																																																																																																																																																																																																																																																																																						
	29.50	453.32	13.30	33.47	33.08	510.58	6.11	90.55	29.97	462.57	6.64	33.20	19.70	304.06	7.93	25.15																																																																																																																																																																																																																																																																																																																																																																																						
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Catalogue number of samples..	65. HIP.				66. SHOULDER.				66. SIDE.				66. SIDE.																																																																																																																																																																																																																																																																																																																																																																																									
Length of fiber tested .....	—				—				1 centimeter.				2 centimeters.																																																																																																																																																																																																																																																																																																																																																																																									
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.																																																																																																																																																																																																																																																																																																																																																																																						
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Actual measurement in grams and millimeters.	28.50	8.00	20.00	6.75	19.75	4.75	16.75	2.00	21.50	5.00	30.00	5.00	16.50	8.50	28.00	10.25		20.00	8.00	19.00	8.50	21.25	7.25	27.75	5.75	13.00	4.75	31.00	5.00	18.75	9.50	22.00	8.00		36.00	8.00	33.25	8.00	16.50	2.25	18.00	6.00	21.00	5.00	25.25	5.00	29.00	0.00	32.50	0.00		32.00	8.00	37.75	8.00	19.00	5.00	19.50	4.50	20.00	4.00	31.00	4.75	23.00	0.25	29.25	8.25		29.50	4.00	33.50	6.00	10.25	6.50	23.25	7.50	14.50	4.00	23.50	5.00	22.50	8.75	37.00	10.25		26.00	8.00	29.00	7.00	23.50	7.25	25.25	4.00	14.00	4.25	21.00	0.00	14.00	6.00	34.75	8.00		20.00	2.50	22.00	1.50	17.25	6.50	18.75	6.50	32.00	5.75	21.00	5.50	19.00	7.00	23.50	10.00		24.50	8.50	19.75	4.50	12.00	6.00	26.25	7.00	32.50	5.00	26.25	4.25	20.50	9.50	19.50	7.50		42.50	8.25	27.00	5.00	17.25	6.50	20.25	4.75	18.50	4.00	20.00	3.75	13.00	7.00	30.00	8.00		46.75	9.00	27.00	5.50	31.00	8.50	17.00	4.50	20.25	4.75	36.00	5.00	16.25	8.50	22.50	7.25		19.75	2.75	27.00	7.00	22.25	6.50	23.00	4.00	38.50	5.00	23.25	5.00	26.50	0.50	27.50	8.25		31.50	7.00	24.00	2.50	29.25	7.00	12.00	3.50	27.50	5.50	20.00	4.50	11.50	7.50	39.75	9.00		22.00	8.00	36.00	7.00	13.50	5.50	22.75	8.75	26.00	4.00	19.75	4.25	34.00	10.25	33.00	7.50		35.00	8.25	32.00	8.25	20.50	6.75	29.25	7.00	18.50	4.50	36.00	6.00	17.75	8.50	28.00	9.50		18.50	4.00	20.00	1.50	21.50	7.25	17.50	8.25	20.00	6.00	20.00	5.75	17.75	6.00	28.00	8.50	Total .....	432.50	97.25	407.25	82.00	305.75	93.50	321.25	74.00	330.25	71.50	388.00	74.75	300.00	124.75	445.25	129.25	Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	Lowest .....	46.75	721.57	9.00	45.00	31.00	478.47	3.50	42.60	36.00	555.65	0.00	60.00	30.75	913.62	10.25	81.25	Average .....	18.60	285.54	1.50	7.50	12.00	183.22	2.00	10.00	13.00	200.65	3.75	37.50	11.50	177.50	6.00	30.00		27.99	532.01	6.97	29.85	20.90	322.58	5.58	27.90	23.87	368.42	4.37	48.70	24.84	383.40	8.40	42.30	Tests above average.....	14		18		13		17		13		17		14		17		Tests below average.....	16		12		17		13		17		13		16		13	
	20.00	8.00	19.00	8.50	21.25	7.25	27.75	5.75	13.00	4.75	31.00	5.00	18.75	9.50	22.00	8.00		36.00	8.00	33.25	8.00	16.50	2.25	18.00	6.00	21.00	5.00	25.25	5.00	29.00	0.00	32.50	0.00		32.00	8.00	37.75	8.00	19.00	5.00	19.50	4.50	20.00	4.00	31.00	4.75	23.00	0.25	29.25	8.25		29.50	4.00	33.50	6.00	10.25	6.50	23.25	7.50	14.50	4.00	23.50	5.00	22.50	8.75	37.00	10.25		26.00	8.00	29.00	7.00	23.50	7.25	25.25	4.00	14.00	4.25	21.00	0.00	14.00	6.00	34.75	8.00		20.00	2.50	22.00	1.50	17.25	6.50	18.75	6.50	32.00	5.75	21.00	5.50	19.00	7.00	23.50	10.00		24.50	8.50	19.75	4.50	12.00	6.00	26.25	7.00	32.50	5.00	26.25	4.25	20.50	9.50	19.50	7.50		42.50	8.25	27.00	5.00	17.25	6.50	20.25	4.75	18.50	4.00	20.00	3.75	13.00	7.00	30.00	8.00		46.75	9.00	27.00	5.50	31.00	8.50	17.00	4.50	20.25	4.75	36.00	5.00	16.25	8.50	22.50	7.25		19.75	2.75	27.00	7.00	22.25	6.50	23.00	4.00	38.50	5.00	23.25	5.00	26.50	0.50	27.50	8.25		31.50	7.00	24.00	2.50	29.25	7.00	12.00	3.50	27.50	5.50	20.00	4.50	11.50	7.50	39.75	9.00		22.00	8.00	36.00	7.00	13.50	5.50	22.75	8.75	26.00	4.00	19.75	4.25	34.00	10.25	33.00	7.50		35.00	8.25	32.00	8.25	20.50	6.75	29.25	7.00	18.50	4.50	36.00	6.00	17.75	8.50	28.00	9.50		18.50	4.00	20.00	1.50	21.50	7.25	17.50	8.25	20.00	6.00	20.00	5.75	17.75	6.00	28.00	8.50	Total .....	432.50	97.25	407.25	82.00	305.75	93.50	321.25	74.00	330.25	71.50	388.00	74.75	300.00	124.75	445.25	129.25	Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	Lowest .....	46.75	721.57	9.00	45.00	31.00	478.47	3.50	42.60	36.00	555.65	0.00	60.00	30.75	913.62	10.25	81.25	Average .....	18.60	285.54	1.50	7.50	12.00	183.22	2.00	10.00	13.00	200.65	3.75	37.50	11.50	177.50	6.00	30.00		27.99	532.01	6.97	29.85	20.90	322.58	5.58	27.90	23.87	368.42	4.37	48.70	24.84	383.40	8.40	42.30	Tests above average.....	14		18		13		17		13		17		14		17		Tests below average.....	16		12		17		13		17		13		16		13																		
	36.00	8.00	33.25	8.00	16.50	2.25	18.00	6.00	21.00	5.00	25.25	5.00	29.00	0.00	32.50	0.00		32.00	8.00	37.75	8.00	19.00	5.00	19.50	4.50	20.00	4.00	31.00	4.75	23.00	0.25	29.25	8.25		29.50	4.00	33.50	6.00	10.25	6.50	23.25	7.50	14.50	4.00	23.50	5.00	22.50	8.75	37.00	10.25		26.00	8.00	29.00	7.00	23.50	7.25	25.25	4.00	14.00	4.25	21.00	0.00	14.00	6.00	34.75	8.00		20.00	2.50	22.00	1.50	17.25	6.50	18.75	6.50	32.00	5.75	21.00	5.50	19.00	7.00	23.50	10.00		24.50	8.50	19.75	4.50	12.00	6.00	26.25	7.00	32.50	5.00	26.25	4.25	20.50	9.50	19.50	7.50		42.50	8.25	27.00	5.00	17.25	6.50	20.25	4.75	18.50	4.00	20.00	3.75	13.00	7.00	30.00	8.00		46.75	9.00	27.00	5.50	31.00	8.50	17.00	4.50	20.25	4.75	36.00	5.00	16.25	8.50	22.50	7.25		19.75	2.75	27.00	7.00	22.25	6.50	23.00	4.00	38.50	5.00	23.25	5.00	26.50	0.50	27.50	8.25		31.50	7.00	24.00	2.50	29.25	7.00	12.00	3.50	27.50	5.50	20.00	4.50	11.50	7.50	39.75	9.00		22.00	8.00	36.00	7.00	13.50	5.50	22.75	8.75	26.00	4.00	19.75	4.25	34.00	10.25	33.00	7.50		35.00	8.25	32.00	8.25	20.50	6.75	29.25	7.00	18.50	4.50	36.00	6.00	17.75	8.50	28.00	9.50		18.50	4.00	20.00	1.50	21.50	7.25	17.50	8.25	20.00	6.00	20.00	5.75	17.75	6.00	28.00	8.50	Total .....	432.50	97.25	407.25	82.00	305.75	93.50	321.25	74.00	330.25	71.50	388.00	74.75	300.00	124.75	445.25	129.25	Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	Lowest .....	46.75	721.57	9.00	45.00	31.00	478.47	3.50	42.60	36.00	555.65	0.00	60.00	30.75	913.62	10.25	81.25	Average .....	18.60	285.54	1.50	7.50	12.00	183.22	2.00	10.00	13.00	200.65	3.75	37.50	11.50	177.50	6.00	30.00		27.99	532.01	6.97	29.85	20.90	322.58	5.58	27.90	23.87	368.42	4.37	48.70	24.84	383.40	8.40	42.30	Tests above average.....	14		18		13		17		13		17		14		17		Tests below average.....	16		12		17		13		17		13		16		13																																			
	32.00	8.00	37.75	8.00	19.00	5.00	19.50	4.50	20.00	4.00	31.00	4.75	23.00	0.25	29.25	8.25		29.50	4.00	33.50	6.00	10.25	6.50	23.25	7.50	14.50	4.00	23.50	5.00	22.50	8.75	37.00	10.25		26.00	8.00	29.00	7.00	23.50	7.25	25.25	4.00	14.00	4.25	21.00	0.00	14.00	6.00	34.75	8.00		20.00	2.50	22.00	1.50	17.25	6.50	18.75	6.50	32.00	5.75	21.00	5.50	19.00	7.00	23.50	10.00		24.50	8.50	19.75	4.50	12.00	6.00	26.25	7.00	32.50	5.00	26.25	4.25	20.50	9.50	19.50	7.50		42.50	8.25	27.00	5.00	17.25	6.50	20.25	4.75	18.50	4.00	20.00	3.75	13.00	7.00	30.00	8.00		46.75	9.00	27.00	5.50	31.00	8.50	17.00	4.50	20.25	4.75	36.00	5.00	16.25	8.50	22.50	7.25		19.75	2.75	27.00	7.00	22.25	6.50	23.00	4.00	38.50	5.00	23.25	5.00	26.50	0.50	27.50	8.25		31.50	7.00	24.00	2.50	29.25	7.00	12.00	3.50	27.50	5.50	20.00	4.50	11.50	7.50	39.75	9.00		22.00	8.00	36.00	7.00	13.50	5.50	22.75	8.75	26.00	4.00	19.75	4.25	34.00	10.25	33.00	7.50		35.00	8.25	32.00	8.25	20.50	6.75	29.25	7.00	18.50	4.50	36.00	6.00	17.75	8.50	28.00	9.50		18.50	4.00	20.00	1.50	21.50	7.25	17.50	8.25	20.00	6.00	20.00	5.75	17.75	6.00	28.00	8.50	Total .....	432.50	97.25	407.25	82.00	305.75	93.50	321.25	74.00	330.25	71.50	388.00	74.75	300.00	124.75	445.25	129.25	Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	Lowest .....	46.75	721.57	9.00	45.00	31.00	478.47	3.50	42.60	36.00	555.65	0.00	60.00	30.75	913.62	10.25	81.25	Average .....	18.60	285.54	1.50	7.50	12.00	183.22	2.00	10.00	13.00	200.65	3.75	37.50	11.50	177.50	6.00	30.00		27.99	532.01	6.97	29.85	20.90	322.58	5.58	27.90	23.87	368.42	4.37	48.70	24.84	383.40	8.40	42.30	Tests above average.....	14		18		13		17		13		17		14		17		Tests below average.....	16		12		17		13		17		13		16		13																																																				
	29.50	4.00	33.50	6.00	10.25	6.50	23.25	7.50	14.50	4.00	23.50	5.00	22.50	8.75	37.00	10.25		26.00	8.00	29.00	7.00	23.50	7.25	25.25	4.00	14.00	4.25	21.00	0.00	14.00	6.00	34.75	8.00		20.00	2.50	22.00	1.50	17.25	6.50	18.75	6.50	32.00	5.75	21.00	5.50	19.00	7.00	23.50	10.00		24.50	8.50	19.75	4.50	12.00	6.00	26.25	7.00	32.50	5.00	26.25	4.25	20.50	9.50	19.50	7.50		42.50	8.25	27.00	5.00	17.25	6.50	20.25	4.75	18.50	4.00	20.00	3.75	13.00	7.00	30.00	8.00		46.75	9.00	27.00	5.50	31.00	8.50	17.00	4.50	20.25	4.75	36.00	5.00	16.25	8.50	22.50	7.25		19.75	2.75	27.00	7.00	22.25	6.50	23.00	4.00	38.50	5.00	23.25	5.00	26.50	0.50	27.50	8.25		31.50	7.00	24.00	2.50	29.25	7.00	12.00	3.50	27.50	5.50	20.00	4.50	11.50	7.50	39.75	9.00		22.00	8.00	36.00	7.00	13.50	5.50	22.75	8.75	26.00	4.00	19.75	4.25	34.00	10.25	33.00	7.50		35.00	8.25	32.00	8.25	20.50	6.75	29.25	7.00	18.50	4.50	36.00	6.00	17.75	8.50	28.00	9.50		18.50	4.00	20.00	1.50	21.50	7.25	17.50	8.25	20.00	6.00	20.00	5.75	17.75	6.00	28.00	8.50	Total .....	432.50	97.25	407.25	82.00	305.75	93.50	321.25	74.00	330.25	71.50	388.00	74.75	300.00	124.75	445.25	129.25	Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	Lowest .....	46.75	721.57	9.00	45.00	31.00	478.47	3.50	42.60	36.00	555.65	0.00	60.00	30.75	913.62	10.25	81.25	Average .....	18.60	285.54	1.50	7.50	12.00	183.22	2.00	10.00	13.00	200.65	3.75	37.50	11.50	177.50	6.00	30.00		27.99	532.01	6.97	29.85	20.90	322.58	5.58	27.90	23.87	368.42	4.37	48.70	24.84	383.40	8.40	42.30	Tests above average.....	14		18		13		17		13		17		14		17		Tests below average.....	16		12		17		13		17		13		16		13																																																																					
	26.00	8.00	29.00	7.00	23.50	7.25	25.25	4.00	14.00	4.25	21.00	0.00	14.00	6.00	34.75	8.00		20.00	2.50	22.00	1.50	17.25	6.50	18.75	6.50	32.00	5.75	21.00	5.50	19.00	7.00	23.50	10.00		24.50	8.50	19.75	4.50	12.00	6.00	26.25	7.00	32.50	5.00	26.25	4.25	20.50	9.50	19.50	7.50		42.50	8.25	27.00	5.00	17.25	6.50	20.25	4.75	18.50	4.00	20.00	3.75	13.00	7.00	30.00	8.00		46.75	9.00	27.00	5.50	31.00	8.50	17.00	4.50	20.25	4.75	36.00	5.00	16.25	8.50	22.50	7.25		19.75	2.75	27.00	7.00	22.25	6.50	23.00	4.00	38.50	5.00	23.25	5.00	26.50	0.50	27.50	8.25		31.50	7.00	24.00	2.50	29.25	7.00	12.00	3.50	27.50	5.50	20.00	4.50	11.50	7.50	39.75	9.00		22.00	8.00	36.00	7.00	13.50	5.50	22.75	8.75	26.00	4.00	19.75	4.25	34.00	10.25	33.00	7.50		35.00	8.25	32.00	8.25	20.50	6.75	29.25	7.00	18.50	4.50	36.00	6.00	17.75	8.50	28.00	9.50		18.50	4.00	20.00	1.50	21.50	7.25	17.50	8.25	20.00	6.00	20.00	5.75	17.75	6.00	28.00	8.50	Total .....	432.50	97.25	407.25	82.00	305.75	93.50	321.25	74.00	330.25	71.50	388.00	74.75	300.00	124.75	445.25	129.25	Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	Lowest .....	46.75	721.57	9.00	45.00	31.00	478.47	3.50	42.60	36.00	555.65	0.00	60.00	30.75	913.62	10.25	81.25	Average .....	18.60	285.54	1.50	7.50	12.00	183.22	2.00	10.00	13.00	200.65	3.75	37.50	11.50	177.50	6.00	30.00		27.99	532.01	6.97	29.85	20.90	322.58	5.58	27.90	23.87	368.42	4.37	48.70	24.84	383.40	8.40	42.30	Tests above average.....	14		18		13		17		13		17		14		17		Tests below average.....	16		12		17		13		17		13		16		13																																																																																						
	20.00	2.50	22.00	1.50	17.25	6.50	18.75	6.50	32.00	5.75	21.00	5.50	19.00	7.00	23.50	10.00		24.50	8.50	19.75	4.50	12.00	6.00	26.25	7.00	32.50	5.00	26.25	4.25	20.50	9.50	19.50	7.50		42.50	8.25	27.00	5.00	17.25	6.50	20.25	4.75	18.50	4.00	20.00	3.75	13.00	7.00	30.00	8.00		46.75	9.00	27.00	5.50	31.00	8.50	17.00	4.50	20.25	4.75	36.00	5.00	16.25	8.50	22.50	7.25		19.75	2.75	27.00	7.00	22.25	6.50	23.00	4.00	38.50	5.00	23.25	5.00	26.50	0.50	27.50	8.25		31.50	7.00	24.00	2.50	29.25	7.00	12.00	3.50	27.50	5.50	20.00	4.50	11.50	7.50	39.75	9.00		22.00	8.00	36.00	7.00	13.50	5.50	22.75	8.75	26.00	4.00	19.75	4.25	34.00	10.25	33.00	7.50		35.00	8.25	32.00	8.25	20.50	6.75	29.25	7.00	18.50	4.50	36.00	6.00	17.75	8.50	28.00	9.50		18.50	4.00	20.00	1.50	21.50	7.25	17.50	8.25	20.00	6.00	20.00	5.75	17.75	6.00	28.00	8.50	Total .....	432.50	97.25	407.25	82.00	305.75	93.50	321.25	74.00	330.25	71.50	388.00	74.75	300.00	124.75	445.25	129.25	Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	Lowest .....	46.75	721.57	9.00	45.00	31.00	478.47	3.50	42.60	36.00	555.65	0.00	60.00	30.75	913.62	10.25	81.25	Average .....	18.60	285.54	1.50	7.50	12.00	183.22	2.00	10.00	13.00	200.65	3.75	37.50	11.50	177.50	6.00	30.00		27.99	532.01	6.97	29.85	20.90	322.58	5.58	27.90	23.87	368.42	4.37	48.70	24.84	383.40	8.40	42.30	Tests above average.....	14		18		13		17		13		17		14		17		Tests below average.....	16		12		17		13		17		13		16		13																																																																																																							
	24.50	8.50	19.75	4.50	12.00	6.00	26.25	7.00	32.50	5.00	26.25	4.25	20.50	9.50	19.50	7.50		42.50	8.25	27.00	5.00	17.25	6.50	20.25	4.75	18.50	4.00	20.00	3.75	13.00	7.00	30.00	8.00		46.75	9.00	27.00	5.50	31.00	8.50	17.00	4.50	20.25	4.75	36.00	5.00	16.25	8.50	22.50	7.25		19.75	2.75	27.00	7.00	22.25	6.50	23.00	4.00	38.50	5.00	23.25	5.00	26.50	0.50	27.50	8.25		31.50	7.00	24.00	2.50	29.25	7.00	12.00	3.50	27.50	5.50	20.00	4.50	11.50	7.50	39.75	9.00		22.00	8.00	36.00	7.00	13.50	5.50	22.75	8.75	26.00	4.00	19.75	4.25	34.00	10.25	33.00	7.50		35.00	8.25	32.00	8.25	20.50	6.75	29.25	7.00	18.50	4.50	36.00	6.00	17.75	8.50	28.00	9.50		18.50	4.00	20.00	1.50	21.50	7.25	17.50	8.25	20.00	6.00	20.00	5.75	17.75	6.00	28.00	8.50	Total .....	432.50	97.25	407.25	82.00	305.75	93.50	321.25	74.00	330.25	71.50	388.00	74.75	300.00	124.75	445.25	129.25	Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	Lowest .....	46.75	721.57	9.00	45.00	31.00	478.47	3.50	42.60	36.00	555.65	0.00	60.00	30.75	913.62	10.25	81.25	Average .....	18.60	285.54	1.50	7.50	12.00	183.22	2.00	10.00	13.00	200.65	3.75	37.50	11.50	177.50	6.00	30.00		27.99	532.01	6.97	29.85	20.90	322.58	5.58	27.90	23.87	368.42	4.37	48.70	24.84	383.40	8.40	42.30	Tests above average.....	14		18		13		17		13		17		14		17		Tests below average.....	16		12		17		13		17		13		16		13																																																																																																																								
	42.50	8.25	27.00	5.00	17.25	6.50	20.25	4.75	18.50	4.00	20.00	3.75	13.00	7.00	30.00	8.00		46.75	9.00	27.00	5.50	31.00	8.50	17.00	4.50	20.25	4.75	36.00	5.00	16.25	8.50	22.50	7.25		19.75	2.75	27.00	7.00	22.25	6.50	23.00	4.00	38.50	5.00	23.25	5.00	26.50	0.50	27.50	8.25		31.50	7.00	24.00	2.50	29.25	7.00	12.00	3.50	27.50	5.50	20.00	4.50	11.50	7.50	39.75	9.00		22.00	8.00	36.00	7.00	13.50	5.50	22.75	8.75	26.00	4.00	19.75	4.25	34.00	10.25	33.00	7.50		35.00	8.25	32.00	8.25	20.50	6.75	29.25	7.00	18.50	4.50	36.00	6.00	17.75	8.50	28.00	9.50		18.50	4.00	20.00	1.50	21.50	7.25	17.50	8.25	20.00	6.00	20.00	5.75	17.75	6.00	28.00	8.50	Total .....	432.50	97.25	407.25	82.00	305.75	93.50	321.25	74.00	330.25	71.50	388.00	74.75	300.00	124.75	445.25	129.25	Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	Lowest .....	46.75	721.57	9.00	45.00	31.00	478.47	3.50	42.60	36.00	555.65	0.00	60.00	30.75	913.62	10.25	81.25	Average .....	18.60	285.54	1.50	7.50	12.00	183.22	2.00	10.00	13.00	200.65	3.75	37.50	11.50	177.50	6.00	30.00		27.99	532.01	6.97	29.85	20.90	322.58	5.58	27.90	23.87	368.42	4.37	48.70	24.84	383.40	8.40	42.30	Tests above average.....	14		18		13		17		13		17		14		17		Tests below average.....	16		12		17		13		17		13		16		13																																																																																																																																									
	46.75	9.00	27.00	5.50	31.00	8.50	17.00	4.50	20.25	4.75	36.00	5.00	16.25	8.50	22.50	7.25		19.75	2.75	27.00	7.00	22.25	6.50	23.00	4.00	38.50	5.00	23.25	5.00	26.50	0.50	27.50	8.25		31.50	7.00	24.00	2.50	29.25	7.00	12.00	3.50	27.50	5.50	20.00	4.50	11.50	7.50	39.75	9.00		22.00	8.00	36.00	7.00	13.50	5.50	22.75	8.75	26.00	4.00	19.75	4.25	34.00	10.25	33.00	7.50		35.00	8.25	32.00	8.25	20.50	6.75	29.25	7.00	18.50	4.50	36.00	6.00	17.75	8.50	28.00	9.50		18.50	4.00	20.00	1.50	21.50	7.25	17.50	8.25	20.00	6.00	20.00	5.75	17.75	6.00	28.00	8.50	Total .....	432.50	97.25	407.25	82.00	305.75	93.50	321.25	74.00	330.25	71.50	388.00	74.75	300.00	124.75	445.25	129.25	Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	Lowest .....	46.75	721.57	9.00	45.00	31.00	478.47	3.50	42.60	36.00	555.65	0.00	60.00	30.75	913.62	10.25	81.25	Average .....	18.60	285.54	1.50	7.50	12.00	183.22	2.00	10.00	13.00	200.65	3.75	37.50	11.50	177.50	6.00	30.00		27.99	532.01	6.97	29.85	20.90	322.58	5.58	27.90	23.87	368.42	4.37	48.70	24.84	383.40	8.40	42.30	Tests above average.....	14		18		13		17		13		17		14		17		Tests below average.....	16		12		17		13		17		13		16		13																																																																																																																																																										
	19.75	2.75	27.00	7.00	22.25	6.50	23.00	4.00	38.50	5.00	23.25	5.00	26.50	0.50	27.50	8.25		31.50	7.00	24.00	2.50	29.25	7.00	12.00	3.50	27.50	5.50	20.00	4.50	11.50	7.50	39.75	9.00		22.00	8.00	36.00	7.00	13.50	5.50	22.75	8.75	26.00	4.00	19.75	4.25	34.00	10.25	33.00	7.50		35.00	8.25	32.00	8.25	20.50	6.75	29.25	7.00	18.50	4.50	36.00	6.00	17.75	8.50	28.00	9.50		18.50	4.00	20.00	1.50	21.50	7.25	17.50	8.25	20.00	6.00	20.00	5.75	17.75	6.00	28.00	8.50	Total .....	432.50	97.25	407.25	82.00	305.75	93.50	321.25	74.00	330.25	71.50	388.00	74.75	300.00	124.75	445.25	129.25	Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	Lowest .....	46.75	721.57	9.00	45.00	31.00	478.47	3.50	42.60	36.00	555.65	0.00	60.00	30.75	913.62	10.25	81.25	Average .....	18.60	285.54	1.50	7.50	12.00	183.22	2.00	10.00	13.00	200.65	3.75	37.50	11.50	177.50	6.00	30.00		27.99	532.01	6.97	29.85	20.90	322.58	5.58	27.90	23.87	368.42	4.37	48.70	24.84	383.40	8.40	42.30	Tests above average.....	14		18		13		17		13		17		14		17		Tests below average.....	16		12		17		13		17		13		16		13																																																																																																																																																																											
	31.50	7.00	24.00	2.50	29.25	7.00	12.00	3.50	27.50	5.50	20.00	4.50	11.50	7.50	39.75	9.00		22.00	8.00	36.00	7.00	13.50	5.50	22.75	8.75	26.00	4.00	19.75	4.25	34.00	10.25	33.00	7.50		35.00	8.25	32.00	8.25	20.50	6.75	29.25	7.00	18.50	4.50	36.00	6.00	17.75	8.50	28.00	9.50		18.50	4.00	20.00	1.50	21.50	7.25	17.50	8.25	20.00	6.00	20.00	5.75	17.75	6.00	28.00	8.50	Total .....	432.50	97.25	407.25	82.00	305.75	93.50	321.25	74.00	330.25	71.50	388.00	74.75	300.00	124.75	445.25	129.25	Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	Lowest .....	46.75	721.57	9.00	45.00	31.00	478.47	3.50	42.60	36.00	555.65	0.00	60.00	30.75	913.62	10.25	81.25	Average .....	18.60	285.54	1.50	7.50	12.00	183.22	2.00	10.00	13.00	200.65	3.75	37.50	11.50	177.50	6.00	30.00		27.99	532.01	6.97	29.85	20.90	322.58	5.58	27.90	23.87	368.42	4.37	48.70	24.84	383.40	8.40	42.30	Tests above average.....	14		18		13		17		13		17		14		17		Tests below average.....	16		12		17		13		17		13		16		13																																																																																																																																																																																												
	22.00	8.00	36.00	7.00	13.50	5.50	22.75	8.75	26.00	4.00	19.75	4.25	34.00	10.25	33.00	7.50		35.00	8.25	32.00	8.25	20.50	6.75	29.25	7.00	18.50	4.50	36.00	6.00	17.75	8.50	28.00	9.50		18.50	4.00	20.00	1.50	21.50	7.25	17.50	8.25	20.00	6.00	20.00	5.75	17.75	6.00	28.00	8.50	Total .....	432.50	97.25	407.25	82.00	305.75	93.50	321.25	74.00	330.25	71.50	388.00	74.75	300.00	124.75	445.25	129.25	Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	Lowest .....	46.75	721.57	9.00	45.00	31.00	478.47	3.50	42.60	36.00	555.65	0.00	60.00	30.75	913.62	10.25	81.25	Average .....	18.60	285.54	1.50	7.50	12.00	183.22	2.00	10.00	13.00	200.65	3.75	37.50	11.50	177.50	6.00	30.00		27.99	532.01	6.97	29.85	20.90	322.58	5.58	27.90	23.87	368.42	4.37	48.70	24.84	383.40	8.40	42.30	Tests above average.....	14		18		13		17		13		17		14		17		Tests below average.....	16		12		17		13		17		13		16		13																																																																																																																																																																																																													
	35.00	8.25	32.00	8.25	20.50	6.75	29.25	7.00	18.50	4.50	36.00	6.00	17.75	8.50	28.00	9.50		18.50	4.00	20.00	1.50	21.50	7.25	17.50	8.25	20.00	6.00	20.00	5.75	17.75	6.00	28.00	8.50	Total .....	432.50	97.25	407.25	82.00	305.75	93.50	321.25	74.00	330.25	71.50	388.00	74.75	300.00	124.75	445.25	129.25	Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	Lowest .....	46.75	721.57	9.00	45.00	31.00	478.47	3.50	42.60	36.00	555.65	0.00	60.00	30.75	913.62	10.25	81.25	Average .....	18.60	285.54	1.50	7.50	12.00	183.22	2.00	10.00	13.00	200.65	3.75	37.50	11.50	177.50	6.00	30.00		27.99	532.01	6.97	29.85	20.90	322.58	5.58	27.90	23.87	368.42	4.37	48.70	24.84	383.40	8.40	42.30	Tests above average.....	14		18		13		17		13		17		14		17		Tests below average.....	16		12		17		13		17		13		16		13																																																																																																																																																																																																																														
	18.50	4.00	20.00	1.50	21.50	7.25	17.50	8.25	20.00	6.00	20.00	5.75	17.75	6.00	28.00	8.50	Total .....	432.50	97.25	407.25	82.00	305.75	93.50	321.25	74.00	330.25	71.50	388.00	74.75	300.00	124.75	445.25	129.25	Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	Lowest .....	46.75	721.57	9.00	45.00	31.00	478.47	3.50	42.60	36.00	555.65	0.00	60.00	30.75	913.62	10.25	81.25	Average .....	18.60	285.54	1.50	7.50	12.00	183.22	2.00	10.00	13.00	200.65	3.75	37.50	11.50	177.50	6.00	30.00		27.99	532.01	6.97	29.85	20.90	322.58	5.58	27.90	23.87	368.42	4.37	48.70	24.84	383.40	8.40	42.30	Tests above average.....	14		18		13		17		13		17		14		17		Tests below average.....	16		12		17		13		17		13		16		13																																																																																																																																																																																																																																															
Total .....	432.50	97.25	407.25	82.00	305.75	93.50	321.25	74.00	330.25	71.50	388.00	74.75	300.00	124.75	445.25	129.25																																																																																																																																																																																																																																																																																																																																																																																						
Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.																																																																																																																																																																																																																																																																																																																																																																																							
Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.																																																																																																																																																																																																																																																																																																																																																																																						
Lowest .....	46.75	721.57	9.00	45.00	31.00	478.47	3.50	42.60	36.00	555.65	0.00	60.00	30.75	913.62	10.25	81.25																																																																																																																																																																																																																																																																																																																																																																																						
Average .....	18.60	285.54	1.50	7.50	12.00	183.22	2.00	10.00	13.00	200.65	3.75	37.50	11.50	177.50	6.00	30.00																																																																																																																																																																																																																																																																																																																																																																																						
	27.99	532.01	6.97	29.85	20.90	322.58	5.58	27.90	23.87	368.42	4.37	48.70	24.84	383.40	8.40	42.30																																																																																																																																																																																																																																																																																																																																																																																						
Tests above average.....	14		18		13		17		13		17		14		17																																																																																																																																																																																																																																																																																																																																																																																							
Tests below average.....	16		12		17		13		17		13		16		13																																																																																																																																																																																																																																																																																																																																																																																							



TABLE XV.—Results of actual tests of strain and stretch—Continued.

		OXFORD.															
Catalogue number of samples..		65. SIDE.				66. SIDE.				69. SIDE.				60. SIDE.			
Length of fiber tested .....		3 centimeters.				4 centimeters.				5 centimeters.				6 centimeters.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
Total .....		337.75	172.00	348.25	167.25	359.50	209.75	816.00	224.50	385.75	293.25	404.75	252.25	327.75	295.00	321.25	250.75
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....		grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Lowest .....		20.75	613.52	13.50	45.00	37.00	571.03	18.50	48.25	40.00	617.33	22.75	45.50	32.00	498.91	25.50	42.50
Average .....		15.00	231.52	5.00	10.67	12.00	185.22	7.00	17.50	17.00	262.39	10.25	20.50	14.00	216.03	11.00	18.33
Tests above average .....		22.53	347.74	11.30	37.67	22.51	347.43	14.47	36.13	26.35	406.70	17.28	34.56	21.63	333.85	18.52	30.86
Tests below average .....		15		16		15		19		13		14		12		17	
		15		14		15		11		17		16		13		13	
		OXFORD.															
Catalogue number of samples..		60. HIP.				67. SHOULDER.				67. SIDE.				67. HIP.			
Length of fiber tested .....		—				—				—				—			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
Total .....		399.00	93.75	397.00	92.50	570.00	84.25	622.75	100.75	630.75	113.50	615.50	130.25	550.25	91.00	574.00	98.50
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....		grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Lowest .....		33.00	580.52	9.00	45.00	51.00	787.17	8.50	42.50	57.00	879.77	10.00	50.00	59.00	910.64	8.25	41.25
Average .....		19.25	297.12	2.25	11.25	30.75	474.61	4.00	20.00	23.50	393.50	5.50	27.50	20.50	310.41	2.00	10.00
Tests above average .....		20.53	409.43	6.20	31.00	39.98	616.77	6.17	30.85	41.54	641.15	8.11	40.50	37.67	581.42	6.81	31.55
Tests below average .....		12		20		15		17		15		10		14		20	
		18		10		15		13		15		20		16		10	



TABLE XV.—Results of actual tests of strain and stretch—Continued.

Catalogue number of samples..		MERINO.															
		30. NECK, TOP OF WRINKLE.				30. NECK, BETWEEN WRINKLE.				30. SHOULDER.				30. SIDE.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
		10.60	5.25	12.75	6.00	7.25	4.25	9.25	7.00	5.60	3.75	12.25	5.60	6.00	5.75	9.00	4.25
		9.25	6.25	13.00	4.75	10.75	5.00	8.00	3.75	0.00	8.25	6.75	7.00	8.00	3.00	6.75	2.75
		12.00	5.75	14.25	6.25	11.00	4.25	8.00	5.00	5.25	6.00	6.00	6.00	10.00	5.00	9.25	6.25
		12.00	5.75	13.75	5.75	7.75	7.00	9.50	5.25	11.75	7.75	6.75	5.60	13.00	6.00	9.00	4.00
		14.00	5.00	15.75	6.75	9.75	5.25	8.25	5.25	6.50	5.00	7.00	5.00	13.00	5.00	8.00	4.25
		14.75	6.00	12.29	5.75	0.75	3.75	9.75	6.75	8.25	6.00	6.60	5.25	11.25	4.00	7.25	5.25
		10.00	3.25	16.25	7.75	10.50	4.00	6.60	4.50	7.75	5.75	9.00	6.00	7.50	2.25	12.75	6.50
		16.50	5.75	13.00	6.00	7.00	5.75	8.00	4.00	10.00	5.25	10.25	7.00	8.00	8.00	7.00	4.75
		12.25	4.25	12.00	4.25	11.00	8.75	9.75	4.25	5.50	3.75	8.00	7.00	9.75	6.00	6.00	4.00
		9.25	2.60	13.25	3.75	7.00	6.50	8.00	4.75	10.00	5.00	8.50	7.25	10.00	6.75	3.75	7.00
		9.00	3.00	10.00	5.75	8.25	7.75	10.75	0.50	13.75	8.25	11.50	4.50	8.00	6.00	14.00	7.00
		14.00	6.00	16.00	6.25	10.75	5.75	11.00	7.75	11.25	5.25	12.60	5.75	19.25	6.25	12.00	8.75
		16.50	6.25	10.00	4.00	8.00	8.25	8.00	0.00	7.00	4.25	6.00	5.00	9.00	3.60	7.00	4.25
		20.00	6.50	12.50	3.50	11.25	3.25	11.60	4.75	7.25	6.25	11.50	7.60	6.75	7.75	9.25	6.50
		0.75	8.25	15.75	6.50	9.75	5.00	12.25	7.25	10.00	7.50	5.75	3.25	6.00	8.00	10.75	6.00
		Total .....	201.75	79.75	206.50	83.00	136.75	81.50	138.50	82.75	123.75	85.00	128.25	87.50	133.50	83.25	137.25
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
		grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
		20.00	308.09	8.25	41.25	12.25	189.07	8.75	43.75	13.75	212.21	8.25	41.25	14.00	216.08	8.75	43.75
		9.00	138.91	2.50	13.50	6.50	100.33	3.25	16.25	5.50	84.89	3.25	16.25	6.00	92.61	2.25	11.25
Average .....	13.61	210.07	5.43	27.15	9.18	141.00	5.43	27.49	8.47	130.73	5.75	28.75	9.19	141.84	5.40	27.45	
Tests above average .....	15		10		10		13		14		13		14		16		
Tests below average .....	15		11		14		17		10		15		10		14		

Catalogue number of samples..		MERINO.															
		30. HIP.				41. NECK.				41. SIDE.				41. HIP.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
		10.50	5.00	7.00	7.00	4.25	6.00	3.5	2.25	6.00	6.00	8.00	8.00	8.00	7.00	6.50	7.00
		8.75	4.75	7.00	5.00	6.25	8.00	4.00	7.00	8.25	6.25	6.50	7.50	6.00	6.00	10.00	8.00
		9.00	8.25	11.00	6.75	10.00	7.25	5.75	3.00	5.6	6.00	5.00	5.59	7.25	7.00	7.00	4.75
		11.50	8.00	10.00	6.00	6.25	5.00	6.25	4.00	9.75	8.75	6.00	6.25	8.75	8.00	0.75	5.00
		8.75	4.25	8.75	5.75	4.00	2.00	3.25	3.25	7.00	7.25	7.00	6.00	7.25	7.00	6.25	4.00
		9.25	7.25	9.00	8.25	4.00	0.00	4.00	4.00	6.25	8.00	3.75	1.75	6.00	5.00	6.50	6.25
		7.00	4.25	9.00	6.00	3.75	2.00	4.00	2.75	5.50	2.50	3.75	8.00	5.00	6.25	4.25	5.50
		12.25	6.25	8.00	6.00	3.75	3.75	7.5	6.00	4.00	4.50	13.00	8.00	7.00	4.50	9.25	8.00
		9.50	6.75	6.75	8.00	4.00	3.00	4.75	2.00	6.50	7.00	5.25	3.00	7.00	9.50	8.00	7.00
		7.00	3.75	7.75	5.25	3.75	3.75	6.25	5.25	7.80	6.75	8.00	2.50	6.75	7.00	10.50	6.00
		9.75	4.60	11.00	0.25	5.50	4.25	4.5	5.25	5.00	7.60	8.75	7.60	8.00	6.50	8.00	4.75
		7.25	8.25	12.00	5.75	4.50	3.00	4.75	2.00	10.00	8.00	6.75	9.25	7.00	6.75	0.50	8.00
		6.00	6.00	11.00	4.00	8.75	3.25	4.25	4.25	7.50	5.00	10.00	7.00	8.50	6.50	6.50	7.00
		10.00	6.75	8.75	2.75	4.25	3.00	5.00	8.00	5.50	7.00	5.75	7.00	7.00	8.00	3.00	8.75
		7.25	6.25	6.00	6.60	7.25	4.75	7.00	4.5	8.75	6.50	11.00	7.50	8.00	8.00	6.00	8.00
		Total .....	132.75	86.25	130.00	84.25	75.25	65.00	71.75	63.50	100.00	95.75	76.5	91.75	107.5	100.00	112.00
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
		grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
		12.25	189.07	8.25	41.25	10.00	151.85	8.00	40.00	12.00	185.22	8.75	43.75	10.50	162.00	8.75	43.75
		5.75	88.75	2.75	13.75	3.25	50.16	2.00	10.00	3.75	57.88	1.75	8.75	4.25	65.60	4.00	20.00
Average .....	8.76	135.21	5.68	28.40	5.00	77.17	4.28	21.40	5.68	90.78	6.25	31.25	7.31	112.83	6.60	33.00	
Tests above average .....	18		10		10		12		18		10		12		16		
Tests below average .....	12		14		10		18		12		11		18		14		



TABLE XV.—Results of actual tests of strain and stretch—Continued.

Catalogue number of samples.		MERINO.															
		45. NECK, TOP OF WRINKLE.				45. NECK, BETWEEN WRINKLE.				45. SIDE.				45. HIP.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
		8.00	5.25	13.00	7.25	15.50	6.75	7.75	7.25	7.75	0.25	7.00	2.75	15.50	7.50	9.50	6.50
		7.00	6.75	10.25	6.00	6.75	6.00	5.50	6.25	6.25	4.75	8.75	2.50	10.00	7.50	8.00	2.50
		7.60	4.50	6.00	5.00	11.50	3.00	4.50	3.75	6.50	4.25	9.75	4.00	5.50	0.50	14.00	4.00
		4.00	3.50	6.00	3.75	8.00	6.00	10.25	5.00	8.00	8.50	7.50	5.25	15.00	4.00	9.75	4.00
		6.50	5.00	7.00	6.25	6.75	6.25	6.25	6.75	11.00	7.50	11.25	8.00	16.00	6.00	10.00	3.50
		4.75	3.75	6.00	6.75	11.75	3.50	7.00	7.00	7.50	7.75	6.75	5.00	10.75	1.00	9.00	4.50
		6.00	5.25	9.25	7.25	4.50	5.75	4.25	5.00	7.00	9.00	8.00	6.25	8.75	1.50	11.00	2.50
		15.00	7.75	9.50	7.00	4.25	2.25	4.25	6.50	7.00	8.75	8.00	9.00	7.00	2.00	12.50	3.50
		6.25	7.00	4.25	4.75	4.25	1.50	11.00	5.00	6.50	8.75	14.00	9.00	14.00	3.00	20.00	6.00
		6.75	7.75	6.00	4.00	6.75	4.75	7.25	6.25	6.50	7.00	7.00	4.50	10.00	2.00	10.50	2.00
		12.00	3.25	7.50	4.50	6.25	6.25	13.50	2.75	6.75	5.00	6.00	6.25	19.00	4.00	12.50	5.00
		6.25	3.75	8.25	6.25	11.50	3.75	6.00	4.25	8.00	8.50	11.00	7.00	13.00	2.00	18.50	7.50
		8.00	8.00	7.00	3.25	6.60	5.00	5.75	4.25	11.00	7.25	6.75	4.25	19.00	7.50	15.00	7.00
		11.25	6.75	14.75	7.5	6.75	4.00	11.25	4.50	14.00	8.00	9.00	5.25	7.25	4.00	8.75	7.00
7.00	7.50	10.25	5.00	15.00	7.75	14.50	5.00	7.50	7.50	7.50	4.00	23.00	3.00	11.00	3.50		
Total .....		116.25	85.75	123.00	81.50	123.00	71.50	118.50	79.50	126.75	108.75	127.25	91.00	193.75	55.50	180.00	71.00

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
	Highest .....	15.00	231.52	8.00	40.00	15.50	239.24	7.75	38.75	14.00	216.08	9.00	45.00	20.00	308.69	8.00
Lowest .....	4.00	61.74	3.25	16.25	4.25	65.60	1.50	7.50	5.75	88.75	4.00	20.00	5.50	84.89	0.5	2.50
Average .....	7.98	123.17	5.58	57.90	8.05	124.25	5.03	25.15	8.46	130.58	6.65	33.25	12.45	192.16	4.21	21.05
Tests above average .....	12		13		10		12		10		16		14		11	
Tests below average .....	18		17		20		18		20		14		16		19	

Catalogue number of samples..		MERINO.															
		46. SHOULDER.				46. SIDE.				46. HIP.				47. SHOULDEE.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
		4.25	6.00	6.00	6.25	4.00	3.00	10.00	7.00	12.50	3.00	11.00	7.00	6.50	7.50	5.25	4.75
		7.00	3.75	5.60	6.75	11.50	9.00	6.50	7.00	6.25	3.00	9.00	3.50	6.50	7.25	5.50	1.50
		8.75	6.25	5.25	5.25	4.75	6.75	6.00	4.75	10.75	5.00	11.25	8.00	5.00	4.50	12.00	7.00
		3.75	6.00	6.00	2.00	5.00	4.25	14.00	9.00	12.00	2.00	6.50	4.50	6.25	6.00	6.00	5.25
		6.75	6.25	4.50	6.75	11.75	9.25	6.25	6.00	11.75	3.00	11.50	5.00	9.00	2.00	11.00	5.00
		6.25	4.75	5.00	3.00	8.00	9.00	4.75	3.60	12.00	7.00	13.50	5.00	5.00	3.25	6.50	7.25
		6.25	6.60	4.50	7.60	9.00	2.00	4.50	8.60	10.00	3.50	6.00	2.00	5.25	4.75	4.50	2.00
		4.25	3.00	6.00	6.50	9.75	4.50	9.00	10.00	10.25	7.00	4.00	7.00	4.25	5.00	4.25	3.75
		4.60	1.75	4.00	4.00	6.00	4.75	4.75	9.00	10.25	6.00	5.50	6.25	6.50	2.00	4.00	4.25
		5.00	1.60	6.00	7.50	8.75	2.50	12.25	7.50	10.60	6.50	11.50	8.00	12.50	6.25	8.00	4.75
		7.50	6.60	4.00	5.25	6.00	7.25	6.50	7.00	9.25	5.00	11.50	4.50	5.25	4.25	5.00	4.75
		6.60	8.00	6.00	6.75	5.00	1.60	6.50	3.60	8.00	7.50	10.50	7.00	4.00	3.50	4.25	3.50
		3.60	7.00	6.00	6.75	6.25	6.25	7.00	2.50	6.00	3.00	10.50	3.00	8.00	4.75	6.00	3.50
		7.00	7.00	4.60	2.00	6.60	8.00	6.00	6.25	11.00	5.25	5.0	4.00	7.50	7.00	5.00	6.00
6.00	7.25	3.50	1.50	6.50	8.25	10.75	8.75	11.25	6.25	8.25	5.60	4.50	5.00	6.00	4.75		
Total .....		80.25	80.50	76.75	75.00	107.75	86.25	112.75	100.25	151.75	72.00	135.00	80.25	95.00	66.25	90.75	68.00

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
	Highest .....	9.50	146.03	8.00	40.00	14.00	216.08	10.00	50.00	13.50	208.37	8.00	40.00	12.60	192.98	7.25
Lowest .....	3.50	54.02	1.50	7.50	4.00	61.74	1.50	7.50	4.00	61.74	2.00	10.00	4.00	61.74	0.75	3.75
Average .....	6.53	85.35	5.17	25.86	6.35	113.44	6.21	31.05	9.55	147.40	5.07	25.35	6.19	95.54	4.48	22.40
Tests above average .....	15		19		11		18		10		14		10		18	
Tests below average .....	15		11		19		12		11		16		20		12	



TABLE XV.—Results of actual tests of strain and stretch—Continued.

Catalogue number of samples..	MERINO.															
	47. SIDE.				47. HIP.				48. SHOULDER, TOP OF WRINKLE.				48. SHOULDER, BETWEEN WRINKLE.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	7.50	6.25	7.00	6.00	12.00	2.00	10.00	4.00	12.00	5.00	15.00	7.00	13.00	8.25	5.25	2.75
	10.50	8.25	11.00	6.25	14.50	4.00	13.00	4.75	12.75	6.00	5.00	2.00	5.25	5.75	11.50	5.50
	8.00	8.00	5.50	6.50	18.50	7.00	12.75	5.00	5.00	8.50	8.00	4.75	8.00	8.00	10.75	0.00
	7.00	6.00	6.00	8.25	17.50	2.00	9.00	4.90	9.75	7.00	7.00	6.00	8.25	7.75	10.25	7.50
	13.75	8.00	6.75	8.25	23.50	6.75	17.00	8.00	6.50	7.25	5.25	4.75	9.00	7.75	5.25	5.00
	7.00	3.25	7.50	8.25	14.25	4.25	5.75	3.00	5.75	6.00	11.00	8.25	6.00	6.75	0.00	6.50
	8.00	8.00	8.00	9.25	11.00	4.75	8.50	6.50	7.50	2.75	12.25	7.50	6.50	4.75	12.25	7.50
	0.50	8.50	4.00	3.25	24.00	4.75	27.00	8.00	6.25	6.25	6.50	3.00	9.50	7.00	7.00	5.50
	6.75	5.25	9.00	3.25	15.00	6.00	10.00	4.00	13.00	3.50	4.00	2.25	12.00	8.00	7.75	8.00
	10.50	8.00	5.00	2.50	13.75	3.00	22.50	3.50	5.75	4.25	0.25	2.50	4.25	4.25	4.00	0.00
	8.50	8.00	6.00	3.00	7.00	8.50	12.25	8.00	3.75	4.00	13.50	7.00	8.00	5.25	7.00	4.00
	5.00	8.00	6.00	8.75	12.75	2.00	4.75	2.00	7.00	6.75	3.50	6.00	4.00	4.00	9.50	7.25
	7.00	4.50	5.00	3.75	11.00	3.00	8.00	6.00	3.50	2.00	6.50	7.00	7.25	8.25	8.50	8.25
	8.75	6.25	7.00	7.75	8.00	6.00	6.00	3.00	4.25	2.25	10.50	7.75	11.50	5.25	6.75	6.50
9.25	7.25	11.00	8.50	10.00	2.75	8.50	4.50	15.75	7.00	7.50	5.00	4.00	5.00	13.25	8.25	
Total .....	127.00	98.50	103.75	90.00	212.75	61.75	184.00	77.25	123.25	75.00	125.25	84.00	110.25	96.00	124.50	94.50

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
	Highest .....	13.75	212.23	9.25	46.25	27.00	416.73	8.00	40.00	15.75	243.09	8.25	41.25	13.25	204.51	8.25
Lowest .....	4.00	61.74	3.00	15.00	4.75	73.31	2.00	10.00	3.50	54.02	2.00	10.00	4.00	61.74	2.75	13.75
Average .....	7.72	119.15	6.48	32.40	13.23	204.05	4.63	23.15	8.28	127.80	5.80	26.60	7.83	120.78	6.55	31.75
Tests above average .....	13		15		12		14		13		16		12		10	
Tests below average .....	17		15		18		16		17		14		18		14	

Catalogue number of samples..	MERINO.															
	48. SIDE.				48. HIP.				51. SHOULDER.				51. SIDE.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	5.00	8.50	8.50	4.00	5.25	3.00	9.00	4.00	4.00	6.25	6.50	7.75	8.00	8.25	5.75	3.50
	10.25	5.75	12.50	7.00	0.50	1.25	5.00	3.00	10.75	5.75	5.25	5.00	5.00	8.00	6.75	8.00
	12.00	8.00	9.75	6.50	15.00	5.00	12.00	4.00	7.75	6.50	7.00	6.75	4.75	6.00	5.25	4.25
	15.75	7.50	13.50	7.50	20.00	7.00	21.75	7.00	6.50	7.50	10.50	7.50	10.50	7.00	4.00	4.25
	5.00	4.60	7.00	8.00	23.00	5.25	10.00	4.00	11.75	7.50	4.00	4.50	8.50	7.50	4.50	5.50
	4.00	5.75	10.50	6.50	10.25	2.00	6.75	1.00	7.00	3.25	5.00	6.00	12.00	7.25	5.75	6.50
	4.00	3.00	6.00	8.25	12.00	5.25	11.60	8.25	22.00	5.50	6.50	7.75	9.50	6.50	8.50	5.50
	12.00	8.50	7.50	8.25	8.00	3.50	17.00	2.50	16.50	10.75	11.75	8.00	4.50	5.50	7.50	6.00
	5.00	3.50	8.25	7.00	13.75	2.00	16.50	3.00	7.25	6.00	17.00	9.00	8.75	7.00	6.50	6.50
	7.00	3.00	15.00	7.00	6.00	8.00	7.50	5.00	6.00	5.00	10.50	4.00	4.00	7.00	7.00	4.00
	7.00	9.00	5.75	6.50	23.00	5.25	6.00	4.75	10.00	5.00	22.00	8.00	10.00	7.50	6.60	7.50
	7.00	9.75	0.00	3.50	12.50	5.00	7.50	5.00	14.00	8.50	10.00	6.25	10.25	7.50	5.75	6.50
	9.75	7.25	4.00	3.75	23.50	5.50	7.50	3.00	7.25	8.75	8.00	8.25	6.50	3.50	4.00	5.00
	13.00	7.25	9.00	8.00	6.50	5.00	4.50	5.00	7.25	7.50	6.50	7.50	8.50	6.50	6.50	8.00
6.00	8.25	5.00	6.25	6.50	5.00	7.25	5.00	7.50	6.50	5.25	5.00	7.00	3.50	8.50	6.50	
Total .....	123.75	94.50	129.25	98.00	191.75	68.00	161.75	61.50	145.60	100.25	133.75	101.25	115.75	92.50	93.75	63.50

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
	Highest .....	15.75	243.09	9.75	48.75	23.50	362.71	8.25	41.25	22.00	339.56	10.75	53.75	12.00	185.21	8.25
Lowest .....	4.00	61.74	3.00	15.00	4.50	69.46	1.00	5.00	4.00	61.74	3.25	16.25	4.00	61.74	3.00	15.00
Average .....	8.43	130.11	6.41	32.05	11.78	181.83	4.41	22.05	9.31	143.70	6.72	33.60	6.98	107.73	5.53	27.65
Tests above average .....	14		19		13		17		12		15		13		16	
Tests below average .....	16		11		17		13		18		15		17		14	



TABLE XV.—Results of actual tests of strain and stretch—Continued.

Catalogue number of samples..		MERINO.															
		51. HIP.				52. SHOULDER.				52. SIDE.				52. HIP.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	12.50	2.50	4.25	4.00	8.50	8.50	3.25	8.50	3.50	8.00	4.00	4.00	4.50	3.00	3.00	5.00	
	6.50	5.00	8.25	5.25	0.50	5.50	3.25	0.00	5.75	4.50	5.00	8.50	4.25	6.00	0.75	1.50	
	8.25	1.00	10.50	8.00	3.50	6.50	3.75	4.00	3.50	6.50	4.25	8.25	3.75	1.60	11.00	5.50	
	11.75	7.00	6.50	7.25	3.25	7.75	3.25	6.25	3.00	5.00	4.75	8.00	3.25	4.00	9.00	7.00	
	26.50	6.50	8.50	8.00	5.25	6.75	8.25	8.25	5.50	8.00	9.25	8.00	7.00	3.00	6.00	3.25	
	16.50	6.00	7.00	6.50	3.50	7.50	5.25	6.50	5.00	8.25	5.25	4.00	4.00	1.00	3.50	1.50	
	23.00	5.50	12.00	2.00	2.50	7.00	2.50	8.25	4.00	8.50	4.00	8.00	4.75	4.75	4.00	5.00	
	20.50	6.00	5.50	3.00	4.25	5.00	3.00	5.00	4.00	7.25	4.25	7.50	4.50	5.00	8.50	7.00	
	4.75	5.00	11.25	2.00	3.50	7.00	5.00	6.75	6.00	9.00	3.00	5.50	2.75	2.00	4.75	5.25	
	4.50	3.50	14.00	3.00	3.00	5.50	4.00	8.00	3.00	3.50	7.50	8.50	2.50	3.00	3.00	2.00	
	17.50	3.00	10.00	4.50	5.00	8.50	3.75	0.50	4.00	4.50	4.50	9.00	8.50	4.00	3.50	3.00	
	10.50	5.00	8.50	4.00	5.00	6.25	3.00	6.25	3.75	6.50	5.00	6.00	4.00	4.75	4.50	0.00	
	4.75	3.00	9.75	6.00	3.25	6.00	2.50	8.25	6.75	7.25	3.25	7.00	4.25	5.75	4.75	0.00	
	8.00	5.25	6.00	4.00	2.50	3.50	3.50	6.50	6.00	7.00	3.50	7.50	4.25	3.50	3.50	0.00	
7.50	6.50	7.25	7.50	2.00	8.00	2.50	5.50	5.25	7.00	5.50	6.00	4.25	7.00	3.50	5.50		
Total .....	183.00	73.75	138.25	75.00	52.75	99.25	51.75	101.50	69.00	101.25	67.00	105.75	66.50	58.75	81.25	69.50	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	
Lowest .....	4.25	65.60	1.00	5.00	2.00	30.87	3.50	17.50	3.00	46.30	3.00	15.00	2.50	38.59	1.00	5.00	
Average .....	10.70	165.15	4.95	24.75	8.48	54.71	6.69	33.45	4.63	69.92	6.90	24.50	4.92	75.94	4.27	21.35	
Tests above average .....	11		18		15		14		12		19		8		17		
Tests below average .....	10		12		15		16		18		11		22		18		

Catalogue number of samples..		MERINO.															
		53. SHOULDER.				53. SHOULDER, TOP OF WRINKLE.				53. SHOULDER, BETWEEN WRINKLE.				53. SIDE.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	8.50	7.50	3.00	7.00	7.00	6.00	13.00	6.75	3.25	4.75	7.25	5.00	4.50	6.00	3.00	6.00	
	2.00	6.50	3.00	8.75	6.50	3.25	10.00	5.00	8.50	5.50	5.00	4.25	5.25	6.00	4.25	3.75	
	2.50	5.25	3.00	7.50	10.50	5.25	7.25	5.50	4.75	4.00	6.25	0.00	3.00	2.00	0.00	7.75	
	3.25	9.00	2.50	5.00	7.25	3.50	11.25	6.50	6.00	6.00	7.00	3.50	3.00	4.00	5.00	5.50	
	2.25	5.00	3.25	7.50	6.50	4.50	7.50	5.50	6.50	5.00	5.50	3.00	2.75	2.50	3.00	2.50	
	4.00	5.75	3.50	7.00	7.50	5.00	10.00	3.25	6.00	7.00	4.00	3.25	6.25	8.50	4.75	6.25	
	3.25	7.00	3.00	5.25	8.75	6.25	10.00	0.75	5.00	6.50	3.75	3.75	4.50	5.50	5.00	4.00	
	2.50	8.75	2.50	5.75	7.00	4.75	12.75	5.50	5.50	5.00	5.00	5.75	5.00	5.50	4.50	8.50	
	3.00	7.25	4.00	4.00	25.00	7.00	11.25	0.25	6.25	2.00	6.00	3.25	8.00	7.25	3.00	1.50	
	3.00	4.75	3.50	6.00	7.00	4.00	9.00	6.00	7.00	5.50	3.50	3.00	5.00	6.00	3.50	4.50	
	3.50	7.50	5.00	5.00	9.00	6.00	0.00	7.00	5.50	5.50	6.00	5.00	5.00	6.00	4.50	5.75	
	3.25	6.50	5.00	5.25	15.25	6.00	10.25	5.50	7.25	6.50	8.00	7.00	3.50	6.00	0.00	7.00	
	2.50	5.25	5.50	4.00	15.00	6.50	11.50	5.75	8.50	7.75	7.00	3.75	5.00	8.50	5.00	8.75	
	2.25	6.50	4.25	6.50	10.25	8.50	12.00	3.50	6.50	6.00	6.25	4.75	4.25	8.50	4.00	6.25	
2.50	6.25	4.50	0.25	13.50	5.75	9.00	7.50	4.25	4.75	4.50	3.00	4.00	5.00	4.00	7.00		
Total .....	43.25	98.75	55.60	90.75	150.50	77.25	150.75	86.25	90.75	80.75	82.00	64.25	69.00	87.75	65.50	85.00	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	
Lowest .....	2.00	30.87	4.00	20.00	25.00	385.86	7.50	37.50	8.50	131.19	7.75	38.75	8.00	123.43	8.50	42.50	
Average .....	3.20	50.78	6.32	31.60	10.54	162.68	5.45	27.25	5.76	88.00	4.83	24.15	4.48	69.14	5.75	28.75	
Tests above average .....	11		15		10		10		10		14		17		17		
Tests below average .....	10		15		20		11		14		16		13		12		



TABLE XV.—Results of actual tests of strain and stretch—Continued.

MERINO.																
Catalogue number of samples..	53. HIP.				53. HIP, TOP OF WRINKLE.				53. HIP, BETWEEN WRINKLE.				54. SHOULDER, TOP OF WRINKLE.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	7.75	4.00	2.00	4.00	25.50	5.00	.....	.....	6.25	2.50	2.50	4.00	18.00	7.50	15.00	7.75
	8.00	3.00	2.50	2.50	23.00	8.00	.....	.....	4.00	8.00	4.50	1.50	10.50	4.00	9.00	2.00
	4.00	1.50	2.75	5.25	25.00	5.50	.....	.....	3.25	2.00	8.00	8.00	8.25	2.25	4.00	2.75
	4.00	1.00	4.50	4.00	24.00	7.00	.....	.....	5.25	6.75	8.50	7.50	12.50	8.00	0.00	2.25
	4.75	5.50	3.50	3.50	19.00	6.50	.....	.....	4.50	3.00	7.50	7.75	5.00	2.50	9.00	2.50
	4.00	2.00	5.00	6.00	18.00	3.50	.....	.....	4.50	8.00	7.25	4.00	6.50	3.50	13.00	8.50
	5.00	6.00	3.00	1.00	15.00	6.00	.....	.....	8.00	6.50	8.00	8.00	5.25	1.75	11.75	4.25
	4.50	7.00	2.00	5.00	14.50	5.00	.....	.....	6.50	4.00	4.50	4.00	9.25	1.00	15.50	4.75
	4.00	5.00	4.50	5.50	32.50	6.50	.....	.....	5.50	2.25	8.5	5.25	6.00	3.00	29.00	8.50
	7.50	3.25	7.75	4.00	17.50	8.00	.....	.....	7.00	4.00	6.75	4.75	16.00	6.50	9.75	2.50
	7.50	6.50	5.50	6.00	7.75	2.00	.....	.....	6.50	5.00	5.25	8.00	6.50	3.00	18.50	0.00
	7.00	4.75	3.00	4.00	11.00	5.50	.....	.....	2.50	5.00	5.50	3.00	20.00	4.00	4.25	3.50
	4.75	2.50	3.75	5.00	8.25	4.00	.....	.....	6.25	7.00	5.50	8.00	10.25	3.00	8.50	3.50
	6.00	2.00	4.50	6.00	14.75	5.00	.....	.....	9.00	6.00	8.25	4.75	12.25	6.00	0.00	6.50
5.50	2.00	5.75	5.00	11.00	3.50	.....	.....	9.50	6.00	8.75	8.00	7.5	2.00	6.00	2.50	
Total .....	84.25	58.00	80.00	66.25	270.75	70.00	.....	.....	86.50	68.00	82.25	70.50	153.75	53.00	165.25	62.75
Recapitulation and reduction:																
Highest .....																
Lowest .....																
Average .....																
Tests above average.....																
Tests below average.....																
MERINO.																
Catalogue number of samples..	51. SHOULDER, BETWEEN WRINKLE.				54. HIP, TOP OF WRINKLE.				51. HIP, BETWEEN WRINKLE.				55. SHOULDER, TOP OF WRINKLE.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	6.25	8.00	6.50	4.50	12.00	2.50	9.00	1.50	3.75	1.50	5.00	3.00	14.00	6.00	6.75	8.00
	8.50	7.75	4.00	4.25	17.00	3.00	7.25	1.00	4.50	4.00	8.25	6.00	8.75	4.50	9.50	6.75
	8.00	8.50	4.50	8.25	13.75	4.50	8.00	1.00	4.50	4.50	8.50	4.50	7.50	6.00	8.25	4.0
	4.25	5.00	4.75	4.75	7.00	1.00	8.00	1.50	10.00	4.50	4.25	8.00	0.00	4.50	18.50	7.5
	5.00	4.75	2.75	5.25	18.00	4.00	6.00	2.00	6.00	3.00	8.50	2.00	10.50	4.50	9.00	6.00
	7.00	8.00	5.00	3.75	12.50	3.50	8.00	2.00	7.25	4.00	9.00	6.00	8.75	0.50	6.00	6.00
	7.25	6.75	7.50	6.00	0.00	2.00	6.00	1.50	6.00	5.00	8.25	2.50	9.50	6.50	6.50	7.00
	5.50	7.50	4.75	4.00	5.00	1.00	4.00	3.00	8.00	4.00	5.50	5.25	0.75	6.50	6.25	6.00
	6.50	7.25	8.00	4.00	16.75	4.00	20.00	5.00	7.00	2.00	3.75	4.25	14.50	6.75	13.00	7.50
	4.50	6.25	5.50	4.25	10.00	1.00	9.00	8.00	4.75	2.00	8.25	3.50	5.00	4.00	6.00	8.50
	3.00	8.75	6.50	6.75	10.25	4.00	14.00	2.00	7.75	4.50	7.25	5.00	6.75	4.00	5.50	4.00
	5.75	8.00	4.50	2.50	17.00	5.50	9.75	2.00	7.00	4.75	5.25	4.00	7.00	4.75	9.25	7.25
	5.00	1.75	5.50	4.25	10.50	1.25	17.50	3.50	4.25	3.25	4.50	1.50	18.50	7.75	7.50	8.00
	5.75	4.50	5.75	6.50	8.75	5.00	8.75	3.00	5.00	2.50	4.00	2.50	8.50	4.00	7.75	5.00
4.75	4.25	5.75	6.00	16.5	6.00	18.00	3.00	2.75	2.25	6.00	8.50	7.75	4.00	9.00	8.25	
Total .....	80.00	80.00	78.25	73.00	181.00	43.25	149.25	35.00	89.50	61.75	89.35	58.50	144.75	80.25	123.75	104.75
Recapitulation and reduction:																
Highest .....																
Lowest .....																
Average .....																
Tests above average.....																
Tests below average.....																



TABLE XV.—Results of actual tests of strain and stretch—Continued.

Catalogue number of samples..		MERINO.															
		55. SHOULDER, BETWEEN WRINKLE.				55. SIDE.				55. HIP, TOP OF WRINKLE.				55. HIP, BETWEEN WRINKLE.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	4.50	0.25	4.25	4.00	3.50	2.25	4.00	2.00	2.50	2.00	3.75	4.00	8.75	9.00	5.50	3.25	
	5.25	5.50	6.25	6.75	5.00	2.25	5.50	7.50	2.00	1.00	4.00	2.00	8.00	3.75	3.50	1.50	
	6.00	6.50	4.50	4.50	3.00	3.00	4.00	3.00	7.75	3.25	6.00	4.00	3.75	4.00	3.00	4.75	
	4.25	7.25	4.00	6.00	7.00	8.25	3.25	4.00	9.75	6.00	5.50	6.50	8.50	7.75	4.50	5.00	
	5.25	5.00	7.60	7.60	10.00	7.50	11.00	9.00	4.50	6.00	6.00	6.25	3.00	1.50	6.50	7.00	
	6.25	7.00	6.50	5.60	4.00	3.50	3.50	4.00	7.00	3.25	9.50	4.50	6.00	6.25	8.00	6.00	
	4.00	5.00	4.00	5.00	5.75	4.00	3.00	3.50	3.75	2.00	6.50	8.50	3.75	5.00	6.00	5.50	
	6.00	7.00	4.00	4.25	6.00	7.00	7.50	6.50	4.50	5.25	5.25	1.00	4.75	3.00	9.00	5.00	
	7.25	7.25	6.25	6.50	3.75	2.50	7.25	7.75	3.50	3.00	4.50	1.00	7.75	5.00	3.00	2.00	
	6.75	6.00	6.00	7.00	6.75	5.75	3.25	4.00	5.75	4.00	6.50	6.50	4.75	5.00	3.50	2.25	
	7.50	5.50	4.50	6.00	4.25	4.00	8.00	8.25	11.50	0.25	8.00	2.25	2.75	3.00	9.00	7.00	
	5.25	4.00	5.50	7.75	5.50	7.50	4.00	6.00	4.75	1.00	7.00	2.00	4.00	1.50	5.00	6.00	
	4.00	4.50	6.50	6.50	6.00	9.50	4.00	7.50	5.25	2.25	5.25	7.50	3.25	4.00	5.50	7.00	
	5.00	5.75	4.25	4.75	5.00	0.00	5.50	6.00	5.75	7.00	4.00	3.50	6.00	7.00	6.50	2.25	
6.25	6.50	5.75	7.00	7.50	8.50	7.50	7.50	8.00	2.50	4.25	6.00	7.00	4.75	4.25	3.00		
Total .....	82.60	89.00	77.60	89.00	83.00	81.50	81.25	86.50	86.25	53.75	86.00	65.50	82.00	70.50	81.75	67.50	
		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:		grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Highest .....		7.50	115.78	7.75	38.75	11.00	169.78	9.50	47.50	11.50	177.50	8.50	42.50	9.00	138.91	9.00	45.00
Lowest .....		4.00	61.74	4.0	20.00	3.00	46.30	2.00	10.00	2.00	30.87	1.00	5.00	2.75	42.44	1.50	7.50
Average .....		6.83	82.27	5.08	29.65	5.47	84.43	5.42	27.10	5.74	88.59	3.97	19.85	5.45	84.12	4.60	23.00
Tests above average .....		13		17		15		17		14		15		15		17	
Tests below average .....		17		13		15		13		16		15		15		13	

Catalogue number of samples..		MERINO.															
		56. NECK, TOP OF WRINKLE.				56. SHOULDER, BETWEEN WRINKLE.				56. SIDE.				56. HIP, TOP OF WRINKLE.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	20.00	5.75	19.00	8.00	6.50	7.50	5.50	8.25	3.75	2.00	7.25	7.25	11.25	5.00	10.00	7.00	
	18.50	7.00	8.00	4.25	5.75	7.00	4.50	5.00	5.75	6.00	7.75	4.75	9.50	4.00	8.25	5.25	
	15.25	7.00	14.00	4.75	7.75	8.00	4.75	6.00	7.50	6.75	3.00	3.00	7.75	5.00	3.75	2.00	
	18.00	6.25	18.50	7.00	4.25	4.25	6.75	7.60	5.00	2.25	8.25	4.00	5.50	5.00	5.50	3.00	
	18.75	6.25	12.25	5.00	8.00	5.25	6.50	7.25	5.25	6.25	5.25	4.00	0.50	7.00	4.25	2.00	
	9.25	4.75	8.50	5.00	5.00	5.00	6.00	5.25	5.75	6.75	5.50	6.00	12.00	7.75	5.50	4.00	
	15.50	7.50	12.25	7.00	3.25	4.75	5.60	7.00	5.50	5.00	5.00	5.50	9.00	2.00	12.50	8.00	
	15.00	7.25	9.00	5.75	5.00	3.00	4.25	7.60	7.00	3.00	8.50	7.25	7.00	2.00	10.00	8.50	
	9.75	5.50	8.00	5.00	4.50	4.75	5.50	5.00	9.50	8.00	3.50	5.25	8.00	5.00	7.25	6.75	
	8.00	6.25	12.00	7.00	9.00	8.00	5.00	5.50	4.75	7.00	8.50	7.25	4.50	2.00	10.75	5.5	
	11.00	5.00	15.50	7.00	6.75	7.50	3.50	3.50	3.00	2.60	8.00	8.00	10.00	7.75	8.00	6.00	
	12.50	6.50	11.00	5.50	4.75	5.00	5.00	3.00	3.50	4.00	4.00	2.00	5.50	6.00	12.00	8.00	
	13.00	4.75	12.00	6.75	5.50	3.75	3.66	3.50	9.00	8.00	4.50	3.50	4.50	4.00	4.75	2.00	
	8.50	4.00	13.00	7.00	7.50	5.75	6.50	4.25	4.50	5.50	7.50	7.00	6.50	7.00	8.25	4.00	
14.75	4.00	18.00	7.50	4.25	6.25	6.25	3.00	7.00	4.50	5.75	5.50	5.25	7.00	9.75	5.00		
Total .....	208.25	87.75	191.00	92.50	87.75	85.75	79.00	81.50	86.75	75.50	92.25	80.25	112.75	77.00	120.50	77.00	
		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:		grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Highest .....		20.00	308.69	8.00	40.00	9.00	138.91	8.25	41.25	9.00	138.91	8.00	40.00	12.50	192.93	8.50	42.50
Lowest .....		8.00	123.48	4.00	20.00	3.25	50.16	3.00	15.00	3.00	46.30	2.00	10.00	3.75	57.88	2.00	10.00
Average .....		13.31	205.43	6.01	30.05	5.66	85.82	5.58	27.90	5.96	91.99	6.19	25.94	7.77	119.93	5.13	25.05
Tests above average .....		13		16		12		13		12		16		15		15	
Tests below average .....		17		14		18		17		18		14		15		15	



TABLE XV.—Results of actual tests of strain and stretch—Continued.

MERINO.																
Catalogue number of samples..	56. HIP, BETWEEN WRINKLE.				57. SHOULDER, TOP OF WRINKLE.				57. SHOULDER, BETWEEN WRINKLE.				57. HIP.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	9.00	3.50	7.00	3.75	6.25	4.25	11.75	7.25	4.50	7.75	8.00	7.00	6.00	4.60	8.50	4.00
	9.50	6.50	5.75	8.75	13.00	4.00	11.50	8.00	6.00	8.00	3.50	5.00	6.75	6.00	8.00	3.75
	12.50	6.00	7.00	6.25	8.25	3.00	6.00	4.50	5.25	4.00	4.00	5.50	11.00	6.50	13.50	7.00
	10.75	6.75	5.00	8.00	14.00	8.00	5.00	3.00	8.25	8.50	6.25	7.50	12.00	7.50	8.75	2.75
	4.75	5.00	9.50	5.00	11.00	7.00	5.00	4.25	8.50	6.50	3.50	6.00	8.25	7.75	8.75	4.00
	6.00	6.00	7.25	6.00	10.75	6.00	10.00	3.00	6.50	6.50	6.50	8.00	8.50	6.00	12.00	6.75
	6.25	4.75	6.50	3.00	20.00	8.25	20.00	8.25	4.25	9.50	5.50	5.00	8.75	6.75	8.75	7.00
	7.50	6.50	6.00	6.00	7.00	6.25	22.00	8.00	7.00	8.00	4.50	5.00	9.00	5.25	7.00	3.00
	9.25	4.50	4.50	2.50	13.00	7.00	6.25	3.00	6.00	4.00	8.60	5.50	8.00	5.00	7.75	4.50
	4.00	3.00	6.75	7.00	12.25	6.50	27.00	8.00	9.25	4.00	5.75	8.00	14.00	6.50	7.75	6.25
	6.50	6.75	12.25	8.00	7.00	4.25	8.50	7.50	3.50	6.60	4.25	6.60	8.00	5.00	7.25	6.25
	10.25	5.25	5.75	6.50	5.50	3.00	18.25	3.00	7.00	7.50	7.50	5.00	7.00	8.25	9.50	6.00
	3.75	6.00	7.00	7.25	13.00	3.25	0.00	7.50	6.25	7.00	7.00	7.00	8.50	4.25	6.00	4.00
	10.00	4.75	8.50	6.00	7.25	7.00	12.50	8.00	7.00	8.25	4.25	7.25	9.75	5.00	7.75	4.00
8.50	5.25	3.50	3.25	14.00	6.00	12.50	3.00	6.25	5.25	6.00	6.75	16.00	5.00	6.75	4.00	
Total .....	118.50	80.50	101.25	82.25	162.25	82.75	177.25	90.25	89.00	101.25	77.60	95.00	133.50	84.25	126.00	75.25
Recapitulation and reduction:																
Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Lowest .....	12.50	192.93	8.75	43.75	27.00	416.73	8.50	42.50	3.50	131.19	9.50	47.50	14.00	218.98	8.25	41.25
Average .....	3.50	84.02	2.50	12.50	5.00	77.17	3.25	11.25	3.25	50.16	4.00	20.00	5.75	88.75	2.75	13.75
	7.32	112.98	5.42	27.10	11.81	174.56	5.63	23.15	5.55	85.66	6.54	32.70	8.65	133.61	5.81	26.55
Tests above average .....	13		10		14		17		16		15		13		13	
Tests below average .....	18		14		16		18		14		15		17		17	

MERINO.																
Catalogue number of samples..	58. SHOULDER, TOP OF WRINKLE.				58. SHOULDER, BETWEEN WRINKLE.				58. HIP, TOP OF WRINKLE.				58. HIP, BETWEEN WRINKLE.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	10.50	6.75	8.75	3.50	6.00	6.00	7.50	8.00	9.00	6.00	7.50	7.00	6.00	3.00	4.50	2.75
	4.50	3.50	4.25	5.00	7.25	5.00	5.75	6.75	7.00	5.25	5.25	4.00	10.75	6.00	6.75	6.00
	6.50	7.00	3.25	2.00	6.25	1.25	3.25	3.25	5.00	2.50	4.25	2.00	8.25	5.50	9.00	6.50
	7.25	2.50	7.75	2.00	5.75	3.00	4.75	4.00	11.25	6.00	5.75	1.75	5.00	8.50	3.50	3.50
	6.00	6.00	5.75	4.75	7.25	5.50	4.75	6.00	5.75	4.75	9.75	2.50	8.00	4.75	8.00	5.25
	7.50	6.75	8.25	6.50	5.00	6.00	5.25	7.50	12.00	6.00	7.00	3.00	6.75	5.00	4.75	5.25
	9.25	7.00	6.00	2.75	8.25	7.00	7.75	7.75	5.00	2.00	9.75	3.50	7.25	4.50	6.00	5.00
	6.25	5.00	6.50	4.75	5.50	3.50	3.25	8.00	7.00	5.00	5.25	4.00	4.25	2.75	6.25	2.00
	6.75	7.50	5.25	3.75	5.25	4.25	4.75	5.25	7.00	1.75	10.00	4.00	5.50	2.50	5.00	2.00
	8.25	3.00	5.75	1.50	5.50	7.00	6.00	4.00	6.50	4.50	7.75	5.00	7.00	2.00	4.75	6.50
	5.75	1.75	8.50	6.25	6.50	6.00	4.50	4.00	4.50	2.00	7.25	4.00	6.00	5.00	7.00	4.50
	6.25	6.00	7.75	6.00	9.25	5.50	6.25	4.75	7.50	3.00	5.75	3.00	5.00	8.75	4.50	2.00
	8.25	8.00	5.00	7.00	4.25	7.00	3.00	5.25	7.00	3.00	9.50	3.25	7.00	8.00	5.00	2.00
	8.50	6.00	5.00	6.00	4.00	6.25	9.00	6.50	13.00	3.00	6.00	2.00	3.50	5.00	3.50	2.50
8.25	6.50	4.50	6.00	3.25	3.50	5.50	5.00	6.00	4.75	6.25	4.00	5.25	5.00	5.00	2.00	
Total .....	93.75	75.25	91.75	84.75	89.25	76.75	91.25	81.00	113.60	59.50	107.00	55.00	92.00	81.25	81.50	54.75
Recapitulation and reduction:																
Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Lowest .....	10.5	162.06	7.50	37.50	9.25	142.77	8.00	40.00	13.00	200.65	7.00	35.00	10.75	165.92	6.50	32.50
Average .....	3.25	50.16	1.50	7.50	3.00	46.30	1.25	6.25	4.25	65.60	1.75	8.75	8.00	46.30	2.00	10.00
	6.18	95.39	4.67	33.35	5.63	87.66	5.28	26.30	7.35	113.44	3.81	16.05	5.78	89.21	3.88	19.30
Tests above average .....	15		18		14		15		11		16		11		14	
Tests below average .....	15		12		10		15		19		14		19		16	



TABLE XV.—Results of actual tests of strain and stretch—Continued.

Catalogue number of samples.		MERINO.															
		68. SHOULDER.				68. SIDE.				68. HIP.				69. SHOULDER.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	5.25	7.25	8.00	6.75	6.50	7.00	11.75	8.50	15.00	6.00	9.00	6.50	5.25	3.75	10.00	9.00	
	5.25	0.75	6.25	6.25	9.00	6.00	7.00	7.25	9.50	5.00	10.25	5.00	6.25	6.25	6.50	5.00	
	8.75	4.50	5.50	6.75	8.00	8.75	4.00	8.00	11.50	4.00	12.00	6.00	6.50	6.50	5.50	3.75	
	6.50	6.50	7.00	7.25	0.00	9.00	5.25	7.50	13.50	7.50	9.00	4.75	5.00	7.00	0.00	7.50	
	12.00	5.75	6.00	4.75	6.00	3.00	4.50	5.50	12.00	6.50	9.75	5.00	5.25	1.75	5.50	4.75	
	5.50	6.75	5.25	3.75	12.00	6.00	4.00	4.50	12.00	5.50	9.00	2.00	6.00	6.75	7.50	7.50	
	6.25	5.75	5.75	6.75	7.25	7.50	7.00	9.00	9.75	5.00	11.00	8.00	5.50	7.00	6.50	6.75	
	7.75	4.25	11.00	5.25	7.75	7.50	8.50	6.50	14.00	7.25	7.00	7.00	9.00	8.25	7.50	7.50	
	8.75	6.75	5.25	3.75	6.25	7.50	4.00	3.75	10.50	8.25	12.00	6.00	6.25	8.00	10.00	7.25	
	4.25	4.00	5.75	5.75	4.00	7.75	6.50	4.00	7.50	7.00	18.25	0.00	4.25	5.25	7.75	5.50	
	8.00	9.00	10.25	3.25	4.75	5.00	11.75	7.00	8.25	5.00	9.00	6.00	5.00	2.25	6.25	6.25	
	6.75	7.75	5.00	5.50	7.50	7.50	7.50	8.50	17.75	8.00	14.75	8.00	4.75	6.75	6.25	7.00	
	4.50	4.00	0.50	6.50	6.50	7.75	6.00	8.75	0.00	4.75	9.50	3.00	7.25	5.25	5.00	4.25	
	5.00	7.25	4.00	5.00	5.50	5.25	8.00	7.50	9.50	7.00	7.50	6.25	8.25	2.75	5.50	7.00	
7.50	6.75	9.00	7.75	8.00	8.00	8.00	8.25	14.75	6.00	19.00	8.75	4.25	2.00	6.50	8.00		
Total .....	102.00	92.00	100.50	85.00	104.50	97.50	108.75	93.50	174.50	62.75	167.00	89.25	88.75	79.50	105.25	97.00	
		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:		grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Highest .....		12.00	185.22	9.00	45.00	12.00	185.22	0.00	45.00	19.00	293.20	8.75	43.75	10.00	154.35	9.00	45.00
Lowest .....		4.00	01.74	3.25	16.25	4.00	61.74	2.00	10.00	7.50	115.75	3.00	15.00	4.25	65.00	1.75	8.75
Average .....		6.90	164.18	5.90	29.50	6.94	107.12	0.50	32.80	11.38	175.65	6.06	30.30	6.47	99.66	5.88	29.40
Tests above average .....		11		15		15		18		19		13		19		18	
Tests below average .....		18		15		15		12		17		17		17		12	

Catalogue number of samples.		MERINO.															
		69. SIDE.				69. HIP.				70. SHOULDER.				70. SIDE.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	4.25	4.25	5.50	7.00	10.25	6.00	6.00	4.50	11.50	6.50	4.00	4.50	8.00	3.00	5.50	7.00	
	0.00	7.50	4.00	6.00	13.50	6.00	12.00	5.50	5.25	3.00	4.00	3.00	5.50	6.00	6.00	7.00	
	11.25	7.50	9.00	6.75	15.00	4.00	14.00	5.00	8.50	3.25	5.00	5.25	9.00	3.50	10.00	9.00	
	5.50	6.00	15.00	9.00	11.75	8.00	7.00	6.00	4.00	0.50	5.00	3.75	5.25	7.50	6.00	7.50	
	6.50	6.25	7.00	5.25	15.50	4.00	13.00	5.75	3.50	5.75	9.25	6.25	6.00	5.00	6.00	7.00	
	6.25	7.50	7.50	5.50	5.25	2.50	12.00	6.75	5.75	2.75	6.00	7.75	4.00	0.00	3.75	4.00	
	4.00	3.25	6.50	6.00	7.00	2.75	12.50	5.00	11.00	6.75	4.50	7.00	5.50	3.25	4.00	4.60	
	6.00	7.25	7.50	8.25	8.00	4.00	8.00	2.00	0.75	3.50	9.25	2.00	8.00	2.25	7.50	7.00	
	9.25	6.75	7.00	7.00	6.00	6.00	9.75	4.00	4.50	6.25	5.75	2.25	4.50	7.25	6.00	7.50	
	10.00	8.00	6.00	6.00	10.00	5.00	15.00	7.00	4.25	5.50	7.75	4.00	4.00	5.00	5.50	7.50	
	4.00	3.75	7.00	4.75	12.50	5.25	13.00	5.00	10.00	6.00	4.75	4.50	8.00	0.50	4.00	5.50	
	5.00	4.50	5.50	0.00	8.75	4.00	7.50	3.50	6.00	8.00	7.50	5.75	6.00	2.50	6.00	4.00	
	7.00	8.00	10.00	9.00	11.50	3.00	9.00	4.75	5.25	8.75	7.50	2.75	6.25	4.50	5.50	4.25	
	5.50	4.50	8.00	7.25	8.75	6.25	7.00	4.00	0.50	6.50	7.75	8.25	5.50	8.50	6.00	0.50	
5.50	4.50	5.25	4.25	14.00	4.00	7.50	4.50	4.00	4.00	3.75	4.25	6.25	5.50	4.50	7.00		
Total .....	96.00	89.50	111.00	98.00	166.75	70.75	153.25	73.25	90.75	73.00	88.75	66.25	91.75	85.75	85.00	95.25	
		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:		grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Highest .....		15.00	231.52	9.00	45.00	10.25	297.12	8.00	40.00	11.50	177.50	7.75	33.75	10.00	154.35	9.00	45.00
Lowest .....		4.00	61.74	8.25	16.25	5.25	81.04	2.00	10.00	3.50	54.02	2.00	10.00	3.75	57.88	2.25	11.25
Average .....		6.90	164.18	8.35	31.75	10.66	164.53	4.80	24.00	6.28	96.98	4.64	23.20	5.89	90.00	6.03	30.15
Tests above average .....		13		13		15		15		11		13		16		15	
Tests below average .....		17		17		15		15		19		17		14		15	



TABLE XV.—Results of actual tests of strain and stretch—Continued.

Catalogue number of samples..	MERINO.															
	70. HIP.				71. SHOULDER.				71. SIDE.				71. HIP.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	15.00	8.00	4.00	2.50	4.00	3.00	6.50	6.50	5.00	3.00	4.00	6.25	9.00	3.00	6.75	5.00
	4.00	3.00	8.50	12.00	3.50	3.50	4.75	2.25	8.00	7.25	5.00	5.75	6.00	7.00	3.00	1.00
	12.75	5.25	8.00	5.00	6.00	6.50	5.50	4.50	5.25	6.00	6.00	7.00	7.00	4.50	7.00	4.00
	10.00	3.00	5.25	2.25	4.75	4.25	7.75	6.75	4.50	6.50	6.50	7.00	4.00	4.75	6.00	4.75
	8.00	4.00	10.50	3.00	7.00	3.75	4.25	4.75	6.50	6.25	4.50	4.50	10.25	4.00	4.00	1.50
	12.00	5.50	4.25	4.50	4.75	5.00	4.50	5.00	7.00	6.25	9.00	5.00	5.00	5.00	9.00	2.75
	5.00	3.00	13.00	7.75	4.00	2.50	5.00	6.25	5.00	7.25	6.50	6.00	6.00	5.25	9.00	6.00
	5.00	1.00	6.75	7.00	2.75	4.75	4.50	5.00	5.00	3.50	6.00	4.75	6.25	5.00	9.25	6.25
	4.75	2.00	8.00	4.00	3.00	3.25	4.75	5.00	4.75	6.50	6.25	4.25	11.25	2.25	13.00	7.00
	9.50	1.50	4.00	4.75	3.25	6.00	4.00	6.75	4.75	7.50	6.00	3.50	5.00	9.00	5.00	2.25
	6.25	4.00	4.75	2.50	5.75	7.50	5.50	4.00	9.00	8.50	7.25	7.00	12.25	2.50	5.00	4.00
	12.75	4.00	12.00	2.00	5.00	4.75	4.00	4.00	6.00	5.50	4.00	4.00	5.00	2.75	6.00	5.00
	7.50	2.00	12.00	4.25	6.50	6.25	7.50	7.75	4.50	8.50	7.25	7.00	12.25	4.50	10.00	4.00
	4.50	4.00	8.00	7.00	5.00	5.25	3.25	5.75	4.00	7.00	8.00	7.50	11.00	4.00	7.50	5.25
5.00	3.00	9.50	7.00	6.25	7.00	4.50	5.50	5.00	7.00	5.00	4.75	6.75	3.00	11.00	1.50	
Total .....	122.00	53.25	117.50	50.50	72.50	72.25	76.75	81.50	84.75	94.25	91.25	88.25	118.50	49.75	124.50	59.25

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	15.00	231.52	8.00	40.00	7.75	119.03	7.75	38.75	9.00	139.91	9.00	45.00	13.00	200.63	7.00	35.00
Lowest .....	4.00	61.74	1.00	5.00	3.00	46.30	2.25	11.25	4.00	61.74	2.00	10.00	4.00	61.74	1.00	5.00
Average .....	7.98	123.17	3.45	17.25	4.98	76.86	5.13	25.65	5.89	90.45	6.08	30.40	8.10	125.02	3.63	18.15
Tests above average .....	16		13		14		14		15		17		13		16	
Tests below average .....	14		17		16		10		15		13		17		14	

Catalogue number of samples..	MERINO.															
	72. SHOULDER.				72. SIDE.				72. HIP.				73. SHOULDER.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	4.00	2.75	5.50	5.50	8.50	3.00	4.00	4.00	9.50	3.00	7.75	3.75	6.25	5.25	7.50	4.00
	2.50	3.75	3.50	3.00	5.00	4.00	5.50	8.75	8.00	2.25	16.75	8.25	10.00	4.25	5.50	6.25
	6.00	3.75	3.50	4.25	4.00	5.00	7.25	5.00	9.00	5.25	12.00	3.50	7.00	4.75	12.50	6.00
	4.00	5.50	5.00	4.75	8.00	5.00	5.50	8.25	14.00	4.00	8.50	4.50	11.00	5.75	9.00	7.75
	4.25	2.50	3.25	3.25	2.50	2.00	3.75	3.25	9.25	8.75	6.25	8.00	7.00	6.00	5.50	5.50
	6.00	5.50	8.00	6.25	6.25	4.75	5.75	7.25	7.00	2.50	6.00	8.00	8.25	4.00	11.00	5.00
	6.50	7.00	5.50	5.75	3.50	5.00	5.25	5.50	5.50	2.00	6.50	3.00	10.25	5.00	7.50	7.50
	3.25	2.50	6.00	6.75	3.00	4.50	4.75	4.50	12.75	4.00	6.00	4.25	6.00	7.00	13.50	7.00
	3.50	4.25	4.25	8.50	6.50	5.50	4.50	4.50	5.00	3.00	9.00	2.00	10.50	4.75	10.25	5.50
	4.25	3.50	6.25	7.50	2.75	6.50	3.75	8.00	13.25	2.00	5.75	2.00	8.00	6.75	6.25	6.75
	3.75	2.75	4.50	4.00	4.00	2.00	4.50	8.00	13.25	2.25	8.00	4.00	11.00	6.00	7.00	6.75
	4.50	4.00	5.25	5.00	4.25	3.00	6.25	5.75	6.00	3.00	12.75	2.75	8.75	8.25	7.25	3.00
	5.50	6.00	4.50	2.50	5.50	2.50	5.75	8.25	7.25	2.25	8.50	3.50	6.75	3.75	11.50	4.75
	4.25	5.00	7.00	6.50	7.00	5.00	4.50	5.00	5.75	5.00	15.50	4.50	5.50	5.00	5.50	7.75
4.25	4.25	2.50	3.50	5.50	3.75	6.00	6.00	2.25	2.50	10.25	2.00	5.00	6.25	7.00	7.75	
Total .....	67.00	64.00	73.25	75.00	79.25	65.50	77.00	74.00	136.50	59.25	130.50	51.00	118.75	82.75	127.75	90.25

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	7.00	108.04	7.50	37.50	9.50	146.63	7.25	36.25	16.75	258.53	8.00	30.00	13.50	208.37	8.25	41.25
Lowest .....	3.25	50.16	2.50	12.50	3.00	46.30	3.00	15.00	5.00	77.17	2.00	10.00	5.00	77.17	3.00	15.00
Average .....	4.69	72.89	4.63	23.15	5.20	80.26	4.65	23.25	9.20	141.09	3.37	16.85	8.22	128.87	5.77	28.85
Tests above average .....	12		14		15		15		11		14		12		14	
Tests below average .....	18		10		15		15		10		16		18		16	



TABLE XV.—Results of actual tests of strain and stretch—Continued.

Catalogue number of samples..		MERINO.															
		73. SIDE.				73. HIP.				74. SHOULDER.				74. SIDE.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	12.25	8.00	4.50	4.25	7.75	3.00	8.00	3.00	6.00	4.00	5.75	4.75	8.00	9.50	6.00	5.00	
	6.75	4.00	8.25	6.25	10.00	4.00	7.00	2.50	11.00	6.00	10.25	5.25	0.50	7.50	11.00	8.25	
	8.00	8.00	0.50	7.00	6.50	5.25	11.00	2.75	7.00	6.00	9.25	6.25	10.00	7.00	11.25	6.00	
	7.00	5.00	8.75	5.00	9.00	6.00	6.50	4.75	11.25	8.00	5.50	5.50	9.60	8.60	6.50	7.50	
	5.00	4.00	8.00	8.00	7.00	3.00	6.75	3.00	5.50	4.75	12.25	7.75	5.25	5.00	6.00	5.25	
	5.75	6.00	8.50	4.00	6.25	4.00	8.75	6.00	6.75	4.50	9.00	0.75	7.50	7.50	8.00	6.75	
	9.00	7.00	7.00	7.50	8.00	2.75	8.75	3.75	8.00	6.00	11.00	8.00	7.00	8.00	8.00	8.25	
	4.00	7.75	8.75	8.00	0.25	3.00	9.00	6.00	7.00	4.75	9.50	7.00	10.00	9.00	9.75	7.50	
	9.00	7.50	7.75	6.00	8.00	3.50	4.75	3.25	7.25	6.75	7.00	5.50	6.00	4.25	7.00	7.25	
	0.50	4.25	6.00	7.00	10.50	5.00	8.00	1.75	13.50	8.00	6.50	5.00	5.00	5.25	7.00	7.50	
	7.75	4.25	6.00	5.00	8.75	5.25	9.00	1.00	14.00	7.50	12.50	6.00	8.75	7.75	8.00	6.75	
	6.00	6.50	8.00	4.00	10.26	3.00	6.25	2.00	11.50	7.00	8.00	5.00	7.60	8.00	5.00	5.00	
	5.00	6.50	5.75	4.00	14.00	6.00	11.50	3.00	5.00	6.00	12.50	6.50	7.00	9.50	5.00	7.00	
	7.50	7.50	5.00	4.25	8.00	5.50	10.60	7.00	6.00	5.00	10.00	4.00	8.60	7.75	5.00	5.25	
8.75	6.00	7.00	7.00	6.00	5.25	0.30	4.00	7.25	4.75	7.25	5.00	9.50	7.00	5.50	8.00		
Total .....	108.25	98.75	106.75	87.25	126.25	62.50	120.25	53.75	126.00	88.00	136.25	88.25	116.00	111.60	109.00	101.25	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Lowest .....		12.25	189.07	8.00	40.00	14.00	210.08	7.00	35.00	14.00	216.06	8.00	40.00	11.25	173.64	9.59	47.50
Average .....		7.10	110.51	6.20	31.00	6.21	126.72	3.87	19.35	8.74	134.90	5.88	29.40	7.50	115.76	7.09	35.45
Tests above average .....		15		15		18		14		14		15		13		17	
Tests below average .....		15		15		17		16		16		15		15		13	
Catalogue number of samples..		MERINO.															
		74. HIP.				75. SHOULDER.				75. SIDE.				75. HIP.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	13.75	6.00	9.75	2.75	6.90	3.25	8.75	5.50	6.50	7.00	5.00	4.25	10.00	4.00	10.00	4.75	
	14.00	6.75	11.75	7.00	5.75	3.25	12.75	7.00	10.50	5.60	7.25	7.60	7.00	2.25	11.25	7.00	
	10.00	6.00	8.00	3.00	6.50	3.25	0.00	2.50	8.00	8.00	7.25	5.00	7.00	3.00	8.00	7.00	
	11.25	7.00	12.25	6.25	7.00	6.25	9.00	3.50	8.00	7.25	5.00	7.00	8.00	6.25	14.00	6.00	
	17.25	5.75	9.75	4.00	8.75	2.50	9.00	6.50	7.25	5.75	11.00	8.60	7.00	3.75	11.00	6.00	
	17.25	8.00	12.00	6.00	8.00	3.35	8.00	4.75	7.00	8.00	6.60	5.00	6.50	4.75	15.00	6.00	
	12.75	7.00	10.00	4.75	6.75	2.50	0.50	4.00	8.00	7.60	7.60	7.60	7.00	4.00	7.00	9.00	
	9.50	0.00	20.00	7.00	7.00	2.25	8.25	2.75	7.00	5.00	10.00	7.00	6.25	4.00	14.75	8.00	
	10.00	5.00	8.50	5.25	12.75	6.50	5.60	2.50	7.50	7.50	9.00	6.25	10.50	5.00	7.00	3.00	
	15.00	6.00	13.00	6.60	9.60	3.75	8.75	3.00	10.00	7.75	8.00	8.00	6.00	2.25	8.00	2.75	
	15.00	3.00	12.75	5.75	9.00	4.75	6.75	3.50	7.25	6.50	5.00	7.00	8.00	0.00	10.25	4.00	
	11.00	7.00	0.25	7.00	6.00	3.00	5.75	5.75	7.50	6.75	8.00	7.25	9.00	3.00	7.60	2.50	
	8.00	5.00	13.00	6.00	7.00	3.25	6.00	4.00	9.60	6.00	7.60	6.00	9.75	6.25	8.00	2.00	
	11.60	4.00	20.00	6.60	7.00	4.00	7.50	4.00	5.00	6.00	6.75	8.60	17.75	7.00	7.50	3.00	
10.00	6.00	14.25	8.25	7.60	6.75	7.00	4.25	11.00	7.50	10.00	6.25	13.50	7.00	8.50	5.00		
Total .....	186.25	85.50	184.25	84.00	115.00	55.50	115.50	62.50	120.00	100.00	112.75	98.50	133.25	68.50	145.75	71.00	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Lowest .....		20.00	308.69	8.25	41.25	12.75	196.79	7.00	35.00	11.00	169.78	8.50	42.50	17.75	273.96	7.00	35.00
Average .....		8.00	123.48	2.75	13.75	5.50	84.89	2.25	11.50	6.00	77.17	4.25	21.25	6.00	92.61	2.00	10.00
Tests above average .....		13		16		12		13		13		16		12		16	
Tests below average .....		17		12		18		17		17		14		18		14	



TABLE XV.—Results of actual tests of strain and stretch—Continued.

Catalogno number of samples..		MERINO.															
		70. SHOULDER.				70. SIDE.				70. HIP.				77. SHOULDER.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
		5.50	3.00	10.25	1.75	5.00	4.50	7.00	7.25	11.75	2.00	10.00	4.50	5.75	5.75	8.00	5.25
		10.00	5.00	7.25	1.75	6.00	7.00	5.25	5.00	6.00	3.75	12.00	5.75	8.25	4.75	7.25	4.25
		8.50	2.25	6.50	1.50	7.25	5.00	7.00	4.75	7.00	3.00	11.00	2.75	5.00	6.50	5.00	5.00
		14.75	5.00	12.00	2.00	4.00	5.25	5.00	8.00	6.75	4.25	9.00	4.00	5.75	4.50	5.00	5.75
		10.00	1.25	10.00	5.00	5.75	4.50	5.00	5.50	6.50	5.25	10.50	3.75	5.00	3.75	6.25	5.25
		8.25	2.50	9.25	4.00	4.00	3.50	5.00	6.50	13.00	3.50	11.00	5.75	5.25	4.25	6.00	6.25
		8.25	2.00	13.00	2.75	8.25	2.25	5.00	8.75	12.25	6.00	8.00	5.50	6.00	4.00	5.00	7.50
		10.00	3.25	5.75	2.00	6.75	7.25	5.00	3.25	6.50	3.00	9.60	4.75	5.50	8.50	7.75	8.00
		8.00	1.75	8.75	2.25	6.25	6.00	4.00	6.50	10.00	5.50	12.00	5.00	5.00	5.00	7.00	7.00
		8.00	1.00	12.00	5.00	5.00	5.25	6.50	7.00	12.50	4.00	6.75	1.50	4.25	5.25	6.25	8.50
		8.50	2.25	8.25	3.50	8.25	5.00	4.00	4.00	7.25	4.75	7.00	3.00	9.00	4.75	6.50	6.50
		12.75	3.75	9.50	1.25	5.50	5.75	4.00	8.00	9.00	2.00	6.50	2.50	10.50	7.00	8.00	6.00
		6.50	4.50	7.50	8.00	5.50	5.25	6.00	6.50	6.25	6.00	7.00	4.00	5.75	5.00	9.00	5.00
		8.75	1.75	8.00	2.00	7.00	7.00	4.25	6.00	10.00	4.00	10.75	5.75	7.50	5.25	4.25	6.00
7.75	1.50	9.25	1.50	5.25	5.25	4.25	5.00	9.50	7.00	3.50	8.50	5.50	5.50	7.25	5.75		
Total .....		134.75	42.75	137.25	39.25	89.75	97.50	77.50	84.00	134.75	61.00	136.50	62.00	85.00	74.75	98.50	60.50
		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....		14.75	227.66	5.25	26.25	8.25	127.34	8.00	40.00	13.50	208.37	6.00	30.00	10.50	162.00	8.00	40.00
Lowest .....		5.50	84.89	1.00	5.00	4.00	61.74	3.25	16.25	5.75	88.75	1.50	7.50	4.25	65.60	8.50	17.50
Average .....		9.07	130.99	2.73	13.65	5.57	85.97	6.05	30.25	9.44	139.53	4.10	20.50	6.12	94.40	5.51	27.55
Tests above average .....		13		12		12		8		14		13		15		13	
Tests below average .....		17		18		18		22		16		17		15		17	
		MERINO.															
Catalogno number of samples..		77. SIDE.				77. HIP.				78. SHOULDER.				78. SIDE.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
Actual measurement in grams and millimeters.		5.50	6.50	8.50	5.00	5.75	5.25	13.50	4.75	5.00	4.00	5.00	1.75	5.00	4.50	5.25	7.25
		4.25	6.00	4.00	8.00	5.75	8.00	6.50	3.00	5.50	2.75	5.25	4.25	8.25	5.75	5.50	4.50
		5.25	5.50	5.00	8.25	9.25	5.25	5.00	3.75	6.00	5.00	5.50	3.25	8.00	6.75	6.75	6.25
		6.75	7.60	4.00	8.00	10.00	8.00	5.25	6.00	5.50	1.75	5.00	8.00	5.25	4.75	11.00	8.75
		5.25	8.75	5.25	0.50	7.00	4.75	10.75	4.00	6.50	5.75	6.25	5.75	7.25	7.50	5.00	6.25
		5.75	5.75	5.50	8.00	10.00	5.50	6.00	3.00	4.50	3.25	4.50	1.75	6.50	4.25	6.00	6.25
		4.00	5.25	4.75	6.00	4.25	4.00	7.00	5.00	9.50	6.00	8.75	5.00	6.50	6.50	5.00	7.00
		6.25	7.00	5.00	7.25	9.00	5.75	7.00	3.25	5.25	3.00	7.75	6.50	7.25	8.25	4.50	5.00
		4.00	5.00	4.25	7.00	11.25	5.25	10.50	4.50	6.25	5.00	5.25	5.25	5.00	7.25	4.50	6.25
		4.50	8.00	11.00	7.60	7.75	7.00	6.75	3.00	7.75	7.25	7.75	5.00	5.50	5.00	4.75	7.50
		4.25	8.25	6.50	7.25	4.75	5.00	5.00	4.25	9.25	6.25	7.75	6.50	7.00	8.00	6.25	4.00
		4.25	7.50	4.75	7.50	5.75	3.50	9.00	6.75	6.00	3.75	5.25	3.25	7.25	6.00	7.00	5.00
		6.00	7.00	5.00	5.50	14.00	6.75	8.00	5.25	5.25	2.25	7.25	5.25	6.50	4.75	6.25	8.00
		5.00	6.25	5.50	8.50	11.50	4.50	4.50	4.75	7.75	6.75	5.00	3.00	6.00	7.00	11.00	7.75
		7.00	7.75	5.00	7.50	6.00	3.00	11.00	5.50	5.75	4.75	6.00	5.25	5.50	6.00	5.75	4.00
Total .....		77.00	102.00	84.00	100.75	122.00	74.50	115.70	60.75	95.75	67.50	89.25	67.75	96.75	92.75	73.50	93.75
		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....		11.00	169.78	8.75	43.75	14.00	216.08	7.00	35.00	9.50	145.63	7.25	36.25	11.00	169.78	8.75	43.75
Lowest .....		4.00	61.74	5.00	20.00	4.25	65.60	3.00	15.00	4.25	65.60	1.75	8.75	4.50	69.40	4.00	20.00
Average .....		5.36	82.73	6.95	34.75	7.92	122.24	4.70	23.50	6.17	95.23	4.51	22.55	5.67	87.51	6.21	31.05
Tests above average .....		11		19		13		17		12		17		18		16	
Tests below average .....		19		11		17		13		18		13		12		14	



TABLE XV.—Results of actual tests of strain and stretch—Continued.

Catalogue number of samples..		MERINO.															
		78. HIP.				79. SHOULDER.				79. SIDE.				79. HIP, TOP OF WRINKLE.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
		12.00	6.00	6.00	5.25	5.75	5.00	5.00	5.60	8.50	8.25	4.75	6.00	7.75	3.00	7.75	4.00
		5.00	3.75	5.00	5.00	5.00	6.75	6.00	4.25	5.00	5.25	5.25	6.25	7.75	6.00	10.00	7.00
		7.50	3.25	6.75	7.00	4.00	4.00	6.25	7.00	8.00	8.00	5.00	7.25	5.25	4.00	7.50	6.00
		11.50	3.00	10.75	6.00	5.25	3.75	5.50	3.75	6.50	8.50	4.00	7.00	8.50	5.50	8.75	5.50
		7.00	4.75	9.50	6.25	7.00	4.75	6.75	6.00	9.00	6.00	4.25	6.25	10.75	7.00	9.50	4.25
		5.75	4.60	7.00	6.00	4.75	2.25	7.25	4.00	5.00	6.25	4.60	5.75	10.50	4.75	5.75	3.50
		6.75	5.50	8.25	3.25	6.00	5.00	4.75	6.00	4.25	3.50	5.25	5.75	8.75	5.75	7.00	4.75
		9.00	4.00	4.75	2.50	6.75	7.25	4.75	5.75	6.00	3.25	5.25	6.00	7.00	3.00	6.00	6.00
		5.00	3.00	11.25	5.00	5.00	7.50	6.25	6.00	7.50	7.75	4.25	7.00	6.00	3.50	7.00	7.00
		5.75	3.75	9.25	4.00	6.00	4.75	5.00	5.75	5.00	7.00	5.50	6.25	6.50	4.50	6.75	3.75
		10.50	4.00	6.00	3.00	6.50	7.25	5.50	6.50	6.25	6.00	4.25	3.25	6.75	4.50	9.00	4.00
		9.00	4.25	10.60	3.00	5.50	5.75	9.00	7.25	7.00	7.00	9.00	7.00	6.25	4.00	7.00	4.00
8.25	6.00	7.00	4.00	0.00	5.25	6.00	6.00	5.25	6.00	4.25	5.00	10.00	4.50	6.75	3.75		
7.25	6.00	7.50	3.00	7.50	4.75	4.75	5.00	5.00	9.00	4.25	6.00	6.50	4.50	9.75	3.50		
8.75	5.25	12.75	4.00	8.25	8.00	5.50	4.50	4.50	4.00	5.50	7.25	7.50	4.75	7.50	4.00		
Total .....		119.00	67.00	122.25	67.25	89.25	82.00	88.25	83.25	92.75	95.75	76.25	92.00	115.75	69.25	116.00	71.00
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
		12.75	196.79	7.00	35.00	9.00	138.91	8.00	40.00	9.00	133.01	9.00	45.00	10.75	165.92	7.00	35.00
		5.00	77.17	3.00	15.00	4.00	61.74	2.25	11.25	4.25	65.60	3.25	16.25	5.25	81.03	3.00	15.00
Average .....		8.04	124.09	4.47	22.35	5.92	91.37	5.51	27.55	5.63	86.90	6.25	81.25	7.72	110.15	4.67	23.35
Tests above average.....		14		14		15		15		9		12		13		12	
Tests below average.....		16		16		15		15		21		14		17		18	

Catalogue number of samples..		MERINO.															
		79. HIP, BETWEEN WRINKLE.				80. SHOULDER.				80. SIDE.				80. HIP.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
		6.25	4.25	9.75	6.00	6.75	7.00	5.75	8.00	4.00	7.75	3.50	6.25	5.50	5.75	4.00	4.00
		8.00	5.25	5.00	5.75	8.50	7.75	6.00	6.50	4.25	9.00	5.50	8.00	4.25	7.00	7.75	5.25
		6.00	3.25	10.00	5.25	4.25	7.00	4.25	5.00	4.50	9.25	4.00	7.75	5.25	3.00	6.25	6.00
		10.25	5.25	5.50	5.00	4.00	7.00	6.50	5.50	3.50	8.00	5.25	5.00	6.00	4.50	4.00	2.75
		7.75	7.00	10.75	3.00	3.00	5.00	7.00	6.60	3.75	9.00	3.50	6.00	6.50	6.00	4.00	5.00
		0.00	4.00	6.50	6.00	5.00	6.25	4.75	8.60	3.25	7.25	3.75	6.25	4.75	6.75	7.00	5.00
		5.50	3.00	10.00	6.25	6.00	5.50	0.25	7.75	5.00	8.50	3.76	6.00	4.25	6.00	4.00	7.00
		6.00	3.00	7.00	5.00	5.25	6.35	3.50	5.50	5.00	7.00	6.00	0.00	3.00	3.00	5.25	4.75
		7.50	6.00	5.50	3.00	5.25	8.00	5.00	4.00	5.00	6.25	4.00	6.76	4.50	6.00	4.00	4.75
		8.00	4.75	5.75	3.50	4.00	7.25	5.25	8.00	4.00	8.25	5.23	7.00	5.25	4.75	0.25	7.00
		10.00	7.00	7.25	7.00	5.25	5.75	4.75	7.25	5.00	7.75	4.25	6.50	3.25	3.00	4.75	4.50
		6.75	4.75	12.50	6.25	3.75	6.00	0.00	7.00	6.25	6.50	5.00	7.00	6.00	6.75	5.00	3.00
7.25	6.25	5.00	3.00	5.00	8.00	3.00	5.00	6.00	8.00	4.75	7.50	5.00	6.75	4.00	7.00		
9.50	6.75	6.00	6.25	5.00	6.25	5.50	8.00	4.00	8.00	5.00	6.50	8.00	4.50	5.50	7.00		
9.00	6.00	6.75	3.75	7.25	5.75	5.25	7.50	5.50	6.75	8.50	7.75	4.75	5.00	4.50	4.50		
Total .....		113.75	75.50	113.25	75.00	78.25	98.75	78.75	100.00	69.00	117.25	72.00	101.25	76.25	77.75	76.25	77.50
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
		12.50	192.93	7.00	35.00	8.50	131.19	8.50	42.50	8.50	131.19	9.25	46.25	8.00	123.48	7.00	35.00
		5.00	77.17	3.00	15.00	3.00	46.30	4.00	20.00	3.25	59.16	5.60	25.00	3.00	46.30	2.75	13.75
Average .....		7.56	116.69	5.01	25.05	5.23	89.72	6.63	33.15	4.70	72.54	7.28	36.40	5.08	78.41	5.17	25.85
Tests above average.....		12		16		16		15		15		15		13		14	
Tests below average.....		18		14		14		15		15		15		17		16	



TABLE XV.—Results of actual tests of strain and stretch—Continued.

MERINO.																
Catalogue number of samples..	81. SHOULDER.				81. SIDE.				81. HIP.				82. SHOULDER.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	10.25	6.75	7.25	4.25	8.25	7.75	5.25	7.00	5.00	4.00	8.00	3.25	4.75	2.25	5.50	4.75
	6.25	8.75	7.00	5.25	6.25	6.00	6.50	6.75	8.75	3.50	7.00	4.50	6.25	6.75	6.75	4.00
	8.00	5.00	9.00	7.25	11.50	7.25	8.00	6.50	13.00	8.00	9.25	4.25	6.75	2.25	8.25	5.75
	8.00	5.00	11.75	7.50	5.00	6.25	6.00	8.00	12.75	2.75	7.75	2.00	6.50	5.25	7.50	6.50
	7.50	7.75	6.50	6.00	9.50	7.25	4.75	8.25	8.50	7.00	7.00	7.00	6.25	3.25	9.25	6.50
	7.75	4.00	10.75	7.25	4.75	8.00	5.00	8.50	14.75	5.75	11.00	4.00	5.75	4.00	6.00	3.75
	8.00	5.75	11.25	6.75	4.00	7.25	3.00	7.00	11.00	5.25	14.75	6.00	5.00	8.75	5.00	3.00
	8.50	7.75	6.75	4.00	10.50	8.00	5.00	6.00	5.75	3.00	7.75	3.00	9.75	6.00	7.00	4.25
	9.50	8.00	7.75	4.00	10.00	8.50	7.75	5.75	6.00	2.50	14.00	5.00	5.00	4.50	5.50	4.00
	6.60	7.75	5.25	5.00	5.00	7.00	10.00	6.50	6.25	7.75	4.50	8.25	6.75	6.00	2.75	2.75
	7.75	4.50	7.75	5.75	6.25	5.00	5.00	6.00	6.60	3.50	8.50	5.75	7.25	5.00	6.25	6.00
	6.25	7.25	6.25	4.50	4.50	8.25	4.75	7.25	13.25	3.25	10.75	7.00	7.25	5.50	6.75	8.00
	6.50	5.50	9.25	4.75	5.50	8.00	7.00	6.00	6.50	2.50	6.50	5.00	7.25	2.75	7.75	5.75
	6.50	4.00	6.50	4.75	4.00	6.75	4.50	6.00	7.50	3.25	12.75	5.00	8.75	5.75	7.00	6.25
	6.00	4.00	6.75	4.00	5.00	6.25	8.50	6.25	11.75	7.00	7.50	4.00	5.50	6.25	7.75	5.75
Total .....	113.25	91.75	117.75	81.00	100.00	107.50	93.00	101.50	140.50	67.00	145.25	71.25	100.25	70.00	102.25	72.50
Recapitulation and reduction:																
Highest .....	11.75	161.86	8.75	43.75	11.50	177.50	9.00	45.00	14.75	227.00	8.00	40.00	9.75	160.40	6.75	33.75
Lowest .....	5.25	81.63	4.00	20.00	4.00	61.74	5.00	25.00	5.00	77.17	2.00	10.00	4.75	73.81	2.25	11.25
Average .....	7.70	118.85	5.76	28.80	6.43	98.24	6.06	24.80	9.23	147.00	4.61	23.05	6.75	104.18	4.73	23.75
Tests above average .....	15		13		11		17		12		13		13		15	
Tests below average .....	15		18		19		13		19		17		14		14	

MERINO.																
Catalogue number of samples..	82. SIDE.				82. HIP.				83. SHOULDER.				83. SIDE.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	5.00	2.00	6.00	3.50	5.00	3.00	5.00	4.00	7.50	3.50	8.00	6.75	5.00	4.00	4.25	3.50
	5.50	3.00	6.00	7.25	11.25	7.25	5.00	2.00	7.25	6.25	8.00	4.75	3.00	5.25	8.50	5.50
	4.75	2.00	6.00	4.00	9.50	5.50	5.00	3.00	6.50	5.00	4.50	5.75	4.00	6.50	6.75	4.00
	11.00	6.50	6.00	3.00	8.25	3.25	5.00	3.00	6.75	6.00	6.50	6.25	5.75	5.00	5.25	5.75
	7.50	2.00	4.00	5.00	16.75	5.00	6.00	4.50	8.25	4.75	5.50	5.75	5.50	4.50	4.00	4.00
	5.75	6.00	7.50	6.00	10.75	3.00	7.00	5.50	5.00	5.00	5.50	5.75	6.50	7.25	6.00	4.00
	6.25	3.00	5.50	2.25	9.00	4.00	7.25	3.75	4.50	6.50	4.50	6.25	4.00	5.00	8.50	5.00
	8.50	7.00	6.00	2.00	8.00	3.00	8.50	4.75	5.75	7.00	9.75	5.25	6.00	6.75	7.25	5.50
	5.00	2.50	5.50	6.00	6.00	4.00	12.50	3.00	12.25	5.00	10.25	7.50	7.00	6.50	4.50	4.75
	4.00	3.75	6.50	4.25	8.50	6.00	7.00	5.50	9.50	6.00	7.50	3.75	5.00	6.50	4.25	4.00
	6.25	4.25	8.00	5.00	6.00	6.75	14.00	5.00	13.75	8.00	7.00	3.75	6.00	6.00	6.00	7.25
	10.00	4.25	8.50	6.75	9.75	2.75	16.50	6.75	6.25	6.25	7.75	4.00	4.00	5.75	5.00	7.50
	4.75	4.50	7.00	7.00	7.00	6.25	5.25	3.25	5.75	4.50	8.00	6.75	9.00	8.75	6.75	8.00
	5.00	4.25	5.50	3.50	7.50	4.75	9.50	5.00	6.25	3.25	7.00	4.50	4.00	5.00	3.75	4.00
	5.50	3.50	8.75	6.25	12.00	6.00	18.25	7.25	8.00	5.00	11.75	4.75	5.00	7.50	5.50	7.00
Total .....	98.75	65.50	98.25	71.75	135.25	71.50	131.75	60.25	113.25	81.00	111.50	81.50	82.25	87.25	86.25	77.75
Recapitulation and reduction:																
Highest .....	11.00	108.78	8.00	40.00	18.25	261.68	7.25	26.25	13.75	212.23	8.00	40.00	9.00	138.91	7.50	37.50
Lowest .....	4.00	61.71	2.00	10.00	5.00	77.17	3.00	15.00	4.50	69.46	3.25	16.25	3.75	67.87	3.50	17.50
Average .....	6.46	98.78	4.57	22.85	6.90	137.37	4.00	23.45	7.49	115.01	5.42	27.10	5.61	86.69	5.50	27.60
Tests above average .....	10		14		12		16		14		14		12		14	
Tests below average .....	20		16		18		14		18		16		18		14	



TABLE XV.—Results of actual tests of strain and stretch—Continued.

Catalogue number of samples..		MERINO.																
		83. HIP.				84. SHOULDER. (17 months.)				81. SHOULDER.				84. SIDE.				
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
		18.00	6.50	10.75	3.00	4.25	5.50	5.00	4.00	4.50	2.00	5.50	3.25	5.00	1.50	3.00	2.00	2.00
		10.75	1.50	4.60	4.00	5.00	7.00	4.25	6.75	4.00	1.25	3.75	2.25	3.00	1.00	5.00	5.25	5.25
		11.50	2.50	15.00	3.00	6.75	6.50	4.00	5.75	6.50	2.75	6.25	3.75	6.00	4.50	4.50	4.25	4.25
		17.00	4.00	10.25	3.00	5.25	7.75	4.00	5.00	5.50	1.75	3.75	3.25	4.00	1.50	3.50	2.00	2.00
		5.00	2.25	11.50	2.00	5.25	6.00	3.75	6.00	3.25	2.50	3.50	1.50	3.50	2.00	6.25	6.25	2.25
		13.25	3.25	10.50	2.25	5.00	6.75	6.00	6.25	3.25	1.75	3.75	2.25	7.50	6.25	4.25	3.75	3.75
		9.00	3.00	12.50	3.25	5.50	6.25	6.00	7.00	6.25	4.75	3.25	2.00	5.00	4.50	3.25	1.50	1.50
		22.25	7.50	11.25	3.00	7.00	5.25	5.00	6.25	4.50	2.00	4.50	3.25	3.50	2.00	5.50	2.50	2.50
		3.00	2.75	6.00	5.00	5.50	6.00	4.00	8.25	6.25	5.00	5.25	1.75	3.00	1.00	2.75	3.25	3.25
		24.00	3.00	4.50	2.75	4.25	4.75	4.75	8.75	3.75	3.25	4.00	3.75	4.75	5.00	4.00	2.50	2.50
		12.00	3.50	18.50	5.25	4.50	7.00	4.00	7.50	5.50	2.25	5.00	3.75	7.25	3.00	5.50	4.00	4.00
		7.50	3.00	10.50	2.50	6.25	6.75	3.00	6.75	4.25	1.75	4.25	2.50	3.00	2.50	5.00	4.25	4.25
		4.75	1.75	12.00	3.00	7.00	5.50	3.25	5.50	3.75	1.50	4.25	2.75	3.00	1.00	4.75	4.75	4.75
		6.00	4.00	6.25	4.25	3.50	5.50	5.50	5.75	4.00	3.75	6.00	3.25	4.00	3.75	6.00	5.00	5.00
		3.50	1.50	12.00	2.25	3.75	6.00	4.50	6.50	4.75	3.75	6.50	3.00	3.00	1.00	4.00	4.50	4.50
		Total .....		167.50	50.25	101.50	48.50	78.75	91.51	67.00	92.00	7.00	40.00	69.50	42.25	65.50	40.50	67.25
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		
		grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	
		Highest.....	24.00	370.43	7.50	37.50	7.00	108.04	8.25	41.25	6.50	100.32	5.00	25.00	7.50	115.70	6.25	31.25
		Lowest.....	3.00	46.30	1.50	7.50	3.00	46.30	4.00	20.00	3.25	50.16	1.25	6.25	2.75	42.44	1.00	5.00
		Average.....	14.30	220.71	3.29	16.45	4.86	75.01	6.12	30.60	4.65	71.77	2.74	13.70	4.42	68.22	3.07	15.35
Tests above average.....		7		9		15		14		12		15		13		14		
Tests below average.....		23		21		15		16		18		15		17		16		
Catalogue number of samples..		MERINO.																
		84. HIP.				85. SHOULDER.				85. SIDE.				85. HIP.				
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
		6.00	1.50	5.00	2.00	5.25	5.25	4.00	5.00	4.50	7.50	5.00	8.50	5.25	5.00	5.00	5.50	
		4.00	1.25	4.25	3.00	3.50	8.25	3.75	5.75	6.00	8.25	4.00	6.00	4.50	6.75	3.00	1.75	
		3.00	2.50	3.00	2.25	3.75	7.00	4.25	9.00	4.00	4.50	3.00	7.00	6.00	8.00	5.25	3.00	
		6.00	2.75	4.25	1.75	6.00	4.50	3.75	4.50	4.00	9.25	3.00	5.25	4.50	2.75	4.75	5.25	
		6.75	3.25	4.50	2.50	4.50	8.00	3.50	5.50	4.00	6.00	4.00	7.00	6.00	4.00	5.75	4.25	
		4.75	3.00	5.25	1.25	3.00	6.00	3.75	5.75	5.50	9.50	3.50	8.00	3.25	8.00	5.00	6.00	
		3.75	1.00	5.50	3.00	2.75	5.00	2.75	6.50	3.00	6.75	3.25	7.50	4.00	5.25	4.25	2.25	
		6.25	1.50	4.75	2.00	3.50	8.00	2.75	5.75	6.25	8.75	3.75	6.25	4.50	5.50	4.50	3.00	
		6.50	2.00	4.00	3.00	3.25	8.50	4.00	7.00	4.00	5.75	3.00	4.75	3.00	2.50	4.00	1.50	
		5.00	4.00	4.75	1.75	3.00	7.00	3.75	4.50	8.00	6.50	3.25	4.50	3.75	1.00	3.25	5.00	
		2.50	1.75	3.75	1.50	3.00	5.50	4.00	8.75	3.00	7.50	6.00	7.00	4.25	3.25	3.00	5.00	
		5.00	4.50	3.50	2.25	2.75	7.75	3.75	5.00	4.00	9.00	3.00	4.50	4.00	2.75	3.50	1.00	
		4.50	1.25	4.00	2.50	4.25	8.00	3.00	4.00	3.50	7.00	3.00	7.00	4.75	5.75	4.25	6.75	
		2.25	2.00	8.25	5.25	4.00	6.00	5.00	8.00	4.25	7.50	4.25	8.50	5.50	2.25	4.50	5.00	
		6.50	3.50	8.00	1.75	3.25	6.50	4.75	7.00	3.00	7.00	8.50	6.00	3.00	3.25	3.00	1.25	
		Total .....		71.75	35.75	72.75	35.75	54.75	95.25	50.60	92.00	61.00	109.00	55.50	98.00	65.25	62.00	62.75
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		
		grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	
		Highest.....	8.25	127.34	5.25	24.25	5.25	81.03	9.00	45.00	0.25	98.47	0.50	47.50	0.00	92.81	6.75	33.75
		Lowest.....	2.25	34.73	1.00	5.00	2.75	42.45	4.00	20.00	3.00	46.30	4.50	22.50	3.00	46.30	1.00	5.00
		Average.....	4.82	74.39	2.38	11.90	3.71	57.20	6.24	31.20	3.88	59.89	6.92	34.60	4.27	65.91	8.92	19.60
Tests above average.....		13		12		16		14		15		17		15		16		
Tests below average.....		17		18		14		16		15		13		15		14		



TABLE XV.—Results of actual tests of strain and stretch—Continued.

Catalogue number of samples..		MERINO.															
		86. SHOULDER.				86. SIDE.				86. HIP.				87. SHOULDER.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
		4.50	7.75	4.00	6.75	10.25	8.75	7.50	8.75	4.00	5.00	4.50	6.00	5.00	6.75	6.25	6.00
		3.25	5.75	5.50	7.50	8.00	7.25	4.00	8.00	3.00	3.50	3.00	2.25	6.00	8.75	5.50	8.00
		5.25	5.25	3.25	4.75	4.00	3.25	5.50	8.00	5.06	1.75	4.25	3.25	5.75	7.75	5.50	4.75
		4.75	6.00	5.50	8.75	6.50	3.00	4.00	6.00	4.25	4.00	4.00	3.00	5.00	7.25	4.25	4.75
		6.25	8.00	3.50	7.75	4.25	2.50	10.50	7.25	15.00	2.50	3.75	4.25	4.75	6.45	5.75	8.50
		3.75	7.50	4.50	0.56	3.00	2.25	6.00	8.00	6.50	2.25	4.60	6.00	3.75	6.75	6.00	7.00
		4.75	4.75	5.25	7.00	5.00	2.00	8.00	7.50	7.25	2.50	5.00	6.50	4.75	4.75	6.00	6.00
		3.75	4.25	5.00	5.75	8.00	2.25	4.00	2.50	4.00	2.00	4.50	4.00	7.75	5.75	4.75	6.25
		4.00	5.75	3.25	5.50	4.50	6.00	3.25	4.50	4.75	2.75	12.75	4.00	6.00	7.00	6.25	7.00
		5.75	8.25	4.50	6.25	8.50	6.00	5.00	7.00	8.00	5.75	11.00	2.75	4.75	5.75	6.50	7.75
		5.00	6.75	6.00	7.75	3.50	5.00	4.75	4.50	7.50	4.00	11.50	6.25	4.50	7.00	4.75	5.50
		5.25	7.25	4.00	6.00	5.00	2.25	4.25	4.00	3.75	4.00	4.00	5.00	4.25	6.75	4.50	6.60
		3.75	4.25	4.50	6.50	4.25	5.00	7.00	6.75	5.25	6.00	4.50	4.50	6.25	6.75	5.25	6.25
		4.00	4.25	5.00	8.25	6.75	4.25	5.00	6.50	6.50	6.25	6.00	6.25	5.00	7.50	5.25	7.00
5.25	6.25	5.50	5.75	6.75	7.75	3.60	7.00	5.00	7.50	4.50	4.00	5.25	8.00	4.75	4.75		
Total .....		60.00	92.00	69.25	100.50	88.25	70.50	81.25	87.25	89.75	66.75	88.00	92.75	79.25	103.25	80.25	86.00
		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:		grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Highest .....		6.25	94.47	8.75	43.75	10.50	162.00	8.00	40.00	15.00	231.53	8.50	42.50	7.75	119.63	8.75	43.75
Lowest .....		3.25	59.10	4.25	21.25	3.00	46.30	2.25	11.25	3.00	46.30	1.75	8.75	4.25	65.00	4.75	23.75
Average .....		4.62	71.31	6.42	32.10	6.65	87.21	6.25	26.25	5.93	91.53	4.32	21.60	5.33	82.11	6.61	33.05
Tests above average .....		15		14		11		14		10		11		14		18	
Tests below average .....		15		18		19		16		20		19		10		12	
Catalogue number of samples..		MERINO.															
		87. SIDE.				87. HIP.				88. SHOULDER.				88. SIDE.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
		6.25	6.25	5.75	7.00	4.50	3.00	7.00	4.00	4.00	6.75	5.50	7.00	6.50	7.75	4.50	6.25
		6.75	3.00	5.00	5.50	5.50	5.50	5.75	5.25	5.00	5.50	2.50	7.00	4.50	5.25	3.50	4.00
		6.50	7.50	5.25	7.00	5.00	4.00	6.50	6.50	3.25	6.50	4.75	5.00	3.75	6.25	4.75	6.00
		6.00	7.50	4.50	3.00	5.25	6.25	3.75	5.00	4.25	6.00	4.50	4.75	4.75	5.50	5.25	6.50
		5.00	6.75	4.25	5.50	7.00	7.00	6.00	4.00	4.75	5.75	5.25	5.75	4.50	6.00	3.50	5.00
		4.50	7.00	5.75	5.00	5.50	2.25	4.75	4.75	6.50	4.75	5.50	7.25	4.25	7.50	5.75	7.50
		5.25	6.50	4.75	7.00	3.50	4.75	6.75	3.00	4.00	5.75	6.00	9.00	5.50	4.25	4.50	6.00
		4.50	8.00	5.00	7.00	4.75	3.00	6.50	6.00	4.25	8.25	6.50	6.50	5.25	7.00	4.00	4.00
		4.50	3.75	5.75	7.25	5.00	2.00	4.00	3.00	3.25	3.75	5.50	7.75	5.00	6.75	3.50	3.25
		7.00	7.25	5.25	7.00	4.00	2.00	4.00	1.00	5.25	7.25	5.00	5.25	5.00	4.25	3.75	3.75
		6.00	7.00	5.50	7.25	6.00	4.50	5.75	6.50	4.25	5.00	6.25	6.75	4.75	6.25	3.50	6.50
		6.00	6.25	6.00	7.00	5.75	6.50	5.00	7.00	4.00	6.00	3.50	7.25	6.00	6.25	4.00	4.50
		6.00	7.00	6.75	7.50	5.00	3.00	4.00	1.50	3.75	6.00	3.00	4.00	5.00	3.75	6.50	7.00
		5.75	6.50	8.00	6.50	8.25	7.00	5.75	3.50	4.50	6.00	3.00	4.50	6.25	6.00	4.75	6.50
5.00	5.25	4.75	7.50	5.50	1.50	6.00	6.25	3.50	6.50	4.50	4.00	5.75	6.25	3.75	7.00		
Total .....		81.00	95.25	80.25	97.00	79.00	61.25	87.50	68.25	69.50	86.75	76.25	91.75	75.25	87.00	65.50	83.75
		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:		grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Highest .....		8.00	123.45	8.00	40.00	9.75	150.40	7.00	35.00	8.25	127.34	9.00	45.00	6.50	100.82	7.75	38.75
Lowest .....		4.25	65.60	3.00	15.00	3.50	54.02	1.00	6.00	3.00	46.30	3.75	18.75	3.50	54.02	3.25	16.25
Average .....		5.37	82.88	6.40	32.00	5.55	85.66	4.25	21.25	4.60	71.92	5.95	29.75	4.60	72.30	5.69	28.45
Tests above average .....		12		21		13		15		14		16		16		18	
Tests below average .....		18		9		17		15		10		14		14		12	



TABLE XV.—Results of actual tests of strain and stretch—Continued.

Catalogue number of samples..		MERINO.															
		88. HIP.				89. SHOULDER.				89. SIDE.				89. HIP.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	0.50	3.00	4.25	5.50	5.00	3.75	6.50	4.00	9.00	4.00	4.25	3.00	11.00	6.50	4.25	5.25	
	8.00	5.00	6.75	6.00	4.25	8.00	4.25	1.25	7.75	3.25	6.75	7.50	5.50	7.00	6.00	4.00	
	11.50	5.75	6.25	2.25	4.00	8.25	5.25	5.25	8.25	8.00	4.00	3.00	5.00	5.50	5.00	5.50	
	5.75	7.75	4.00	1.00	4.25	6.25	9.00	4.25	4.50	5.00	4.00	6.75	4.75	3.00	7.00	3.75	
	5.00	4.25	4.50	5.00	7.50	7.25	4.25	5.75	5.00	5.50	4.25	5.75	5.00	4.50	3.00	5.00	
	5.50	7.25	7.75	7.75	6.75	8.00	5.50	4.00	5.50	7.00	5.25	8.00	6.75	4.00	5.75	6.00	
	6.00	1.75	7.00	5.00	8.00	5.00	3.00	5.00	4.00	6.00	5.50	6.75	4.00	5.75	6.50	1.50	
	3.00	4.75	7.00	3.00	3.00	4.25	5.50	4.25	4.75	5.25	8.00	6.75	4.00	5.75	5.75	0.75	
	6.50	1.50	14.00	5.00	6.00	1.25	4.50	6.75	11.00	5.00	5.25	7.75	6.25	4.25	6.00	1.75	
	5.00	1.00	6.75	3.75	4.00	7.75	4.00	5.75	4.00	5.00	6.50	7.25	7.75	4.75	4.25	4.00	
	11.00	6.25	8.25	1.75	6.00	9.50	5.00	8.25	8.00	8.00	4.75	6.00	10.00	0.50	7.00	7.50	
	5.50	0.60	9.50	6.25	5.00	3.00	4.25	7.75	4.00	4.60	4.00	7.75	5.50	6.00	7.50	7.50	
	9.00	2.00	5.50	2.75	3.25	5.00	5.25	4.00	4.00	4.00	5.00	6.00	12.75	0.50	7.00	3.75	
	5.50	2.50	7.50	1.75	6.25	7.50	3.00	7.50	5.25	6.25	4.75	6.75	5.00	2.25	4.75	1.60	
	6.75	2.75	7.60	4.75	4.60	7.75	4.25	5.00	4.50	7.00	5.75	7.75	5.50	3.00	8.50	2.75	
	Total .....	100.00	61.50	106.50	61.50	77.75	92.50	73.50	78.75	89.50	83.75	78.00	93.50	92.75	69.00	90.50	68.75
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....		grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Lowest .....		3.00	40.30	1.00	5.00	3.00	46.30	1.25	6.25	4.00	61.74	3.25	16.25	4.00	61.74	1.50	7.50
Average .....		6.88	108.19	4.10	20.50	5.04	83.35	5.71	28.55	5.58	86.12	5.90	29.50	6.81	97.39	4.59	22.95
Tests above average .....		12		10		12		15		9		17		10		15	
Tests below average .....		18		14		18		15		21		18		20		15	
Catalogue number of samples..		MERINO.															
		90. SHOULDER.				90. SIDE.				90. HIP.				90.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	5.50	5.25	5.25	5.75	5.00	5.00	6.00	6.00	4.75	2.00	7.50	6.50	1.25	2.50	3.00	2.75	
	5.25	4.75	5.00	4.25	5.00	5.25	8.00	6.00	6.25	2.75	7.00	6.75	3.50	7.50	2.00	5.25	
	4.00	4.75	5.25	5.25	6.50	4.50	5.00	2.50	6.00	1.00	4.50	5.00	3.00	8.00	2.50	6.00	
	6.50	5.50	7.50	7.75	10.25	7.00	5.00	5.75	9.25	5.00	8.00	2.00	3.50	5.50	3.00	7.25	
	5.00	3.25	3.25	2.00	8.00	6.50	4.00	6.50	10.75	4.75	4.75	3.25	2.50	6.00	2.00	4.50	
	3.25	2.75	5.50	5.00	5.75	4.00	6.00	7.00	5.00	1.50	0.00	3.25	2.50	5.00	2.50	7.50	
	3.60	3.25	3.25	3.00	6.50	2.75	6.75	7.00	7.00	4.75	6.00	2.75	3.25	5.25	1.50	2.25	
	3.60	2.25	6.50	3.50	6.00	7.25	5.50	2.50	7.50	3.75	7.00	6.00	2.25	2.00	1.50	5.25	
	5.00	6.00	6.25	6.25	5.00	5.25	5.75	7.50	7.00	5.75	12.00	4.50	3.25	9.00	2.00	4.75	
	6.50	3.75	6.50	4.50	6.00	4.75	6.50	4.00	5.00	4.25	6.00	1.75	2.00	2.25	2.75	6.00	
	0.25	6.75	4.00	3.25	5.25	4.60	5.25	5.00	4.25	2.60	9.50	2.75	3.25	5.75	1.75	7.00	
	3.25	3.75	5.50	4.50	4.50	3.50	4.75	4.50	5.00	4.00	11.25	5.00	3.00	1.25	2.00	6.75	
	4.50	5.75	6.25	5.00	4.00	2.50	6.50	6.00	6.73	1.75	5.73	2.25	2.00	4.50	2.50	7.25	
	4.50	5.25	4.00	4.50	5.00	5.25	4.75	2.25	5.00	1.00	4.75	2.25	3.25	7.25	3.00	5.00	
	0.25	3.75	3.25	3.25	9.00	6.25	6.25	4.25	10.25	2.00	6.00	2.00	1.75	6.75	2.25	8.00	
	Total .....	72.75	66.75	77.25	67.75	92.25	74.25	80.00	76.75	99.75	46.75	109.00	56.00	40.25	82.50	34.25	85.50
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....		grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Lowest .....		7.50	115.78	7.75	38.75	10.25	158.20	7.50	37.50	12.00	185.22	6.75	33.75	3.50	64.02	9.00	45.00
Average .....		3.25	50.10	2.00	10.00	4.00	61.74	2.25	11.25	4.25	65.60	1.00	5.00	1.25	19.29	2.00	10.00
Tests above average .....		15		17		14		15		14		13		17		15	
Tests below average .....		12		13		10		15		16		17		13		15	



TABLE XV.—Results of actual tests of strain and stretch—Continued.

Catalogue number of samples..		MERINO.																
		97.				98.				99a.				99.				
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.	grams.	m. m.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.		
	2.75	8.00	2.00	12.25	4.50	8.00	3.00	7.25	3.00	6.75	3.50	8.75	3.25	3.50	3.00	4.00		
	2.25	5.60	1.50	1.50	3.00	2.50	3.25	6.25	2.00	2.00	1.25	3.50	2.50	3.50	3.00	7.25		
	2.75	7.00	2.75	5.25	4.25	8.75	2.00	4.50	2.25	7.25	2.25	3.00	2.75	5.50	4.00	3.00		
	1.50	4.75	4.25	8.75	4.00	2.50	6.50	1.50	2.50	2.00	2.60	3.00	3.25	4.25	1.50	5.75		
	3.00	2.75	5.75	3.25	3.75	7.50	1.50	5.00	4.50	9.00	1.25	6.00	2.00	4.50	4.00	4.25		
	3.75	5.25	6.00	4.75	3.00	7.00	3.00	2.00	3.00	3.00	2.25	6.75	2.50	2.00	3.25	5.25		
	3.75	8.00	12.25	4.75	1.50	1.00	3.50	6.50	2.50	7.00	8.00	4.75	2.25	3.00	4.25	7.75		
	2.25	5.75	4.00	8.00	2.25	5.00	3.75	3.00	2.75	4.00	3.75	4.50	2.00	2.00	2.75	9.00		
	2.25	8.00	1.75	6.50	2.50	4.75	1.75	5.75	3.00	6.50	1.00	4.75	1.75	4.00	3.00	3.50		
	2.25	8.50	1.50	2.00	1.75	2.00	3.25	4.00	3.00	7.75	8.50	7.25	2.00	4.25	3.00	3.00		
	2.00	4.75	12.25	5.75	1.25	6.75	3.50	0.00	1.25	7.00	3.00	0.25	4.25	7.75	3.00	4.00		
	2.25	5.75	12.25	5.75	4.00	2.00	3.50	8.25	3.50	7.50	3.00	6.25	3.00	8.75	3.00	3.00		
	2.00	3.75	1.50	5.00	3.00	7.00	3.00	6.50	3.60	8.00	2.75	7.00	2.75	7.00	2.25	6.50		
	2.50	6.50	12.25	6.75	4.00	7.25	2.50	7.00	2.25	3.00	4.00	7.00	3.25	7.50	2.25	8.50		
	2.00	4.25	12.00	1.75	3.00	7.50	3.75	7.50	3.50	7.25	3.00	4.25	2.25	3.00	3.25	7.50		
	Total.....	37.50	88.25	35.50	74.75	42.75	83.00	43.25	96.00	41.50	93.00	41.00	87.00	39.75	70.00	44.25	98.25	
	Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	Highest.....		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
	Lowest.....		4.25	63.60	3.75	43.75	4.50	69.46	3.75	43.75	4.50	69.46	3.00	45.00	4.25	65.60	3.00	45.00
Average.....		1.50	23.15	1.50	7.50	1.50	23.15	1.00	6.00	1.00	13.44	2.00	10.00	1.60	23.15	2.00	10.00	
Tests above average.....		2.43	37.51	5.43	27.15	2.90	44.76	5.96	29.80	2.75	42.44	6.00	30.00	2.80	43.22	5.60	28.00	
Tests below average.....		13		10		10		13		17		19		15		14		
		17		14		11		12		11		11		15		16		
Catalogue number of samples..		MERINO.																
		100. SHOULDER.				101.				102.				103.				
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.		
	2.75	7.25	3.50	7.75	3.00	4.75	2.50	6.75	3.00	0.00	2.25	4.50	7.25	7.75	4.25	6.00		
	2.25	8.75	2.00	3.00	3.00	7.75	2.50	8.00	3.25	5.75	2.60	7.00	5.50	7.00	6.25	8.00		
	2.50	7.25	12.25	6.50	3.25	8.00	2.25	5.50	7.60	7.60	1.75	2.60	5.50	4.75	3.75	5.75		
	3.75	8.25	3.50	7.25	2.50	6.25	2.50	7.00	2.75	4.00	1.75	4.50	4.75	8.50	5.00	2.75		
	3.50	7.00	2.00	7.50	2.50	4.75	2.00	0.00	3.25	5.50	1.25	2.00	6.50	3.00	6.50	7.00		
	3.50	7.00	12.50	3.00	3.00	8.00	8.25	8.75	3.25	8.00	3.00	1.50	4.00	5.50	2.00	5.00		
	3.25	4.75	12.50	5.00	2.00	8.25	1.50	1.00	1.50	4.00	4.00	4.25	4.50	6.00	4.25	0.75		
	3.50	4.25	12.25	3.25	1.75	2.75	2.25	5.00	1.25	1.50	8.00	7.50	3.75	2.25	4.75	5.75		
	3.75	5.00	3.00	0.00	3.00	8.00	3.00	9.50	3.75	7.00	1.60	2.75	3.00	4.25	6.00	4.50		
	3.50	5.00	12.50	5.00	2.50	7.75	2.50	7.50	2.00	4.25	8.75	6.75	4.00	6.50	6.75	8.00		
	3.25	8.25	12.25	7.60	2.50	7.00	1.50	1.75	1.76	4.50	3.25	6.00	3.25	5.25	5.00	5.00		
	1.75	3.00	12.75	7.00	12.25	6.00	2.50	3.00	2.00	5.25	8.00	5.00	3.75	2.00	2.75	2.00		
	3.25	6.75	1.75	5.50	1.75	1.00	2.25	6.00	2.00	5.00	2.75	7.25	3.00	3.25	4.00	5.00		
	2.25	3.25	4.25	7.25	2.50	7.50	3.25	8.25	2.25	7.00	2.25	5.00	6.25	7.25	4.00	8.00		
	2.00	2.50	3.00	4.75	4.00	8.75	2.25	8.00	2.25	3.75	1.60	2.50	5.25	4.60	4.25	4.50		
	Total.....	38.50	70.25	40.00	85.25	39.50	95.50	36.00	88.00	37.25	77.00	37.60	69.00	70.25	77.75	68.50	84.00	
	Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	Highest.....		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
	Lowest.....		4.25	63.60	7.75	33.75	4.00	61.74	9.50	47.50	4.00	61.74	7.50	37.50	7.25	111.00	3.50	42.50
Average.....		1.75	27.01	2.50	13.50	1.50	23.15	1.00	5.00	1.25	19.29	1.60	7.50	2.75	42.44	2.00	10.00	
Tests above average.....		2.61	40.26	5.38	26.90	2.51	38.74	6.11	30.55	2.49	38.43	4.86	24.30	4.62	71.31	5.39	26.95	
Tests below average.....		12		14		9		15		15		16		13		15		
		18		16		21		15		15		14		17		15		



TABLE XV.—Results of actual tests of strain and stretch—Continued.

Catalogue number of samples..	MERINO.								CROSS-BREEDS.							
	104.				104a.				14.				15.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	4.00	5.50	3.75	5.25	4.25	6.75	3.50	6.25	3.50	7.75	3.00	2.00	4.75	5.00	3.00	2.00
	2.50	3.75	3.25	5.75	4.00	6.25	5.00	7.75	3.50	5.00	3.25	7.25	2.50	5.25	2.25	4.00
	4.50	6.50	4.50	7.00	4.00	5.75	4.75	6.25	4.00	7.00	4.00	6.75	3.25	6.25	3.75	4.75
	5.00	6.50	2.75	7.00	3.50	7.25	2.25	0.75	2.50	2.50	5.00	6.00	2.00	6.75	2.00	6.25
	3.00	4.00	5.25	7.00	2.50	4.00	3.50	6.50	4.00	6.25	4.50	4.00	2.00	2.00	2.50	5.75
	4.50	6.00	4.25	4.75	4.00	6.50	4.50	7.00	4.00	3.25	2.75	5.00	4.00	6.75	3.25	6.25
	3.00	4.50	7.50	7.75	4.25	6.00	4.00	4.00	4.00	7.00	4.25	5.50	4.25	6.00	6.50	4.25
	3.00	5.00	6.75	7.50	3.00	5.00	4.00	7.50	3.75	2.00	4.25	5.25	4.00	6.00	2.25	6.00
	3.75	5.75	4.00	3.75	7.00	7.00	4.25	6.25	4.00	3.00	3.50	1.75	2.75	5.75	2.25	4.75
	5.00	3.50	3.60	7.00	4.25	8.00	4.00	7.00	2.75	2.00	4.25	7.75	3.00	5.25	3.00	5.75
	4.00	6.00	3.75	6.75	4.25	5.75	3.75	5.75	4.50	8.25	5.00	6.75	3.25	6.00	5.00	5.25
	4.25	6.25	3.75	5.50	2.25	2.75	3.00	6.00	2.50	3.00	2.75	5.00	2.50	5.00	2.25	3.75
	5.00	5.75	3.25	2.25	3.00	2.25	1.75	3.00	4.00	7.00	5.00	7.50	2.75	6.75	3.75	7.00
	3.50	4.00	2.25	2.25	4.00	3.75	2.75	3.25	3.50	5.25	3.00	1.00	4.25	2.75	3.50	6.25
4.50	7.25	8.00	6.25	3.50	4.25	2.50	3.50	4.00	5.50	3.25	6.50	3.75	4.50	2.75	4.75	
Total .....	60.00	80.25	66.50	85.75	57.75	81.25	53.50	86.75	54.50	74.75	57.75	78.00	49.00	80.00	47.00	79.00
Recapitulation and reduction:																
Highest .....	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Lowest .....	2.25	34.73	2.25	11.25	1.75	27.01	2.25	11.25	2.50	38.59	1.00	5.00	2.00	30.87	2.00	10.00
Average .....	4.21	64.98	5.53	27.65	3.70	57.10	5.60	28.00	3.74	57.73	5.09	25.45	3.20	49.30	5.80	26.50
Tests above average.....	13		17		15		20		17		17		14		15	
Tests below average.....	17		13		15		10		13		13		16		15	
CROSS-BREEDS.																
Catalogue number of samples..	19.				20.				24.				111.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
Actual measurement in grams and millimeters.	13.50	7.00	11.25	6.50	9.00	6.75	4.75	5.00	3.50	4.00	7.00	4.00	24.25	6.25	17.75	7.25
	10.00	1.25	13.50	4.50	7.25	5.25	5.25	7.00	5.50	6.50	3.00	3.00	18.50	4.75	25.00	7.50
	15.00	7.50	11.00	2.75	4.00	2.60	7.00	8.00	10.00	7.75	2.75	3.50	11.00	5.50	23.00	7.00
	20.00	7.25	12.00	2.25	3.00	3.25	10.00	7.75	5.25	6.25	2.75	1.75	23.75	6.50	19.25	7.50
	12.50	1.75	12.00	2.00	5.50	4.75	6.00	4.25	6.00	2.00	5.00	3.00	20.00	7.00	8.75	3.00
	8.25	1.00	10.00	4.00	6.75	3.25	6.00	6.75	5.50	1.50	9.50	4.75	30.00	8.00	25.00	7.00
	7.25	2.00	10.75	6.00	9.25	5.00	7.25	2.75	4.50	4.00	6.75	4.00	27.00	7.00	24.00	7.00
	12.50	2.75	12.00	5.75	7.75	5.75	8.25	9.50	9.50	7.50	3.00	4.50	17.00	7.00	22.75	7.00
	13.00	6.50	11.75	2.75	8.25	5.50	6.00	2.25	7.75	5.00	8.00	6.00	22.00	6.00	24.00	7.50
	11.00	2.00	13.25	1.25	6.00	5.00	5.00	2.25	6.50	2.50	7.50	7.75	28.50	8.00	22.00	8.00
	8.75	1.00	8.00	1.00	6.75	3.00	9.75	6.75	5.50	5.50	8.50	8.00	26.00	8.75	20.50	7.25
	10.00	2.75	13.00	4.25	4.00	2.75	9.00	7.75	3.00	1.75	5.50	8.00	26.75	7.75	24.00	7.75
	9.50	1.00	15.00	4.00	8.75	7.25	6.50	5.75	4.00	7.75	5.25	6.50	20.50	6.00	25.75	7.50
	12.50	3.75	13.00	2.25	6.75	6.75	8.75	8.00	7.50	4.00	6.00	4.00	27.25	6.50	26.50	7.00
	13.00	4.75	11.00	1.75	5.00	5.25	5.25	2.00	9.00	7.00	6.50	2.75	18.50	7.00	27.00	7.25
Total .....	176.75	52.25	170.50	51.00	98.00	72.00	102.75	50.50	92.00	73.00	87.00	71.50	341.00	102.00	341.25	105.50
Recapitulation and reduction:																
Highest .....	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Lowest .....	7.25	111.90	1.00	5.00	3.00	46.30	2.00	10.00	2.75	42.45	1.50	7.50	8.75	135.05	8.00	15.00
Average .....	11.78	161.82	3.44	17.20	6.09	103.26	5.05	25.25	6.97	102.15	4.82	24.10	22.74	350.98	6.92	34.00
Tests above average.....	16		13		15		15		14		13		19		22	
Tests below average.....	14		17		15		15		16		17		11		6	



TABLE XV.—Results of actual tests of strain and stretch—Continued.

Catalogue number of samples .....		CROSS-BREEDS.											
		126.				128.				129.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurements in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
		12.00	2.00	6.00	4.00	4.75	8.00	4.25	5.75	10.00	7.00	8.75	8.00
		4.50	2.00	9.50	2.00	3.00	4.25	3.00	1.00	7.00	6.75	10.25	4.75
		9.00	7.00	11.00	5.50	4.00	4.00	4.00	5.75	9.00	2.50	10.50	4.50
		7.00	1.50	6.00	3.00	4.25	5.25	3.50	7.00	5.25	4.25	7.75	5.75
		8.75	7.00	6.50	1.00	5.00	7.75	4.00	6.75	6.75	2.75	6.75	4.00
		8.75	3.00	14.75	7.00	3.50	5.00	3.25	3.25	4.75	6.50	3.75	5.25
		7.00	2.00	13.50	3.25	2.25	2.50	3.75	3.00	6.50	6.50	8.75	6.75
		7.00	5.00	7.25	1.00	2.75	2.00	3.25	1.50	6.50	7.00	7.00	4.75
		7.25	2.00	4.00	2.00	2.00	4.75	3.75	1.00	9.25	7.00	7.25	7.25
		8.00	3.00	7.00	2.00	3.00	2.75	3.25	4.50	10.75	3.00	3.00	3.25
		5.00	1.50	7.75	6.50	4.25	2.75	3.25	7.25	5.50	5.00	8.00	5.75
		5.75	2.00	7.50	3.25	5.25	7.75	4.25	6.75	4.75	3.50	6.00	3.75
		9.50	6.50	6.25	4.25	3.75	5.00	2.75	4.25	7.75	5.25	7.00	4.75
		6.00	1.25	6.50	1.00	3.00	6.00	3.50	4.00	8.25	7.25	6.25	6.00
		11.50	2.25	5.75	2.75	3.25	1.25	3.75	2.75	10.00	5.75	11.25	7.75
		Total .....		117.00	48.00	119.25	48.50	54.00	69.00	53.50	64.50	112.00	80.00
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	grams.	per ct.
Highest .....		14.75	227.66	7.00	35.00	5.25	80.03	8.00	40.00	11.25	173.64	8.00	40.00
Lowest .....		4.00	61.74	1.00	5.00	2.00	30.87	1.00	5.00	3.00	46.30	2.50	12.50
Average .....		7.88	121.62	3.22	16.10	3.58	55.26	4.45	22.25	7.48	115.45	5.41	27.05
Tests above average .....		11		11		14		15		14		15	
Tests below average .....		19		19		16		15		16		15	



TABLE XVI.—Individual extremes and averages, showing influence of breed upon strain and stretch.

Catalogue No. of samples.	Portion of fleece represented.	STRAIN.						STRETCH.					
		Highest.		Lowest.		Average.		Highest.		Lowest.		Average.	
		grams.	grains.	grams.	grains.	grams.	grains.	mm.	per ct.	mm.	per ct.	mm.	per ct.
<b>COTSWOLD.</b>													
24	Shoulder.....	41.00	632.82	16.50	254.07	25.00	306.05	8.00	40.00	2.00	10.00	6.44	32.20
	Side.....	51.00	771.73	20.00	308.09	35.75	551.79	9.00	45.00	1.25	6.25	6.09	30.45
	Hip.....	62.00	958.95	27.50	424.45	41.24	636.52	10.00	50.00	5.25	20.25	7.99	39.95
25	Shoulder.....	55.75	860.48	21.00	324.13	33.40	515.52	10.00	60.00	5.75	28.75	7.30	36.50
	Side.....	61.00	941.51	23.00	354.99	40.00	618.93	9.50	47.50	1.50	7.50	7.57	37.85
	Hip.....	64.00	987.81	30.50	470.76	45.45	701.50	9.50	47.60	3.00	15.00	7.80	39.00
26	Shoulder.....	81.00	478.47	15.50	236.24	24.35	375.83	8.50	42.50	1.50	7.50	6.01	30.05
	Side.....	38.75	598.09	9.50	146.63	24.27	374.00	10.75	53.75	1.25	6.25	5.93	29.65
	Hip.....	39.00	601.95	19.75	304.83	20.20	450.69	9.00	45.00	2.00	10.00	7.50	37.50
27	Shoulder.....	51.00	787.18	15.50	236.24	32.20	408.99	8.75	43.75	4.00	20.00	6.00	33.30
	Side.....	38.00	586.52	11.00	169.78	26.36	400.86	9.00	45.00	1.00	5.00	4.75	23.75
	Hip.....	40.00	617.98	18.00	277.82	30.35	468.44	9.50	47.50	0.50	2.50	6.33	31.43
28	Shoulder.....	47.00	725.43	16.00	246.95	20.96	462.42	8.75	43.75	5.00	25.00	6.84	34.20
	Side.....	52.50	810.32	20.00	308.69	36.26	559.06	10.00	60.00	4.00	20.00	7.62	38.10
	Hip.....	60.00	926.08	20.00	308.60	47.43	732.06	10.00	50.00	3.00	15.00	8.36	41.80
29	Shoulder.....	47.75	737.00	16.00	246.65	34.32	529.72	8.50	42.50	5.25	26.25	8.03	34.16
	Side.....	67.00	879.77	25.50	393.58	39.01	611.36	9.50	47.50	3.25	16.25	7.83	39.15
	Hip.....	40.50	625.10	23.50	362.71	32.72	505.02	9.00	45.00	6.00	30.00	8.20	41.00
170	Shoulder.....	44.00	679.12	12.50	192.93	30.88	475.85	24.00	120.00	2.50	12.50	11.10	55.55
171	Shoulder.....	30.50	470.70	10.50	162.06	20.38	314.66	10.00	50.00	1.00	5.00	7.40	37.60
172	Shoulder.....	30.00	463.04	0.00	134.91	17.10	264.88	10.75	53.75	1.00	5.00	6.38	31.80
173	Shoulder.....	44.00	670.12	13.00	200.65	27.85	429.85	10.00	50.00	1.25	6.25	6.36	31.80
174	Shoulder.....	40.50	625.10	12.50	192.93	25.19	388.80	20.50	102.50	2.00	10.00	9.58	47.90
175	Shoulder.....	48.50	748.58	16.00	246.95	35.54	548.55	25.00	125.00	2.00	10.00	12.25	61.25
176	Shoulder.....	47.50	733.14	12.00	185.22	32.91	507.05	25.00	130.00	1.25	6.25	12.36	61.80
177	Shoulder.....	44.75	690.70	15.50	239.24	31.17	740.88	21.75	110.88	2.25	11.25	10.47	52.35
178	Shoulder.....	45.50	702.27	12.00	185.22	26.86	414.67	10.50	52.50	1.50	7.50	6.64	33.20
179	Shoulder.....	38.50	594.23	13.75	212.23	26.49	408.88	8.75	43.75	2.50	12.50	6.53	32.65
180	Shoulder.....	44.00	679.12	21.00	324.13	31.13	480.48	9.00	43.33	1.25	6.25	7.26	36.30
181	Shoulder.....	49.50	764.01	11.00	169.78	35.04	540.83	10.00	50.00	1.25	6.25	7.10	35.50
182	Shoulder.....	42.00	648.25	12.00	185.22	28.03	441.89	8.75	43.75	1.00	5.00	6.58	32.00
183	Shoulder.....	36.75	567.22	10.50	162.06	24.03	371.66	9.75	48.75	1.25	6.25	6.97	34.85
184	Shoulder.....	43.00	668.69	18.75	289.40	31.25	482.33	8.25	41.25	1.25	6.25	5.48	27.15
185	Shoulder.....	34.00	524.78	15.00	321.52	24.79	382.62	8.00	40.00	1.00	5.00	4.43	22.15
186	Shoulder.....	42.25	652.11	16.25	273.96	27.78	428.77	8.25	41.25	1.00	5.00	5.22	26.10
187	Shoulder.....	40.75	628.06	16.75	250.81	27.75	428.81	8.75	43.75	1.00	5.00	5.21	26.05
188	Shoulder.....	30.75	476.61	6.00	77.17	14.68	225.04	7.50	37.60	0.25	1.25	2.03	10.15
189	Shoulder.....	43.25	667.65	13.75	212.23	32.03	494.87	8.00	40.00	1.00	5.00	6.09	30.45
190	Shoulder.....	40.00	617.98	12.50	192.93	27.23	420.28	8.25	41.25	0.25	1.25	5.23	26.15
	Average.....	44.54	687.46	16.10	248.50	30.44	460.83	11.00	55.00	2.13	10.65	7.09	35.45
<b>LEICESTER.</b>													
	Leicester.....	30.00	463.04	15.50	239.24	23.70	365.80	8.00	40.00	2.50	12.50	5.61	28.05
<b>LINCOLN.</b>													
59	Shoulder.....	38.00	555.65	17.00	262.39	26.87	414.73	8.00	40.00	5.00	25.00	6.98	34.00
	Side.....	38.00	555.65	10.00	154.35	23.42	361.48	9.00	45.00	4.00	20.00	7.52	37.60
	Hip.....	45.00	694.56	23.00	355.00	34.40	530.95	8.75	43.75	5.00	25.00	7.16	35.80
60	Shoulder.....	43.50	748.58	20.00	308.69	23.75	520.80	8.50	42.50	6.00	30.00	7.41	37.05
	Side.....	53.00	802.60	24.00	370.42	37.77	582.90	10.00	50.00	6.25	31.25	7.90	39.50
	Hip.....	49.00	756.30	25.00	393.58	35.89	553.95	8.75	43.75	5.00	25.00	7.39	80.95
61	Shoulder.....	20.25	451.48	20.25	312.55	23.88	368.68	0.50	47.50	5.00	25.00	7.38	36.90
	Side.....	31.00	478.47	18.50	285.54	25.55	394.35	10.25	51.25	7.25	36.25	8.07	43.35
	Hip.....	42.50	655.97	19.25	297.12	28.80	444.52	11.00	55.00	6.00	30.00	8.24	41.20
164	Shoulder.....	32.25	497.77	14.25	210.94	23.18	357.77	9.25	46.25	1.25	6.25	6.58	32.00
165	Shoulder.....	27.50	424.45	11.50	177.50	17.72	273.60	8.00	40.00	0.75	3.75	4.67	28.35
166	Shoulder.....	30.00	463.04	7.00	108.04	20.62	318.26	8.75	43.75	1.25	6.25	6.10	30.80
167	Shoulder.....	33.00	509.34	11.25	173.64	22.75	351.14	9.50	47.50	1.00	5.00	6.63	33.15
168	Shoulder.....	25.25	889.72	10.00	154.35	17.75	273.96	9.60	47.50	1.25	6.25	0.27	31.35
169	Shoulder.....	33.50	617.06	8.50	131.19	22.50	347.28	12.75	63.75	2.00	10.00	7.14	35.70
	Average.....	36.72	566.76	15.97	246.49	25.66	366.05	9.43	47.15	3.80	19.00	7.07	35.33
<b>SOUTHDOWN.</b>													
62	Shoulder.....	17.75	278.96	8.50	131.19	12.46	192.31	6.50	32.60	1.00	5.00	3.06	15.30
	Side.....	10.25	297.12	8.00	123.48	11.60	170.04	8.00	40.00	3.25	16.25	6.05	30.25
	Hip.....	10.00	293.26	7.50	115.70	13.41	200.98	8.00	40.00	4.00	20.00	6.33	31.65
63	Shoulder.....	20.00	308.69	7.50	115.76	13.68	211.15	8.00	40.00	4.50	22.60	6.19	30.95
	Side.....	22.00	339.56	6.60	92.60	11.70	180.59	10.00	60.00	2.60	12.60	6.88	34.40
	Hip.....	22.00	339.56	11.00	109.78	16.33	252.05	7.75	38.75	3.50	17.50	5.81	29.05
91	Shoulder.....	14.75	227.66	6.75	104.18	11.71	180.74	7.00	35.00	1.50	7.50	4.10	20.50
	Side.....	19.50	300.97	8.00	123.48	13.24	204.35	9.00	45.00	3.50	17.50	5.75	28.75
	Hip.....	29.00	447.00	11.00	169.78	17.65	270.88	8.25	41.25	1.00	5.00	4.19	20.95
92	Shoulder.....	26.00	401.30	7.60	115.76	14.38	221.95	8.25	41.25	4.50	22.60	0.24	31.20
	Side.....	23.00	354.99	8.75	135.05	13.57	209.45	7.00	35.00	3.25	16.25	5.62	28.10
	Hip.....	33.00	509.34	13.00	200.65	21.46	331.23	8.00	40.00	1.00	5.00	4.54	22.70
93	Shoulder.....	20.00	308.69	0.50	100.32	12.54	199.55	8.25	41.25	1.50	7.50	4.55	22.75
	Side.....	21.00	324.13	9.25	142.77	14.15	218.40	7.75	38.75	2.50	12.50	5.60	28.00
	Hip.....	23.00	355.00	8.00	123.48	14.50	228.80	8.00	40.00	1.25	6.25	4.26	21.50
94	Shoulder.....	21.50	331.94	8.00	123.48	11.95	184.44	7.75	38.75	1.25	6.25	4.69	23.45
	Side.....	21.00	324.13	7.75	119.62	12.33	190.31	8.00	40.00	2.50	12.50	5.65	28.25
	Hip.....	26.50	409.02	9.25	142.77	18.73	289.09	7.00	35.00	1.50	7.50	4.77	23.85
95	Shoulder.....	15.00	231.52	7.25	111.90	10.80	166.60	8.00	40.00	2.50	12.50	5.46	27.30
	Side.....	14.00	216.08	4.50	69.40	9.26	142.92	8.50	42.50	1.50	7.50	4.90</	



TABLE XVI.—Individual extremes and averages, showing influence of breed upon strain and stretch—Continued.

Catalogue No. of samples.	Portion of fleece represented.	STRAIN.						STRETCH.					
		Highest.		Lowest.		Average.		Highest.		Lowest.		Average.	
		grams.	grains.	grams.	grains.	grams.	grains.	mm.	per ct.	mm.	per ct.	mm.	per ct.
SOUTHDOWN—continued.													
113		23.50	362.71	3.50	54.02	13.22	204.05	8.25	41.25	0.25	1.25	3.24	16.20
144		18.75	280.40	3.50	54.02	11.14	171.94	6.00	40.00	0.25	1.25	3.53	17.65
	Average	21.20	328.60	3.48	100.02	12.78	197.25	7.94	39.70	1.00	8.45	4.50	22.95
OXFORD.													
61	Shoulder	47.73	737.00	16.00	246.95	31.04	492.98	8.25	41.25	1.75	6.75	5.22	26.10
	Side	47.00	725.44	22.00	330.50	30.99	478.32	10.00	50.00	4.00	20.00	7.46	37.36
	Hip	50.25	775.50	21.00	324.13	33.08	510.53	9.50	47.50	1.25	6.25	6.11	30.53
65	Shoulder	42.25	652.11	20.75	329.27	29.97	462.67	9.00	45.00	4.25	21.25	6.64	33.20
	Side	32.00	493.91	12.00	185.21	10.70	304.06	8.75	43.75	4.50	22.50	7.03	35.15
	Hip	46.75	721.57	18.50	285.54	27.00	532.01	9.00	45.00	1.50	7.50	5.97	29.85
66	Shoulder	31.00	478.47	12.00	185.22	20.90	322.53	8.50	42.50	2.00	10.00	5.58	27.90
	Side	39.75	613.52	11.50	177.50	24.84	383.40	10.25	50.10	8.00	50.00	8.46	42.30
	Hip	38.00	586.62	19.25	297.12	26.83	409.48	9.00	45.00	2.25	11.25	6.20	31.00
67	Shoulder	61.00	787.17	30.75	474.61	39.00	616.77	8.60	42.50	4.00	20.00	6.17	36.85
	Side	67.00	670.77	25.50	398.58	41.54	641.15	10.00	50.00	5.50	27.50	8.11	40.50
	Hip	60.00	910.64	20.50	310.41	37.67	681.42	8.25	41.25	2.00	10.00	6.31	31.55
	Average	45.15	696.57	19.15	295.57	30.43	409.67	9.08	45.40	3.25	16.25	6.61	33.05
MERINO.													
30	Neck, top of wrinkle	20.00	308.69	0.00	138.91	13.61	210.07	8.25	41.25	2.50	12.50	6.43	27.15
	Neck, between wrinkle	12.25	189.07	6.50	100.33	9.18	141.09	8.75	43.75	3.25	16.25	5.48	27.40
	Shoulder	13.75	212.23	6.50	81.89	8.47	130.73	8.25	41.25	3.25	16.25	6.75	28.75
	Side	14.00	210.08	6.00	92.61	9.10	141.94	8.75	43.75	2.25	11.25	6.49	27.45
	Hip	12.25	189.07	3.25	68.75	6.78	135.21	8.25	41.25	2.75	13.75	5.68	28.40
41	Neck	10.00	154.35	3.25	60.10	5.00	77.17	8.00	40.00	2.00	10.00	4.28	21.40
	Side	12.00	185.22	3.75	67.88	5.89	90.76	8.75	43.75	1.75	8.75	6.25	31.23
	Hip	10.50	162.00	4.25	65.00	7.81	112.83	8.75	43.75	4.00	20.00	6.60	33.00
45	Neck, top of wrinkle	15.00	231.52	4.00	61.74	7.98	123.17	8.00	40.00	3.25	16.25	5.58	27.90
	Neck, between wrinkle	15.50	239.21	4.28	65.50	8.05	124.25	7.75	38.75	1.50	7.50	5.02	25.15
	Side	14.00	216.08	5.75	88.75	8.48	130.58	9.00	45.00	4.00	20.00	6.65	33.25
	Hip	20.00	398.60	5.50	84.89	12.46	192.16	8.00	40.00	0.50	2.50	4.21	21.05
46	Shoulder	8.50	116.63	8.50	54.02	5.53	85.35	8.00	40.00	1.50	7.50	5.17	25.35
	Side	14.00	216.08	4.00	61.74	6.35	113.44	10.00	50.00	1.50	7.50	6.21	31.05
	Hip	13.50	208.37	4.00	61.74	6.65	147.40	8.00	40.00	2.00	10.00	5.07	25.35
47	Shoulder	12.50	192.02	4.00	61.74	6.19	95.54	7.25	36.25	0.75	3.75	4.48	22.40
	Side	13.75	212.23	4.00	61.74	7.72	119.15	9.25	46.25	3.00	15.00	6.48	32.40
	Hip	27.00	416.73	4.75	73.31	13.22	204.05	8.00	40.00	2.00	10.00	4.63	23.15
43	Shoulder, top of wrinkle	15.75	243.00	3.50	54.02	8.28	127.89	8.25	41.25	2.00	10.00	5.30	26.60
	Shoulder, between wrinkle	13.25	204.51	4.00	61.74	7.83	120.78	8.25	41.25	2.75	13.75	6.35	31.75
	Side	15.75	243.00	4.00	61.74	6.43	130.11	9.00	45.00	3.00	15.00	6.41	32.05
	Hip	23.50	362.71	4.50	69.46	11.73	151.82	8.25	41.25	1.00	5.00	4.41	22.05
51	Shoulder	22.00	339.56	4.00	61.74	9.31	143.70	10.75	53.75	3.25	16.25	6.72	33.60
	Side	22.00	339.56	4.00	61.74	6.98	107.73	8.25	41.25	3.00	15.00	5.58	27.65
	Hip	20.50	309.02	4.25	63.50	10.70	165.15	8.00	40.00	1.00	5.00	4.05	24.75
52	Shoulder	5.25	81.33	2.00	30.87	3.48	54.71	8.50	42.50	3.50	17.50	6.09	33.45
	Hip	7.50	115.76	2.00	45.30	4.53	69.92	9.00	45.00	3.00	15.00	6.00	34.50
53	Shoulder	11.00	169.78	2.50	38.59	4.92	75.94	7.00	35.00	1.00	5.00	4.27	21.85
	Shoulder, top of wrinkle	5.50	84.89	2.00	30.87	3.20	50.75	9.00	45.00	4.00	20.00	6.82	31.00
	Shoulder, between wrinkle	23.00	385.86	6.50	100.32	10.54	162.08	7.50	37.50	3.25	16.25	5.45	27.25
	Side	8.50	131.19	3.25	50.16	5.76	88.90	7.75	38.75	2.00	10.00	4.89	24.15
	Hip	8.00	123.48	3.00	46.80	4.43	69.14	8.50	42.50	1.50	7.50	5.75	29.75
54	Shoulder, top of wrinkle	32.50	561.02	7.75	119.62	12.05	278.59	8.00	40.00	2.00	10.00	5.69	25.30
	Shoulder, between wrinkle	9.60	146.08	2.50	38.59	5.02	86.74	7.75	38.75	1.50	7.50	4.61	23.05
	Hip	29.00	447.00	4.00	61.74	10.68	164.67	8.50	42.50	1.00	5.00	6.80	19.30
55	Shoulder, top of wrinkle	7.50	115.76	2.75	42.44	5.28	81.49	8.00	40.00	1.75	8.75	5.10	25.50
	Shoulder, between wrinkle	20.00	308.69	4.00	61.74	11.68	171.03	6.00	30.00	1.00	5.00	2.77	13.85
	Hip	10.00	154.85	3.50	54.02	5.92	91.87	6.00	30.00	1.50	7.50	8.67	18.25
56	Shoulder, top of wrinkle	18.50	254.07	5.00	77.17	8.95	138.14	8.25	41.25	4.00	20.00	6.16	30.90
	Shoulder, between wrinkle	7.60	115.76	4.00	61.74	5.33	82.27	7.75	38.75	4.00	20.00	5.93	29.65
	Side	11.00	169.78	3.00	46.80	5.47	64.43	9.50	47.50	3.00	15.00	5.42	27.10
	Hip	11.50	177.50	2.00	30.87	5.74	88.69	8.50	42.50	1.00	5.00	3.67	19.35
60	Neck, top of wrinkle	9.00	138.00	2.75	42.44	5.45	84.12	9.00	45.00	1.50	7.50	4.60	23.00
	Shoulder, top of wrinkle	20.00	308.69	8.00	123.48	13.31	205.43	8.00	40.00	4.00	20.00	6.01	30.05
	Shoulder, between wrinkle	9.00	138.91	3.25	50.10	5.50	85.82	8.25	41.25	3.00	15.00	6.63	27.90
	Side	2.00	138.91	3.00	46.80	5.06	91.09	8.00	40.00	2.00	10.00	5.19	25.94
	Hip	12.50	192.02	3.75	57.69	7.77	119.03	8.50	42.50	2.00	10.00	5.13	25.05
67	Shoulder, top of wrinkle	13.50	192.02	3.50	54.02	7.92	112.98	8.75	43.75	2.50	12.50	5.42	27.10
	Shoulder, between wrinkle	27.00	416.73	3.00	77.17	11.51	174.60	8.80	42.50	2.25	11.25	5.63	29.15
	Side	8.50	131.19	3.25	50.16	5.55	85.00	9.50	47.50	4.00	20.00	6.84	32.70
	Hip	14.00	216.08	5.75	88.75	8.65	138.61	8.25	41.25	2.75	13.75	5.81	26.55
68	Shoulder, top of wrinkle	10.50	162.00	3.25	50.16	6.18	95.99	7.50	37.50	1.50	7.50	4.67	23.35
	Shoulder, between wrinkle	9.25	143.77	2.00	46.80	5.08	87.60	8.00	40.00	1.25	6.25	5.20	24.30
	Hip	13.00	200.65	4.25	65.00	7.85	113.44	7.00	35.00	1.75	8.75	3.81	19.05
69	Shoulder	10.75	163.92	3.00	46.80	5.78	89.21	6.50	32.50	2.00	10.00	3.90	19.30
	Side	12.00	185.22	4.00	61.74	6.75	104.18	9.00	45.00	3.25	16.25	5.90	29.50
	Hip	12.00	185.22	4.00	61.74	8.94	107.12	9.00	45.00	2.00	10.00	6.56	32.80
70	Shoulder	19.90	293.26	7.50	115.76	11.89	175.05	8.75	43.75	3.00	15.00	6.06	30.80
	Side	10.00	154.35	4.23	63.60	6.47	99.86	9.00	45.00	1.75	8.75	5.88	29.40
	Hip	15.00	231.52	4.00	61.74	6.90	106.50	9.00	45.00	8.25	16.25	6.95	31.75
71	Shoulder	19.25	297.12	5.25	81.64	10.66	164.63	8.00	40.00	2.00	10.00	4.90	24.00
	Side	11.50	177.50	3.50	54.02	6.28	93.93	7.75	38.75	2.00	10.00	4.64	24.00
	Hip	10.00	154.35	3.75	57.88	5.89	90.90	8.00	40.00	2.25	11.25	6.03	30.15



TABLE XVI.—Individual extremes and averages, showing influence of breed upon strain and stretch—Continued.

Catalogue No. of samples.	Portion of fleece represented.	STRAIN.						STRETCH.					
		Highest.		Lowest.		Average.		Highest.		Lowest.		Average.	
		grams.	grains.	grams.	grains.	grams.	grains.	mm.	per ct.	mm.	per ct.	mm.	per ct.
MERINO—continued.													
74	Hip.....	20.00	308.69	8.00	123.48	12.35	190.62	8.25	41.25	2.75	13.75	6.65	28.25
75	Shoulder.....	12.75	196.79	5.50	84.89	7.68	118.54	7.00	85.00	2.25	11.50	3.98	19.65
	Side.....	11.00	169.78	5.00	77.17	7.75	119.62	8.50	42.50	4.25	21.25	6.51	32.55
	Hip.....	17.75	273.96	6.00	92.61	9.30	143.54	7.00	35.00	2.60	10.00	4.65	23.25
76	Shoulder.....	14.75	227.00	6.50	84.89	9.07	139.69	6.25	26.25	1.00	5.00	2.73	13.65
	Side.....	8.25	127.34	4.00	61.74	6.57	85.97	8.00	40.00	3.25	16.25	6.05	30.25
	Hip.....	13.50	208.37	5.75	88.75	9.04	139.53	6.00	30.00	1.50	7.50	4.10	20.50
77	Shoulder.....	10.50	162.06	4.25	65.60	6.12	94.46	8.00	40.00	3.50	17.50	6.51	27.65
	Side.....	11.00	169.78	4.00	61.74	6.36	82.73	8.75	43.75	5.00	25.00	6.95	34.75
	Hip.....	14.00	216.08	4.25	65.60	7.92	122.24	7.00	35.00	3.00	15.00	4.70	23.50
78	Shoulder.....	9.50	146.63	4.25	65.00	6.17	95.23	7.25	36.25	1.75	8.75	4.51	22.55
	Side.....	11.00	169.78	4.50	69.46	5.67	87.51	8.75	43.75	4.00	20.00	6.21	31.65
	Hip.....	12.75	196.70	5.00	77.17	8.04	124.09	7.00	35.00	3.00	16.00	4.47	22.95
79	Shoulder.....	9.00	138.91	4.00	61.74	5.92	91.37	8.00	40.00	2.25	11.25	5.51	27.55
	Side.....	9.00	138.91	4.25	65.60	5.63	86.00	9.00	45.00	3.25	16.25	6.25	31.25
	Hip, top of wrinkle.....	10.75	165.92	5.25	81.08	7.72	119.15	7.00	35.00	3.00	15.00	4.67	23.95
	Hip, between wrinkle.....	12.50	192.08	6.00	77.17	7.56	118.69	7.00	35.00	3.00	15.00	5.01	25.05
80	Shoulder.....	8.60	131.19	8.00	46.30	5.23	80.72	8.50	42.50	4.00	20.00	6.63	33.15
	Side.....	8.50	131.19	3.25	50.18	4.70	72.54	9.25	40.25	5.00	25.00	7.28	36.40
	Hip.....	8.00	123.48	3.00	40.30	5.08	78.41	7.00	35.00	2.75	13.75	5.17	25.85
81	Shoulder.....	11.75	181.90	5.25	81.08	7.70	118.85	8.75	43.75	4.00	20.00	5.78	28.80
	Side.....	11.50	177.50	4.00	61.74	6.43	99.24	9.00	45.00	6.00	25.00	6.96	34.80
	Hip.....	14.75	227.06	5.00	77.17	9.63	147.00	8.00	40.00	2.00	10.00	4.61	23.05
82	Shoulder.....	9.75	150.49	4.75	73.81	6.75	104.18	8.00	33.75	2.25	11.25	4.75	23.55
	Side.....	11.00	169.78	4.00	61.74	6.40	98.78	8.00	40.00	2.00	10.00	4.57	22.85
	Hip.....	18.25	281.68	5.00	77.17	8.90	137.37	7.25	36.25	3.00	15.00	4.60	23.45
83	Shoulder.....	13.75	212.23	4.50	69.46	7.49	115.61	8.00	40.00	3.25	16.25	5.42	27.10
	Side.....	9.00	138.91	3.75	57.87	5.61	86.59	7.60	37.60	3.50	17.50	5.50	27.60
	Hip.....	24.00	370.43	8.00	46.30	14.30	220.71	7.50	37.60	1.50	7.60	3.29	16.45
84	Shoulder, 17 months.....	7.00	108.04	3.00	46.30	4.86	75.01	8.25	41.25	4.00	20.00	6.12	30.60
	Shoulder.....	6.50	100.32	3.25	50.18	4.65	71.77	8.00	25.00	1.25	6.25	2.74	13.70
	Side.....	7.50	115.76	2.75	42.44	4.42	68.22	6.25	31.25	1.00	5.00	3.07	15.95
	Hip.....	8.25	127.94	2.25	34.73	4.32	74.39	5.25	26.25	1.00	5.00	2.33	11.90
85	Shoulder.....	6.25	81.03	2.75	42.45	3.71	57.28	8.00	45.00	4.00	20.00	0.24	31.20
	Side.....	6.25	96.47	3.00	46.30	3.88	69.69	6.50	47.60	4.50	22.60	6.62	34.60
	Hip.....	6.00	92.61	3.00	46.30	4.27	65.91	6.75	33.75	1.00	5.00	3.82	19.60
86	Shoulder.....	6.25	96.47	3.25	50.16	4.62	71.51	8.75	43.75	4.25	21.25	6.42	32.10
	Side.....	10.50	162.06	3.00	46.30	5.65	87.21	8.00	40.00	2.25	11.25	5.25	26.25
	Hip.....	15.00	231.52	3.00	46.30	5.93	91.53	8.50	42.50	1.75	8.75	4.82	21.60
87	Shoulder.....	7.75	119.62	4.25	65.60	5.32	82.11	8.75	43.75	4.75	23.76	6.61	33.05
	Side.....	8.00	123.48	4.25	65.60	6.37	82.88	8.00	40.00	3.00	15.00	6.40	32.00
	Hip.....	9.75	150.49	3.50	54.02	5.55	85.66	7.00	35.00	1.00	5.00	4.25	21.26
88	Shoulder.....	8.25	127.94	3.00	46.30	4.68	71.92	9.00	45.00	3.75	18.75	5.65	29.75
	Side.....	6.50	100.32	3.50	54.02	4.69	72.99	7.75	38.75	3.25	16.25	5.69	28.45
	Hip.....	14.00	216.08	3.00	46.30	6.88	106.19	7.75	38.76	1.00	5.00	4.10	20.60
89	Shoulder.....	9.00	138.91	3.00	46.30	5.04	83.35	8.50	47.60	1.25	6.25	5.71	28.55
	Side.....	11.00	169.78	4.00	61.74	5.68	86.12	8.00	40.00	3.25	16.25	5.90	29.50
	Hip.....	12.75	196.79	4.00	61.74	6.31	97.39	7.60	37.60	1.50	7.60	4.59	22.95
90	Shoulder.....	7.50	115.76	3.25	50.16	5.00	77.17	7.75	38.75	2.00	10.00	4.48	22.40
	Side.....	10.25	158.20	4.00	61.74	5.94	91.08	8.50	37.50	2.25	11.25	5.03	25.15
	Hip.....	12.00	185.22	4.25	65.60	6.96	107.43	6.75	33.75	1.00	5.00	3.43	17.15
96	.....	3.50	54.02	1.25	19.29	2.48	38.28	9.00	45.00	2.00	10.00	5.60	28.00
97	.....	4.25	65.60	1.50	23.15	2.43	37.51	8.75	43.75	1.50	7.50	5.43	27.15
98	.....	4.50	69.46	1.50	23.15	2.00	44.76	8.75	43.75	1.00	5.00	5.06	29.80
99a	.....	4.50	69.46	1.00	15.44	2.75	42.44	8.00	45.00	2.00	10.00	6.00	30.00
99	.....	4.25	65.60	1.50	23.15	2.80	43.22	9.00	45.00	2.00	10.00	5.60	28.00
100	Shoulder.....	4.25	65.60	1.75	27.01	2.61	40.28	7.75	38.75	2.60	12.50	5.98	26.90
101	.....	4.00	61.74	1.50	23.15	2.51	38.74	8.50	47.60	1.00	5.00	6.11	30.55
102	.....	4.00	61.74	1.25	19.29	2.49	38.43	7.60	37.60	1.50	7.50	4.86	24.30
103	.....	7.25	111.00	2.75	42.44	4.62	71.73	8.50	42.50	2.00	10.00	5.39	26.95
104	.....	8.00	123.48	2.25	34.73	4.21	64.08	7.75	38.75	2.25	11.25	5.53	27.65
104a	.....	7.00	108.04	1.75	27.01	3.70	67.10	8.00	40.00	2.25	11.25	5.60	28.00
847	.....	14.25	219.94	2.75	42.44	6.07	107.68	8.00	40.00	1.50	5.00	3.65	18.25
848	.....	16.00	246.95	2.00	30.87	6.02	92.92	7.25	36.25	1.00	5.00	5.29	26.45
849	Top of wrinkle.....	14.25	219.94	3.00	46.30	6.97	107.68	7.75	38.75	1.00	5.00	3.65	18.25
	Between wrinkle.....	13.00	200.65	3.50	54.02	6.10	78.72	7.00	35.00	1.50	7.50	3.66	19.30
850	.....	12.75	196.79	3.00	46.30	5.71	88.13	8.00	40.00	1.50	7.50	4.60	23.00
351	.....	9.25	142.77	2.00	30.87	4.24	65.44	7.25	36.25	1.60	7.50	4.65	23.25
352	.....	12.75	196.79	3.00	46.30	5.42	88.66	7.75	38.75	1.25	6.25	4.65	23.25
353	.....	10.00	154.35	3.00	46.30	5.40	83.35	7.60	37.60	1.00	5.00	4.33	21.65
354	.....	9.00	138.91	2.75	42.44	4.81	74.24	7.00	35.00	1.00	5.00	3.84	19.20
355	.....	12.00	185.22	3.75	57.88	6.85	105.73	6.50	32.50	1.25	6.25	3.93	19.15
356	.....	8.00	123.48	3.00	46.31	6.29	81.65	8.00	40.00	1.00	5.00	4.56	22.95
357	.....	17.75	273.96	4.00	61.74	8.94	137.98	8.00	40.00	1.50	7.50	4.86	24.30
358	.....	8.75	135.05	4.50	69.46	5.95	91.84	8.25	41.25	1.00	5.00	4.49	22.45
359	.....	10.75	165.92	4.00	61.74	6.29	97.08	7.00	35.00	2.00	10.00	4.13	20.65
860	.....	12.00	185.22	5.00	77.17	7.73	119.31	7.60	37.60	1.00	5.00	4.69	22.95
861	.....	8.75	135.05	3.00	46.30	5.01	77.33	7.00	35.00	2.00	10.00	4.47	22.35
	Average.....	11.92	183.96	3.86	59.68	7.35	113.44	7.99	39.95	2.14	10.70	5.74	28.70



TABLE XVII.—Individual extremes and averages, showing influence of sex and part of fleece upon strain and stretch.

Catalogue No. of samples.	Portion of fleece represented.	STRAIN.						STRETCH.					
		Highest.		Lowest.		Average.		Highest.		Lowest.		Average.	
		grams.	grains.	grams.	grains.	grams.	grains.	mm.	per ct.	mm.	per ct.	mm.	per ct.
<b>COTSWOLD.</b>													
<i>Ram.</i>													
34	Shoulder.....	41.00	652.62	16.50	254.67	25.66	396.05	8.00	40.00	2.00	16.00	6.44	32.20
35	do.....	55.75	860.48	21.00	324.13	33.40	515.52	10.00	50.00	5.75	28.75	28.75	36.50
36	do.....	31.00	473.47	15.60	239.24	24.35	375.83	8.50	42.50	1.50	7.50	6.01	30.05
	Average.....	42.58	257.21	17.67	272.73	27.80	429.08	8.83	44.15	3.08	15.40	6.58	32.90
34	Side.....	51.00	771.73	20.00	308.09	35.75	551.79	9.00	45.00	1.25	6.25	6.09	30.45
35	do.....	61.00	941.51	23.00	354.09	40.00	618.93	9.50	47.50	1.50	7.50	7.57	37.85
36	do.....	38.75	598.09	9.50	146.03	24.27	374.00	10.75	53.75	1.25	6.25	5.93	29.65
	Average.....	50.18	774.51	17.50	276.11	33.34	514.59	0.75	48.75	1.33	6.65	6.53	32.65
34	Hip.....	62.00	950.05	27.50	424.45	41.24	636.52	10.00	50.00	5.25	26.25	7.09	39.05
35	do.....	64.00	987.81	30.50	407.76	45.45	701.50	9.50	47.50	8.00	15.00	7.80	39.00
36	do.....	38.00	601.05	10.75	304.83	29.20	450.69	9.00	45.00	2.00	10.00	7.50	37.50
	Average.....	55.00	848.00	25.92	400.06	38.63	596.24	9.50	47.50	8.42	17.10	7.76	38.80
172	.....	30.00	463.04	0.00	138.01	17.16	264.86	10.75	53.75	1.00	5.00	6.38	31.90
173	.....	44.00	679.12	13.00	200.65	27.85	429.85	10.00	50.00	1.25	6.25	6.36	31.80
174	.....	40.50	625.10	12.50	192.93	25.19	388.80	20.50	102.50	2.00	10.00	9.58	47.90
175	.....	49.50	748.56	16.00	240.95	35.54	548.55	25.00	125.00	2.00	10.00	12.25	61.25
176	.....	47.50	733.14	12.00	185.22	32.91	507.95	26.00	130.00	1.25	6.25	12.30	61.80
184	.....	43.00	663.09	18.75	289.40	31.25	482.33	8.25	41.25	1.25	6.25	5.43	27.15
185	.....	34.00	524.78	15.00	321.52	24.70	382.62	8.00	40.00	1.00	5.00	4.43	22.15
180	.....	42.00	652.11	17.75	273.90	27.78	428.77	8.25	41.25	1.00	5.00	5.22	26.10
	Average.....	45.47	701.81	17.49	269.95	30.69	478.69	11.82	59.10	2.01	10.05	7.33	36.67
<i>Ewe.</i>													
37	Shoulder.....	61.00	787.10	15.50	239.24	32.20	496.09	8.75	43.75	4.00	20.00	6.50	33.90
38	do.....	47.00	725.43	10.00	246.95	29.00	462.42	8.75	43.75	5.00	25.00	6.84	34.20
39	do.....	47.75	737.00	10.00	246.95	34.82	529.72	8.50	42.50	5.25	26.25	5.83	34.16
	Average.....	48.58	749.81	15.83	244.33	32.10	496.38	8.67	43.35	4.75	23.75	6.78	33.90
37	Side.....	38.00	586.52	11.00	169.78	26.30	496.86	9.00	45.00	1.00	5.00	4.75	23.75
38	do.....	62.50	810.23	20.00	308.69	34.20	559.00	10.00	50.00	4.00	20.00	7.62	38.10
39	do.....	67.00	879.77	25.50	393.58	39.61	611.36	9.50	47.50	3.25	16.25	7.83	39.15
	Average.....	49.17	758.92	18.83	290.68	34.08	526.01	9.50	47.50	2.75	13.75	6.75	33.75
37	Hip.....	40.00	667.38	18.00	277.82	30.35	463.44	9.50	47.50	9.50	2.50	6.33	31.43
38	do.....	60.00	926.08	20.00	308.69	47.43	732.00	10.00	50.00	3.00	15.00	8.36	41.60
39	do.....	40.50	625.10	23.50	362.71	32.72	505.02	9.00	45.00	8.00	30.00	8.20	41.00
	Average.....	40.83	722.80	20.50	316.41	36.83	568.40	0.50	47.60	3.17	15.85	7.63	38.15
171	.....	30.50	470.76	10.50	162.00	20.38	314.56	10.00	50.00	1.00	5.00	7.40	37.00
177	.....	44.75	690.70	18.50	239.24	31.17	740.86	21.75	108.75	2.25	11.25	10.47	62.85
178	.....	45.50	702.27	12.00	185.22	26.86	414.67	10.50	62.50	1.50	7.50	6.64	33.20
179	.....	38.50	594.23	13.75	212.23	20.49	408.86	8.75	43.75	2.50	12.50	6.53	32.65
180	.....	44.00	679.12	21.00	324.13	31.13	480.48	8.00	43.83	1.25	6.25	7.26	36.90
181	.....	49.50	764.01	11.00	169.78	35.04	540.83	10.00	50.00	1.25	6.25	7.10	35.50
182	.....	42.00	618.25	12.00	185.22	28.63	441.89	8.75	43.75	1.00	6.00	6.58	32.90
183	.....	36.75	567.22	10.50	162.00	24.08	371.60	9.75	48.75	1.25	6.25	6.97	34.85
187	.....	40.75	628.96	16.25	250.81	27.75	428.31	8.75	43.75	1.00	5.00	5.21	26.05
189	.....	43.25	667.55	13.75	212.23	32.09	494.37	8.00	40.00	1.00	5.00	6.00	30.45
190	.....	40.00	617.38	12.50	192.93	27.23	420.28	8.25	41.25	0.25	1.25	6.23	26.15
	Average.....	44.46	686.22	15.71	242.48	31.00	478.47	0.83	49.15	2.31	11.50	6.96	34.75
<b>LINCOLN.</b>													
<i>Ram.</i>													
59	Shoulder.....	30.00	555.65	17.00	262.39	26.87	414.73	8.00	40.00	5.00	25.00	6.08	34.00
59	Side.....	30.00	555.65	10.00	154.35	23.42	361.48	9.00	45.00	4.00	20.00	7.25	37.60
59	Hip.....	45.00	694.60	23.00	355.00	34.40	530.95	8.75	43.75	5.00	25.00	7.16	35.90
165	.....	27.50	424.45	11.50	177.50	17.72	273.50	8.00	40.00	0.75	3.75	4.67	23.85
166	.....	30.00	463.04	7.00	108.04	20.63	313.20	8.75	43.75	1.25	6.25	6.16	30.90
167	.....	33.00	509.34	11.25	173.64	22.75	351.14	9.50	47.50	1.00	5.00	6.63	33.15
	Average.....	34.58	533.73	13.29	205.13	24.30	375.06	8.67	43.35	2.83	14.17	6.52	32.60
<i>Ewe.</i>													
60	Shoulder.....	48.50	748.58	20.00	308.69	23.75	520.36	8.50	42.50	6.00	30.00	7.41	37.05
61	do.....	29.25	451.46	20.25	312.65	23.88	368.58	9.50	47.50	5.00	25.00	7.38	36.90
	Average.....	36.88	600.10	20.13	310.70	23.82	367.65	9.00	45.50	5.50	27.50	7.40	37.00
60	Side.....	52.00	802.60	24.00	370.42	37.77	582.96	10.00	50.00	6.25	31.25	7.00	39.50
41	do.....	31.00	478.47	18.60	285.34	25.65	394.35	10.25	51.25	7.25	36.25	8.67	43.35
	Average.....	41.50	610.54	21.25	327.60	31.69	478.66	10.13	50.65	6.75	33.75	8.29	41.45



TABLE XVII.—Individual extremes and averages, showing influence of sex and part of fleece, &c.—Continued.

Catalogue No. of samples.	Portion of fleece represented.	STRAIN.						STRETCH.					
		Highest.		Lowest.		Average.		Highest.		Lowest.		Average.	
		grams.	grains.	grams.	grains.	grams.	grains.	mm.	per ct.	mm.	per ct.	mm.	per ct.
LINCOLN—continued.													
<i>Ewe</i> —Continued.													
60	Hip.....	40.00	756.30	25.00	393.58	35.89	553.05	8.75	43.75	5.00	25.00	7.39	36.05
61	do.....	42.50	655.97	10.25	297.12	28.80	444.52	11.00	55.00	6.00	30.00	8.24	41.20
	Average.....	45.75	706.13	22.13	341.67	32.35	493.31	9.88	49.40	5.50	27.50	7.82	39.10
164	.....	32.25	497.77	14.25	219.94	23.18	357.77	9.25	46.25	1.25	6.25	6.58	32.00
163	.....	25.25	389.72	10.00	154.35	17.75	273.06	9.50	47.50	1.25	6.25	6.27	31.35
169	.....	33.50	617.06	8.50	131.19	22.50	347.28	12.75	63.73	2.00	10.00	7.14	35.70
	Average.....	37.08	571.54	17.67	272.73	26.66	409.04	0.94	49.70	4.44	22.20	7.44	37.20
SOUTHDOWN.													
<i>Ram</i> .													
62	Shoulder.....	17.75	273.96	8.50	131.19	12.46	192.31	6.50	32.50	1.00	5.00	3.06	15.30
62	Side.....	19.25	297.12	8.00	123.48	11.60	173.04	8.00	40.00	3.25	16.25	6.05	30.25
62	Hip.....	19.00	293.26	7.50	115.76	13.41	206.96	8.00	40.00	4.00	20.00	6.38	31.65
132	.....	23.00	432.17	2.50	38.50	10.92	168.55	8.25	41.25	0.25	1.25	3.68	18.25
133	.....	16.25	250.81	4.50	69.46	0.99	154.09	8.50	42.50	0.50	2.50	3.45	17.25
134	.....	18.50	285.54	3.00	46.80	12.73	196.48	8.00	40.00	0.50	2.50	4.34	21.70
135	.....	23.75	368.57	6.00	92.61	12.79	197.40	6.75	33.75	0.75	3.75	3.62	18.10
136	.....	22.00	339.56	4.00	61.74	11.64	179.67	7.75	38.75	0.25	1.25	3.98	19.65
137	.....	22.50	347.28	4.00	61.74	13.82	213.31	10.00	50.00	1.25	6.25	4.54	22.70
138	.....	15.50	239.23	3.50	54.02	8.11	125.17	7.25	36.25	0.75	3.75	3.03	15.15
139	.....	26.25	405.16	3.50	54.02	10.87	167.77	8.00	40.00	0.75	3.75	3.36	16.80
140	.....	20.25	312.55	4.00	61.74	10.34	159.59	8.00	40.00	1.00	5.00	3.55	17.75
	Average.....	20.75	320.27	4.92	75.94	11.50	178.42	7.92	39.60	1.19	4.95	4.07	20.35
<i>Ewe</i> .													
63	Shoulder.....	20.00	308.69	7.50	115.76	13.68	211.15	8.00	40.00	4.50	22.50	6.19	30.05
91	do.....	14.75	227.66	6.75	104.18	11.71	180.74	7.00	35.00	1.50	7.50	4.10	20.50
92	do.....	26.00	401.30	7.50	115.76	14.36	221.05	8.25	41.25	4.60	22.50	6.24	31.20
93	do.....	20.00	368.69	6.50	100.32	12.54	193.55	8.25	41.25	1.50	7.50	4.55	22.75
94	do.....	21.50	331.84	8.00	123.48	11.95	184.44	7.75	38.75	1.25	6.25	4.09	23.45
95	do.....	15.00	231.52	7.25	111.90	10.80	166.69	8.00	40.00	2.50	12.50	5.46	27.30
	Average.....	19.54	301.59	7.25	111.90	12.61	193.09	7.88	39.40	2.63	13.15	5.21	26.05
63	Side.....	22.00	339.56	6.00	92.61	11.70	180.59	10.00	50.00	2.50	12.50	6.88	34.40
91	do.....	10.50	300.97	8.00	123.48	13.24	204.35	9.00	45.00	3.50	17.50	5.75	28.75
92	do.....	23.00	354.09	8.75	135.05	13.57	209.45	7.00	35.00	3.25	16.25	5.62	28.10
94	do.....	21.00	324.13	9.25	142.77	14.15	218.14	7.75	38.75	2.50	12.50	5.60	28.00
94	do.....	21.00	324.13	7.75	119.62	12.33	190.31	8.00	40.00	2.50	12.50	5.65	28.35
95	do.....	14.00	216.63	4.50	69.46	9.26	142.92	8.50	42.50	1.50	7.50	4.90	24.50
	Average.....	20.08	304.93	7.38	113.91	12.38	191.08	8.38	41.00	2.63	13.15	5.73	28.65
63	Hip.....	22.00	339.56	11.00	169.78	10.33	252.05	7.75	38.75	3.50	17.50	5.81	29.05
91	do.....	29.00	447.60	11.00	169.78	17.55	270.88	8.25	41.25	1.00	5.00	4.10	20.95
92	do.....	33.00	509.34	13.00	209.65	21.46	331.23	8.00	40.00	1.00	5.00	4.54	22.70
94	do.....	23.00	355.00	8.00	123.48	14.60	223.80	8.00	40.00	1.25	6.25	4.26	21.50
94	do.....	26.50	409.02	9.25	142.77	18.78	280.09	7.00	35.00	1.50	7.50	4.77	23.85
95	do.....	20.00	308.69	6.00	92.61	12.73	196.48	7.25	36.25	1.25	6.25	3.69	18.45
	Average.....	25.58	394.62	9.71	149.37	16.88	260.54	7.71	38.55	1.58	7.90	4.54	22.70
141	.....	22.50	347.28	5.25	81.03	11.00	183.67	7.25	36.25	1.00	5.00	3.59	17.95
142	.....	18.75	289.40	3.00	46.80	9.00	140.30	7.75	38.75	0.75	3.75	4.03	20.40
143	.....	23.50	362.71	3.50	54.02	13.22	204.05	8.25	41.25	0.25	1.25	3.24	16.20
144	.....	18.75	289.40	3.50	54.02	11.14	171.94	8.00	40.00	0.25	1.25	3.53	17.65
	Average.....	21.58	333.08	7.38	113.92	13.45	207.60	7.95	39.75	1.96	9.80	4.83	24.40
OXFORD.													
<i>Ram</i> .													
65	Shoulder.....	42.25	652.11	20.75	320.27	20.97	462.57	0.00	45.00	4.25	21.25	6.64	33.20
66	do.....	31.00	478.47	12.00	185.22	20.90	322.58	8.50	42.50	2.00	10.00	5.53	27.90
67	do.....	51.00	787.17	30.75	474.61	39.96	610.77	8.50	42.50	4.00	20.00	6.17	30.85
	Average.....	41.42	639.30	21.17	326.75	30.28	467.36	8.67	43.35	3.42	17.10	6.13	30.65
65	Side.....	32.00	493.91	12.00	185.21	19.70	304.06	8.75	43.75	4.50	22.50	7.03	35.15
66	do.....	39.75	613.52	11.50	177.50	24.84	383.40	10.25	50.25	6.00	30.00	8.46	42.30
67	do.....	57.00	879.77	25.50	393.58	41.64	641.15	10.00	50.00	5.50	27.50	8.11	40.50
	Average.....	42.92	692.45	16.33	252.05	28.00	442.62	9.67	48.35	5.33	26.65	7.87	39.35
65	Hip.....	46.75	721.57	18.50	285.54	27.90	532.01	9.00	45.00	1.50	7.50	5.97	29.85
66	do.....	38.00	586.62	19.25	297.12	26.53	409.48	9.00	45.00	2.25	11.25	6.20	31.60
67	do.....	59.00	910.64	20.50	316.41	37.67	361.42	8.25	41.25	2.00	10.00	6.31	31.55
	Average.....	47.92	739.63	19.42	299.74	30.73	474.31	8.75	43.75	1.92	9.60	6.16	30.80



TABLE XVII.—Individual extremes and averages, showing influence of sex and part of fleece, &c.—Continued.

Catalogue No. of samples.	Portions of fleece represented.	STRAIN.						STRETCH.					
		Highest.		Lowest.		Average.		Highest.		Lowest.		Average.	
		grams.	grains.	grams.	grains.	grams.	grains.	mm.	per ct.	mm.	per ct.	mm.	per ct.
OXFORD—continued.													
<i>Ewe.</i>													
61	Shoulder.....	47.75	737.00	18.00	246.95	31.91	492.98	8.25	41.25	1.75	8.75	5.22	26.10
61	Side.....	47.00	725.44	22.00	839.56	30.99	478.82	10.00	50.00	4.00	20.00	7.46	37.90
61	Hip.....	50.25	775.59	21.00	824.13	32.08	610.68	9.60	47.60	1.25	6.25	6.11	30.55
MERINO.													
<i>Ram.</i>													
80	Neck, top of wrinkle.....	20.00	308.69	9.00	133.01	12.01	210.07	8.25	41.25	2.50	12.50	5.43	27.15
90	Neck, between wrinkle.....	12.25	189.07	6.50	100.32	9.18	141.69	8.75	43.75	8.25	16.25	5.48	27.40
	Average.....	16.13	248.96	7.75	119.62	11.40	175.90	8.60	42.60	2.88	14.40	5.46	27.30
30	Shoulder.....	13.75	212.23	5.50	84.99	9.47	130.73	8.25	41.25	3.25	16.25	5.75	28.75
47	do.....	12.50	192.93	4.00	61.74	6.19	95.64	7.25	36.25	6.75	3.75	4.48	22.40
48	Shoulder, top of wrinkle.....	15.75	243.09	3.50	64.03	8.28	127.80	8.25	41.25	2.00	10.00	5.30	26.50
48	Shoulder, between wrinkle.....	13.25	204.51	4.00	61.74	7.83	120.78	8.25	41.25	2.75	13.75	6.85	31.75
51	Shoulder.....	22.00	330.66	4.00	61.74	9.31	143.70	10.75	53.75	3.25	18.25	6.75	33.00
51	do.....	8.50	81.89	2.00	30.87	8.29	50.78	9.00	45.00	4.00	20.00	6.32	31.00
53	Shoulder, top of wrinkle.....	25.00	385.88	6.50	100.32	10.54	162.68	7.50	37.50	3.25	16.25	5.45	27.25
53	Shoulder, between wrinkle.....	8.50	131.19	3.25	60.16	5.70	83.00	7.75	38.75	2.00	10.00	4.83	24.15
54	Shoulder, top of wrinkle.....	29.00	447.09	4.00	61.74	10.63	164.07	8.60	43.60	1.00	5.00	3.89	19.30
54	Shoulder, between wrinkle.....	7.50	115.70	2.75	42.44	5.28	81.40	8.00	40.00	1.75	8.75	5.10	25.50
55	Shoulder, top of wrinkle.....	16.50	254.67	5.00	77.17	8.95	138.14	8.25	41.25	4.00	20.00	6.16	30.90
55	Shoulder, between wrinkle.....	7.50	115.76	4.00	61.74	5.23	82.27	7.75	38.75	4.00	20.00	5.93	29.05
58	Shoulder.....	12.00	185.22	4.00	61.74	6.75	104.18	9.00	45.00	3.25	16.25	5.00	26.50
59	do.....	10.00	154.85	4.25	65.00	6.47	99.86	9.00	45.00	1.75	8.75	5.83	29.40
71	do.....	7.75	119.62	3.00	46.30	4.98	70.68	7.75	38.75	2.25	11.25	6.13	25.65
72	do.....	7.00	108.04	3.25	50.16	4.09	72.30	7.50	37.50	2.50	12.50	4.63	23.15
73	do.....	13.50	208.37	5.00	77.17	8.22	120.87	8.25	41.25	3.00	15.00	5.77	28.85
78	do.....	9.50	146.63	4.25	68.60	6.17	95.29	7.25	36.25	1.75	8.75	4.61	22.55
79	do.....	9.00	138.91	4.00	61.74	5.92	91.87	8.00	40.00	2.25	11.25	6.61	27.65
82	do.....	9.75	159.40	4.75	73.81	6.75	104.18	6.75	33.75	2.25	11.25	4.76	23.75
89	do.....	9.00	138.91	3.00	46.30	5.04	83.85	9.50	47.60	1.25	6.25	5.71	28.55
90	do.....	7.50	115.70	3.25	50.16	5.00	77.17	7.75	38.75	2.00	10.00	4.48	22.40
	Average.....	12.35	190.62	3.66	61.12	6.85	105.79	8.19	40.65	2.47	12.35	5.88	26.00
30	Side.....	14.00	216.08	6.00	92.01	9.19	141.84	8.75	43.75	2.25	11.25	6.40	27.45
47	do.....	13.75	212.23	4.00	61.74	7.73	119.15	9.25	46.25	3.00	15.00	6.48	32.40
48	do.....	15.75	243.09	4.00	61.74	8.43	130.11	9.75	48.75	3.00	15.00	6.41	32.05
51	do.....	12.00	185.21	4.00	61.74	6.98	107.73	8.25	41.25	3.00	15.00	5.53	27.65
53	do.....	8.00	123.48	3.00	46.30	4.48	69.14	3.60	42.60	1.60	7.50	5.75	28.75
55	do.....	11.00	169.78	3.00	46.30	5.47	84.43	6.50	47.50	2.00	10.00	6.42	27.10
58	do.....	12.00	185.22	4.00	61.74	6.94	107.13	9.00	45.00	2.00	10.00	6.56	32.60
59	do.....	15.00	231.52	4.00	61.74	6.90	106.60	9.00	45.00	3.25	16.25	6.85	31.75
71	do.....	9.00	138.91	4.00	61.74	5.86	90.45	9.00	45.00	2.00	10.00	6.68	30.40
72	do.....	9.50	146.63	3.00	46.30	5.20	80.26	7.25	36.25	3.00	15.00	4.65	23.25
73	do.....	12.25	189.07	4.00	61.74	7.16	110.51	8.00	40.00	4.00	20.00	6.20	31.00
78	do.....	11.00	169.78	4.50	69.46	5.67	87.51	8.75	43.75	4.00	20.00	6.21	31.05
79	do.....	9.00	138.91	4.25	65.00	5.93	86.00	9.00	45.00	3.25	16.25	6.25	31.25
82	do.....	11.00	169.78	4.00	61.74	6.40	98.78	8.00	40.00	2.00	10.00	4.67	22.85
89	do.....	11.00	169.78	4.00	61.74	5.58	86.13	8.00	40.00	3.25	16.25	5.90	29.50
90	do.....	10.25	158.20	4.00	61.74	5.04	91.68	7.60	37.60	2.25	11.25	5.69	28.15
	Average.....	11.48	177.19	3.99	61.58	6.47	99.86	8.60	42.05	2.74	13.70	5.81	29.05
30	Hip.....	12.25	189.07	5.75	83.75	8.76	135.21	8.25	41.25	2.75	12.75	5.08	26.40
47	do.....	27.00	416.73	4.75	73.81	12.22	204.05	8.00	40.00	2.00	10.00	4.63	23.15
48	do.....	23.50	362.71	4.50	69.46	11.78	181.82	8.25	41.25	1.00	5.00	4.41	22.05
51	do.....	26.50	509.02	4.25	63.60	10.70	165.15	8.00	40.00	1.00	5.00	4.95	24.75
53	do.....	8.00	123.48	2.00	60.87	4.30	74.08	7.00	35.00	1.00	5.00	4.14	20.70
53	Hip, top of wrinkle.....	32.60	501.62	7.75	119.62	18.05	278.59	8.00	40.00	2.00	10.00	5.06	25.30
58	Hip, between wrinkle.....	9.60	146.63	2.50	38.59	5.62	80.74	7.75	38.75	1.50	7.50	4.61	23.05
54	Hip, top of wrinkle.....	20.00	308.69	4.00	61.74	11.68	171.02	6.00	30.00	1.00	5.00	2.77	13.95
54	Hip, between wrinkle.....	10.00	154.35	3.50	54.02	5.92	91.37	6.00	30.00	1.50	7.50	3.67	18.85
55	Hip, top of wrinkle.....	11.50	177.60	3.00	30.87	5.74	83.59	8.50	42.50	1.00	5.00	3.97	19.85
55	Hip, between wrinkle.....	9.00	138.91	2.75	42.44	5.45	84.12	9.00	45.00	1.50	7.50	4.00	23.00
68	Hip.....	10.00	208.26	7.50	115.76	11.38	175.65	8.75	43.75	3.00	15.00	6.08	30.30
71	do.....	19.25	297.12	5.25	81.03	10.90	164.63	8.00	40.00	2.00	10.00	4.80	24.00
73	do.....	13.00	200.65	4.00	61.74	8.10	125.02	7.00	35.00	1.00	5.00	3.83	18.15
73	do.....	16.75	258.53	5.00	77.17	9.29	141.99	8.00	40.00	2.00	10.00	3.87	16.85
78	do.....	14.60	216.08	5.25	81.03	8.21	126.72	7.00	35.00	1.00	5.00	3.87	19.35
79	do.....	13.75	194.79	5.00	77.17	8.04	124.00	7.00	35.00	3.00	15.00	4.47	22.35
79	Hip, top of wrinkle.....	10.75	165.93	5.25	81.03	7.72	119.15	7.00	35.00	3.00	15.00	4.67	23.85
79	Hip, between wrinkle.....	12.50	192.93	5.00	77.17	7.66	116.69	7.00	35.00	3.00	15.00	5.01	25.05
83	do.....	18.25	281.68	5.00	77.17	3.99	137.37	7.25	36.25	3.00	15.00	4.69	23.45
89	do.....	12.75	196.79	4.00	61.74	6.31	97.39	7.60	37.60	1.50	7.50	4.50	22.95
90	do.....	12.00	185.22	4.25	63.60	6.96	107.43	8.75	43.75	1.00	5.00	3.43	17.15
	Average.....	15.94	246.00	4.51	69.61	8.83	136.29	7.46	37.30	1.80	9.00	4.41	22.05
99	do.....	4.25	65.80	1.50	23.15	2.80	43.22	8.00	45.00	2.00	10.00	5.60	28.00
104	do.....	8.00	122.48	2.25	34.73	4.21	61.98	7.75	38.75	2.25	11.25	5.63	27.65
104	do.....	7.00	108.04	1.75	27.01	3.70	57.10	8.00	40.00	2.25	11.25	5.00	26.00
349	Top of wrinkle.....	14.25	210.94	8.00	43.30	6.97	107.53	7.75	38.75	1.00	5.00	3.65	18.25
349	Between wrinkle.....	13.00	200.65	3.60	54.02	5.10	78.72	7.00	35.00	1.60	7.60	3.88	19.30
350	do.....	12.75	194.79	3.00	46.30	5.71	83.13	8.00	40.00	1.60	7.60	4.00	23.00
350	do.....	12.00	185.22	5.00	77.17	7.73	119.21	7.60	37.60	1.60	7.60	4.50	22.95
361	do.....	8.75	135.05	3.00	46.30	5.01	77.53	7.00	35.00	2.00	10.00	4.47	22.35
	Average.....	13.17	203.27	4.13	63.74	7.47	119.30	8.01	40.05	2.24	1		



TABLE XVII.—Individual extremes and averages, showing influence of sex and part of fleece, &c.—Continued.

Catalogue No. of samples.	Portion of fleece represented.	STRAIN.						STRETCH.					
		Highest.		Lowest.		Average.		Highest.		Lowest.		Average.	
		grams.	grains.	grams.	grains.	grams.	grains.	mm.	per ct.	mm.	per ct.	mm.	per ct.
MERINO—continued.													
<i>Ewe.</i>													
41	Neck	10.00	154.35	3.25	50.16	5.00	77.17	8.00	40.00	2.00	10.00	4.23	21.40
45	Neck, top of wrinkle	15.00	231.52	4.00	61.74	7.98	128.17	8.00	40.00	3.25	16.25	5.58	37.90
45	Neck, between wrinkle	15.60	230.24	4.25	65.60	8.05	124.25	7.75	38.75	1.50	7.50	5.03	25.15
50	Neck, top of wrinkle	20.00	308.69	8.00	123.48	13.31	205.43	8.00	40.00	4.09	20.00	6.01	30.05
	Average	15.13	203.53	4.88	75.32	8.59	132.53	7.94	39.70	2.60	13.45	5.23	26.15
40	Shoulder	9.50	146.63	3.50	54.02	5.53	85.35	8.00	40.00	1.50	7.50	5.17	25.85
52	do	5.25	81.08	2.00	30.87	3.48	54.71	8.50	42.50	3.50	17.50	6.69	33.45
56	Shoulder, between wrinkle	9.00	138.91	3.25	50.16	5.58	85.82	8.25	41.25	3.00	15.00	5.58	27.90
57	Shoulder, top of wrinkle	27.00	416.73	5.00	77.17	11.31	174.56	8.50	42.50	2.25	11.25	5.83	29.15
57	Shoulder, between wrinkle	8.50	131.19	3.25	50.16	5.55	85.66	9.50	47.50	4.00	20.00	6.54	32.70
58	Shoulder, top of wrinkle	10.50	162.06	3.25	50.16	6.18	95.39	7.50	37.50	1.50	7.50	4.64	23.35
58	Shoulder, between wrinkle	9.25	142.77	3.00	46.30	5.68	87.68	8.00	40.00	1.25	6.25	5.26	26.30
70	Shoulder	11.50	177.50	3.50	54.02	6.28	96.93	7.75	38.75	2.00	10.00	4.64	23.20
74	do	14.00	216.08	5.00	77.17	8.74	134.90	8.00	40.00	4.00	20.00	5.88	29.40
75	do	12.75	198.79	5.50	84.89	7.68	118.54	7.00	35.00	2.25	11.25	3.09	19.65
76	do	14.75	227.66	5.50	84.89	9.07	139.99	5.25	26.25	1.00	5.00	2.73	13.65
77	do	10.50	162.06	4.25	65.60	6.12	94.46	8.00	40.00	3.50	17.50	5.51	27.55
80	do	8.50	131.19	3.00	46.30	5.23	80.72	8.50	42.50	4.00	20.00	6.63	33.15
81	do	11.75	181.96	5.25	81.08	7.70	118.85	8.75	43.75	4.00	20.00	5.76	28.80
83	do	13.75	212.23	4.50	69.46	7.49	115.61	8.00	40.00	3.25	16.25	5.42	27.10
84	Shoulder, 17 months	7.00	108.04	3.00	46.30	4.88	75.01	8.25	41.25	4.00	20.00	6.12	30.60
84	Shoulder	6.50	100.32	3.25	50.16	4.65	71.77	5.00	25.00	1.25	6.25	2.74	13.70
85	do	5.25	81.03	2.75	42.45	3.71	57.26	9.00	45.00	4.00	20.00	6.24	31.20
86	do	6.25	96.47	3.25	50.16	4.62	71.31	8.75	43.75	4.25	21.25	6.42	32.10
87	do	7.75	119.32	4.25	65.60	5.32	82.11	8.75	43.72	4.75	23.75	6.61	33.05
88	do	8.25	127.34	3.00	46.30	4.68	71.92	9.00	45.00	3.75	18.75	5.95	29.75
	Average	10.36	159.90	3.77	58.19	6.16	95.08	8.01	40.05	3.00	15.00	5.44	27.20
41	Sido	12.00	185.22	3.75	57.88	5.88	90.76	8.75	43.75	1.75	8.75	0.25	31.25
45	do	14.00	216.08	5.75	88.75	8.48	130.58	9.00	45.00	4.00	20.00	6.63	33.25
49	do	14.00	210.08	4.00	61.74	6.85	113.44	10.00	50.00	1.50	7.50	0.21	31.05
52	do	7.50	115.76	3.00	46.30	4.53	69.92	9.00	45.00	3.00	15.00	6.80	34.50
56	do	9.00	138.91	3.00	46.30	5.06	91.99	8.00	40.00	2.00	10.00	5.19	25.94
70	do	10.00	154.35	3.75	57.88	5.89	90.90	9.00	45.00	2.25	11.25	6.03	30.15
74	do	11.25	173.64	5.00	77.17	7.60	115.70	9.50	47.50	4.25	21.25	7.09	35.45
75	do	11.00	169.78	5.00	77.17	7.75	119.62	8.50	42.50	4.25	21.25	6.51	32.55
76	do	8.25	127.34	4.00	61.74	5.57	85.97	8.00	40.00	3.25	16.25	6.05	30.25
77	do	11.00	169.78	4.00	61.74	5.30	82.73	8.75	43.75	5.00	25.00	6.86	34.75
80	do	8.50	131.19	3.25	50.16	4.70	72.54	9.25	46.25	5.00	25.00	7.28	36.40
81	do	11.50	177.50	4.00	61.74	6.43	99.24	9.00	45.00	5.00	25.00	8.96	34.80
84	do	9.00	138.91	3.75	57.87	5.61	86.59	7.50	37.50	3.50	17.50	5.50	27.50
85	do	7.50	115.70	2.75	42.44	4.42	68.22	6.25	31.25	1.00	5.00	3.07	15.35
86	do	6.25	90.47	3.00	46.30	3.88	59.89	9.50	47.50	4.50	22.50	0.92	34.80
86	do	10.50	162.06	3.00	46.30	5.65	87.21	8.00	40.00	2.25	11.25	5.25	26.25
87	do	8.00	123.48	4.25	65.60	5.37	82.88	8.00	40.00	3.00	15.00	6.40	32.00
88	do	6.50	100.32	3.50	54.02	4.69	72.39	7.75	38.75	3.25	16.25	5.69	28.45
	Average	9.78	150.64	3.81	58.81	5.78	89.21	8.54	42.70	3.26	16.30	6.16	30.80
41	Hip	10.50	162.06	4.25	65.60	7.31	112.83	8.75	43.75	4.00	20.00	6.60	33.00
45	do	20.00	308.69	5.50	81.89	12.46	102.16	8.00	40.00	0.50	2.50	4.21	21.05
46	do	13.50	208.37	4.00	61.74	0.55	147.40	8.00	40.00	2.00	10.00	6.07	25.35
62	do	11.00	169.78	2.56	38.59	4.02	75.94	7.00	35.00	1.00	5.00	4.27	21.35
56	Hip, top of wrinkle	12.50	192.93	3.75	57.88	7.75	119.93	8.50	42.50	2.00	10.00	5.13	25.05
59	Hip, between wrinkle	12.50	192.93	3.50	54.02	7.32	112.98	8.75	43.75	2.50	12.50	5.42	27.10
57	Hip, top of wrinkle	14.00	216.08	5.75	88.75	8.65	133.51	8.25	41.25	2.75	13.75	5.31	26.55
58	Hip, between wrinkle	13.00	200.65	4.25	65.60	7.35	113.44	7.00	35.00	1.75	8.75	3.81	19.05
70	Hip	10.75	165.92	3.00	46.30	5.78	89.21	6.50	32.50	2.00	10.00	3.86	19.30
74	do	15.00	231.62	4.00	61.74	7.98	123.17	8.00	40.00	1.00	5.00	3.45	17.25
75	do	20.00	308.69	8.00	123.48	12.35	190.62	8.25	41.25	2.75	13.75	5.65	28.25
76	do	17.75	273.96	6.00	92.61	9.30	143.54	7.00	35.00	2.00	10.00	4.65	23.25
77	do	13.50	208.37	5.75	88.75	9.04	139.53	6.00	30.00	1.50	7.50	4.10	20.50
80	do	14.00	216.08	4.25	65.60	7.92	122.24	7.00	35.00	3.00	15.00	4.70	23.50
81	do	8.00	123.48	3.00	46.30	5.08	78.41	7.00	35.00	2.75	13.75	5.17	25.85
83	do	14.75	227.66	5.00	77.17	9.53	147.09	8.00	40.00	2.00	10.00	4.61	23.05
84	do	24.00	370.43	3.00	46.30	14.30	220.71	7.50	37.50	1.50	7.50	3.29	16.45
85	do	8.25	127.34	2.25	31.73	4.82	74.39	5.25	26.25	1.00	5.00	2.38	11.90
86	do	6.00	92.61	3.00	46.30	4.27	65.91	6.75	33.75	1.00	5.00	3.02	19.60
86	do	15.00	231.51	3.00	46.30	5.93	91.53	8.50	42.50	1.75	8.75	4.32	21.60
87	do	9.75	150.49	3.50	54.02	5.55	85.66	7.00	35.00	1.00	5.00	4.25	21.25
88	do	14.00	216.08	3.00	46.30	6.88	106.19	7.75	38.75	1.00	5.00	4.10	20.50
	Average	13.53	208.83	4.13	63.74	7.92	122.24	7.49	37.45	1.85	9.25	4.47	22.35
96	do	3.50	54.02	1.25	19.29	2.48	38.28	9.00	45.00	2.00	1.00	5.60	28.00
98	do	4.50	69.46	1.50	23.15	2.00	44.76	8.75	43.75	1.00	5.00	5.96	29.50
100	do	4.50	69.40	1.00	15.44	2.75	42.44	9.00	45.00	2.00	10.00	6.00	30.00
102	do	4.25	65.60	1.75	27.01	2.61	40.28	7.75	38.75	2.50	12.50	5.38	26.90
103	do	4.00	61.74	1.25	19.29	2.49	38.43	7.50	37.50	1.50	7.50	4.80	24.30
347	do	7.25	111.90	2.75	42.44	4.62	71.73	8.50	42.50	2.00	10.00	5.39	26.95
348	do	14.25	219.94	2.75	42.44	0.97	107.58	8.00	40.00	1.00	5.00	3.65	18.25
351	do	16.00	246.95	2.00	30.87	6.02	92.92	7.25	36.25	1.00	5.00	5.29	26.95
352	do	9.25	142.77	2.00	30.87	4.24	65.44	7.25	36.25	1.50	7.50	4.65	23.25
353	do	12.75	190.79	3.00	46.30	5.42	83.66	7.75	38.75	1.25	6.25	4.65	23.25
354	do	10.00											







TABLE XIX.—Individual extremes and averages, showing influence of breed, sex, and portion of fleece upon strain and stretch.

Catalogue No of samples.	Age and portion of fleece represented.	STRAIN.						STRETCH.					
		Highest.		Lowest.		Average.		Highest.		Lowest.		Average.	
		grams.	grains.	grams.	grains.	grams.	grains.	mm.	per ct.	mm.	per ct.	mm.	per ct.
<b>COTSWOLD.</b>													
<b>Ram.</b>													
172	Lamb:	30.00	463.04	0.00	133.91	17.16	264.80	10.75	53.75	1.00	5.00	6.33	31.90
185	.....	34.00	524.78	15.00	321.52	24.79	382.62	8.00	40.00	1.00	5.00	4.43	22.15
	Average .....	32.00	403.91	12.00	155.22	20.98	323.82	0.38	45.90	1.00	5.00	6.41	27.05
0 months:													
35	Shoulder .....	31.00	478.47	15.50	239.24	24.35	375.83	8.50	42.50	1.50	7.50	6.01	30.05
	Side .....	38.75	586.09	9.50	146.63	24.27	374.60	10.75	53.75	1.25	6.25	5.93	29.65
	Hip .....	39.00	601.95	19.75	304.83	29.20	450.69	9.00	45.00	2.00	10.00	7.50	37.50
	Average .....	36.25	559.50	14.92	230.28	25.94	400.37	9.42	47.10	1.58	7.90	6.48	32.40
1 year:													
34	Shoulder .....	41.00	632.82	16.60	254.67	25.66	396.05	8.00	40.00	2.00	10.00	6.44	32.20
	Side .....	51.00	771.73	20.00	303.69	35.75	551.79	9.00	45.00	1.25	6.25	6.09	30.45
	Hip .....	62.00	956.95	27.50	424.45	41.24	636.52	10.00	50.00	5.25	26.25	7.90	39.95
174	.....	40.50	625.10	12.50	192.93	25.19	383.30	20.50	102.50	2.00	10.00	9.53	47.90
184	.....	43.00	663.69	13.75	280.40	31.25	482.33	8.25	41.25	1.25	6.25	5.43	27.15
	Average .....	47.50	733.14	19.05	294.03	31.82	491.13	11.15	55.75	2.35	11.75	7.11	35.55
2 years:													
175	.....	43.50	748.58	16.00	240.95	35.54	548.55	25.00	125.00	2.00	10.00	12.25	61.25
176	.....	47.50	733.14	12.00	185.22	32.91	507.95	20.00	130.00	1.25	6.25	12.36	61.80
186	.....	42.00	652.11	17.75	273.96	27.78	428.77	8.25	41.25	1.00	5.00	5.22	20.10
	Average .....	46.00	709.99	15.25	235.38	32.08	495.14	19.75	98.75	1.42	7.10	9.94	49.70
Ewe.													
171	Lamb:	30.50	470.76	10.59	162.00	20.38	314.56	10.00	50.00	1.00	5.00	7.40	37.00
183	.....	36.75	567.22	10.50	162.00	24.08	371.66	9.75	48.75	1.25	6.25	6.97	34.85
187	.....	40.75	628.96	16.25	250.81	27.75	428.31	8.75	43.75	1.00	5.00	6.21	26.05
	Average .....	36.00	555.65	12.42	191.70	24.07	371.51	9.50	47.50	1.08	5.40	6.53	32.65
0 months:													
37	Shoulder .....	51.00	787.16	15.50	239.24	32.20	496.99	8.75	43.75	4.00	20.00	6.66	33.30
	Side .....	38.00	586.62	11.00	169.78	26.36	406.86	9.00	45.00	1.00	5.00	4.75	23.75
	Hip .....	40.00	617.38	13.00	277.82	30.35	468.44	9.50	47.50	0.50	2.50	6.33	31.43
	Average .....	43.00	663.69	14.83	228.89	29.64	457.48	9.08	45.40	1.83	9.15	6.91	29.55
1 year:													
39	Shoulder .....	47.75	737.00	16.00	240.95	34.32	529.72	8.50	42.50	5.25	26.25	6.83	34.16
	Side .....	57.00	879.77	25.60	393.58	39.61	611.36	9.50	47.50	3.25	16.25	7.83	39.15
	Hip .....	40.50	625.10	23.50	362.71	32.72	505.02	9.00	45.00	6.00	30.00	8.20	41.00
179	.....	38.50	604.23	13.75	212.23	26.49	408.86	8.75	43.75	2.50	12.50	6.53	32.65
189	.....	43.25	667.55	13.75	212.23	32.03	494.37	8.00	40.00	1.00	5.00	6.09	30.45
	Average .....	45.40	700.73	18.50	285.54	33.04	609.06	8.75	43.75	3.60	18.00	7.10	35.50
2 years:													
177	.....	44.75	690.70	15.50	239.24	31.17	740.80	21.75	108.75	2.25	11.25	10.47	52.35
178	.....	45.50	702.27	12.00	185.22	29.86	414.57	10.50	62.50	1.50	7.50	6.53	32.65
180	.....	44.00	679.12	21.00	324.13	31.13	480.48	9.00	43.33	1.25	6.25	7.26	36.39
181	.....	43.60	764.01	11.00	169.78	35.04	540.83	10.00	50.00	1.25	6.25	7.10	35.59
182	.....	42.00	648.25	12.00	185.22	28.63	441.89	8.75	43.75	1.00	5.00	6.58	32.90
190	.....	40.00	617.38	12.50	192.93	27.23	420.23	8.25	41.25	0.25	1.25	5.23	26.15
	Average .....	44.20	683.60	14.00	216.03	30.01	463.19	11.38	56.90	1.25	6.25	7.20	36.80
<b>LINCOLN.</b>													
<b>Ram.</b>													
165	Lamb:	27.50	424.45	11.50	177.50	17.72	273.50	8.00	40.00	0.75	3.75	4.67	23.35
167	1 year:	33.00	509.34	11.25	173.64	22.75	351.14	9.50	47.50	1.00	5.00	6.63	33.15
166	2 years:	30.00	463.04	7.00	108.04	20.62	318.20	8.75	43.75	1.25	6.25	6.10	30.80
59	5½ years:	36.00	555.65	17.00	262.39	26.87	414.73	8.00	40.00	5.00	25.00	6.98	34.90
	Shoulder .....	36.00	555.65	10.00	154.35	23.42	361.48	9.00	45.00	4.00	20.00	7.52	37.69
	Side .....	45.00	694.56	28.00	355.00	34.40	530.95	8.75	43.75	5.00	25.00	7.10	35.80
	Hip .....	39.00	601.95	10.67	257.80	28.23	435.72	8.58	42.90	4.67	23.35	7.22	36.10
	Average .....	39.00	601.95	10.67	257.80	28.23	435.72	8.58	42.90	4.67	23.35	7.22	36.10
Ewe.													
61	Lamb:	29.25	451.46	20.25	312.55	23.88	368.58	9.50	47.50	5.00	25.00	7.38	36.90
	Shoulder .....	31.00	478.47	18.50	285.54	25.55	394.25	10.25	51.25	7.25	36.25	8.67	43.35
	Side .....	42.50	655.97	19.25	297.12	28.80	444.52	11.00	55.00	6.00	30.00	8.24	41.20
164	.....	32.25	497.77	14.25	219.94	23.18	357.77	9.25	46.25	1.25	6.25	6.58	32.90
	Average .....	33.75	520.92	18.06	278.75	25.60	395.13	10.00	50.00	4.83	24.40	7.72	38.60
2 years:													
60	Shoulder .....	48.50	748.58	20.00	298.60	23.75	520.30	8.50	42.50	6.00	30.00	7.41	37.05
	Side .....	52.00	802.60	24.00	370.42	37.77	582.06	10.00	50.00	6.25	31.25	7.90	39.50
	Hip .....	49.00	750.30	25.00	393.58	35.89	538.05	8.75	43.75	6.00	30.00	7.39	36.95
168	.....	25.25	389.72	10.00	154.38	17.75	273.96	9.50	47.50	1.25	6.25	6.27	31.35
169	.....	33.50	517.06	8.50	131.19	22.50	347.28	12.75	63.75	2.00	10.00	7.14	35.70
	Average .....	41.65	642.83	17.50	270.11	27.53	424.91	0.90	49.50	4.10	20.50	7.22	36.10



TABLE XIX.—Individual extremes and averages, showing influence of breed, sex, &c.—Continued.

Catalogue No. of samples.	Portion of fleece represented.	STRAIN.						STRETCH.					
		Highest.		Lowest.		Average.		Highest.		Lowest.		Average.	
		grams.	grains.	grams.	grains.	grams.	grains.	mm.	per ct.	mm.	per ct.	mm.	per ct.
<b>SOUTHDOWN.</b>													
<b>Ram.</b>													
138	Lamb:	15.50	239.23	3.50	54.02	8.11	125.17	7.25	36.25	0.75	3.75	3.00	15.15
139	.....	26.25	405.10	3.50	54.02	10.87	167.77	8.00	40.00	0.75	3.75	8.80	16.60
140	.....	30.25	312.55	4.00	61.74	10.34	159.59	8.00	40.00	1.00	5.00	3.55	17.75
	Average.....	20.67	313.03	3.67	56.65	9.77	150.80	6.42	32.10	0.83	4.17	3.31	16.55
1 year:													
135	.....	23.75	306.57	0.00	92.61	12.70	197.40	6.75	33.75	0.75	3.75	3.62	18.10
136	.....	22.00	339.56	4.00	61.74	11.64	173.67	7.75	38.75	0.25	1.25	3.93	19.65
137	.....	22.50	347.23	4.00	61.74	13.82	213.31	10.00	50.00	1.25	6.25	4.54	22.70
	Average.....	22.75	351.14	4.67	72.08	12.75	196.70	8.17	40.85	0.75	3.75	4.03	20.15
2 years:													
62	Shoulder.....	17.75	373.00	8.50	131.19	12.40	192.31	6.50	32.50	1.00	5.00	3.00	15.80
	Side.....	19.25	397.12	8.00	123.48	11.00	179.04	8.00	40.00	3.25	16.25	6.05	30.25
	Hip.....	19.00	393.20	7.50	115.70	13.41	200.88	8.00	40.00	4.00	20.00	6.33	31.65
103	.....	16.25	259.81	4.80	69.40	9.99	151.00	8.50	42.50	0.50	2.50	3.45	17.25
	Average.....	18.66	273.75	7.13	110.05	11.87	183.21	7.78	38.90	2.10	10.95	4.72	23.60
3 years:													
132	.....	28.00	432.17	2.50	38.50	10.92	168.55	8.25	41.25	0.25	1.25	3.63	18.15
4 years:													
131	.....	18.50	285.54	3.00	46.80	12.73	196.48	8.00	40.00	0.50	2.50	4.34	21.70
<b>Ewe.</b>													
6 months:													
95	Shoulder.....	15.00	231.52	7.25	111.90	10.80	166.69	8.00	40.00	2.50	12.50	5.48	27.30
	Side.....	14.00	216.08	4.50	69.40	9.26	142.92	8.50	42.50	1.50	7.50	4.90	24.50
	Hip.....	20.00	308.69	6.00	92.91	12.73	196.48	7.25	36.25	1.25	6.25	3.69	18.45
	Average.....	16.33	252.65	5.92	91.37	10.93	163.70	6.58	32.90	1.75	8.75	4.68	23.40
1 year:													
63	Shoulder.....	20.00	308.60	7.50	115.76	13.88	211.15	8.00	40.00	4.50	22.50	6.19	30.95
	Side.....	22.00	339.51	0.00	92.60	11.70	180.59	10.00	50.00	2.50	12.50	6.89	34.40
	Hip.....	22.00	339.56	11.00	169.78	16.83	252.05	7.75	38.75	3.50	17.50	5.81	29.05
92	.....	26.00	491.30	7.50	115.76	14.38	221.95	8.25	41.25	4.50	22.50	6.24	31.20
	Side.....	23.00	354.99	8.75	135.05	13.57	209.45	7.00	35.00	3.25	16.25	5.62	28.10
	Hip.....	33.00	569.34	13.00	200.65	21.46	331.23	8.00	40.00	1.00	5.00	4.54	22.70
94	.....	21.50	331.84	8.00	123.48	11.95	184.44	7.75	38.75	1.25	6.25	4.69	23.45
	Side.....	21.00	324.13	7.75	119.62	12.33	199.31	8.00	40.00	2.50	12.50	5.05	28.25
	Hip.....	26.50	408.02	9.25	142.77	18.73	289.09	7.00	35.00	1.50	7.50	4.77	23.85
144	.....	18.75	289.40	3.50	54.02	11.14	171.04	8.00	40.00	0.25	1.25	3.53	17.65
	Average.....	23.38	369.60	8.23	127.03	14.53	224.26	7.98	39.90	2.43	12.40	5.39	26.95
2 years:													
91	Shoulder.....	14.75	227.66	6.75	104.18	11.71	180.74	7.00	35.00	1.50	7.50	4.10	20.50
	Side.....	10.50	309.97	8.00	123.48	13.24	204.35	9.00	45.00	3.50	17.50	5.75	28.75
	Hip.....	29.00	447.60	11.00	169.78	17.55	270.88	8.25	41.25	1.00	5.00	4.19	20.95
141	.....	22.50	347.23	6.25	81.03	11.00	183.67	7.25	36.25	1.00	6.00	3.59	17.95
142	.....	18.75	289.40	3.00	46.80	9.09	149.80	7.75	38.75	0.75	3.75	4.08	20.40
143	.....	28.50	362.71	3.50	54.02	13.22	204.05	8.25	41.25	0.25	1.25	3.24	16.20
	Average.....	21.23	339.23	6.25	96.47	12.73	197.40	7.92	39.60	1.33	6.65	4.16	20.80
3 years:													
93	Shoulder.....	20.00	308.60	6.50	100.32	12.54	198.55	8.25	41.25	1.50	7.50	4.55	22.75
	Side.....	21.00	324.13	9.25	142.77	14.15	218.40	7.75	38.75	2.50	12.50	5.60	28.00
	Hip.....	23.00	358.00	8.00	123.48	14.50	223.80	8.00	40.00	1.25	6.25	4.26	21.30
	Average.....	21.33	328.22	7.92	122.34	13.73	211.62	8.00	40.00	1.75	8.75	4.80	24.00
<b>OXFORD.</b>													
<b>Ram.</b>													
1 year:													
60	Shoulder.....	31.00	478.47	12.00	185.22	20.90	322.58	8.50	42.50	2.00	10.00	5.58	27.99
	Side.....	39.75	618.62	11.60	177.60	24.84	383.40	10.25	50.10	0.00	30.00	8.48	42.30
	Hip.....	38.00	586.52	19.25	297.12	26.53	499.43	0.00	45.00	2.25	11.25	6.20	31.00
	Average.....	26.25	559.51	14.25	219.94	24.09	371.82	9.25	46.25	3.42	17.10	6.75	33.75
2 years:													
65	Shoulder.....	42.25	652.11	20.75	230.27	29.97	462.57	9.00	45.00	4.25	21.25	6.64	33.20
	Side.....	32.00	493.91	12.00	135.21	19.70	304.66	8.75	43.75	4.50	22.50	7.03	35.15
	Hip.....	40.75	721.57	18.50	285.54	27.99	532.01	9.00	45.00	1.50	7.50	5.97	29.85
	Average.....	40.33	622.48	17.08	263.62	25.89	399.00	8.92	44.60	3.43	17.10	6.55	32.75
<b>Ewe.</b>													
1 year:													
64	Shoulder.....	47.75	737.00	16.00	240.95	31.94	292.98	8.25	41.25	1.75	8.75	5.23	26.10
	Side.....	47.00	725.44	22.00	339.56	39.09	478.32	10.00	50.00	4.00	20.00	7.46	37.36
	Hip.....	50.25	775.50	21.00	324.13	33.08	510.58	9.50	47.50	1.25	6.25	6.11	30.55
	Average.....	48.33	745.65	19.67	303.60	32.09	493.01	9.25	46.25	2.30	11.60	6.26	31.30
<b>MERINO.</b>													
<b>Ram.</b>													
Lamb:													
70	Shoulder.....	9.00	138.91	4.00	61.74	5.92	91.37	8.00	40.00	2.25	11.25	5.51	27.55
	Side.....	9.00	138.91	4.25	65.60	5.63	86.00	9.00	45.00	3.25	16.25	6.25	31.25
	Hip, top of wrinkle.....	10.75	165.02	5.25	81.03	7.72	119.15	7.00	35.00	8.00	15.00	4.67	23.85
	Hip, between wrinkle.....	12.50	192.93	5.00	77.17	7.50	116.69	7.00	35.00	3.00	15.00	5.91	25.05
	Average.....	10.31	159.13	4.63	71.46	6.70	103.41	7.75	38.75	3.87	14.25	6.36	26.89



TABLE XIX.—Individual extremes and averages, showing influence of breed, sex, &c.—Continued.

Catalogue No. of samples.	Portion of fleece represented.	STRAIN.						STRETCH.					
		Highest.		Lowest.		Average.		Highest.		Lowest.		Average.	
		grams.	grains.	grams.	grains.	grams.	grains.	mm.	per ct.	mm.	per ct.	mm.	per ct.
MERINO—continued.													
Ram—Continued.													
5 months:													
78	Shoulder.....	9.50	146.63	4.25	65.60	0.17	95.25	7.25	36.25	1.75	8.75	4.51	22.55
	Side.....	11.00	169.78	4.50	69.46	5.87	87.51	8.75	43.75	4.00	20.00	6.21	31.05
	Hip.....	12.75	196.79	5.00	77.17	8.04	124.09	7.00	35.00	3.00	15.00	4.47	22.35
	Average.....	11.08	171.02	4.58	70.69	6.63	102.33	7.67	38.35	2.92	14.60	5.08	25.30
1 year:													
51	Shoulder.....	22.00	339.56	4.00	61.74	9.31	143.70	10.75	53.75	3.25	10.25	6.72	33.60
	Side.....	12.00	185.21	4.00	61.74	6.98	107.73	8.25	41.25	3.00	15.00	5.53	27.85
	Hip.....	28.50	509.02	4.25	85.60	10.70	165.15	8.00	40.00	1.00	5.00	4.95	24.75
82	Shoulder.....	9.75	150.49	4.75	73.31	6.75	104.18	6.75	33.75	2.25	11.25	4.75	23.75
	Side.....	11.00	169.78	4.00	61.74	6.40	98.78	8.00	40.00	2.00	10.00	4.51	22.65
	Hip.....	18.25	281.68	5.00	77.17	8.00	137.37	7.25	36.25	3.00	15.00	4.69	23.45
89	Shoulder.....	9.00	138.91	3.00	46.30	5.04	83.35	9.50	47.50	1.25	6.25	5.71	28.55
	Side.....	11.00	169.78	4.00	61.74	5.58	86.12	8.00	40.00	3.25	18.25	5.90	29.50
	Hip.....	12.75	196.79	4.00	61.74	6.31	97.39	7.50	37.50	1.50	7.50	4.59	22.95
849	Top of wrinkle.....	14.25	219.94	3.00	49.30	0.97	107.58	7.75	38.75	1.00	5.00	3.65	18.25
	Between wrinkle.....	13.00	200.65	3.50	54.02	5.10	78.72	7.00	35.00	1.50	7.50	3.88	19.30
	Average.....	14.50	223.80	3.95	60.97	7.09	109.43	8.06	40.30	2.09	10.45	4.99	24.05
2 years:													
30	Neck, top of wrinkle.....	20.00	308.69	9.00	138.91	13.61	210.07	8.25	41.25	2.50	12.50	5.43	27.15
	Neck, between wrinkle.....	12.25	189.07	0.50	100.33	9.18	141.69	8.75	43.75	3.25	16.25	5.48	27.40
	Shoulder.....	13.75	212.23	5.50	84.89	9.47	130.73	8.25	41.25	3.25	16.25	5.75	28.75
	Side.....	14.00	216.08	6.00	92.81	9.10	141.84	8.75	43.75	2.25	11.25	5.49	27.45
	Hip.....	12.25	189.07	5.75	88.75	8.76	135.21	8.25	41.25	2.75	13.75	5.08	28.40
48	Shoulder, top of wrinkle.....	15.75	243.09	3.50	51.02	8.28	127.80	8.25	41.25	2.00	10.00	5.90	26.50
	Shoulder, between wrinkle.....	13.25	204.51	4.00	61.74	7.83	120.78	8.25	41.25	2.75	13.75	6.35	31.75
	Side.....	15.75	243.09	4.00	61.74	8.43	130.11	9.75	48.75	3.00	15.00	6.41	32.05
	Hip.....	23.50	362.71	4.50	60.46	11.78	181.82	8.25	41.25	1.00	5.00	4.41	22.05
53	Shoulder.....	5.50	84.89	2.00	30.87	3.29	50.78	9.00	45.00	4.00	20.00	6.32	31.60
	Shoulder, top of wrinkle.....	25.00	385.28	6.50	100.32	10.54	162.68	7.50	37.50	3.25	16.25	5.45	27.25
	Shoulder, between wrinkle.....	8.50	131.19	3.25	50.16	6.76	88.80	7.75	38.75	2.00	10.00	4.83	24.15
	Side.....	8.00	123.48	3.00	46.39	4.48	69.14	8.50	42.50	1.50	7.50	5.75	28.75
	Hip.....	8.00	123.48	2.00	30.87	4.80	74.08	7.00	35.00	1.00	5.00	4.14	20.70
	Hip, top of wrinkle.....	32.50	501.62	7.75	119.62	18.05	278.59	8.00	40.00	2.00	10.00	5.06	25.30
	Hip, between wrinkle.....	9.50	140.63	2.50	38.59	5.62	88.74	7.75	38.75	1.50	7.50	4.61	23.05
71	Shoulder.....	7.75	119.62	3.00	48.30	4.98	76.86	7.75	38.75	2.25	11.25	5.13	25.65
	Side.....	9.00	138.91	4.00	61.74	5.86	90.45	9.00	45.00	2.00	10.00	6.08	30.40
	Hip.....	13.00	200.65	4.00	61.74	8.10	125.02	7.00	35.00	1.00	5.00	3.63	18.15
850	.....	12.75	196.79	3.00	46.30	5.71	88.13	8.00	40.00	1.50	7.50	4.60	23.00
	Average.....	14.00	216.08	4.49	60.30	8.10	126.41	8.20	41.00	2.24	11.20	5.29	26.45
3 years:													
54	Shoulder, top of wrinkle.....	29.00	447.60	4.00	61.74	10.62	164.07	8.50	42.50	1.00	5.00	3.88	19.30
	Shoulder, between wrinkle.....	7.50	115.76	2.75	42.44	5.28	81.49	8.00	40.00	1.75	8.75	5.10	25.50
	Hip, top of wrinkle.....	20.00	308.69	4.00	61.74	11.08	171.02	6.90	30.00	1.00	5.00	2.77	13.85
	Hip, between wrinkle.....	10.00	154.35	3.50	54.02	5.92	91.37	6.00	30.00	1.50	7.50	3.67	18.35
55	Shoulder, top of wrinkle.....	16.50	254.67	5.00	77.17	8.95	138.14	8.25	41.25	4.00	20.00	6.16	30.80
	Shoulder, between wrinkle.....	7.50	115.76	4.00	61.74	5.33	82.27	7.75	38.75	4.00	20.00	5.93	29.65
	Side.....	11.00	169.78	3.00	46.30	5.47	84.43	9.50	47.50	2.00	10.00	5.42	27.10
	Hip, top of wrinkle.....	11.50	177.50	2.00	30.87	5.74	88.59	8.50	42.50	1.00	5.00	3.97	19.85
	Hip, between wrinkle.....	9.00	138.91	2.75	42.44	5.45	84.12	9.00	45.00	1.50	7.50	4.60	23.00
860	.....	12.00	185.22	5.00	77.17	7.73	119.31	7.50	37.50	1.00	5.00	4.50	22.05
	Average.....	13.40	206.82	3.60	55.56	7.13	110.05	7.90	39.50	1.88	9.40	4.61	23.05
4 years:													
47	Shoulder.....	12.50	192.93	4.00	61.74	6.19	95.54	7.25	36.25	0.75	3.75	4.48	22.40
	Side.....	13.75	212.23	4.00	61.74	7.72	119.15	9.25	46.25	3.00	15.00	6.48	32.40
	Hip.....	27.00	410.73	4.75	73.31	13.22	204.05	8.00	40.00	2.00	10.00	4.67	23.15
73	Shoulder.....	13.50	208.37	5.00	77.17	8.22	126.87	8.25	41.25	3.00	15.00	5.73	28.85
	Side.....	12.25	189.07	4.00	61.74	7.16	110.51	8.00	40.00	4.00	20.00	6.20	31.00
	Hip.....	14.00	216.08	5.25	81.03	8.21	126.72	7.00	35.00	1.00	5.00	3.87	19.35
361	.....	8.75	135.05	3.00	46.30	5.01	77.33	7.00	35.00	2.00	10.00	3.47	22.35
	Average.....	14.54	224.42	4.29	60.21	7.98	122.88	7.82	39.10	2.25	11.25	6.13	25.65
6 years:													
69	Shoulder.....	10.00	154.35	4.25	65.60	6.47	99.88	9.00	45.00	1.75	8.75	5.88	29.40
	Side.....	15.00	231.52	4.00	61.74	0.00	106.50	0.00	45.00	3.25	16.25	6.35	31.75
	Hip.....	19.25	297.12	5.25	81.04	10.66	164.53	8.00	40.00	2.00	10.00	4.80	24.00
104	.....	8.00	123.48	2.25	34.73	4.21	64.98	7.75	38.75	2.25	11.25	5.53	27.65
104a	.....	7.00	108.04	1.75	27.01	3.70	57.10	8.00	40.00	2.25	11.25	5.60	28.00
	Average.....	11.85	182.90	3.60	54.02	6.39	98.63	8.35	41.75	2.30	11.50	5.63	28.15
7 years:													
90	Shoulder.....	7.50	115.76	3.25	50.16	5.00	77.17	7.75	38.75	2.00	10.00	4.48	22.40
	Side.....	10.25	158.20	4.00	61.74	5.04	91.68	7.50	37.50	2.25	11.25	5.08	25.15
	Hip.....	12.00	185.22	4.25	65.60	6.96	107.43	6.75	33.75	1.00	5.00	3.43	17.15
	Average.....	9.92	153.11	3.83	59.11	5.97	92.14	7.33	36.65	1.75	8.75	4.31	21.55
Ewe.													
77	Shoulder.....	10.50	162.00	4.25	65.60	6.12	94.46	8.00	40.00	3.50	17.50	5.51	27.55
	Side.....	11.00	169.78	4.00	61.74	5.38	82.73	8.75	43.75	5.00	25.00	6.95	34.75
	Hip.....	14.00	216.08	4.25	65.60	7.92	122.24	7.00	35.00	3.00	15.00	4.70	23.50
	Average.....	11.83	182.59	4.17	64.36	6.47	99.86	7.92	39.60	3.83	19.15	5.72	28.60



TABLE XIX.—Individual extremes and averages, showing influence of breed, sex, &c.—Continued.

Catalogue No. of samples.	Portion of fleece represented.	STRAIN.						STRETCH.														
		Highest.		Lowest.		Average.		Highest.		Lowest.		Average.										
		grams.	grains.	grams.	grains.	grams.	grains.	mm.	per ct.	mm.	per ct.	mm.	per ct.									
MERINO—continued.																						
Ewes—Continued.																						
43	5½ months:																					
	Neck, top of wrinkle	15.00	231.52	4.00	61.74	7.98	123.17	8.00	40.00	3.25	16.25	5.58	27.90									
	Neck, between wrinkle	15.50	230.24	4.25	65.60	8.05	124.26	7.75	38.75	1.50	7.50	5.03	25.15									
	Side	14.00	216.08	5.75	88.75	8.46	130.68	9.00	45.00	4.00	20.00	6.05	33.25									
	Hip	20.00	308.09	5.50	84.89	12.46	192.16	8.00	40.00	0.50	2.50	4.21	21.05									
	Average	16.13	248.96	4.88	75.32	9.24	142.03	8.19	40.95	2.81	11.55	5.37	26.83									
41	1 year:																					
	Neck	10.00	154.35	3.25	50.16	5.00	77.17	8.00	40.00	2.00	10.00	4.28	21.40									
	Side	12.00	185.22	8.75	57.89	5.88	60.76	8.75	43.75	1.75	8.75	0.25	81.25									
	Hip	10.50	162.06	4.25	65.60	7.31	112.83	8.75	43.75	4.00	20.00	0.60	33.00									
74	Shoulder	14.00	216.08	5.00	77.17	8.74	134.90	8.00	40.00	4.00	20.00	5.88	29.40									
	Side	11.25	173.64	5.00	77.17	7.50	115.70	9.50	47.50	4.25	21.25	7.09	35.45									
	Hip	20.00	308.09	8.00	123.48	12.35	190.63	8.25	41.25	2.75	13.75	5.65	28.25									
75	Shoulder	12.75	190.79	5.50	84.89	7.68	118.54	7.00	35.00	2.26	11.50	3.98	19.65									
	Side	11.00	169.78	5.00	77.17	7.75	110.83	8.50	42.50	4.25	21.25	6.01	32.55									
	Hip	17.75	273.90	6.00	92.01	9.50	143.54	7.00	35.00	2.00	10.00	4.85	23.25									
76	Shoulder	14.75	237.06	5.50	84.89	9.07	139.99	5.25	26.25	1.00	5.00	2.73	13.65									
	Side	8.25	127.34	4.00	62.74	6.57	85.97	8.00	40.00	8.25	16.25	6.05	30.25									
	Hip	13.50	208.37	5.75	88.75	9.04	139.63	6.00	30.00	1.50	7.50	4.10	20.50									
83	Shoulder	13.75	212.23	4.50	69.46	7.49	115.61	8.00	40.00	3.25	16.25	5.42	27.10									
	Side	9.00	138.91	3.75	67.87	5.61	80.69	7.50	37.50	3.50	17.50	5.50	27.50									
	Hip	24.00	370.43	3.00	46.30	14.30	220.71	7.50	37.50	1.60	7.50	3.29	16.45									
86	Shoulder	6.25	96.47	3.25	50.16	4.63	71.81	8.75	43.75	4.25	21.25	6.42	32.10									
	Side	10.50	162.06	3.00	46.30	5.65	87.21	8.00	40.00	2.25	11.25	5.25	26.25									
	Hip	15.00	231.52	3.00	46.30	5.93	91.53	8.50	42.50	1.75	8.75	4.32	21.00									
847	Shoulder	14.25	219.91	2.75	42.44	6.97	107.58	8.00	40.00	1.00	5.00	3.65	18.25									
343	Side	10.00	246.95	2.00	30.87	6.02	92.93	7.25	36.25	1.00	5.00	5.29	26.45									
	Average	13.23	204.20	4.31	60.52	7.59	117.15	7.83	39.15	2.68	12.90	5.14	25.70									
	2 years:																					
40	Shoulder	9.50	146.63	3.50	54.02	5.53	85.35	8.00	40.00	1.50	7.50	5.17	25.85									
	Side	14.00	216.08	4.00	61.74	6.35	113.44	10.00	50.00	1.50	7.50	0.21	81.05									
	Hip	13.50	208.37	4.00	61.74	9.55	147.40	8.00	40.00	2.00	10.00	5.07	25.85									
57	Shoulder, top of wrinkle	27.00	416.73	5.00	77.17	11.31	174.66	8.50	42.50	2.25	11.25	5.83	29.15									
	Shoulder, between wrinkle	8.50	131.10	3.25	50.16	5.55	85.66	9.50	47.50	4.00	20.00	6.54	32.70									
	Hip	14.00	216.08	5.75	88.75	8.05	139.61	8.25	41.25	2.75	13.25	5.81	26.55									
58	Shoulder, top of wrinkle	10.50	162.06	3.25	50.16	6.18	95.30	7.50	37.50	1.50	7.50	4.67	23.85									
	Shoulder, between wrinkle	9.25	142.77	3.00	46.30	5.68	87.68	8.00	40.00	1.25	6.25	5.20	26.30									
	Hip, top of wrinkle	13.00	200.65	4.25	65.00	7.35	113.44	7.00	35.00	1.75	8.75	3.81	19.05									
	Hip, between wrinkle	10.75	165.93	3.00	46.30	6.78	89.21	6.50	32.50	2.00	10.00	3.80	19.30									
70	Shoulder	11.50	177.60	3.50	54.02	6.28	90.93	7.75	38.75	2.00	10.00	4.64	23.20									
	Side	10.00	154.85	3.75	67.88	5.89	96.90	9.00	45.00	2.25	11.25	6.03	30.15									
	Hip	15.00	231.52	4.00	61.74	7.08	123.17	8.00	40.00	1.00	5.00	3.45	17.25									
85	Shoulder	6.25	81.03	2.75	42.45	3.71	57.20	9.00	45.00	4.00	20.00	6.24	31.20									
	Side	6.25	96.47	3.00	46.30	3.88	59.89	9.50	47.50	4.50	22.50	6.92	34.60									
	Hip	6.00	92.61	3.00	46.30	4.27	65.91	6.75	33.75	1.00	5.00	3.93	19.60									
351	Shoulder	9.25	142.77	2.00	30.87	4.24	65.44	7.25	36.25	1.50	7.50	4.65	23.25									
352	Side	12.75	190.79	8.00	46.30	5.42	83.66	7.75	38.75	1.25	6.25	4.65	23.25									
353	Hip	10.00	154.35	8.00	46.30	5.40	83.85	7.50	37.50	1.00	5.00	4.33	21.65									
354	Shoulder	9.00	138.91	2.75	42.44	4.81	74.24	7.00	35.00	1.00	5.00	3.94	19.20									
355	Side	12.00	185.22	3.75	57.88	6.35	105.73	6.50	32.50	1.25	6.25	3.83	19.15									
356	Hip	8.00	123.48	3.00	46.30	3.29	81.65	8.00	40.00	1.00	5.00	4.59	22.25									
357	Shoulder	17.75	273.90	4.00	61.74	8.94	137.98	8.00	40.00	1.50	7.50	4.86	24.30									
358	Side	8.75	135.05	4.50	60.46	5.95	91.84	8.25	41.25	1.00	5.00	4.49	22.45									
	Average	11.31	174.57	3.54	54.04	6.20	97.08	7.98	39.90	1.86	9.30	4.92	24.60									
81	3 years:																					
	Shoulder	11.75	181.36	5.25	81.03	7.70	118.85	8.75	43.75	4.00	20.00	5.76	28.80									
	Side	11.50	177.50	4.00	61.74	6.43	89.24	9.00	45.00	5.00	25.00	6.96	34.80									
	Hip	14.75	227.66	5.00	77.17	9.53	147.09	8.00	40.00	2.00	10.00	4.61	23.05									
88	Shoulder	8.25	127.84	3.00	46.30	4.66	71.93	9.00	45.00	3.75	18.75	5.95	29.75									
	Side	6.50	100.32	3.50	54.02	4.69	72.39	7.75	38.75	3.25	16.25	5.09	26.45									
	Hip	14.00	216.08	3.00	46.30	6.88	106.19	7.75	38.75	1.00	5.00	4.10	20.50									
	Average	11.12	171.79	3.98	61.12	6.65	102.64	8.58	41.90	3.17	15.85	5.51	27.55									
80	4 years:																					
	Shoulder	8.50	131.10	3.00	46.30	5.23	80.72	8.50	42.50	4.60	20.00	6.63	33.15									
	Side	8.50	131.10																			



TABLE XX.—General extremes and averages, showing influence of age upon strain and stretch.

	STRAIN.						STRETCH.					
	Highest.		Lowest.		Average.		Highest.		Lowest.		Average.	
	grams.	grains.	grams.	grains.	grams.	grains.	mm.	per. ct.	mm.	per. ct.	mm.	per. ct.
<b>COTSWOLD.</b>												
<i>Ram.</i>												
Lamb .....	32.00	493.91	12.00	185.22	20.98	328.82	9.88	46.90	1.00	5.00	5.41	27.05
6 months.....	36.25	559.50	14.92	230.23	25.94	400.37	9.42	47.10	1.58	7.90	6.48	32.40
1 year.....	47.50	733.14	19.05	294.03	31.82	491.13	11.15	55.75	2.35	11.75	7.11	35.55
2 years.....	46.00	709.99	15.25	235.38	32.08	495.14	13.75	58.75	1.42	7.10	9.94	49.70
<i>Ewe.</i>												
Lamb .....	30.00	555.05	12.42	191.70	24.07	371.51	9.50	47.50	1.08	5.40	6.53	32.65
6 months.....	43.00	663.69	14.63	228.89	29.64	457.48	9.08	45.40	1.83	9.15	5.91	29.55
1 year.....	45.40	700.73	18.50	285.54	33.04	503.96	8.75	43.75	3.60	13.00	7.10	35.50
2 years.....	44.29	653.60	14.00	216.08	30.01	463.19	11.98	56.90	1.25	6.25	7.20	36.00
<b>LINCOLN.</b>												
<i>Ram.</i>												
Lamb .....	27.50	424.45	11.50	177.50	17.72	273.50	8.00	40.00	0.75	3.75	4.09	23.35
1 year.....	33.00	509.34	11.25	173.64	22.75	351.14	9.50	47.50	1.00	5.00	6.63	33.15
2 years.....	30.00	463.04	7.00	103.04	20.62	318.26	8.75	43.75	1.25	6.25	6.16	30.80
6½ years.....	39.00	601.95	16.67	257.30	28.23	435.72	8.58	42.90	4.67	23.35	7.22	36.10
<i>Ewe.</i>												
Lamb .....	33.75	520.92	18.06	278.75	25.60	395.13	10.00	50.00	4.88	24.40	7.72	38.60
2 years.....	41.65	642.85	17.50	270.11	27.53	421.91	9.90	49.50	4.10	20.50	7.22	36.10
<b>SOUTHDOWN.</b>												
<i>Ram.</i>												
Lamb .....	20.67	319.03	3.67	56.65	9.77	150.80	6.42	32.10	0.88	4.17	3.31	16.65
1 year.....	22.75	351.14	4.67	72.08	12.75	196.79	8.17	40.85	0.75	3.75	4.03	20.15
2 years.....	18.06	278.75	7.13	110.05	11.87	183.21	7.78	38.90	2.10	10.95	4.72	23.60
3 years.....	28.00	432.17	2.50	38.59	10.92	168.65	8.25	41.25	0.25	1.25	3.63	18.15
4 years.....	18.50	285.54	3.00	46.30	12.73	196.48	8.00	40.00	0.50	2.50	4.34	21.70
<i>Ewe.</i>												
6 months.....	10.33	252.05	5.92	91.37	10.93	168.70	6.58	32.90	1.75	8.75	4.68	23.40
1 year.....	23.58	360.86	8.23	127.03	14.53	224.26	7.98	33.90	2.48	12.40	5.39	26.95
2 years.....	21.33	329.22	6.25	66.47	12.70	197.40	7.92	39.60	1.38	6.65	4.16	20.80
3 years.....	21.33	320.22	7.92	122.24	13.78	211.02	8.00	40.00	1.75	8.75	4.80	24.00
<b>OXFORD.</b>												
<i>Ram.</i>												
1 year.....	36.25	559.51	14.25	210.94	24.09	371.82	9.25	46.25	3.42	17.10	6.75	33.75
2 years.....	40.33	622.48	17.08	263.62	25.89	399.60	8.92	44.60	3.42	17.10	6.55	32.75
<i>Ewe.</i>												
1 year.....	43.33	745.95	19.67	303.60	32.00	493.91	9.25	40.85	2.30	11.50	6.26	31.30
<b>MERINO.</b>												
<i>Ram.</i>												
Lamb .....	10.31	159.13	4.63	71.46	6.70	103.41	7.75	38.75	2.87	14.35	5.36	26.80
5 months.....	11.08	171.02	4.58	70.69	6.63	102.33	7.67	38.35	2.92	14.60	5.00	25.30
1 year.....	14.50	223.80	3.95	60.97	7.09	109.43	8.06	40.30	2.69	10.45	4.99	24.95
2 years.....	14.00	216.08	4.49	69.30	8.19	126.41	8.20	41.00	2.24	11.20	5.29	26.45
3 years.....	13.40	206.82	3.00	55.56	7.13	110.05	7.90	39.50	1.88	9.40	4.61	23.05
4 years.....	14.54	224.42	4.29	66.21	7.96	122.86	7.82	39.10	2.25	11.25	5.13	25.65
6 years.....	11.85	182.90	3.50	54.02	6.39	98.63	8.35	41.75	2.30	11.50	5.63	28.15
7 years.....	9.92	153.11	3.83	59.11	5.97	92.14	7.33	36.65	1.75	8.75	4.31	21.55
<i>Ewe.</i>												
5 months.....	11.83	182.59	4.17	64.36	6.47	99.86	4.92	39.60	3.63	19.15	5.72	28.60
5½ months.....	16.13	248.96	4.88	75.32	9.24	142.62	8.19	40.95	2.31	11.55	5.37	26.85
1 year.....	18.23	264.20	4.31	68.52	7.59	117.15	7.83	39.15	2.68	12.90	5.14	25.70
2 years.....	11.31	174.57	3.54	54.64	6.29	97.08	7.98	39.00	1.86	9.30	4.92	24.60
3 years.....	11.13	171.79	3.96	61.12	6.65	102.64	8.38	41.00	3.17	15.85	5.51	27.55
4 years.....	8.33	128.57	3.08	47.54	5.00	77.17	8.25	41.25	3.02	19.60	0.30	31.80
4½ years.....	7.31	112.83	2.81	43.37	4.69	72.39	6.19	30.95	1.81	9.05	3.58	17.90
5 years.....	10.81	167.31	3.63	56.03	6.61	102.02	8.26	41.25	2.63	13.15	6.65	28.25



TABLE XXI.—Extremes and averages, showing influence of folds upon strain and stretch.

Catalogue No. of samples.	Portion of fleece represented.	STRAIN.						STRETCH.					
		Highest.		Lowest.		Average.		Highest.		Lowest.		Average.	
		grams.	grains.	grams.	grains.	grams.	grains.	mm.	p. cent.	mm.	p. cent.	mm.	p. cent.
MERINO.													
30	Neck, top of wrinkle	20.00	308.69	9.00	138.91	13.61	210.07	8.25	41.25	2.50	12.50	5.43	27.15
45	do	15.00	231.52	4.00	61.74	7.98	123.17	8.00	40.00	3.25	16.25	5.58	27.90
48	Shoulder, top of wrinkle	16.75	243.09	3.50	54.02	8.28	127.80	8.25	41.25	2.00	10.00	5.30	26.50
53	do	25.00	385.86	6.50	100.33	10.54	162.68	7.50	37.50	3.25	16.25	5.45	27.25
	Hip, top of wrinkle	32.50	501.62	7.75	119.62	18.05	278.59	8.00	40.00	2.00	10.00	5.06	25.30
54	Shoulder, top of wrinkle	29.00	447.60	4.00	61.74	10.63	184.07	8.50	42.50	1.00	5.00	3.86	19.30
	do	20.00	308.69	4.00	61.74	11.08	171.02	6.00	30.00	1.00	5.00	2.77	13.85
55	Shoulder, top of wrinkle	16.50	254.67	5.00	77.17	8.95	138.14	8.25	41.25	4.00	20.00	6.16	30.80
	Hip, top of wrinkle	11.50	177.50	2.00	30.87	5.74	88.59	8.50	42.50	1.00	5.00	3.97	19.85
56	Neck, top of wrinkle	20.00	308.69	8.00	123.48	13.31	205.43	8.00	40.00	4.00	20.00	6.01	30.05
	Hip, top of wrinkle	12.50	192.93	3.75	57.88	7.77	119.93	8.50	42.50	2.00	10.00	5.13	25.65
57	Shoulder, top of wrinkle	27.00	416.73	5.00	77.17	11.31	174.56	8.50	42.50	2.25	11.25	5.23	29.15
	do	10.50	162.66	3.25	50.16	6.18	93.39	7.50	37.50	1.50	7.50	4.07	23.35
58	Hip, top of wrinkle	13.00	200.65	4.25	65.60	7.35	113.44	7.00	35.00	1.75	8.75	3.81	19.05
	do	10.75	165.92	5.25	81.03	7.72	119.15	7.00	35.00	3.00	15.00	4.07	23.35
79	do	10.75	165.92	5.25	81.03	7.72	119.15	7.00	35.00	3.00	15.00	4.07	23.35
349	Top of wrinkle	14.25	219.94	3.00	40.80	6.97	107.58	7.75	38.75	1.00	5.00	3.65	18.25
	Average	17.50	270.11	4.71	72.70	9.28	143.24	7.96	36.80	2.15	10.75	4.61	23.05
30	Neck, between wrinkle	12.25	189.07	6.50	100.33	9.18	141.60	8.75	43.75	3.25	16.25	5.48	27.40
45	do	13.50	239.24	4.25	65.60	8.05	124.25	7.75	38.75	1.50	7.50	5.03	25.15
48	Shoulder, between wrinkle	13.25	204.51	4.00	61.74	7.83	120.78	8.25	41.25	2.75	13.75	6.25	31.75
53	do	8.50	131.10	3.25	50.16	5.76	88.90	7.75	38.75	2.00	10.00	4.83	24.15
	Hip, between wrinkle	9.50	146.63	2.50	38.59	5.62	86.74	7.75	38.75	1.50	7.50	4.61	23.05
54	Shoulder, between wrinkle	7.50	115.76	2.75	42.44	5.23	81.49	8.00	40.00	1.75	8.75	5.10	25.50
	Hip, between wrinkle	10.00	154.85	3.50	54.02	5.02	91.37	8.00	40.00	1.60	7.50	3.67	18.35
55	Shoulder, between wrinkle	7.50	115.76	4.00	61.74	5.33	82.27	7.75	38.75	4.00	20.00	5.93	29.65
	Hip, between wrinkle	9.00	138.91	2.75	42.44	5.45	84.12	9.00	45.00	1.50	7.50	4.60	23.00
56	Shoulder, between wrinkle	9.00	138.91	3.25	50.16	5.56	85.82	8.25	41.25	3.00	15.00	5.58	27.90
	Hip, between wrinkle	12.50	192.93	3.50	54.02	7.32	112.98	8.75	43.75	2.50	12.50	5.42	27.10
57	Shoulder, between wrinkle	8.50	131.19	3.25	50.16	5.53	85.66	9.50	47.50	4.00	20.00	6.54	32.70
	do	9.25	143.77	3.00	40.80	5.68	87.68	8.00	40.00	1.25	6.25	5.26	26.30
58	Hip, between wrinkle	10.75	165.92	3.00	46.30	5.78	89.21	6.50	32.50	2.00	10.00	3.86	19.30
	do	12.50	192.93	5.00	77.17	7.50	116.69	7.00	35.00	3.00	15.00	5.01	25.05
79	do	12.50	192.93	5.00	77.17	7.50	116.69	7.00	35.00	3.00	15.00	5.01	25.05
349	Between wrinkle	13.00	200.65	3.50	54.02	5.10	78.72	7.00	35.00	1.50	7.50	3.86	19.30
	Average	9.72	150.02	3.41	52.63	6.31	97.39	7.44	37.20	2.22	11.10	4.83	24.15



TABLE XXII.—Individual extremes and averages, showing influence of folds upon strain and stretch in each sex and portion of fleecce.

Catalogue No. of samples.	Portion of fleecce represented.	STRAIN.						STRETCH.					
		Highest.		Lowest.		Average.		Highest.		Lowest.		Average.	
		grams.	grains.	grams.	grains.	grams.	grains.	mm.	p. cent.	mm.	p. cent.	mm.	p. cent.
<b>MERINO.</b>													
<i>Ram.</i>													
30	Neck, top of wrinkle .....	20.00	308.69	0.00	138.91	13.61	210.07	8.25	41.25	2.50	12.50	5.43	27.15
48	Shoulder, top of wrinkle.....	15.75	243.09	3.50	54.02	8.28	127.80	8.25	41.25	2.00	10.00	5.30	26.50
58	do .....	25.00	385.86	6.50	100.32	10.54	162.68	7.50	37.50	3.25	16.25	5.45	27.25
54	do .....	29.00	447.60	4.00	81.74	10.63	164.07	8.50	42.50	1.00	5.00	3.80	19.30
55	do .....	16.50	254.67	5.00	77.17	8.95	138.14	8.25	41.25	4.00	20.00	6.16	30.80
	Average .....	21.56	332.77	4.75	73.31	9.60	148.17	8.13	40.65	2.56	12.80	5.19	25.95
58	Hip, top of wrinkle .....	32.50	501.62	7.75	119.62	18.05	278.59	8.00	40.00	2.00	10.00	5.06	25.30
54	do .....	20.00	308.69	4.00	61.74	11.08	171.02	6.00	30.00	1.00	5.00	2.77	13.85
55	do .....	11.50	177.50	2.00	30.87	5.74	88.59	8.50	42.50	1.00	5.00	3.97	19.85
79	do .....	10.75	165.92	5.25	81.03	7.72	119.15	7.00	35.00	3.00	15.00	4.67	23.35
	Average .....	18.69	288.47	4.75	73.31	10.65	168.38	7.98	36.90	1.75	8.75	4.12	20.60
349	Top of wrinkle .....	14.25	219.94	3.00	46.30	6.97	107.58	7.75	38.75	1.00	5.00	3.65	18.25
	General average .....	19.51	301.13	5.00	77.17	10.15	156.66	7.80	39.00	2.08	10.40	4.63	23.15
30	Neck, between wrinkle.....	12.25	189.07	6.50	100.33	9.18	141.69	8.75	43.75	3.25	16.25	5.48	27.40
48	Shoulder, between wrinkle.....	13.25	204.51	4.00	61.74	7.83	120.78	8.25	41.25	2.75	13.75	0.35	31.75
58	do .....	8.50	131.19	3.25	50.16	5.76	88.90	7.75	38.75	2.00	10.00	4.83	24.15
54	do .....	7.50	115.76	2.75	42.44	5.28	81.49	8.00	40.00	1.75	8.75	6.10	25.50
55	do .....	7.50	115.76	4.00	61.74	5.33	82.27	7.75	38.75	4.00	20.00	5.93	29.65
	Average .....	9.19	141.84	3.50	54.02	6.05	93.38	7.94	39.70	2.63	13.65	5.55	27.75
53	Hip, between wrinkle .....	9.50	146.63	2.50	38.59	5.62	86.74	7.75	38.75	1.50	7.50	4.61	23.05
54	do .....	10.00	154.35	3.60	54.02	5.92	91.37	6.00	30.00	1.50	7.50	3.67	18.35
55	do .....	9.00	138.91	2.75	42.44	5.45	84.12	9.00	45.00	1.50	7.50	4.60	23.00
79	do .....	12.50	192.93	5.00	77.17	7.56	116.69	7.00	35.00	3.00	15.00	5.01	25.05
	Average .....	10.25	158.20	3.44	53.10	6.14	94.77	7.44	37.70	1.88	9.40	4.48	22.40
249	Between wrinkle .....	12.00	203.65	3.50	54.02	5.10	78.72	7.00	35.00	1.50	7.50	3.86	19.30
	General average .....	10.10	155.89	3.77	58.19	6.30	97.24	7.72	38.60	2.28	11.40	4.94	24.70
<i>Ewe.</i>													
45	Neck, top of wrinkle .....	15.00	231.52	4.00	61.74	7.98	123.17	8.00	40.00	3.25	16.25	5.58	27.90
50	do .....	20.00	308.69	8.00	123.48	13.31	205.43	8.00	40.00	4.00	20.00	6.01	30.05
	Average .....	17.50	270.11	6.00	92.61	10.65	164.38	8.00	40.00	3.63	18.15	5.80	29.00
57	Shoulder, top of wrinkle.....	27.00	416.73	5.00	77.17	11.31	174.56	8.50	42.50	2.25	11.25	6.83	29.15
58	do .....	10.50	162.06	3.25	50.16	6.18	95.39	7.50	37.50	1.50	7.50	4.67	23.35
	Average .....	18.75	289.40	4.13	63.75	8.75	135.05	7.60	37.50	1.88	9.40	5.25	26.25
56	Hip, top of wrinkle .....	12.50	192.92	3.75	57.88	7.77	119.93	8.50	42.50	2.00	10.00	5.13	25.65
58	do .....	13.00	200.65	4.25	65.60	7.35	113.44	7.00	35.00	1.75	8.75	3.81	19.05
	Average .....	12.75	196.79	4.00	61.74	7.56	116.69	7.75	38.75	1.88	9.40	4.47	22.35
45	Neck, between wrinkle.....	15.50	239.24	4.25	65.60	8.05	124.25	7.75	38.75	1.50	7.50	5.03	25.15
50	Shoulder, between wrinkle.....	9.00	138.91	3.25	50.16	5.56	85.82	8.25	41.25	3.00	15.00	5.58	27.90
57	do .....	8.50	131.19	3.25	50.16	5.65	85.66	9.60	47.50	4.00	20.00	6.54	32.70
58	do .....	9.25	142.77	3.00	46.30	5.08	87.68	8.00	40.00	1.25	6.25	5.26	26.30
	Average .....	8.92	137.68	3.17	43.93	5.59	86.28	8.58	42.90	2.75	13.75	5.79	28.95
56	Hip, between wrinkle .....	12.50	192.93	3.50	54.02	7.32	112.98	8.75	43.75	2.50	12.50	5.42	27.10
58	do .....	10.75	165.92	3.00	46.30	5.78	89.21	6.56	32.50	2.00	10.00	3.86	19.30
	Average .....	11.63	179.51	3.25	50.16	6.55	101.09	7.63	38.15	2.25	11.25	4.64	23.20



TABLE XXIII.—General extremes and averages, showing influence of folds upon strain and stretch.

Portion of fleece represented.	STRAIN.						STRETCH.					
	Highest.		Lowest.		Average.		Highest.		Lowest.		Average.	
	grams.	grains.	grams.	grains.	grams.	grains.	mm.	p. cent.	mm.	p. cent.	mm.	p. cent.
<b>MERINO.</b>												
Top of wrinkle:												
Whole fleeco.....	17.50	270.11	4.71	72.70	9.28	143.24	7.36	36.80	2.15	10.75	4.61	23.05
Between wrinkle:												
Whole fleeco.....	9.72	150.02	3.41	52.63	6.31	97.39	7.44	37.20	2.22	11.10	4.83	24.15
<b>Ram.</b>												
Top of wrinkle:												
Whole fleeco.....	19.51	301.13	5.00	77.17	10.15	156.66	7.80	39.00	2.08	10.40	4.63	23.15
Neck.....	20.00	308.69	9.00	138.91	13.61	210.07	8.25	41.25	2.50	12.50	5.45	27.15
Shoulder.....	21.56	332.77	4.75	73.31	9.60	148.17	8.13	40.65	2.56	12.80	5.19	25.95
Hip.....	18.69	228.47	4.75	73.31	10.65	168.38	7.38	36.19	1.75	8.75	4.12	20.60
Between wrinkle:												
Whole fleeco.....	10.10	155.89	3.77	58.19	6.30	97.24	7.72	38.60	2.28	11.40	4.94	24.70
Neck.....	12.25	189.07	6.50	100.33	9.18	141.69	8.75	43.75	3.25	16.25	5.48	27.40
Shoulder.....	9.19	141.84	3.50	54.02	6.05	93.38	7.04	39.70	2.63	13.65	5.35	27.75
Hip.....	10.25	158.20	3.44	53.10	6.14	94.77	7.44	37.70	1.88	9.40	4.48	22.40
<b>Ewe.</b>												
Top of wrinkle:												
Whole fleeco.....	16.33	252.05	4.71	72.70	8.98	138.60	7.92	39.60	2.46	12.30	5.17	25.85
Neck.....	17.50	270.11	6.00	92.61	10.65	164.38	8.00	40.00	3.63	18.15	5.80	29.00
Shoulder.....	18.75	289.40	4.13	63.75	8.75	135.05	7.50	37.50	1.88	9.40	5.25	26.25
Hip.....	12.75	196.79	4.60	61.74	7.56	116.69	7.75	38.75	1.88	9.40	4.47	22.35
Between wrinkle:												
Whole fleeco.....	10.92	168.55	3.38	52.17	6.32	97.55	8.13	40.65	2.38	11.90	5.28	26.40
Neck.....	15.50	239.24	4.25	65.60	8.05	124.25	7.75	38.75	1.50	7.50	5.03	25.15
Shoulder.....	8.92	137.68	3.17	48.93	5.59	86.28	8.58	42.90	2.75	13.75	5.79	28.95
Hip.....	11.63	179.51	3.25	50.16	6.55	101.09	7.63	38.15	2.25	11.25	4.64	23.20



TABLE XXIV.—General averages of all measurements for each breed, sex, and portion of fleece.

Portion of fleece represented.	Number of samples tested.	Number of crimps per inch.	Length.		Fineness.		Strain.		Stretch.		Strain, in grams, with same stretch and diameter reduced to 4 centimeters.
			Inches.	Centimeters.	Thousandths of inch.	Grams.	Grains.	Millimeters.	Per cent.		
<b>Name of breed:</b>											
Cotswold			5.156	4.196	1.6519	30.44	469.88	7.09	35.45	27.668	
Leicester			9.75	3.879	1.5271	23.70	365.80	5.61	28.05	25.201	
Lincoln			3.785	3.707	1.4594	25.66	396.05	7.07	35.85	29.876	
Southdown	12.053		1.351	2.936	1.1559	12.78	197.25	4.59	22.95	23.721	
Hampshire			2.188	3.298	1.2984						
Oxford			2.647	4.365	1.7185	30.43	469.67	0.01	33.05	25.554	
Morine, general	19.555		1.502	2.131	0.8389	7.35	113.44	5.74	23.70	23.908	
<b>COTSWOLD.</b>											
<i>Ram.</i>											
Whole fleece	44		5.155	4.227	1.6641	30.69	473.69	7.33	36.67	27.482	
Shoulder	11		5.307	4.108	1.6153	27.80	429.08	6.58	32.00	26.422	
Side	11		5.671	4.256	1.6755	33.84	514.59	6.53	32.05	29.450	
Hip	11		5.896	4.415	1.7381	38.63	526.24	7.70	38.80	31.709	
Belly	11		3.789	4.112	1.6188						
<i>Ewe.</i>											
Whole fleece	55		5.010	4.252	1.6740	31.00	478.47	6.95	34.75	27.434	
Shoulder	14		5.223	4.092	1.6110	32.16	496.33	6.73	33.90	30.730	
Side	14		5.482	4.225	1.6639	34.08	526.01	6.75	33.75	30.547	
Hip	14		5.513	4.626	1.8212	39.88	568.46	7.63	36.15	27.537	
Belly	13		3.750	4.054	1.5960						
<b>LINCOLN.</b>											
<i>Ram.</i>											
Whole fleece	15		3.258	3.671	1.4452	24.30	375.06	6.52	32.00	23.917	
Shoulder	4		3.635	3.686	1.4511	20.80	414.73	0.98	34.00	31.501	
Side	4		3.531	3.603	1.4185	23.42	361.48	7.25	37.60	28.865	
Hip	4		3.469	4.017	1.5814	34.40	550.95	7.16	35.80	34.110	
Belly	3		2.125	3.277	1.2901						
<i>Ewe.</i>											
Whole fleece	20		3.969	3.774	1.4858	26.56	409.94	7.44	37.20	29.836	
Shoulder	5		4.350	3.848	1.5149	23.82	367.65	7.40	37.00	25.739	
Side	5		4.700	3.800	1.4996	31.66	488.66	8.29	41.45	34.915	
Hip	5		4.275	3.904	1.5370	32.35	499.31	7.82	39.10	33.990	
Belly	5		2.530	3.591	1.3901						
<b>SOUTHDOWN.</b>											
<i>Ram.</i>											
Whole fleece	13		1.411	2.940	1.1574	11.56	178.42	4.07	20.35	21.399	
Shoulder	1	12	1.375	3.063	1.2059	12.46	192.81	3.06	15.30	21.249	
Side	1	12	1.500	3.274	1.2889	11.00	179.04	6.05	30.25	17.315	
Hip	1		1.00	3.186	1.2543	13.41	206.98	6.33	31.65	21.138	
Belly	1			3.024	1.1905						
<i>Ewe.</i>											
Whole fleece	33		1.328	2.004	1.1433	13.45	207.60	4.88	24.40	25.518	
Shoulder	6	13	1.344	2.988	1.1703	12.51	193.09	5.21	26.05	22.419	
Side	6	14	1.150	2.872	1.1307	12.38	191.08	5.73	28.05	23.463	
Hip	6	12	1.562	3.151	1.2405	16.88	260.54	4.54	22.70	27.202	
Belly	6	14	0.9875	2.845	1.1290						
<b>OXFORD.</b>											
<i>Ram.</i>											
Whole fleece	18		2.604	4.269	1.6807	29.90	461.40	6.82	34.10	26.251	
Shoulder	3		2.208	4.132	1.6267	30.23	407.36	6.13	30.65	28.376	
Side	3		2.792	4.353	1.7137	28.69	442.82	7.87	39.25	24.227	
Hip	3		2.750	4.226	1.6087	30.73	474.31	6.10	30.80	27.532	
Belly	3		2.916	4.718	1.8574						
<i>Ewe.</i>											
Whole fleece	10		2.725	4.241	1.6699	32.00	493.91	6.26	31.30	28.406	
Shoulder	1		3.00	4.542	1.7881	31.94	492.93	5.22	26.10	24.772	
Side	1		2.50	4.363	1.7177	30.99	478.32	7.46	37.30	26.048	
Hip	1		2.75	5.038	1.9834	33.08	510.53	6.11	30.55	20.833	
Belly	1		1.75	4.24	1.6692						
<b>MERINO.</b>											
<i>Ram.</i>											
Whole fleece	88	18.780	1.424	2.215	0.8720	7.12	109.89	5.07	25.35	23.219	
Neck	2	16	1.4375	2.644	1.0409						
Shoulder	22	18.90	1.338	2.171	0.8547	6.73	103.88	5.37	26.85	22.838	
Side	16	19.625	1.281	2.156	0.8488	6.29	97.08	5.83	29.15	21.651	
Hip	22	16.952	1.270	2.297	0.9043	8.83	130.29	4.35	21.75	26.777	
Belly	18	19.294	1.284	2.234	0.8795						



TABLE XXIV.—General averages of all measurements for each breed, sex, and portion of fleece—Continued.

Portion of fleece represented.	Number of sam- ples tested.	Number of crimps per inch.	Length.		Fineness.		Strain.		Stretch.		Strain, in grams, with same stretch and diameter re- duced to 4 centi- meters.
			Inches.	Centimilli- meters.	Thou- sandths of inch.	Grams.	Grains.	Milli- meters.	Per cent.		
<b>MERINO—continued.</b>											
<i>Ram—Continued.</i>											
Top of wrinkle:											
Whole fleece.....	14,857	1.1250	2.556	1.0062	9.77	150.81	4.54	22.70	23.927		
Neck.....	16	1.25	2.822	1.1110							
Shoulder.....	14,667	1.109	2.371	0.9334	9.60	148.17	5.19	25.95	27.222		
Hip.....	14,667	1.109	2.611	1.0270	10.65	168.38	4.12	20.60	24.995		
Between wrinkle:											
Whole fleece.....	17,25	1.181	2.137	0.8413	5.98	92.30	4.88	24.40	20.951		
Neck.....	16	1.625	2.466	0.9708							
Shoulder.....	18,667	1.156	2.042	0.8039	6.05	93.38	5.55	27.75	24.810		
Hip.....	16,50	1.094	2.125	0.8366	6.14	94.77	4.48	22.40	21.756		
<i>Ewe.</i>											
Whole fleece.....	100	19,828	1.491	2.084	0.8204	6.42	99.09	5.21	26.05	23.652	
Neck.....	4	16	1.3125	2.287	0.9003	8.59	132.58	5.23	26.15	26.300	
Shoulder.....	21	19,80	1.393	2.041	0.8035	6.16	99.08	5.44	27.20	23.660	
Side.....	18	20	1.308	2.054	0.8086	5.78	89.21	6.16	30.80	21.929	
Hip.....	22	17	1.219	2.206	0.8684	7.92	122.24	4.47	22.35	26.035	
Belly.....	19	19,474	1.306	2.100	0.8503						
Top of wrinkle:											
Whole fleece.....	16	1.0625	2.402	0.9450	8.98	138.60	5.17	25.85	24.903		
Neck.....	16	1.1875	2.395	0.9429	10.65	164.38	5.80	29.00	29.707		
Shoulder.....	16	1.00	2.311	0.9098	8.75	135.05	5.25	26.25	26.214		
Hip.....	16	1.00	2.499	0.9838	7.56	116.69	4.47	22.35	19.369		
Between wrinkle:											
Whole fleece.....	19,333	1.073	2.137	0.8413	6.32	97.55	5.28	26.40	22.145		
Neck.....	16	1.125	2.271	0.8942	8.05	124.25	5.03	25.15	17.538		
Shoulder.....	20	1.146	2.064	0.8125	5.69	86.28	5.79	28.95	20.995		
Hip.....	20	0.9375	2.171	0.8547	6.55	101.09	4.64	23.20	22.240		
<b>CROSS-BREEDS.</b>											
Cotswold and Leicester.....		11.50	3.370	1.3267	22.74	350.98	6.92	34.60	32.037		
Cotswold and Southdown.....		2.625	2.952	1.1622	11.78	181.82	3.44	17.20	21.630		
One-half Cotswold, one-half Merino.....		4.750	2.336	0.9196	7.48	115.45	5.41	27.05	21.982		
Do.....		3.000	1.708	0.6724	3.20	49.39	5.30	26.50	17.551		
Cotswold and Merino.....		3.250	2.089	0.8224	6.69	103.26	5.05	25.25	24.532		
Do.....		2.750	2.331	0.9177	5.97	92.15	4.82	24.10	17.580		
Cotswold and Australian Merino.....		3.250	1.813	0.7137	3.74	57.73	5.09	25.45	18.205		
Seven-eighths Leicester, one-eighth Merino.....		4.6250	2.329	1.0346	7.88	121.62	3.22	26.10	18.241		
Seven-eighths Spanish, one-eighth Aust. Merino.....		3.3750	2.101	0.8271	3.58	55.26	5.45	22.25	12.976		



TABLE XXV.—General averages of all measurements, showing influence of age upon all qualities.

Portion of fleece represented.	Number of sam- ples tested.	Number of crimps per inch.	Length.		Fineness.		Strain.		Stretch.		Strain, in grams, with same stretch and diameter re- duced to 4 centi- meters.
			Inches.	Centimilli- meters.	Thou- sandths of inch.	Grams.	Grains.	Milli- meters.	Per cent.		
<b>COTSWOLD.</b>											
<i>Ram.</i>											
Lamb.....	8		6.125	3.726	1.4069	20.98	323.82	5.41	27.05	24.179	
6 months.....	4		7.25	4.171	1.6421	25.94	400.37	6.48	32.40	23.857	
1 year.....	12		5.073	4.268	1.6803	31.82	491.13	7.11	35.55	27.949	
2 years.....	12		4.458	4.461	1.7562	32.08	495.14	9.94	49.70	25.792	
<i>Ewe.</i>											
Lamb.....	12		7.375	3.982	1.5677	24.07	371.51	6.53	32.65	24.288	
6 months.....	4		8.500	4.465	1.7578	29.64	457.48	5.91	29.55	23.788	
1 year.....	12		3.958	4.054	1.5960	33.04	509.40	7.10	35.50	32.105	
2 years.....	23		3.853	4.290	1.6889	30.01	463.10	7.20	36.00	26.090	
<b>LINCOLN.</b>											
<i>Ram.</i>											
Lamb.....	4		4.813	3.194	1.2574	17.72	273.50	4.67	23.35	27.702	
1 year.....	4		2.563	3.649	1.4366	22.75	351.14	6.63	33.15	27.338	
2 years.....	4		2.406	3.736	1.4798	20.62	318.26	6.16	30.80	23.638	
5½ years.....	3		3.25	4.340	1.7110	28.23	435.72	7.22	30.10	23.915	
<i>Ewe.</i>											
Lamb.....	8		5.750	3.610	1.4212	25.00	305.13	7.72	33.60	31.430	
2 years.....	12		2.779	3.883	1.5287	27.53	424.01	7.22	36.10	29.214	
<b>SOUTHDOWN.</b>											
<i>Ram.</i>											
Lamb.....	3		1.6458	2.691	1.0200	9.77	150.80	3.31	16.55	23.285	
1 year.....	3		1.292	2.967	1.6510	12.75	196.79	4.03	20.15	23.174	
2 years.....	5	12	1.844	3.098	1.2130	11.87	183.21	4.72	23.60	19.790	
3 years.....	1		1.125	2.515	1.1082	10.92	168.55	3.63	18.63	22.050	
4 years.....	1		1.625	3.233	1.2728	12.73	196.48	4.34	21.70	19.486	
<i>Ewe.</i>											
Lamb.....	3		1.75	2.747	1.0315						
6 months.....	4		13.393	1.5925	2.644	10.93	168.70	4.68	23.40	25.066	
1 year.....	16		13.714	1.209	3.020	14.68	224.26	6.39	26.95	25.400	
2 years.....	7		12.067	1.214	2.938	12.79	197.40	4.16	20.81	22.844	
3 years.....	4		12.50	1.104	2.947	13.73	211.92	4.80	24.00	25.297	
<b>OXFORD.</b>											
<i>Ram.</i>											
Lamb.....	1		8.00	3.356	1.3212						
1 year.....	7		2.928	3.958	1.5582	24.09	371.82	6.75	33.75	24.004	
2 years.....	5		1.975	4.459	1.7555	25.89	399.60	6.55	32.75	20.834	
6 years.....	1		2.00	3.923	1.5444						
<i>Ewe.</i>											
Lamb.....	1		3.60	3.452	1.3590						
1 year.....	7		2.607	4.379	1.7240	32.00	493.91	6.26	31.30	26.700	
2 years.....	2		2.75	4.153	1.6350						
<b>MERINO.</b>											
<i>Ram.</i>											
Lamb.....	5	18	1.425	2.242	0.8826	6.70	103.41	5.36	26.30	21.329	
6 months.....	4	19	1.3125	2.203	0.8673	6.63	102.33	5.06	25.30	21.858	
1 year.....	14	19	1.616	2.182	0.8590	7.09	109.43	4.99	24.95	23.825	
2 years.....	25	17.833	1.38	2.206	0.8685	7.55	116.84	5.20	26.00	24.823	
3 years.....	12	17.656	1.24	2.235	0.8799	7.13	110.05	4.61	23.05	22.636	
4 years.....	9	19.56	1.75	2.229	0.8775	7.96	122.86	5.13	25.65	25.634	
6 years.....	6	21	1.477	2.240	0.8818	6.99	98.63	5.63	23.15	20.376	
7 years.....	4	20	1.172	2.261	0.8901	5.97	92.14	4.31	21.55	18.685	
<i>Ewe.</i>											
5 months.....	4	20	1.25	2.003	0.7885	6.47	98.86	5.72	23.60	25.304	
5½ months.....	6	16	1.20	2.367	0.9318	9.24	142.62	5.37	26.35	26.387	
1 year.....	26	17.923	1.529	2.214	0.8716	7.59	117.15	5.14	25.70	24.775	
2 years.....	29	19.929	1.582	2.061	0.8114	0.29	97.68	4.92	24.60	23.693	
3 years.....	8	19	1.3750	2.117	0.8334	6.65	102.64	5.51	27.55	23.741	
4 years.....	4	21	1.469	1.882	0.7409	5.00	77.17	6.36	31.80	22.586	
4½ years.....	4	21.50	1.625	2.040	0.8081	4.09	72.39	3.58	17.90	18.032	
5 years.....	10	19.60	1.219	2.045	0.8051	0.61	102.02	5.65	28.25	25.290	



TABLE XXVI.—General averages of all measurements taken with pure-blood wools, showing influence of crimp upon all qualities.

Portion of fleeco represented.	Number of sam- ples tested.	Number of crimps per inch.	Length in crimp.	Fineness.		Strain.		Stretch.	
			Inches.	Centimilli- meters.	Thou- sandths of inch.	Grams.	Grains.	Millime- ters.	Per cent.
<b>SOUTHDOWN.</b>									
<i>Ram.</i>									
Whole fleeco .....		12	1.4375	8.229	1.2712	12.03	165.68	4.66	22.60
Shoulder .....	1	12	1.3750	8.063	1.2059	12.46	192.31	3.06	15.90
Side .....	1	12	1.50	8.274	1.2889	11.60	179.04	6.05	30.25
Hip .....			1.00	8.180	1.2543	13.41	206.98	6.33	31.65
Belly .....				8.024	1.1905				
<i>Ewe.</i>									
Whole fleeco .....		12	1.4172	8.072	1.2034	14.99	231.21	4.51	22.55
Shoulder .....	3	12	1.3342	8.246	1.2770	12.86	198.80	4.00	24.80
Hip .....	4	12	1.4531	2.892	1.1385	16.66	255.60	4.17	20.85
Belly .....	1	12		2.788	1.0976				
Whole fleeco .....		14	1.062	2.793	1.0996	11.98	184.01	5.02	28.10
Shoulder .....	3	14	1.850	2.727	1.0736	12.14	187.86	5.45	27.25
Side .....	4	14	1.1875	2.840	1.1216	11.80	183.06	6.76	28.60
Belly .....	1	14	0.8750	2.776	1.0905				
Belly .....	1	16	0.8750	2.872	1.1307				
<b>MERINO.</b>									
<i>Ram.</i>									
Whole fleeco .....		14	1.390	2.469	1.0429	9.57	147.71	4.68	23.40
Shoulder .....		14	1.0313	2.487	0.9701	9.70	151.16	5.01	25.05
Hip .....		14	1.297	2.436	0.9590	16.11	166.04	4.77	23.85
Whole fleeco .....		16	1.631	2.235	0.8799	9.11	140.61	6.64	25.20
Neck .....		16	1.4875	2.644	1.0409	11.40	175.06	5.46	27.80
Shoulder .....		16	1.342	2.909	0.9090	8.53	131.66	6.80	29.00
Side .....		16	1.3438	2.178	0.8574	8.81	135.96	6.05	29.75
Hip .....		16	1.8250	2.960	0.9291	8.80	137.21	4.55	22.75
Belly .....		16	1.50	2.310	0.9129				
Whole fleeco .....		20	1.413	2.168	0.8535	6.46	99.71	5.10	25.95
Shoulder .....		20	1.885	2.124	0.8262	6.19	95.99	5.87	26.85
Side .....		20	1.264	2.178	0.8574	6.27	96.78	5.79	25.95
Hip .....		20	1.25	2.076	0.8185	7.68	118.64	4.21	21.05
Belly .....		20	1.277	2.246	0.9448				
Whole fleeco .....		22	1.4063	1.856	0.7367	3.89	60.04	6.04	30.20
Shoulder .....		22	1.4375	1.896	0.7464	3.29	50.76	6.82	31.60
Side .....		22	1.875	1.816	0.6149	4.48	69.14	5.75	28.75
		25	1.8750	1.794	0.7062	3.96	61.12	5.67	27.85
		26	2.0625	1.704	0.6708	2.48	38.28	5.60	28.00
<i>Ewe.</i>									
Hip .....		12	1.0625	2.769	1.1619	12.46	192.16	4.21	21.05
Whole fleeco .....		14	1.6875	2.232	0.8767				
Hip .....		14	1.50	2.470	0.9724	12.85	190.62	6.05	28.65
Belly .....		14	1.875	1.993	0.7846				
Whole fleeco .....		16	1.618	2.250	0.8881	8.36	129.03	5.63	25.16
Neck .....		16	1.8125	2.287	0.9093	8.59	132.58	5.23	26.15
Shoulder .....		16	1.8438	2.928	0.9165	7.02	122.24	4.80	21.60
Side .....		16	1.5417	2.175	0.8547	6.60	101.67	6.77	33.85
Hip .....		16	1.8035	2.535	0.9192	9.23	142.46	4.61	23.05
Belly .....		16	1.25	2.173	0.8555				
Whole fleeco .....		20	1.433	2.105	0.8287	6.27	96.76	5.14	25.70
Shoulder .....		20	1.209	2.127	0.8373	5.96	92.90	5.65	28.25
Side .....		20	1.868	2.099	0.8263	6.18	95.99	6.06	30.45
Hip .....		20	1.125	2.079	0.8185	6.81	105.11	4.25	21.25
Belly .....		20	1.278	2.178	0.8374				
Whole fleeco .....		22	1.569	2.049	0.8068	4.79	73.93	5.61	27.55
Shoulder .....		22	1.719	1.903	0.8492	4.44	68.53	5.80	29.00
Side .....		22	1.2813	1.928	0.7559	4.76	73.47	6.97	29.85
Hip .....		22	1.292	2.043	0.8043	5.52	85.20	4.58	22.90
		25	2.375	1.800	0.7444	4.62	71.73	5.39	26.95
		80	1.825	1.571	0.6185	2.65	40.90	5.50	27.80







## CHAPTER VI.

### COMMERCIAL GRADES.

The above are the facts we have to present with regard to the pure bred wools as we have studied them, and we have now to pass to the consideration of the commercial grades of this and other countries for the raw material, for which we are, as already stated, indebted to Mr. J. D. Whitham, of Valley Grove, W. Va., and Mr. William G. Markham, of Avon, N. Y. These grades are those of the Boston and Philadelphia markets and the standards of Germany, respectively. The Boston grades were classified by Mr. H. E. Chapman, of Hartford, a professional grader, and the Philadelphia grades by Mr. Conant, of West Virginia, both at the request of Mr. Whitham. The German grades were selected by a professional grader of the highest authority in Germany, and they may therefore be accepted as fairly representing the grades of that country. But before proceeding to the discussion of the results obtained in the examination of this series of samples, a few words with regard to the several grades and the means by which they are determined and separated in a commercial way will not be amiss even from one not especially well versed in the art involved.

The commercial wool-grader, in the practice of his profession, depends altogether upon the senses of sight and feeling, guided by the demands of the market, and separates the different qualities of wool passing through his hands rather into the classes demanded for the supply of the factories and looms than into those based entirely upon any one of the qualities with which we have thus far had to deal. For while in Germany much depends upon the fineness of the staple, and as much importance is attached to this quality as any other, in this country all qualities must be considered to a greater or less degree. In what is known as the fine wools, or clothing wools, fineness is of course the prominent characteristic to be considered, while it is intimately connected with strength and elasticity as well. In the delaine wools fineness, strength, and elasticity must be considered, with proper length of fiber to produce the *tout ensemble* necessary to their important grade, while the coarse combing wools depend entirely upon length and freedom from impurities, with goodly amounts of strength and elasticity, which are desirable in all qualities.

But in no case has an absolute standard been established for each grade. If the demands of the market call for more of one grade than of another, the best of a lower or the poorest of a higher, as the case may be, will find its way in the grader's hands to the grade most in demand. Thus if XX or XXX be the prevailing demand of the market, we find the grader adding to these grades in his operations the lower sorts of picklock and the better sorts of X. If, on the other hand, delaine wool is most desired, most of the longer wool of the finer grades finds its way to the grade in question, while it receives also additions from the finer sorts of the long wools. So, too, when medium or coarse combing proves scarce in the markets, the delaines are drawn upon to supply the deficiencies, and thus the wide and elastic limits are maintained. But notwithstanding this, we have deemed it desirable to study the grades in the manner of our examination of the pure-bred wools, and we now have the pleasure of presenting the results obtained. Below we give a catalogue list of the samples included in this series of graded wools, and we have added to the list some notes taken at the time of grading from statements made by the grader.

#### BOSTON GRADES.

*Graded by H. E. Chapman, Hartford, Conn.*

Cat. No.	Cat. No.
275. Fine unwashed, X, XX, and XXX.	282. No. 2.
276. Fine dead wool (from dead sheep).	283. Delaine, fine (from X to XX).
277. Picklock.	284. Delaine, medium (from No. 1 to No. 2).
278. XXX.	285. Combing, fine (generally No. 1 long and strong).
279. XX.	286. Combing, medium.
280. X.	287. Combing, coarse.
281. Between X and No. 1.	288. Common.
281. No. 1.	289. New Mexico wool.



## PHILADELPHIA GRADES.

Prepared by Mr. Conant.

## Cat. No.

290. Picklock, best.  
 291. Picklock, fair. Fair wool, but not high grade.  
 292. Picklock, medium. Generous grade, tending to the low side and much like XXX.  
 293. Picklock, low. Too growthy and long; like high XXX.  
 294. XXX series. This sample, probably grading wool, is very fine and elastic, and may be considered extra XXX.  
 5. XXX series. Very good XXX wool.  
 296. XXX series, low. Scarcely fine enough for XXX, and should probably fall to the XX grade.  
 297. XX series, good XX. This is a sample of excellent XX wool. It might be graded delaine in Boston, where the delaine is shorter than in Philadelphia.  
 298. XX series, clothing. In this grade the length is not considered; the qualities most desired are fineness, strength, elasticity, and liveliness or "quality".  
 299. XX series, low. The bodies of these fleeces run evenly to one sort. They are sometimes made No. 3. They are not so fine as other XX wools, but the wool is young and lively, and works well, and so is placed in this grade.  
 300. X. This is a sample of good X wool. It is fine enough for XX, but it is in some way defective. It is weak and works down in the factory.  
 301. X, fair. A sample of good, fair X wool.  
 302. X, low. Not quite good enough for delaine. It is long enough and fine enough, but is defective at the bottom; nor is it fine enough for XX.  
 303. Delaine, washed, fine. Regular grade.  
 304. Delaine, washed, fine. This sample is especially fine, though delaine fleeces are usually rather finer and heavier than clothing.  
 305. Fine unwashed X and above.  
 306. Fair unwashed X and above. Worth 25 to 26 cents per pound.

## Cat. No.

307. X and above. Unmerchantable, because of containing too much grease, dirt, and cotts, and susceptible of excessive shrinkage; has been brook-washed, but not enough. The shrinkage in fine wools is about 40 to 50 per cent., and when it becomes greater than this the product becomes unmerchantable.  
 308.  $\frac{1}{2}$ -blood series. This sample is good quarter wool, because it is graded high. This grade may be divided, and part of it thrown to a higher grade and part of it to a lower.  
 309.  $\frac{1}{2}$ -blood series. For length should be classed as  $\frac{1}{2}$  combing, but it is wanting in strength, is weak at the bottom, and is therefore classed as clothing.  
 310. Washed  $\frac{1}{2}$  blood. Low combing. Longer and closer than combing, which must have a length of  $3\frac{1}{2}$  to  $3\frac{3}{4}$  inches.  
 311.  $\frac{3}{8}$ -blood series. Good.  
 312.  $\frac{3}{8}$ -blood series, washed. A combing fleece, because good and strong and will lose little in noils.  
 313. Washed,  $\frac{3}{8}$  and  $\frac{1}{2}$  blood. Medium delaine. Has the same fineness as medium combing, but is shorter.  
 314. High  $\frac{1}{2}$ -blood series. Classed thus because of the condition of the market.  
 315. Regular  $\frac{1}{2}$ -blood. Same as Boston No. 1, or general medium. Thrown high; that is, the quality in this sample is placed in a high grade, because medium is scarce and other qualities are crowded into it. It is a real half-blood.  
 316. Combing. Washed half-blood. Combing fleeces, the best of them graded as fine delaine by some houses.  
 317.  $\frac{5}{8}$  series. In this series the  $\frac{5}{8}$ ,  $\frac{1}{2}$ , and  $\frac{3}{8}$  blood wools are generally thrown together. It is produced by graded animals nearer to fine Merino than other grades, and is not low enough for medium.  
 318. Cotts. Wool generally of the coarser grades which from some cause has become matted or felted together so that it can be combed out and worked only with the greatest difficulty and loss.  
 319. Imported Saxony, wool used in Connecticut mills.  
 320. Saxony wool, grown in West Virginia.

## GERMAN GRADES.

Furnished by Mr. William G. Markham, Avon, N. Y.

1. Superelecta.
2. Super-superelecta.
3. Superelecta.
4. Superelecta.
5. I. Electa.
6. I. Electa.
7. II. Electa.
8. II. Electa.
9. I. Prima.
10. I. Prima.
11. II. Prima.
12. II. Prima.
13. Secunda.
14. Tertia.
15. Quarta.
16. Wool of excellent pedigree.
17. Wool of excellent pedigree.

18. Pure-bred wool of ancient pedigree.
19. Wool not pure bred.
20. Wool from the first prize 2-year old French ram exhibited at the Paris Exposition of 1878; 1 year's growth.
21. Wool from Rambouillet Merino.
22. Merino wool from Sturgeon, Gray's Station, near London, England. Said to be from one of the purest flocks in the world, descended from the flock of George III, imported from Spain.
23. Australian ewe's wool, from flock of Sir Samuel Wilson, Australia.
24. Wool from M. Roger's 2-year old ram. Pulled at nine months' growth. Ram had been shorn once.
25. Wool from M. Roger's ewe, 2 $\frac{1}{2}$  years' old. Rambouillet stock.
26. Wool from M. Roger's ewe, 2 $\frac{1}{2}$  years old, of Rambouillet stock, but larger than the original.

This list will sufficiently explain and describe the samples represented in the tables following those just discussed. There are, however, a few other samples received from miscellaneous sources that have been examined, and the results of their examination are given in separate tables. They will be described when they are discussed. The notes accompanying the list of Philadelphia grades will explain, sufficiently for our present purpose, the principles involved in making them. So much depends upon practical experience in acquiring the knowledge necessary to making them, that a written description of the methods and principles which govern the work will be of little



general value. The object of the examination of these grades was to determine the limits between which lie the qualities found in each, and, if possible, furnish data from which some more definite standard could be established. The latter will, however, prove exceedingly difficult under any circumstances, for examination of the results of measurement of the German grades will show how widely the samples represented vary from the established standards, even when prepared by one long familiar with the grades and of large experience in their separation. After all, the demands of the market must be one of the most important factors in this determination, and these will be too flexible to conform to any rules which science may fix upon. But if the results here presented may tend in any way to effect any improvement in the uniformity in the product of the American looms, one of the great ends of this study will have been attained. But our results plainly show how difficult it is to establish a grade upon any given quality, since all the known qualities are involved in each case. Thus, the clothing wools may be wanting in length, but fineness, strength, and elasticity must be fully developed. In the delaines, length as well as all the other qualities must be included, while in the combing wools fineness is as a general rule the important quality, the long and coarse wools being those required. But the variations occurring in each grade in all these qualities become apparent in the tables giving the results of the measurements.

In the examinations, to provide for the variations here referred to, many of the samples in which any very considerable want of uniformity in quality occurred were divided into several smaller samples, and each quality contained in the grade was examined separately. Thus in Table XXVII, section A, giving the actual measurements of fineness at the several grades, we find at the head of the columns numbers 275*a*, 275*b*, 275*c*, &c., and each of these numbers refers to a distinct quality of wool found in the sample under examination, and differing from all the others in some peculiarity or another. The results of the examination of these subsamples serve to show the range that may be found in the qualities of each grade, and to determine the limits which should govern their range. What these specific limits are will be found in one of the later tables. In this table we have recorded, as before, all the measurements actually taken, and have collected at the bottom of each page the recapitulation and reductions necessary to the more ready and intelligent appreciation of the differences to be found in the figures corresponding to each sample or part of sample. The table will fully explain itself, and will serve for the determination of many of the relations that have escaped our notice or that from want of time or space we have thus far been unable to consider.

In the next section, B, we have presented in exactly the same way the actual measurements made of the grades of the Philadelphia markets. Here, because of the peculiarities of that market, we may expect to find wider variations than in the previous table. It is constructed in exactly the same manner as former tables of like character, and will therefore explain itself.

In section C we have the actual measurements of the length, crimp, and fineness of the commercial grades of Germany, the materials for which were furnished by Mr. Markham. Constructed in the same way as the others, it needs no further explanation than they. But there is one point of especial interest that we must call attention to in passing. It is well known that in Germany great dependence is placed upon the relation between the closeness of the crimp and the fineness of the fiber, and this relation is always largely employed in the determination of the grade. This is well illustrated in this table under numbers 1 to 15, inclusive. We find here a gradual decrease in the number of crimps per inch, and a corresponding increase in the diameter of the fiber. With the exception of the super-super electa we find this correspondence between the crimp and fineness comparatively close, and its reliability as a standard of grade in the finer wools well supported. In No. 1, the super-electa nomenclature, with 34 crimps per inch in both the samples, we have a variation of from about 1.4 to 1.9 centimillimeters. Here the indications of the crimp are wholly unreliable, and if we were to accept these figures as a general rule, we should conclude that in the finer qualities of wool this relation is wholly defective as a means for determination of the fineness, though for the wools of medium fineness it will prove of very considerable practical utility.

But there is also another relation here to which we think too much importance cannot be attached, and which should be studied with great care, with a view to the practical application of the facts set forth by all breeders of fine-wooled sheep, or growers of wools of the finer grades. We refer especially to the uniformity in the quality of the staple, not only from fiber to fiber, but throughout its length as well. It is difficult to find in any of the samples of American wool we have had occasion to examine the degree of uniformity in fineness here exhibited, both in the extremes of the whole sample or of each section, the averages for each section, or the number of measurements found above and below the average in each case. This is a point by all means too important to be neglected, and it will to a great extent explain the necessity that impels our manufacturers to send abroad for material to be employed in the manufacture of the finer goods and to consume the home product in the lower grades. There are doubtless in this country both breeders of sheep and growers of wool who aim at securing the high degree of uniformity here represented, but it is a lamentable fact that the wools of the United States must be acknowledged to be wanting in this important quality. This may be due in some cases to the influences to which our animals are naturally subjected by the sudden and radical climatic changes for which many parts of the country are celebrated, but it is more probable that it may in most cases be traced and referred to the want of that constant care and watchfulness that sheep on the European continent usually receive. The additional care required, and the possibly improved nutrition that may often be afforded, will no doubt eventually yield returns that could be nothing but gratifying



to the breeders and growers, and improve the relations prevailing between the producer and manufacturer as well. The sooner this fact is recognized the sooner will the discussions so disastrous to the prosperity of the woollen industry in all its branches decline, while the advancement in every direction must follow as a matter of course.

The data given here in detail will be presented in a more condensed form in a subsequent table, in which the facts we have alluded to become even more prominent.

Passing to the following tables, we have the extremes and averages of the preceding ones arranged and classified for more convenient comparison of the general relations. In the first table, XXVIII, we have the extremes and averages for all the portions of each sample represented, showing the wide variations in the quality of wool in each grade, wider as a rule in those of the Boston than in those of the Philadelphia markets. And, as compared with each other, we may plainly see here the greater uniformity in the quality of the foreign wools. We have already insisted upon these relations sufficiently, and we offer them again in this form.

In the next table, XXIX, the averages of the extremes and averages for the different parts of each sample are collected, and we have an opportunity for more absolute comparison of one grade with another. The fineness and length fairly show the qualities upon which the grades depend. In some cases the distinctions are too slight to be of value, and in such case we must look to strength or some other quality to effect the differentiation. But we may see in this table what we have pointed out before, the general relation of fineness to crimp, and at the same time its general unreliability.

We have now to consider the strength and elasticity of the wools constituting the several grades, the fineness of which we have just discussed. All the samples were divided in exactly the same way as for the measurements of fineness, that is to say, all the different qualities found in each sample were tested as nearly as it was possible to do so. Indeed the same small subspecimens that were used in the measurements of fineness were also employed in the tests of strength and stretch. In these tables they are therefore designated in the same way; for instance, the subspecimens of sample number 275, are designated by 275*a*, 275*b*, 275*c*, &c., respectively. The results of the actual measurements and the recapitulations and reductions are arranged here exactly as in previous tables of results of the same character, and they likewise serve to furnish the data for subsequent tables showing more clearly and in a more concise way the general relations to be brought out. The uniformity of the material tested may here be studied in detail, and from such studies we may learn lessons of much the same character and the same importance as those to which we have already called attention in the discussion of the fineness of these grades. The superiority of the European wool as regards uniformity is here equally prominent, and will appear still more distinctly in the tables of general averages to be given later on. We commend the study of these detailed results to the careful consideration of wool-growers and manufacturers alike, for they must prove to them a source of fruitful meditation.

The results of these measurements are detailed in Table XXX.

In Table XXXI we have collected all the extremes and averages of the preceding tables, to show at a glance the variations in strength and elasticity from sample to sample and from grade to grade. We see here how important it is that there should be more careful breeding on the one hand and more careful selections in grading on the other. But in this table, as in the preceding, we have given the averages for all the specimens tested. It still remains to determine from these figures the general averages for each sample, and the results of this determination are collected in Table XXXII, which should furnish fairly good standards for each grade. In both of these tables we have arranged the figures for strain on one side and the figures for stretch of the corresponding sample directly opposite on the other side. Beyond this these tables will explain themselves.

In conclusion, we present in Table XXXIII the general averages of all measurements made upon the samples of the commercial grades, so that each grade may be compared with any other in any particular or as a whole. This will show better than any previous combination of figures all the elements which enter into the determination of each grade, and what are the most important as guides in fixing the several classes. This table needs no further explanation. Each one must study it for himself, and each one find the practical application of the data it contains.

As the general result of the whole examination we arrive at the following conclusions:

1. That of the breeds represented in our investigation, as regards fineness of fiber, the Merino stands first and the Oxforddown last in the scale, and all in the following order: 1, Merino; 2, Southdown; 3, Hampshiredown; 4, Lincoln; 5, Leicester; 6, Cotswold; 7, Oxforddown.

2. That of the different parts of the fleece, as regards fineness, no absolute standards can be established, but as a general rule they are found to stand in about the following relation: 1, belly; 2, shoulder; 3, side; 4, hip.

3. That as regards the influence of sex upon the fineness of the fiber, no standard can be adopted. In some cases ram's wool is finer than ewe's wool; in others, the ewe's wool is finer. As a general rule the Lincoln and Cotswold breeds belong to the first class, and the Merinos and Downs to the second.

4. As regards the influence of age upon fineness no uniformity prevails, but it appears that with increase of age there is a certain increase of diameter of the fiber, and that this increase is more uniform in the coarse-wooled breeds than in the Merinos and Downs, and in the ram than in the ewe.

5. That wool produced upon the folds of the skin is always shorter and coarser than that grown between the folds or upon smooth skin, and that the folds of the hip produce coarser wool than those of other parts of the body.



6. That the fine wools having close crimp have as a rule a greater degree of fineness than those having more open crimp, and that fineness seems to vary with the closeness of the crimp. But the relation is by no means absolute, and must be accepted with some caution.

7. That as regards strength of the fiber, it is not wholly dependent upon the diameter of the cross section.

8. That stretch does not wholly depend upon the strain applied, nor upon the fineness of the fiber.

9. That the percentage of stretch may be accepted as fairly representative of the elasticity of the fiber.

10. As with the fineness, the relation between sex and strength and elasticity is not absolute, each breed having its own standard with this regard.

11. As regards strength of different portions of the fleece, we find a gradual increase from shoulder to hip, following the same order as for fineness, but as regards the stretch there is no regularity.

12. As regards the influence of age upon the strength and elasticity, a maximum appears to be reached at the age of about two years. Beyond this age the relation varies, and is not absolute.

13. That the wool from the tops of the wrinkles is stronger but less elastic than that from between the wrinkles or upon smooth skin.

14. That in the commercial grades of fine wool greater uniformity in all qualities prevails in those obtained from Germany than in those of the United States, but it must also be observed that the material representing the German grades was doubtless from thoroughbred stock, while that representing the American grades was taken from the ordinary market stock.



TABLE XXVII.—Actual measurements of length, crimp, and fineness of commercial grades.

		A.—BOSTON GRADES.																		
Catalogue number of samples..		274.			275a.			275b.			275c.			275d.			275e.			
Length of fiber in crimp.....		4½ inches.			2 inches.			2½ inches.			1¾ inches.			2¼ inches.			2¼ inches.			
Number of crimps per inch....		20.			20.			20.			20.			20.			20.			
Number of section.....		B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	
Actual measurement in centi- millimeters	1.25	3.50	1.625	1.25	2.00	1.50	3.50	2.75	2.75	2.375	2.00	2.50	2.50	2.00	2.00	2.00	2.50	2.00	2.50	2.50
	2.50	1.875	1.75	1.75	1.75	1.75	3.00	1.875	2.25	2.00	2.125	2.50	2.00	2.00	1.75	1.50	1.50	1.50	1.50	1.50
	2.125	2.00	2.75	1.25	2.00	1.75	2.75	2.375	2.75	2.50	2.50	1.75	1.75	1.50	1.75	1.50	1.50	1.50	1.50	1.50
	1.75	2.25	2.25	1.875	2.00	2.25	2.50	2.75	2.50	2.25	2.125	2.00	2.00	1.375	1.50	1.75	1.50	1.50	1.50	1.50
	2.00	2.125	2.00	1.50	1.75	2.00	2.75	2.875	2.50	2.75	2.50	2.00	2.00	1.50	1.50	1.25	1.50	1.875	2.50	2.75
	2.125	1.75	2.50	1.50	1.75	1.50	3.50	3.00	1.75	2.875	2.25	2.75	1.75	1.375	2.00	2.00	3.00	2.00	2.50	2.50
	2.25	1.75	3.50	1.60	1.50	1.625	2.25	3.50	3.50	2.00	2.00	2.00	2.00	1.625	2.25	1.75	2.125	2.75	2.375	2.375
	1.75	1.625	5.00	1.25	1.625	2.00	2.50	1.875	2.50	2.75	2.375	2.00	2.00	1.50	1.75	2.25	2.00	2.25	2.50	2.50
	1.625	1.60	3.50	1.375	1.875	1.625	3.50	3.00	2.75	2.125	2.125	2.50	2.50	1.50	2.00	1.875	2.00	2.00	2.50	2.50
	2.50	1.75	2.75	1.50	1.75	2.00	2.75	3.25	2.75	2.25	2.25	1.75	1.75	1.50	2.00	2.25	2.125	3.25	2.75	2.75
	1.625	1.875	2.50	1.750	1.75	1.875	2.50	2.50	2.50	2.25	2.25	2.00	2.00	1.875	2.125	1.50	2.25	2.00	2.00	2.50
	2.125	1.75	2.00	1.50	2.125	2.00	2.00	2.50	2.50	2.00	2.00	2.00	2.00	1.875	2.125	1.50	2.25	2.00	2.00	2.50
	2.5	2.00	2.50	1.60	1.875	2.00	2.375	2.00	2.00	2.25	2.25	2.00	2.25	3.00	2.00	2.375	2.25	2.50	2.50	2.50
	1.875	2.125	2.75	1.50	1.625	1.75	2.25	3.25	2.75	2.50	2.50	2.50	2.50	2.75	2.00	2.375	2.75	2.00	2.50	2.50
	1.75	2.125	3.00	1.125	1.75	2.00	3.375	2.00	2.00	2.50	2.50	2.50	2.50	1.875	1.875	1.75	1.875	1.75	1.875	2.00
	1.625	2.25	2.625	1.50	2.00	2.125	2.75	3.00	2.25	3.00	2.25	3.00	2.00	2.125	2.00	2.25	2.00	2.00	2.50	2.50
	2.125	1.75	2.875	1.60	1.60	1.875	2.25	2.25	2.25	2.375	2.50	2.50	2.50	1.875	1.875	1.75	1.875	1.75	1.875	2.00
	1.625	2.375	2.00	1.50	1.375	2.00	2.25	2.00	2.00	2.125	2.125	2.125	2.125	1.50	1.75	1.75	2.375	2.75	2.75	2.575
	2.125	2.125	2.75	1.75	2.125	2.00	2.25	1.75	3.00	2.50	2.50	2.50	2.50	1.50	1.75	2.00	2.25	2.25	2.25	2.25
	2.025	1.625	2.125	1.875	1.625	1.625	3.50	3.375	2.50	2.25	2.25	2.25	2.25	2.50	1.375	1.625	1.875	1.75	1.875	2.00
1.875	1.875	2.50	1.50	1.75	2.00	2.75	2.25	2.50	2.50	2.50	2.75	2.25	1.75	2.00	1.50	3.00	2.50	2.375	2.00	
1.75	2.00	2.125	1.50	2.125	1.875	2.25	2.00	2.50	2.00	2.125	2.25	2.25	1.50	2.50	1.625	2.00	2.00	2.00	1.75	
2.25	1.625	1.875	1.25	1.75	2.125	2.375	2.25	3.25	2.25	2.25	2.00	2.50	1.625	2.50	1.50	3.00	2.00	3.375	3.00	
1.625	1.875	1.75	1.50	1.875	1.75	2.25	2.125	3.25	2.375	1.75	3.25	1.375	1.75	2.00	2.00	2.00	2.00	3.00	2.50	
2.00	1.625	2.25	1.50	2.25	1.75	2.00	2.00	2.25	2.50	2.00	2.50	1.625	2.50	1.50	1.875	2.50	1.75	2.75	2.75	
2.00	1.875	2.625	1.25	2.00	1.625	3.75	2.50	2.50	2.25	2.25	2.25	2.25	2.50	1.75	2.00	1.875	2.25	2.25	2.00	
1.875	2.125	4.50	1.125	1.75	2.00	2.75	2.50	2.25	2.50	2.50	2.50	2.50	1.625	2.00	1.875	2.00	2.00	2.00	1.625	
2.125	2.00	2.00	1.875	1.50	2.00	2.50	3.00	2.25	2.375	2.25	2.25	2.25	2.25	2.00	2.00	2.00	2.75	3.00	3.00	
2.00	2.00	1.875	1.50	1.875	1.75	2.375	2.50	2.75	2.00	2.625	2.50	2.50	1.75	1.75	2.00	1.75	2.00	2.00	2.125	
Averages .....	2.013	1.950	2.302	1.500	1.800	1.863	2.633	2.525	2.467	2.500	2.238	2.400	1.688	1.996	1.875	2.233	2.412	2.363		

Recapitulation and reduction:		No. of section.			In centimillime- ters.			In thousandths of inch.			No. of section.			In centimillime- ters.			In thousandths of inch.		
Maximum measurements	B <sup>1</sup>	2.625	1.6334	B <sup>1</sup>	1.875	0.7380	B <sup>1</sup>	3.50	1.3779	B <sup>1</sup>	3.00	1.1811	B <sup>1</sup>	2.50	0.9842	B <sup>1</sup>	3.00	1.1311	
	B <sup>2</sup>	3.50	1.3779	B <sup>2</sup>	2.25	0.8858	B <sup>2</sup>	3.50	1.3779	B <sup>2</sup>	2.75	1.0826	B <sup>2</sup>	2.50	0.9842	B <sup>2</sup>	3.25	1.2755	
	B <sup>3</sup>	5.00	1.9685	B <sup>3</sup>	2.25	0.8858	B <sup>3</sup>	3.25	1.2795	B <sup>3</sup>	3.25	1.2795	B <sup>3</sup>	2.25	0.8858	B <sup>3</sup>	4.00	1.5748	
Highest .....		6.00	1.0685		2.25	0.8858		3.50	1.3779		3.25	1.2795		2.50	0.9842		4.00	1.5748	
Minimum measurements.	B <sup>1</sup>	1.25	0.4921	B <sup>1</sup>	1.125	0.4420	B <sup>1</sup>	2.00	0.7874	B <sup>1</sup>	2.00	0.7874	B <sup>1</sup>	1.375	0.5413	B <sup>1</sup>	1.375	0.5413	
	B <sup>2</sup>	1.50	0.5905	B <sup>2</sup>	1.375	0.5413	B <sup>2</sup>	1.75	0.6889	B <sup>2</sup>	1.75	0.6889	B <sup>2</sup>	1.50	0.5905	B <sup>2</sup>	1.75	0.6889	
	B <sup>3</sup>	1.625	0.6397	B <sup>3</sup>	1.50	0.5905	B <sup>3</sup>	1.75	0.6889	B <sup>3</sup>	1.75	0.6889	B <sup>3</sup>	1.50	0.5905	B <sup>3</sup>	1.50	0.5905	
Lowest .....		1.25	0.4021		1.125	0.4420		1.75	0.6889		1.75	0.6889		1.375	0.5413		1.375	0.5413	
Average measurements.	B <sup>1</sup>	2.013	0.7025	B <sup>1</sup>	1.500	0.5905	B <sup>1</sup>	2.633	1.0366	B <sup>1</sup>	2.500	0.9342	B <sup>1</sup>	1.688	0.6645	B <sup>1</sup>	2.233	0.8791	
	B <sup>2</sup>	1.95	0.7677	B <sup>2</sup>	1.800	0.7086	B <sup>2</sup>	2.525	0.9940	B <sup>2</sup>	2.238	0.8811	B <sup>2</sup>	1.996	0.7858	B <sup>2</sup>	2.412	0.9406	
	B <sup>3</sup>	2.392	0.9421	B <sup>3</sup>	1.863	0.7334	B <sup>3</sup>	2.467	0.9712	B <sup>3</sup>	2.400	0.9448	B <sup>3</sup>	1.875	0.7380	B <sup>3</sup>	2.363	0.9303	
Average .....		2.118	0.8336		1.721	0.6775		2.542	1.0007		2.379	0.9366		1.853	0.7295		2.336	0.9196	
Measurements above average		44			32			33			28			47			43		
Measurements below average		46			58			67			52			43			47		



TABLE XXVII.—Actual measurements of length, crimp, and fineness of commercial grades—Continued.

Catalogue number of samples..		A.—BOSTON GRADES.																				
		270.			277a.			277b.			277c.			278a.			278b.					
Length of fiber in crimp .....		2½ inches.			1¾ inches.			2 inches.			2½ inches.			2½ inches.			1¾ inches.					
Number of crimps per inch....		30.			22.			22.			22.			22.			22.					
Number of section .....		B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .			
Actual measurement in centimillimeters.		1.25	2.00	2.00	1.50	2.00	1.50	1.50	1.75	2.00	1.00	1.75	1.25	1.25	1.25	1.25	1.125	1.50	1.50			
		1.125	1.50	1.75	1.50	2.00	1.75	1.75	1.50	1.75	1.25	1.50	1.875	1.50	1.25	1.50	1.50	1.125	1.125	1.75		
		1.50	2.25	1.50	1.75	1.75	1.75	1.25	1.50	2.00	1.25	1.25	1.025	1.50	1.75	1.75	1.125	2.00	1.50	1.50		
		1.50	2.25	2.00	1.50	1.75	1.75	1.75	1.75	1.75	1.50	1.125	1.50	1.875	2.25	1.75	1.50	1.50	1.50	2.25	2.25	
		1.50	2.00	1.75	1.50	2.00	1.75	1.75	1.50	2.00	1.00	1.50	1.875	1.50	1.25	1.75	1.25	1.50	1.50	1.50	1.50	
		1.875	2.25	2.50	1.25	1.75	2.00	1.50	1.50	1.75	1.25	1.50	1.25	1.50	1.25	1.50	1.25	1.50	1.50	1.50	1.50	
		1.50	2.75	1.75	1.75	1.75	1.75	1.75	1.25	1.50	1.50	1.25	1.50	1.50	1.50	1.50	1.25	1.50	1.25	1.50	1.875	
		1.875	2.00	2.00	1.50	1.75	2.00	1.50	1.50	2.00	1.00	1.25	1.50	1.50	1.50	1.50	1.75	1.50	1.75	1.50	1.50	
		1.25	2.50	2.50	1.75	1.50	1.50	1.50	1.25	1.75	1.50	1.25	1.125	1.50	1.25	1.50	1.75	1.50	1.75	1.50	1.75	
		1.875	2.00	2.00	1.50	1.75	1.50	1.50	1.25	1.75	1.50	1.375	1.50	1.75	1.25	1.50	2.00	1.25	1.50	1.75	1.75	
		1.875	2.00	2.50	1.75	1.50	1.50	1.50	1.50	1.75	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.75	1.75
		1.25	2.25	2.25	1.50	2.00	1.75	1.25	1.25	1.75	1.75	1.875	1.25	1.50	1.75	1.50	1.75	1.75	1.50	1.75	1.75	1.75
		1.25	2.00	2.50	1.50	2.00	1.50	1.50	1.25	1.50	1.50	1.50	1.50	1.75	1.50	2.00	2.00	1.25	1.75	1.75	1.75	1.75
		1.00	1.875	1.75	1.75	1.75	1.75	1.25	1.25	1.50	2.00	1.50	1.75	1.50	1.50	1.50	1.75	1.50	1.50	1.75	1.50	1.50
		1.50	2.00	2.25	1.25	1.75	2.00	2.00	1.25	1.00	1.75	1.25	1.25	2.00	1.50	1.50	1.75	1.25	1.50	1.75	1.50	1.75
		1.25	2.00	2.50	1.25	2.00	1.75	1.50	1.50	1.50	1.75	1.25	1.50	1.25	1.00	1.75	1.50	1.50	1.75	1.50	1.75	1.75
		1.625	2.125	2.50	1.75	1.75	1.75	1.75	1.50	1.00	1.50	1.25	1.50	1.50	1.00	1.50	1.50	1.00	1.50	1.50	1.75	1.75
		1.50	2.00	2.00	1.25	2.00	1.75	1.25	1.25	1.50	2.00	1.50	1.75	1.50	1.25	1.50	1.50	1.00	1.50	1.50	1.75	1.75
		1.00	2.25	2.00	1.50	1.50	1.50	1.375	1.25	1.50	1.50	1.50	1.50	1.50	1.25	1.25	1.75	1.25	1.25	1.75	1.75	1.75
		1.375	2.25	2.50	1.75	1.75	1.75	1.50	1.25	1.50	1.50	1.25	1.50	1.75	1.25	2.00	2.00	1.75	1.25	1.75	1.75	1.75
	1.125	2.25	2.50	1.50	1.50	2.00	1.25	1.25	1.25	1.50	1.25	1.50	1.50	1.25	2.00	1.25	1.25	1.50	1.50	1.25	1.25	
	1.25	2.50	3.00	1.50	2.00	2.00	1.75	1.25	1.50	1.50	1.25	2.00	2.00	1.50	1.25	1.75	1.25	1.50	1.50	1.50	1.50	
	1.25	2.00	1.50	1.25	1.25	1.25	1.50	1.25	1.50	1.50	1.25	1.50	1.75	1.375	1.50	1.75	1.25	1.50	1.50	1.75	1.75	
	1.125	1.625	2.00	1.25	2.00	2.00	1.50	1.50	1.50	1.25	1.50	1.75	1.75	1.50	1.50	1.25	1.00	1.50	1.25	1.50	1.25	
	1.125	1.875	1.75	1.25	1.50	1.50	1.25	1.25	1.25	1.50	1.25	1.75	1.75	1.50	1.75	1.50	1.375	1.75	1.50	1.50	1.50	
	1.375	1.75	1.75	1.25	2.00	1.75	1.625	1.25	1.75	1.50	1.50	1.00	1.50	1.25	1.375	1.50	1.25	1.75	1.75	1.75	1.75	
	1.50	2.50	2.25	1.50	1.75	1.75	1.50	1.25	1.25	1.50	1.50	1.375	1.375	1.375	2.00	1.25	1.25	1.75	1.75	1.75	1.75	
	1.25	2.00	2.00	1.25	1.75	2.00	2.00	1.25	1.25	1.50	1.50	1.50	1.25	1.50	1.25	1.50	1.25	1.25	2.00	2.00	2.00	
	1.50	1.625	2.00	1.50	1.75	1.75	2.00	1.00	2.00	1.50	1.00	1.50	1.25	1.50	1.25	1.50	1.25	1.25	1.50	1.50	1.50	
	1.375	2.00	2.25	1.50	1.50	1.50	1.50	1.25	1.50	1.50	1.25	1.625	2.00	1.50	1.75	2.00	1.00	1.75	1.75	1.75	1.75	
Averages .....		1.325	2.070	2.100	1.483	1.783	1.670	1.337	1.508	1.667	1.275	1.508	1.550	1.375	1.508	1.675	1.296	1.579	1.671			

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.		No. of section.	In centimillimeters.		In thousandths of inch.		No. of section.	In centimillimeters.		In thousandths of inch.			
		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.							
Maximum measurements.	B <sup>1</sup>	1.625	0.6397	B <sup>1</sup>	1.75	0.6889	B <sup>1</sup>	1.75	0.6889	B <sup>1</sup>	1.50	0.5905	B <sup>1</sup>	1.75	0.6889	B <sup>1</sup>	1.75	0.6889
	B <sup>2</sup>	2.75	1.0820	B <sup>2</sup>	2.00	0.7874	B <sup>2</sup>	2.00	0.7874	B <sup>2</sup>	2.00	0.7874	B <sup>2</sup>	2.00	0.7874	B <sup>2</sup>	2.00	0.7874
	B <sup>3</sup>	3.00	1.1811	B <sup>3</sup>	2.00	0.7874	B <sup>3</sup>	2.00	0.7874	B <sup>3</sup>	2.00	0.7874	B <sup>3</sup>	2.00	0.7874	B <sup>3</sup>	2.25	0.8258
Highest .....		3.00	1.1811		2.00	0.7874		2.00	0.7874		2.00	0.7874		2.00	0.7874		2.25	0.8258
Minimum measurements.	B <sup>1</sup>	1.00	0.3937	B <sup>1</sup>	1.25	0.4921	B <sup>1</sup>	1.00	0.3937	B <sup>1</sup>	1.00	0.3937	B <sup>1</sup>	1.00	0.3937	B <sup>1</sup>	1.00	0.3937
	B <sup>2</sup>	1.50	0.5905	B <sup>2</sup>	1.25	0.4921	B <sup>2</sup>	1.00	0.3937	B <sup>2</sup>	1.00	0.3937	B <sup>2</sup>	1.25	0.4921	B <sup>2</sup>	1.125	0.4420
	B <sup>3</sup>	1.50	0.5905	B <sup>3</sup>	1.25	0.4921	B <sup>3</sup>	1.25	0.4921	B <sup>3</sup>	1.25	0.4921	B <sup>3</sup>	1.25	0.4921	B <sup>3</sup>	1.25	0.4921
Lowest .....		1.00	0.3937		1.25	0.4921		1.00	0.3937		1.00	0.3937		1.00	0.3937		1.00	0.3937
Average measurements..	B <sup>1</sup>	1.825	0.5216	B <sup>1</sup>	1.483	0.5838	B <sup>1</sup>	1.337	0.5203	B <sup>1</sup>	1.275	0.5019	B <sup>1</sup>	1.375	0.5413	B <sup>1</sup>	1.296	0.5102
	B <sup>2</sup>	2.070	0.8185	B <sup>2</sup>	1.783	0.7019	B <sup>2</sup>	1.508	0.5930	B <sup>2</sup>	1.508	0.5930	B <sup>2</sup>	1.508	0.5930	B <sup>2</sup>	1.579	0.6216
	B <sup>3</sup>	2.100	0.8267	B <sup>3</sup>	1.670	0.6610	B <sup>3</sup>	1.667	0.6562	B <sup>3</sup>	1.550	0.6102	B <sup>3</sup>	1.675	0.6504	B <sup>3</sup>	1.671	0.6578
Average .....		1.835	0.7224		1.648	0.6488		1.584	0.5921		1.444	0.5684		1.519	0.5980		1.515	0.5664
Measurements above average..		47			40			24			52			27			35	
Measurements below average..		43			41			66			38			63			53	



TABLE XXVII.—Actual measurements of length, crimp, and fineness of commercial grades—Continued.

Catalogue number of samples..		A.—BOSTON GRADES.																			
		279a.			279b.			279c.			279d.			280a.			280b.				
		2½ inches.			2½ inches.			2½ inches.			2¼ inches.			1¾ inches.			2 inches.				
		20.			20.			20.			20.			20.			20.				
Number of section .....		B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.		
Actual measurement in centimillimeters.		1.75	2.25	2.00	1.50	2.25	2.25	1.75	1.25	1.75	1.50	2.50	2.00	1.50	1.75	2.00	1.50	3.25	2.25		
		1.75	1.75	2.00	1.50	2.125	2.00	1.25	2.25	1.75	1.25	1.75	1.75	2.00	2.00	2.00	1.75	1.75	2.00	2.50	
		1.75	2.00	1.75	1.50	2.00	2.00	2.00	2.25	1.75	2.25	1.50	1.75	1.75	1.00	3.00	1.75	1.75	2.25	1.25	
		1.75	2.00	2.25	1.50	1.875	2.125	1.50	1.75	1.25	1.25	1.50	2.25	1.75	1.75	2.75	2.75	1.25	2.00	2.00	
		1.25	2.00	2.00	1.75	1.75	3.25	1.75	1.75	1.75	1.75	1.75	2.00	1.75	2.00	2.00	2.50	1.50	1.50	2.25	2.25
		1.25	1.75	2.00	1.75	2.00	1.75	1.50	2.25	2.00	2.00	1.60	1.75	2.00	1.50	2.00	2.50	1.50	2.00	1.75	1.75
		1.50	1.50	2.125	1.75	1.75	3.25	1.50	2.00	1.60	2.00	1.25	1.75	2.00	1.50	3.00	2.25	1.50	2.25	1.75	2.00
		1.75	1.625	1.75	2.00	1.75	1.75	1.75	1.25	1.75	2.00	1.25	1.50	1.75	2.00	2.00	2.25	2.25	1.25	1.75	2.00
		1.00	2.125	2.80	1.75	2.75	1.50	1.00	1.75	2.00	2.00	1.25	2.50	2.00	2.00	2.00	2.50	1.25	2.00	1.50	1.50
		1.25	1.75	2.00	1.625	2.50	2.00	1.50	2.00	1.50	2.00	1.50	1.75	2.50	2.00	1.75	2.25	2.50	1.75	1.75	1.50
		2.00	2.00	2.00	2.00	2.00	2.25	1.50	1.75	1.75	1.75	1.75	2.25	2.25	2.00	1.00	2.50	2.25	1.50	2.50	1.50
		1.50	2.00	2.25	2.25	2.00	2.75	1.25	1.25	1.50	1.50	1.50	1.75	2.25	2.00	2.00	2.50	2.25	1.50	2.00	2.00
		1.625	2.00	2.00	1.50	1.75	2.00	1.50	1.50	1.75	1.75	1.50	1.50	2.00	1.50	2.00	2.50	2.00	1.50	2.00	1.75
		1.50	2.00	1.875	1.75	2.00	2.00	1.25	1.75	2.25	2.25	1.25	2.25	2.25	2.25	1.25	2.75	2.25	2.25	2.00	2.00
		1.75	1.75	1.75	1.75	1.75	1.75	1.25	1.50	1.50	1.50	1.75	1.75	2.25	2.00	1.75	2.75	3.25	2.25	2.00	2.00
		1.25	2.25	2.00	1.75	1.75	1.75	1.00	1.50	1.75	2.00	2.00	1.75	2.25	2.25	1.25	2.00	2.25	1.25	2.25	2.25
		1.75	2.25	2.50	2.00	2.00	2.25	1.50	2.00	1.75	2.00	1.75	1.75	1.50	2.25	1.50	2.75	1.625	1.75	1.50	1.50
		1.75	2.00	1.75	2.00	2.00	2.50	1.50	1.50	1.50	1.50	1.50	2.25	2.25	1.75	2.50	2.50	1.875	2.50	1.75	1.75
		1.875	2.50	2.00	1.00	2.25	2.00	2.00	2.00	2.00	2.00	2.00	1.75	2.15	2.00	1.50	2.00	3.00	1.50	1.75	2.50
		2.00	2.25	2.25	1.125	2.25	2.00	1.75	2.00	1.75	2.00	1.75	1.75	1.75	1.50	1.25	2.00	1.75	1.25	1.75	2.00
		1.75	1.75	1.50	1.75	2.25	2.25	1.50	1.75	2.625	1.25	2.00	1.75	1.50	1.50	2.25	2.25	1.50	2.25	2.00	2.00
		1.375	2.75	1.75	1.75	2.50	2.00	2.00	1.50	2.25	1.25	2.00	1.75	1.75	1.75	2.00	2.00	1.60	1.75	1.50	1.50
		1.75	1.625	2.00	1.50	1.375	2.50	1.50	2.00	1.60	2.00	2.50	1.75	1.75	1.75	2.75	2.25	1.50	2.75	1.50	1.50
		1.50	2.00	2.00	1.50	1.75	1.75	1.25	1.75	1.75	2.00	2.00	2.75	1.75	1.50	2.25	2.25	2.00	1.50	1.50	1.50
		1.875	1.75	1.75	1.50	1.25	2.50	1.50	2.25	2.00	1.50	2.50	1.50	1.50	1.25	1.75	2.00	1.50	2.50	2.00	2.00
1.75	1.50	2.00	2.00	2.00	3.00	1.25	1.60	1.00	1.00	1.25	2.75	2.00	1.25	2.00	2.25	1.375	2.50	2.50	2.50		
1.75	1.75	2.00	1.75	1.75	1.75	1.50	1.25	1.50	1.50	1.50	2.00	2.25	1.75	2.00	2.75	1.60	2.00	1.75	1.75		
1.25	1.75	1.50	1.75	2.50	3.25	1.60	2.00	1.75	1.60	2.00	1.75	2.25	2.25	1.75	2.25	1.625	2.00	2.00	2.00		
1.75	2.00	1.75	2.75	2.50	1.75	1.50	2.00	2.25	1.25	1.25	1.75	2.00	1.50	2.00	2.125	1.50	2.25	1.75	1.75		
1.25	2.00	2.25	1.25	1.75	1.50	1.50	2.25	2.25	2.25	1.25	2.25	2.00	2.00	2.00	2.00	2.625	1.875	2.25	1.75		
Averages .....	1.000	1.954	1.975	1.708	2.004	2.351	1.500	1.975	1.804	1.533	2.117	1.917	1.617	2.293	2.558	1.540	2.108	1.892			

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.		No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.		No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.	
		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.						
Maximum measurements.	B¹	2.00	0.7874	B¹	2.75	1.0826	B¹	2.00	0.7874	B¹	2.00	0.7874	B¹	2.25	0.8858	B¹	2.25	0.8858
	B²	2.75	1.0826	B²	2.75	1.0826	B²	2.25	0.8858	B²	3.00	1.1812	B²	3.00	1.1811	B²	3.25	1.2795
	B³	2.50	1.9843	B³	3.25	1.2795	B³	2.025	1.0394	B³	3.00	1.1812	B³	3.25	1.2795	B³	2.50	0.9842
Highest .....		2.75	1.0826		3.25	1.2795		2.025	1.0394		3.00	1.1811		3.25	1.2795		3.25	1.2795
Minimum measurements.	B¹	1.00	0.3937	B¹	1.00	0.3937	B¹	1.00	0.3937	B¹	1.25	0.4921	B¹	1.00	0.3937	B¹	1.25	0.4921
	B²	1.50	0.5905	B²	1.25	0.4921	B²	1.25	0.4921	B²	1.50	0.5905	B²	1.75	0.6889	B²	1.50	0.5905
	B³	1.50	0.5905	B³	1.50	0.5905	B³	1.00	0.3937	B³	1.25	0.4921	B³	1.75	0.6889	B³	1.25	0.4921
Lowest .....		1.00	0.3937		1.00	0.3937		1.00	0.3937		1.25	0.4921		1.00	0.3937		1.25	0.4921
Average measurements.	B¹	1.600	0.6299	B¹	1.708	0.6724	B¹	1.600	0.5905	B¹	1.533	0.6035	B¹	1.617	0.6356	B¹	1.540	0.6286
	B²	1.954	0.7692	B²	2.004	0.7889	B²	1.975	0.7775	B²	2.117	0.8034	B²	2.292	0.9023	B²	2.108	0.8299
	B³	1.975	0.7775	B³	2.354	0.9267	B³	1.804	0.7102	B³	1.917	0.7547	B³	2.358	0.9283	B³	1.892	0.7448
Average .....		1.843	0.7255		2.022	0.7960		1.780	0.6929		1.856	0.7307		2.089	0.8224		1.849	0.7279
Measurements above average.		43			25			28			33			41			41	
Measurements below average.		47			65			62			62			49			49	



TABLE XXVII.—Actual measurements of length, crimp, and fineness of commercial grades—Continued.

Catalogue number of samples..		A.—BOSTON GRADES.																	
		280c.			280d.			281a.			281b.			281c.			281d.		
		2½ inches.			2½ inches.			2 inches.			2½ inches.			2½ inches.			1¾ inches.		
		20.			20.			20.			20.			20.			20.		
		B¹	B²	B³	B¹	B²	B³	B¹	B²	B³	B¹	B²	B³	B¹	B²	B³	B¹	B²	B³
Actual measurement in centimillimeters.		2.25	2.50	2.00	2.25	2.25	2.50	2.00	2.50	2.25	1.50	1.75	2.00	1.50	2.00	2.00	1.50	2.00	2.50
		1.75	2.50	2.75	1.75	2.50	2.50	1.625	2.75	2.25	1.25	2.00	1.75	2.00	1.75	1.25	2.75	2.00	2.00
		2.60	2.50	2.25	1.75	2.00	2.375	2.125	2.25	2.25	1.625	2.00	2.50	1.75	2.50	2.50	2.75	1.50	2.375
		1.75	2.50	2.50	1.75	2.00	1.75	1.75	2.00	2.50	1.75	2.00	2.50	1.50	2.00	1.75	2.125	2.00	2.50
		2.25	2.50	2.75	1.50	2.25	2.00	1.25	2.00	2.50	1.50	2.00	1.75	1.575	2.00	2.00	2.50	1.75	2.25
		2.00	2.25	2.00	1.50	1.75	1.00	2.25	2.00	2.50	1.625	2.00	2.50	1.75	2.00	1.75	2.25	1.50	1.75
		1.75	2.25	1.75	1.75	2.25	2.00	2.00	2.50	2.75	1.625	1.75	2.00	1.575	2.00	2.25	2.25	1.50	1.75
		2.25	2.00	2.25	1.50	2.25	2.00	2.75	2.375	2.00	2.75	2.25	2.375	2.00	2.375	2.50	2.50	2.00	2.00
		1.00	2.25	2.25	1.50	1.25	2.125	1.75	2.25	2.25	1.75	2.25	2.25	2.25	2.375	2.25	2.25	2.25	1.75
		2.00	2.00	2.25	1.50	2.00	2.25	2.00	2.75	2.25	2.00	2.75	2.25	1.75	2.25	1.75	2.25	1.50	2.25
		1.50	2.00	2.25	2.00	1.60	2.00	1.875	2.25	2.25	1.50	2.00	2.25	2.00	2.25	2.00	1.75	1.625	2.00
		2.50	2.50	2.25	2.00	1.75	2.00	1.00	2.25	2.75	1.75	2.25	2.75	2.25	2.125	2.00	1.75	1.625	2.50
		1.375	2.50	2.00	1.50	2.25	2.50	2.25	2.50	2.75	1.625	1.75	2.00	1.75	2.00	2.375	2.50	2.25	2.00
		2.00	2.50	2.00	1.75	2.50	2.00	1.75	2.50	2.00	1.875	2.25	2.00	1.875	2.00	2.00	2.25	2.25	2.25
		2.50	2.50	2.00	1.00	1.75	2.00	1.75	2.50	2.50	1.625	2.00	2.00	2.00	2.00	2.00	2.25	1.50	2.25
		2.00	2.50	1.75	1.25	2.50	2.00	2.00	1.75	2.25	1.60	1.25	1.75	2.00	1.25	2.00	2.75	1.25	2.00
		2.00	2.00	1.75	2.00	1.75	2.125	2.00	1.75	2.25	1.625	1.75	1.50	1.50	1.125	1.25	2.25	1.50	2.00
		2.00	1.75	2.00	1.50	2.00	2.25	2.00	2.00	2.25	1.75	1.75	2.00	2.25	2.25	2.25	2.75	1.75	2.25
		2.50	2.50	2.25	1.25	2.00	1.50	2.00	2.75	2.25	1.75	1.75	1.75	2.00	2.25	2.25	2.75	1.75	2.75
		1.60	2.00	2.25	2.00	2.00	1.00	2.00	2.75	2.00	1.25	2.25	2.00	1.50	2.25	2.50	2.50	2.25	2.25
2.25	2.00	2.75	2.00	2.125	2.50	2.00	2.25	2.00	1.50	1.50	2.00	2.25	2.75	2.375	1.75	2.50	2.125		
2.00	2.50	2.00	1.25	2.00	1.50	2.75	2.50	2.25	1.50	2.50	1.75	1.625	2.00	2.375	1.75	2.25	2.50		
1.50	2.50	2.25	1.25	2.375	2.50	2.25	2.50	2.25	1.60	2.00	1.75	1.50	2.50	2.75	2.00	2.25	2.00		
1.50	2.25	2.25	1.75	2.50	1.75	2.875	1.75	2.00	1.75	2.25	1.50	1.875	2.50	2.50	2.00	1.75	2.50		
2.00	1.75	2.75	1.60	2.375	2.75	2.50	1.875	2.50	1.50	2.00	2.00	1.50	2.75	2.75	2.75	1.75	2.50		
2.50	2.00	2.25	2.125	2.375	2.00	2.00	2.575	2.75	1.50	2.25	2.00	1.625	2.00	1.625	2.75	1.875	2.50		
2.25	2.00	2.75	1.75	2.125	2.25	2.25	2.00	2.50	1.75	2.00	2.00	2.125	2.75	2.75	2.75	1.50	2.50		
1.50	2.25	2.50	1.75	2.75	2.125	2.00	1.75	2.25	1.75	2.50	1.50	1.75	2.25	2.25	2.75	1.50	2.25		
2.25	2.00	2.50	2.00	2.25	2.00	2.25	2.00	2.75	1.75	2.00	1.75	2.25	2.50	2.25	2.25	1.75	2.75		
2.25	2.00	2.00	1.50	1.75	2.00	2.50	2.00	2.00	1.75	1.50	1.75	2.25	2.25	2.75	2.75	1.625	2.75		
Averages.....		2.013	2.275	2.408	1.645	2.136	2.141	2.216	2.454	2.658	1.671	2.066	1.854	2.004	2.533	2.532	1.717	2.321	2.421
Recapitulation and reduction:		No. of section.		In centimillimeters.		In thousandths of inch.		No. of section.		In centimillimeters.		In thousandths of inch.		No. of section.		In centimillimeters.		In thousandths of inch.	
		Maximum measurements.		B¹	2.00	1.1811	B²	2.50	0.9843	B³	2.00	1.1811	B¹	2.50	0.9842	B²	2.50	0.9842	B³
Highest.....		B¹	2.00	1.1811	B²	2.00	1.1811	B³	2.50	1.3779	B¹	2.50	0.9842	B²	2.50	1.3779	B³	2.00	1.1811
Minimum measurements.		B¹	1.00	0.3037	B²	1.00	0.3037	B³	1.25	0.4921	B¹	1.25	0.4921	B²	1.50	0.5005	B³	1.25	0.4921
Lowest.....		B¹	1.75	0.6889	B²	1.25	0.4921	B³	1.75	0.6889	B¹	1.50	0.5005	B²	1.75	0.6889	B³	1.75	0.6889
Average measurements..		B¹	2.013	0.7925	B²	1.646	0.6190	B³	2.216	0.8724	B¹	1.671	0.8373	B²	2.004	0.7889	B³	1.717	0.6759
Average.....		B¹	2.275	0.8956	B²	2.136	0.6417	B³	2.454	0.9691	B¹	2.066	0.8132	B²	2.533	1.0169	B³	2.321	0.9137
Measurements above average.....		B¹	2.408	0.9450	B²	2.141	0.6429	B³	2.658	1.0404	B¹	2.054	0.7299	B²	2.532	1.0204	B³	2.421	0.9331
Measurements below average.....		B¹	2.177	0.6570	B²	1.975	0.7775	B³	2.442	0.9618	B¹	1.854	0.7338	B²	2.393	0.9421	B³	2.159	0.8476
Measurements above average.....		53			57			46			38			44			46		
Measurements below average.....		37			33			44			52			40			42		



TABLE XXVII.—Actual measurements of length, crimp, and fineness of commercial grades—Continued.

Catalogue number of samples..		A.—BOSTON GRADES.																	
		281e.			281f.			282a.			282b.			282c.			282d.		
		2½ inches.			2¾ inches.			3¼ inches.			2½ inches.			2¾ inches.			3½ inches.		
		20.			20.			16.			16.			16.			10.		
Number of section.....		B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.
Actual measurement in centimillimeters.		1.75	2.50	2.60	1.625	2.375	2.25	2.75	2.25	4.00	2.375	2.50	3.50	3.375	3.50	3.00	3.00	2.25	4.00
		2.00	2.25	2.60	1.50	2.60	2.25	2.25	3.75	3.25	1.50	2.75	3.25	3.00	2.50	2.875	2.25	2.00	2.75
		1.25	2.75	2.50	2.00	2.50	3.00	1.875	4.00	3.25	2.25	3.00	3.75	3.625	2.75	3.125	3.50	3.50	3.50
		1.75	2.50	1.75	1.75	2.25	2.25	2.00	2.75	2.875	2.50	2.75	4.00	3.25	2.875	2.75	2.25	2.50	2.25
		1.50	2.25	3.00	2.00	2.25	2.25	2.75	3.50	3.00	2.25	2.75	2.75	3.625	3.125	3.00	2.25	2.00	3.75
		1.25	2.60	2.75	1.875	2.375	2.75	2.375	3.00	3.25	2.50	2.00	3.75	2.75	3.375	3.25	2.00	2.375	3.25
		2.00	2.25	2.50	1.25	2.125	2.375	1.625	3.50	3.25	2.25	3.125	3.00	3.25	4.00	3.00	3.25	2.125	3.75
		1.25	2.60	3.00	2.00	2.25	2.50	2.25	2.75	3.00	3.00	2.00	3.75	3.00	2.25	2.50	3.00	2.60	3.75
		2.00	3.00	2.50	2.125	3.00	2.875	1.75	2.00	4.25	3.00	2.375	2.60	2.75	4.25	3.50	2.50	3.60	4.00
		1.75	1.75	2.75	1.375	2.25	2.50	2.375	2.60	3.50	1.60	2.25	2.75	2.50	3.75	3.00	1.75	2.75	3.25
		1.25	2.25	1.75	1.875	2.375	2.75	2.25	2.75	2.875	2.625	1.875	3.375	3.50	3.50	3.00	3.50	2.25	3.00
		1.75	2.75	2.75	1.50	2.625	2.50	2.00	3.25	2.75	2.125	3.25	2.375	3.25	3.375	3.50	2.00	2.875	4.25
		2.50	2.50	1.50	2.875	2.00	3.00	2.25	2.25	2.75	3.125	3.125	4.25	2.25	3.00	2.75	3.00	2.875	2.25
		2.00	1.75	2.25	2.375	2.875	2.50	3.60	2.50	2.50	2.125	2.75	3.75	4.125	3.25	3.25	2.75	2.875	2.75
		1.75	2.25	2.50	1.50	2.876	2.50	2.00	3.00	3.00	1.60	3.00	3.50	2.875	3.375	3.75	3.00	2.75	3.875
		1.25	2.09	2.25	1.25	2.50	3.00	2.00	2.50	3.60	3.00	2.50	1.875	3.00	3.75	3.625	3.00	2.75	4.00
		1.60	2.00	2.25	1.25	2.125	3.60	2.125	3.60	2.50	2.75	2.50	2.875	2.75	2.60	3.125	3.00	2.75	3.50
		2.00	1.75	2.00	1.50	2.75	3.25	1.50	2.25	2.25	2.00	3.50	3.75	2.75	2.75	3.25	3.25	3.875	3.25
		1.75	2.25	2.25	1.50	2.75	2.875	2.00	1.875	3.75	2.25	3.375	2.50	2.125	3.00	4.25	1.875	2.25	3.25
		1.25	2.00	2.25	1.75	2.60	2.00	2.50	2.50	3.25	2.25	3.00	2.75	2.25	2.625	4.00	2.75	2.00	1.50
	1.50	2.00	1.76	1.876	2.60	2.75	2.75	4.25	3.25	2.75	2.75	2.375	3.25	3.00	4.25	2.875	3.75	4.00	
	1.25	2.00	2.60	2.125	2.25	2.50	3.60	4.00	2.75	3.75	2.125	2.25	2.75	3.00	2.125	2.50	3.75	3.75	
	1.60	2.25	1.75	1.60	3.25	2.50	2.625	3.00	3.00	2.25	2.25	3.25	2.76	3.75	3.375	2.50	3.25	3.25	
	1.60	2.60	2.25	1.875	2.60	2.50	2.75	2.00	3.00	2.25	2.26	2.75	2.50	4.00	3.125	3.00	1.75	3.25	
	1.25	2.76	2.25	2.125	3.00	2.75	2.875	2.25	4.00	2.25	2.50	3.00	2.50	2.50	3.25	3.00	2.25	5.25	
	1.25	2.75	1.75	1.75	2.75	2.50	2.625	2.75	3.50	2.875	3.50	3.50	2.875	3.00	3.125	3.25	3.75	3.25	
	1.75	2.75	2.25	1.60	1.875	2.75	3.75	2.25	3.00	2.625	3.875	2.25	2.875	2.50	3.00	2.50	3.75	3.375	
	1.75	3.00	2.25	2.75	1.76	2.375	3.00	3.00	4.00	2.75	2.25	2.375	2.75	3.375	3.75	2.00	3.75	3.375	
	2.00	3.00	2.25	1.25	2.25	2.75	3.25	3.50	3.25	1.50	3.50	2.125	2.00	2.75	4.00	1.75	3.75	3.60	
	2.00	3.00	2.25	2.00	2.50	3.00	2.50	2.50	3.50	1.75	2.25	2.50	2.00	3.50	3.00	2.50	4.00	4.50	
Averages.....		1.641	2.392	2.292	1.721	2.450	2.600	2.425	2.846	3.242	2.354	2.792	2.996	2.888	3.204	3.279	2.646	2.779	3.442

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.		No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.		No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.	
		B¹.	B².		B¹.	B².		B¹.	B².		B¹.	B².		B¹.	B².		B¹.	B².
Maximum measurements.	B¹.	2.60	0.9842	B¹.	2.75	1.0828	B¹.	3.50	1.3779	B¹.	3.125	1.2303	B¹.	4.125	1.6240	B¹.	3.50	1.3779
	B².	3.00	1.1811	B².	3.00	1.1811	B².	4.25	1.6732	B².	3.875	1.5255	B².	4.25	1.6732	B².	4.00	1.5748
	B³.	3.00	1.1811	B³.	3.25	1.2795	B³.	4.25	1.6732	B³.	4.25	1.6732	B³.	4.25	1.6732	B³.	5.25	2.0669
Highest.....		3.00	1.1811		3.25	1.2795		4.25	1.6732		4.25	1.6732		4.25	1.6732		5.25	2.0669
Minimum measurements.	B¹.	1.25	0.4921	B¹.	1.25	0.4921	B¹.	1.60	0.5905	B¹.	1.50	0.5905	B¹.	2.00	0.7874	B¹.	1.75	0.6989
	B².	1.75	0.6889	B².	1.76	0.6889	B².	1.875	0.7380	B².	1.875	0.7380	B².	2.25	0.8858	B².	1.75	0.6889
	B³.	1.50	0.6905	B³.	2.25	0.8858	B³.	2.25	0.8858	B³.	1.875	0.7380	B³.	2.75	1.0936	B³.	1.50	0.5905
Lowest.....		1.25	0.4921		1.25	0.4921		1.50	0.5905		1.60	0.5905		2.00	0.7874		1.50	0.5905
Average measurements..	B¹.	1.641	0.6460	B¹.	1.721	0.6775	B¹.	2.425	0.9547	B¹.	2.354	0.9267	B¹.	2.883	1.1350	B¹.	2.646	1.0417
	B².	2.392	0.9417	B².	2.450	0.9645	B².	2.846	1.1204	B².	2.792	1.0992	B².	3.204	1.2614	B².	2.779	1.0940
	B³.	2.292	0.9028	B³.	2.600	1.0238	B³.	3.242	1.2703	B³.	2.996	1.1795	B³.	3.279	1.2909	B³.	3.442	1.3551
Average.....		2.108	0.8290		2.257	0.8885		2.838	1.1173		2.714	1.085		3.122	1.2291		2.956	1.1637
Measurements above average..		46			46			43			48			42			47	
Measurements below average..		44			44			47			42			48			43	



TABLE XXVII.—Actual measurements of length, crimp, and fineness of commercial grades—Continued.

A.—BOSTON GRADES.																		
Catalogue number of samples..	283a.			283b.			283c.			284a.			284b.			285a.		
Length of fiber in crimp.....	3½ inches.			3¼ inches.			3½ inches.			3½ inches.			3½ inches.			3½ inches.		
Number of crimps per inch....	20.			20.			20.			14.			14.			14.		
Number of section .....	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.
	2.00	2.00	1.75	1.50	2.00	1.875	1.625	3.50	2.75	1.75	2.00	3.00	3.25	2.75	2.00	2.00	2.50	3.00
	1.25	2.60	2.50	1.60	2.25	2.00	2.00	2.75	2.00	2.75	2.875	4.25	3.875	3.50	2.75	2.75	2.625	3.00
	2.00	2.50	2.75	1.75	2.00	1.60	1.60	1.875	2.375	3.00	1.875	2.50	3.00	2.75	3.00	2.50	2.625	2.50
	1.875	3.00	2.00	1.75	2.375	1.75	1.75	2.25	2.25	2.25	2.50	2.375	3.75	1.50	1.875	2.50	3.00	2.75
	1.50	1.75	2.25	2.00	2.625	2.00	2.00	1.50	2.50	1.25	2.25	2.00	3.25	2.875	2.75	2.875	3.00	2.60
	1.50	2.25	2.75	1.75	2.75	2.00	1.75	2.375	2.50	1.25	2.25	3.50	3.00	2.625	2.75	1.875	2.75	2.60
	2.00	2.00	2.00	2.25	2.00	2.00	2.00	2.125	1.75	2.75	1.875	2.00	2.50	2.125	2.875	2.00	2.75	3.25
	1.50	2.25	2.50	1.50	2.25	1.875	1.875	2.25	2.00	2.25	2.00	3.00	3.00	2.25	3.50	2.25	2.75	3.00
	2.00	2.00	2.50	1.75	2.50	1.75	1.75	2.00	3.00	3.25	2.75	2.75	2.50	2.00	2.50	2.25	2.75	2.00
	1.75	2.75	2.75	1.75	2.00	2.00	2.00	1.75	2.25	2.00	1.75	3.25	2.00	3.00	3.00	2.60	2.875	2.75
	1.75	2.25	2.00	1.75	1.75	2.00	2.00	2.00	2.00	2.875	1.75	2.50	4.00	2.25	3.25	3.00	2.125	3.00
	2.00	2.25	2.00	1.875	2.125	1.75	1.75	2.00	2.25	1.50	1.60	3.50	2.00	3.25	3.25	2.25	2.25	2.875
	1.875	1.875	3.00	1.75	2.50	2.50	2.50	1.75	1.50	1.75	3.50	3.50	2.50	3.60	2.50	2.00	2.25	2.25
	1.75	2.25	2.50	2.00	2.25	2.00	2.00	2.125	2.50	1.25	2.75	3.00	2.25	2.25	2.75	2.25	2.875	3.60
	1.75	2.00	2.00	1.75	3.125	2.00	1.50	2.50	1.75	1.875	2.75	1.50	2.50	2.25	2.25	2.50	3.125	2.25
	2.00	2.50	2.125	1.75	2.875	1.875	2.50	1.75	2.25	2.00	1.75	2.75	2.00	3.50	2.75	3.00	2.75	2.75
	1.75	1.75	2.50	1.75	1.75	2.00	1.75	1.75	2.50	2.25	2.00	4.00	3.50	2.375	2.50	3.25	3.25	2.25
	1.50	1.50	2.50	2.00	2.00	2.50	2.00	2.25	3.25	2.375	1.75	3.25	2.75	3.50	2.75	2.75	2.50	2.60
	2.00	2.25	2.373	1.50	2.25	2.00	1.75	2.00	1.50	1.50	2.125	3.00	2.625	1.75	3.25	2.25	2.00	2.875
	2.00	2.00	2.125	2.125	2.25	2.00	1.75	2.00	2.75	1.50	2.25	3.00	2.875	2.25	3.25	2.375	3.00	3.00
	1.75	1.75	1.75	1.875	2.25	1.75	2.00	2.50	2.25	2.50	2.50	2.25	3.60	2.875	2.60	2.125	2.75	3.25
	2.00	1.75	3.00	1.75	2.50	2.375	3.00	2.75	2.60	1.50	1.75	2.75	3.60	2.25	3.00	2.125	2.50	2.25
	2.25	2.00	2.00	1.50	2.375	2.125	1.875	2.25	2.25	1.75	2.00	4.00	2.60	2.25	2.50	2.375	3.25	2.60
	2.00	2.50	2.00	1.75	2.25	1.75	2.00	2.75	3.00	1.25	2.00	2.50	3.50	3.00	2.50	1.875	2.75	2.25
	2.25	1.75	2.125	1.75	2.25	2.00	2.00	1.75	1.75	1.75	2.00	2.50	2.00	3.75	3.60	2.75	2.125	3.00
	1.75	2.25	1.75	1.625	2.00	1.75	2.25	2.875	1.75	1.25	2.50	2.00	2.75	3.25	2.50	3.00	3.25	3.00
	1.50	2.75	1.50	1.875	2.50	1.75	2.50	2.25	2.25	1.25	3.50	4.00	3.00	3.00	2.50	2.50	2.75	2.60
	1.75	1.60	2.875	1.50	2.75	2.00	1.75	1.75	2.25	1.125	2.00	3.00	3.00	2.75	3.25	2.50	2.75	2.125
	1.75	2.25	2.25	1.75	2.25	1.875	1.50	3.75	2.875	1.375	3.00	4.25	2.50	2.375	2.75	2.50	2.60	2.875
	1.50	2.25	2.00	1.875	1.75	1.75	1.75	2.375	2.25	2.25	2.00	2.75	2.00	3.25	2.50	2.00	3.00	2.375
Averages.....	1.808	2.146	2.271	1.766	2.250	1.942	1.950	2.283	2.329	1.708	2.270	3.012	2.740	2.708	2.742	2.350	2.725	2.687

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:															
Maximum measurements:	B¹	2.25	0.8858	B¹	2.25	0.8858	B¹	3.00	1.1811	B¹	2.75	1.0826	B¹	3.75	1.4763
	B²	3.00	1.1811	B²	2.875	1.1318	B²	3.50	1.3779	B²	3.50	1.3779	B²	3.75	1.4763
	B³	3.00	1.1811	B³	2.50	0.9842	B³	3.25	1.2705	B³	4.25	1.6732	B³	3.50	1.3779
Highest.....		3.00	1.1811		2.875	1.1318		3.50	1.3779		4.25	1.6732		3.75	1.4763
Minimum measurements:	B¹	1.25	0.4921	B¹	1.50	0.5905	B¹	1.50	0.5905	B¹	1.125	0.4429	B¹	2.00	0.7874
	B²	1.50	0.5905	B²	1.75	0.6889	B²	1.50	0.5905	B²	1.50	0.5905	B²	1.50	0.5905
	B³	1.50	0.5905	B³	1.50	0.5905	B³	1.50	0.5905	B³	1.50	0.5905	B³	1.875	0.7380
Lowest.....		1.25	0.4921		1.50	0.5905		1.50	0.5905		1.125	0.4429		1.50	0.5905
Average measurements..	B¹	1.808	0.7118	B¹	1.766	0.6952	B¹	1.950	0.7677	B¹	1.708	0.6724	B¹	2.746	1.0811
	B²	2.146	0.8443	B²	2.250	0.8803	B²	2.283	0.8988	B²	2.270	0.8972	B²	2.708	1.0661
	B³	2.271	0.8940	B³	1.942	0.7645	B³	2.329	0.9109	B³	3.012	1.1858	B³	2.742	1.0795
Average.....		2.075	0.8169		1.989	0.7830		2.187	0.8610		2.333	0.9085		2.732	1.0755
Measurements above average.....		30			49			45			39			48	
Measurements below average.....		60			41			45			61			42	



TABLE XXVII.—Actual measurements of length, crimp, and fineness of commercial grades—Continued.

		A.—BOSTON GRADES.																	
Catalogue number of samples..		285b.			285c.			286a.			286b.			286c.			286d.		
Length of fiber in crimp .....		4½ inches.			4 inches.			4½ inches.			4½ inches.			5½ inches.			4½ inches.		
Number of crimps per inch....		14			14			10			10			10			10		
Number of section.....		B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.
Actual measurement in centimillimeters.		2.00	2.25	2.75	3.50	3.00	2.75	2.25	2.25	2.25	1.50	3.25	3.25	2.75	2.625	2.50	2.50	2.875	2.75
		2.00	2.50	2.50	3.25	3.50	2.75	2.00	3.00	2.50	1.75	2.50	1.75	2.75	2.25	3.50	2.25	2.25	2.875
		2.25	2.125	1.75	2.75	3.50	2.25	3.00	2.00	2.00	1.50	3.25	2.00	2.25	2.75	3.00	2.25	2.75	3.00
		1.375	2.125	2.00	2.00	3.50	3.25	2.75	3.25	2.50	2.00	3.25	2.75	2.00	3.00	3.25	3.00	3.50	3.00
		2.00	2.25	1.75	2.25	2.75	2.00	2.25	2.75	2.00	2.00	3.50	2.25	2.00	3.00	3.25	3.00	3.50	3.00
		2.25	2.50	2.00	2.00	3.00	2.50	2.50	3.875	2.75	1.375	4.00	4.00	2.25	2.50	3.00	2.60	3.125	3.00
		2.60	1.75	1.75	2.25	2.50	2.50	2.50	4.00	2.25	1.625	2.25	2.50	2.50	2.50	3.50	2.25	2.75	3.00
		2.375	2.375	2.50	1.75	3.50	2.75	2.75	2.25	2.375	2.625	1.75	2.25	2.50	2.50	3.00	2.60	2.25	3.00
		2.125	2.75	2.50	1.75	2.50	3.75	3.25	2.75	3.00	1.75	2.00	2.00	3.00	3.00	2.50	3.125	2.875	2.50
		1.75	3.25	3.25	2.50	2.75	2.75	3.50	3.75	2.00	1.25	2.25	2.25	2.75	3.00	3.00	2.75	3.50	3.25
		2.125	1.75	2.375	2.25	3.25	2.75	2.50	2.375	3.375	2.00	2.00	2.50	2.50	3.00	2.00	2.50	3.00	3.00
		1.875	1.75	3.00	2.25	3.50	2.75	2.25	3.00	2.50	1.00	3.00	2.00	2.50	3.125	2.75	3.00	3.375	2.00
		2.00	2.50	2.50	3.00	3.50	2.50	2.25	2.375	2.75	1.50	2.50	2.50	2.50	3.50	2.75	2.50	2.50	2.50
		2.00	3.00	2.50	2.00	2.75	2.00	3.00	2.25	3.50	2.00	2.75	2.75	2.75	3.25	2.25	2.50	3.00	2.75
		2.125	2.25	2.00	2.00	3.50	2.50	3.00	2.25	2.00	1.50	2.50	2.25	3.00	3.00	2.00	2.75	2.75	3.00
		2.25	2.50	2.00	2.125	4.00	2.75	2.50	3.00	2.75	2.00	1.75	3.25	2.50	3.25	2.50	2.00	2.875	2.25
		2.25	3.25	2.25	2.375	3.00	3.25	3.50	2.50	3.375	1.50	1.75	2.00	1.50	3.00	3.50	2.50	2.50	3.25
		2.75	2.50	1.75	2.50	3.00	2.875	3.25	1.75	3.00	2.25	2.75	4.50	2.75	2.50	2.50	2.875	3.00	3.125
		2.25	2.00	2.50	3.00	3.25	3.00	2.25	2.875	3.00	2.00	2.50	2.25	2.25	3.50	2.50	2.50	2.25	2.75
		3.00	2.50	2.25	2.60	3.00	3.25	2.75	3.50	2.75	1.75	3.25	2.25	3.50	2.25	2.00	2.50	2.00	3.25
		2.50	2.25	3.00	3.00	2.25	3.00	2.625	2.50	3.25	2.00	2.50	3.00	2.50	2.50	2.50	2.50	2.00	3.00
		1.875	1.875	2.375	2.50	3.00	3.00	2.60	2.25	2.50	2.00	2.00	2.50	3.125	2.875	3.00	2.50	2.50	3.00
		2.00	2.75	2.50	2.00	3.50	2.75	2.625	2.375	2.25	2.00	3.50	2.50	2.625	2.375	3.25	2.50	3.00	2.50
		2.125	2.25	2.75	1.75	3.25	3.375	2.75	2.875	2.25	1.875	1.75	4.00	2.50	2.75	2.75	2.875	2.625	3.00
		2.00	2.75	1.75	2.50	3.25	3.125	2.75	2.25	2.50	1.75	2.00	3.50	2.875	4.125	2.50	2.875	2.25	2.75
		2.625	2.50	2.50	2.25	3.00	2.75	1.75	2.75	2.375	2.00	2.25	1.75	1.875	3.375	2.75	3.00	2.375	2.00
		2.25	2.50	2.00	1.75	3.50	3.375	3.00	3.50	2.00	2.25	3.00	2.00	2.75	3.125	2.00	2.25	3.00	2.75
		2.25	2.50	3.00	1.75	2.25	2.125	2.50	3.50	3.00	1.75	3.00	3.50	2.00	2.875	3.25	3.50	2.75	1.75
		2.00	2.50	2.00	2.00	2.75	2.50	3.25	3.00	3.25	1.50	2.00	3.50	2.75	3.25	2.50	2.50	1.50	2.75
		2.375	1.75	3.25	2.50	2.75	3.25	2.25	2.375	2.50	1.75	2.50	4.50	3.50	2.00	3.25	2.75	2.00	3.375
Averages.....		2.183	2.379	2.217	2.300	3.002	2.864	2.700	2.771	2.642	1.808	2.575	2.607	2.607	2.671	2.725	2.617	2.654	2.817

		No. of section.			No. of section.			No. of section.			No. of section.			No. of section.			No. of section.					
		In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.					
Recapitulation and reduction:		B¹.	3.90	1.1811	B¹.	3.50	1.3779	B¹.	3.75	1.4783	B¹.	2.625	1.0334	B¹.	4.00	1.5748	B¹.	3.50	1.3779			
Maximum measurements.		B².	3.25	1.2795	B².	4.00	1.5748	B².	4.00	1.5748	B².	4.00	1.5748	B².	4.125	1.6240	B².	3.50	1.3779	B².	3.50	1.3779
		B³.	3.25	1.2795	B³.	3.75	1.4763	B³.	3.50	1.3779	B³.	4.50	1.7716	B³.	3.50	1.3779	B³.	3.375	1.3287	B³.	3.375	1.3287
Highest .....		3.25 1.2795		4.00 1.5748		4.00 1.5748		4.50 1.7716		4.125 1.6240		4.125 1.6240		3.50 1.3779		3.50 1.3779						
Minimum measurements.		B¹.	1.375	0.5413	B¹.	1.75	0.6889	B¹.	1.75	0.6889	B¹.	1.25	0.4921	B¹.	1.50	0.5905	B¹.	2.00	0.7874	B¹.	2.00	0.7874
		B².	1.75	0.6889	B².	2.25	0.8858	B².	1.75	0.6889	B².	1.75	0.6889	B².	2.00	0.7874	B².	1.50	0.5905	B².	1.50	0.5905
		B³.	1.75	0.6889	B³.	2.00	0.7874	B³.	2.00	0.7874	B³.	1.75	0.6889	B³.	1.875	0.7580	B³.	1.75	0.6889	B³.	1.75	0.6889
Lowest .....		1.375 0.5413		1.75 0.6889		1.75 0.6889		1.25 0.4921		1.50 0.5905		1.50 0.5905		1.50 0.5905		1.50 0.5905						
Average measurements.		B¹.	2.183	0.8594	B¹.	2.300	0.9055	B¹.	2.700	1.0629	B¹.	1.808	0.7118	B¹.	2.607	1.0499	B¹.	2.817	1.0303	B¹.	2.817	1.0303
		B².	2.379	0.9968	B².	3.092	1.2173	B².	2.771	1.0909	B².	2.575	1.0137	B².	2.871	1.1303	B².	2.654	1.0448	B².	2.654	1.0448
		B³.	2.217	0.8728	B³.	2.804	1.1039	B³.	2.642	1.0401	B³.	2.607	1.0499	B³.	2.725	1.0728	B³.	2.817	1.1050	B³.	2.817	1.1050
Average .....		2.260 0.8897		2.732 1.0755		2.704 1.0645		2.350 0.9251		2.754 1.0842		2.636 1.0614		2.636 1.0614								
Measurements above average.		43		58		43		35		38		52		52								
Measurements below average.		47		37		47		65		38		60		60								



TABLE XXVII.—Actual measurements of length, crimp, and fineness of commercial grades—Continued.

		A.—BOSTON GRADES.																	
Catalogue number of samples..		287a.			287b.			287c.			287d.			288a.			288b.		
Length of fiber in crimp.....		8 inches.			6½ inches.			6½ inches.			6½ inches.			3 inches.			2½ inches.		
Number of crimps per inch....		—			—			—			—			—			—		
Number of section.....		B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.
Actual measurement in centimillimeters.	3.50	3.125	3.50	3.00	3.125	4.25	3.625	3.25	3.25	3.25	3.75	6.00	3.50	3.50	3.50	4.50	2.50	3.50	
	3.50	3.50	4.00	3.50	4.00	4.00	3.125	3.25	4.25	4.00	3.50	5.50	3.75	3.75	3.75	3.00	3.75	3.75	
	2.50	3.25	3.50	3.50	3.25	4.00	4.00	4.25	3.25	2.125	3.25	5.50	3.00	3.00	3.00	3.75	3.75	4.00	
	3.75	3.50	3.00	3.75	3.50	4.50	3.75	3.75	3.50	1.75	1.75	3.50	3.75	3.75	3.75	3.25	2.875	3.25	
	3.00	2.50	3.375	3.00	4.50	2.50	2.50	3.25	3.375	2.50	3.00	3.00	3.00	3.00	3.00	3.75	2.50	3.00	
	3.00	3.75	4.00	3.00	3.75	3.75	3.25	3.25	3.375	3.00	2.50	5.75	3.00	3.00	3.00	3.25	2.25	2.25	
	2.625	2.75	2.50	3.00	4.375	3.00	3.25	3.375	3.25	3.25	3.25	4.375	3.00	4.375	3.50	3.50	2.875	4.625	
	3.75	3.00	2.50	4.25	3.00	4.125	2.50	3.50	3.125	3.50	3.00	5.25	3.50	4.75	3.50	3.50	2.50	2.75	
	4.00	2.875	3.50	3.75	4.50	4.25	3.25	3.75	3.50	2.00	3.75	4.75	3.75	4.75	3.875	3.875	3.50	5.50	
	3.25	3.00	2.75	4.75	3.125	4.00	3.75	3.375	3.00	3.75	3.00	5.75	3.00	5.75	3.50	3.25	2.375	2.50	
	3.125	3.25	3.125	3.50	3.75	5.00	3.25	3.25	2.75	2.875	2.75	4.50	2.75	4.50	3.875	2.75	2.25	3.75	
	3.00	3.75	2.25	4.75	3.875	3.25	2.50	2.75	3.25	4.875	2.25	4.25	3.75	4.25	3.50	2.75	2.50	2.75	
	3.50	2.72	3.75	3.25	4.00	3.25	3.50	3.75	3.50	3.125	2.125	4.00	4.00	2.625	2.75	3.25	2.875	4.75	
	3.375	2.875	3.50	4.00	3.75	3.625	3.50	3.50	3.00	2.00	3.00	5.25	3.50	3.50	2.875	3.50	1.625	2.75	
	2.75	2.75	3.00	3.75	3.625	3.00	3.625	4.25	3.50	2.00	2.75	5.00	3.75	3.75	3.875	3.875	3.50	2.50	
	2.50	2.00	3.50	3.50	4.50	3.625	3.00	4.00	3.625	4.25	2.75	5.50	3.00	3.875	3.00	3.50	1.75	2.25	
	3.00	2.50	2.625	3.00	3.875	3.00	3.25	3.75	3.60	3.75	3.00	3.75	3.00	3.875	3.125	2.75	3.75	4.00	
	2.75	2.875	4.00	3.25	3.25	5.00	3.50	3.625	3.375	3.25	3.00	3.875	3.00	3.375	2.50	3.00	1.375	3.00	
	2.25	2.50	2.50	3.75	2.50	4.25	3.00	4.125	3.50	4.25	3.75	3.25	3.75	3.25	3.50	3.00	2.75	2.50	
	3.375	2.25	2.75	3.75	4.25	4.25	3.75	3.25	2.75	2.50	4.00	4.00	4.00	4.00	2.75	4.00	3.00	3.50	
2.875	2.75	4.00	4.25	4.50	4.00	3.125	3.50	3.50	2.50	2.25	2.50	2.25	2.50	2.75	3.00	2.00	2.50		
3.125	3.25	2.875	3.25	3.75	4.00	3.125	3.50	3.875	2.00	2.00	3.50	3.50	3.75	3.00	3.75	2.25	3.25		
3.75	3.375	3.25	3.00	3.75	4.00	3.00	3.50	2.75	3.875	2.25	4.25	3.50	4.25	3.50	3.50	1.75	2.25		
2.25	2.50	3.125	3.75	4.00	4.25	3.875	3.50	3.875	2.00	3.00	4.50	3.75	4.00	4.00	4.25	4.25	5.00		
2.75	2.75	2.25	3.625	4.125	4.50	3.50	3.25	3.00	2.75	4.75	5.00	3.25	4.00	3.875	3.875	3.75	4.375		
3.75	3.375	3.25	3.00	3.75	4.00	3.00	4.00	3.25	1.75	3.25	3.00	3.25	3.00	2.875	3.25	1.75	4.00		
3.00	2.125	3.00	3.50	3.25	3.75	3.875	3.50	3.50	2.50	2.50	3.50	3.50	3.50	2.50	2.50	3.00	3.00		
3.50	3.00	3.00	2.625	3.25	3.75	3.875	3.50	3.375	2.50	3.50	3.50	3.50	3.50	2.50	3.50	3.875	3.75		
3.75	2.50	2.50	3.625	3.50	5.00	3.875	3.75	2.75	2.25	3.25	3.25	3.25	3.25	3.25	3.50	3.50	5.50		
3.75	2.50	2.50	3.625	3.50	5.00	3.875	3.75	2.75	2.25	3.25	3.25	3.25	3.25	3.25	3.50	3.50	4.75		
Averages.....	3.108	2.867	3.167	3.521	3.725	4.188	3.308	3.575	3.287	2.871	3.008	4.431	3.263	3.388	3.425	2.525	3.233	4.750	

		No. of section.			No. of section.			No. of section.			No. of section.			No. of section.					
		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.				
Recapitulation and reduction:	Maximum measurements {	B¹	4.00	1.5748	B¹	5.00	1.9685	B²	4.00	1.5748	B¹	4.375	1.7224	B¹	4.25	1.6732	B¹	4.50	1.7710
		B²	3.75	1.4763	B²	4.50	1.7716	B³	4.25	1.6732	B²	4.75	1.8700	B²	4.00	1.5748	B²	5.00	1.9685
		B³	4.25	1.6732	B³	5.00	2.3622	B³	4.25	1.6732	B³	5.00	2.3622	B³	4.25	1.6732	B³	0.75	2.6574
Highest.....	4.25	1.6732	6.00	2.3622	4.25	1.6732	6.00	2.3622	4.25	1.6732	6.75	2.6574							
Minimum measurements {	B¹	2.25	0.8856	B¹	2.50	0.9842	B¹	2.50	0.9842	B¹	1.75	0.6880	B¹	2.50	0.9842	B¹	1.375	0.5413	
	B²	2.00	0.7874	B²	2.75	1.0626	B²	2.75	1.0626	B²	1.75	0.6880	B²	2.75	1.0626	B²	2.25	0.8856	
	B³	2.25	0.8856	B³	3.25	1.2706	B³	2.75	1.0626	B³	2.50	0.9842	B³	2.75	1.0626	B³	3.25	1.2705	
Lowest.....	2.00	0.7874	2.50	0.9842	2.50	0.9842	1.75	0.6880	2.50	0.9842	1.375	0.5413							
Average measurements.. {	B²	3.108	1.2226	B¹	3.521	1.3662	B²	3.308	1.3023	B¹	3.871	1.1903	B¹	3.263	1.2540	B¹	2.525	0.9940	
	B²	2.867	1.1287	B²	3.725	1.4085	B²	3.575	1.4074	B²	3.008	1.1842	B²	3.388	1.3388	B²	3.233	1.2729	
	B³	3.167	1.2408	B³	4.188	1.6888	B³	3.287	1.2940	B³	4.431	1.7405	B³	3.425	1.3484	B³	4.750	1.8700	
Average.....	3.047	1.1906	3.511	1.5003	3.300	1.3346	3.433	1.3615	3.369	1.3224	3.608	1.3791							
Measurements above average..	41		40		42		40		52		37								
Measurements below average..	42		50		48		59		33		47								



XXVII.—Actual measurements of length, crimp, and fineness of commercial grades—Continued.

Catalogue number of samples..	A.—BOSTON GRADES.									B.—PHILADELPHIA GRADES.								
	289a.			289b.			260c.			200.			201.			202.		
	2½ inches.			3 inches.			5 inches.			1½ inches.			1¾ inches.			1½ inches.		
	—			—			—			26.			26.			22.		
Number of section .....	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.
Actual measurement in centimillimeters.	2.125	2.375	2.00	2.25	2.625	2.625	5.25	2.75	4.75	1.50	1.75	1.625	1.125	2.75	1.50	1.625	2.125	2.00
	2.75	2.00	2.25	2.50	2.25	2.75	2.25	1.75	5.50	1.75	1.75	1.50	1.50	2.00	1.50	1.50	1.875	1.75
	2.75	2.00	2.375	2.00	2.625	3.75	5.00	2.375	4.25	1.25	2.00	2.00	1.625	1.75	1.75	1.50	1.75	1.75
	2.25	2.25	2.50	1.875	2.625	3.375	2.25	3.25	7.50	1.25	1.50	1.50	1.375	2.00	1.75	1.75	1.75	2.125
	2.375	2.75	1.75	2.25	3.375	3.125	2.875	2.25	5.75	1.625	1.75	1.25	1.50	1.875	1.75	1.75	1.50	1.50
	2.375	2.25	3.00	2.25	2.875	2.50	2.50	4.625	4.75	1.75	2.125	1.50	1.25	1.75	1.625	1.375	1.75	1.75
	2.75	1.75	1.50	2.75	2.625	1.75	2.25	2.25	7.00	1.50	1.375	1.50	1.50	1.875	1.875	1.875	1.50	1.50
	2.00	2.50	2.50	2.00	2.125	8.50	2.50	2.25	4.00	1.50	2.00	1.50	1.50	2.00	1.50	1.50	1.75	1.50
	2.50	2.00	1.875	3.50	2.25	3.00	2.50	2.25	4.75	1.375	2.25	1.375	1.25	2.00	1.75	1.50	1.625	2.50
	2.375	2.00	1.75	2.875	2.625	2.875	2.00	3.00	5.75	1.125	2.25	2.25	1.50	2.00	1.50	1.75	1.75	1.75
	2.375	1.75	1.875	2.875	3.25	3.00	2.75	3.00	6.00	1.25	1.75	1.50	1.75	1.75	1.50	1.75	1.875	1.875
	2.625	1.875	3.25	2.75	3.00	2.75	1.75	2.25	5.50	1.50	2.25	2.25	1.50	2.00	1.625	1.75	1.875	1.25
	2.25	1.75	1.875	1.75	2.00	3.375	2.50	2.00	5.75	1.625	2.00	1.875	1.75	1.75	1.50	1.75	2.125	1.875
	2.75	1.50	2.00	2.50	2.125	2.875	1.50	3.375	3.50	1.375	2.00	1.25	2.00	1.50	1.50	1.75	2.00	1.75
	2.50	2.25	1.75	2.625	2.875	3.50	1.75	2.25	6.00	1.50	2.00	1.75	1.25	1.875	1.50	1.75	2.00	1.50
	2.00	2.00	2.50	2.75	2.625	2.50	2.25	2.50	5.25	1.25	1.75	1.50	1.60	1.75	1.25	1.625	2.00	1.75
	2.125	1.50	2.125	2.75	3.25	3.25	1.75	3.00	5.75	1.25	1.75	1.50	1.75	2.00	1.625	1.625	2.00	1.75
	3.125	2.25	2.375	2.50	3.75	2.50	1.25	2.75	6.00	1.25	1.50	1.625	1.25	2.00	1.75	1.75	2.125	1.75
	2.625	1.425	2.25	1.75	2.00	2.625	1.625	3.00	5.25	1.375	1.875	1.75	1.75	1.50	1.625	1.75	1.50	1.50
	2.50	1.625	1.75	3.00	3.25	3.75	2.625	2.375	4.50	1.25	2.50	1.50	1.50	2.25	1.375	1.50	2.00	1.75
	2.375	1.875	2.25	2.375	2.75	3.50	2.00	2.625	4.25	1.50	2.00	1.75	1.375	1.50	1.75	1.60	1.75	2.00
	2.00	1.625	2.50	2.625	3.00	3.00	2.00	2.25	6.25	1.50	1.50	1.75	1.375	1.50	1.25	1.50	2.50	2.00
	3.00	1.75	1.875	2.75	3.00	2.75	1.50	2.50	4.00	1.50	2.125	1.75	1.25	2.25	1.625	1.50	1.50	1.50
	2.875	1.875	1.75	2.25	3.00	2.75	2.50	2.375	4.50	1.25	1.875	1.375	1.125	1.75	1.75	1.625	2.00	2.00
	2.75	1.50	1.75	2.50	3.125	3.00	2.25	4.75	5.00	1.25	2.125	2.00	1.50	2.25	1.50	1.50	2.25	1.875
	2.625	2.00	1.875	2.75	2.50	2.375	1.75	2.75	5.50	1.50	2.00	1.875	1.50	1.75	1.75	1.375	2.25	1.50
	2.50	1.75	2.375	3.25	3.50	3.00	1.75	2.00	5.50	1.50	1.875	1.50	1.50	2.00	1.625	1.625	2.00	1.875
	2.50	1.50	1.25	2.50	3.00	2.50	2.00	2.25	6.75	1.25	2.875	2.00	1.50	1.75	1.25	1.625	2.00	1.875
	2.75	2.125	3.00	2.25	3.25	3.50	2.50	2.25	6.00	1.375	1.75	1.50	1.625	1.875	1.50	1.75	2.25	1.875
	Averages.....	2.488	1.942	2.133	2.529	2.758	2.979	2.288	2.654	5.125	1.404	1.950	1.654	1.483	1.917	1.575	1.625	1.900

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.						
Maximum measurements.	B¹	3.125	1.2308	B¹	3.50	1.3779	B¹	5.25	2.0669	B¹	1.75	0.6889	B¹	2.00	0.7874	B¹	1.875	0.7380
	B²	2.75	1.0826	B²	3.75	1.4768	B²	4.75	1.8700	B²	2.875	1.1318	B²	2.75	1.0826	B²	2.50	0.9842
	B³	3.25	1.2795	B³	3.75	1.4763	B³	7.50	2.9527	B³	2.25	0.8858	B³	1.875	0.7380	B³	2.125	0.8366
Highest.....		3.25	1.2795		3.75	1.4763		7.50	2.9527		2.875	1.1318		2.75	1.0826		2.50	0.9842
Minimum measurements.	B¹	2.00	0.7874	B¹	1.75	0.6889	B¹	1.25	0.4921	B¹	1.25	0.4921	B¹	1.125	0.4429	B¹	1.25	0.4921
	B²	1.50	0.5365	B²	2.00	0.7874	B²	1.75	0.6889	B²	1.50	0.5905	B²	1.50	0.5905	B²	1.50	0.5905
	B³	1.25	0.4921	B³	2.50	0.9842	B³	3.50	1.3779	B³	1.25	0.4921	B³	1.25	0.4921	B³	1.25	0.4921
Lowest.....		1.25	0.4921		1.75	0.6889		1.25	0.4921		1.25	0.4921		1.125	0.4429		1.25	0.4921
Average measurements..	B¹	2.483	0.9775	B¹	2.529	0.9956	B¹	2.288	0.9007	B¹	1.404	0.5527	B¹	1.483	0.5898	B¹	1.625	0.6297
	B²	1.942	0.7645	B²	2.758	1.0858	B²	2.654	1.0448	B²	1.950	0.7677	B²	1.917	0.7547	B²	1.900	0.7480
	B³	2.133	0.8307	B³	2.979	1.1726	B³	5.125	2.0177	B³	1.654	0.6511	B³	1.575	0.6200	B³	1.754	0.6905
Average.....		2.188	0.8006		2.755	1.0846		3.356	1.3212		1.609	0.6570		1.658	0.6527		1.760	0.6929
Measurements above average.....		45			37			5			40			42				82
Measurements below average.....		45			40			85			50			48				68



TABLE XXVII.—Actual measurements of length, crimp, and fineness of commercial grades—Continued.

		B.—PHILADELPHIA GRADES.																	
Catalogue number of samples..		293.			294.			295a.			295b.			295c.			296.		
Length of fiber in crimp.....		2 inches.			2 inches.			1½ inches.			2 inches.			2½ inches.			2½ inches.		
Number of crimps per inch....		22			26			26			26			26			22		
Number of section.....		B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .
Actual measurement in centimillimeters.	1.00	1.50	2.25	1.125	1.50	1.75	1.625	1.75	1.625	1.50	1.75	1.50	1.50	1.75	2.00	1.375	1.75	1.75	1.75
	1.50	1.25	1.25	1.25	2.00	1.75	1.50	2.00	2.25	1.60	2.00	2.25	1.60	2.00	1.75	1.375	1.60	1.75	2.125
	1.625	1.25	2.125	1.875	1.00	1.375	1.75	1.75	1.875	1.125	1.75	1.75	1.75	1.25	1.375	1.75	1.125	1.50	2.00
	1.96	1.25	1.50	1.25	1.00	1.50	2.25	2.125	2.50	1.875	1.675	2.00	1.25	1.50	1.625	1.50	1.50	1.75	1.75
	1.25	1.625	1.50	1.50	2.00	1.50	1.75	2.125	2.00	1.125	1.75	2.00	1.60	1.75	2.00	2.00	2.00	2.00	2.00
	1.25	1.25	1.375	1.25	1.50	1.75	1.75	1.925	1.25	1.25	1.75	1.50	1.60	1.675	1.375	1.75	1.25	1.75	1.75
	1.375	1.75	1.50	1.25	1.75	1.50	2.25	1.75	1.625	1.50	1.675	2.00	1.125	1.60	1.75	1.75	2.25	2.25	2.25
	1.125	1.375	1.50	1.25	1.75	1.875	1.875	1.625	1.75	1.75	1.75	1.625	1.625	2.25	1.75	1.375	2.25	2.25	2.25
	0.875	1.25	1.50	1.25	1.375	1.75	1.75	2.00	1.75	1.75	1.625	1.625	1.625	1.60	2.00	1.375	2.25	2.50	2.50
	0.875	1.25	2.00	1.875	1.75	1.75	1.625	1.625	2.125	1.75	1.75	1.75	1.75	1.625	1.75	2.00	1.125	2.60	2.00
	1.00	1.875	1.625	1.125	1.75	1.75	1.875	1.625	1.875	1.25	1.625	1.50	1.75	1.60	2.25	1.25	1.60	2.125	2.125
	1.375	1.60	1.50	1.25	1.625	1.875	1.60	1.625	1.625	1.25	1.75	1.50	1.60	1.60	2.00	1.50	1.75	1.75	1.75
	1.375	1.125	1.50	0.75	1.60	1.625	1.60	2.25	1.75	1.875	1.625	1.875	1.60	1.875	1.60	1.60	1.60	1.60	2.25
	1.25	1.25	1.25	1.25	1.50	1.875	1.625	1.75	1.50	1.75	2.00	1.60	1.50	1.25	1.75	2.25	1.25	2.00	2.00
	1.25	1.25	1.375	1.125	1.625	1.60	1.75	2.25	2.00	1.875	1.75	1.625	1.00	1.875	1.75	1.675	1.50	1.75	1.75
	1.625	1.50	1.875	1.50	1.25	1.50	1.675	2.00	2.60	1.375	1.25	1.25	1.50	1.50	2.00	1.25	2.00	2.00	2.00
	1.125	1.75	2.125	1.875	1.75	1.625	1.875	1.75	1.875	1.125	1.75	1.75	1.75	1.625	1.875	2.25	1.60	2.25	1.75
	1.60	1.875	1.50	1.125	1.60	1.625	1.875	1.50	1.875	0.875	1.50	1.25	1.50	1.625	1.75	1.75	2.25	2.25	2.25
	1.375	1.675	1.50	1.25	1.75	1.75	1.50	2.00	2.375	1.125	1.50	1.75	1.00	1.875	1.50	1.25	2.375	2.25	2.25
	1.375	1.25	1.625	1.125	1.60	1.50	1.625	1.50	2.00	1.00	1.75	1.875	1.25	1.125	2.00	1.50	2.25	2.00	2.00
	1.25	1.25	1.75	1.25	1.75	1.75	1.75	1.875	2.00	1.75	1.75	1.375	1.25	1.25	1.75	1.50	2.00	1.75	1.75
	1.00	1.625	1.875	1.25	1.875	1.625	1.875	1.25	2.625	1.625	1.875	1.75	1.25	1.25	1.60	1.50	2.00	2.00	2.00
	1.50	1.25	1.375	1.125	1.75	1.75	1.625	2.25	2.00	1.375	2.125	1.625	1.625	1.60	1.75	1.375	2.50	1.625	1.625
	1.00	1.375	1.625	1.375	1.60	1.60	1.75	1.625	2.50	1.25	1.75	2.00	1.125	1.60	1.75	1.625	2.00	1.75	1.75
	1.375	1.25	1.75	1.25	1.60	1.75	1.50	1.75	2.50	1.25	1.00	1.60	1.60	1.375	2.00	1.375	2.125	2.125	2.125
1.375	1.60	1.625	1.125	1.75	1.50	1.625	1.75	1.75	1.75	1.875	2.60	1.50	1.25	2.00	1.50	1.75	1.60	1.60	
1.00	1.25	2.00	1.125	1.60	1.75	1.875	1.75	1.50	1.60	1.75	2.00	1.25	1.375	1.75	1.60	2.125	1.75	1.75	
1.375	1.125	1.875	1.25	1.625	1.75	1.375	2.00	2.125	1.875	1.75	1.75	1.25	1.375	2.00	1.25	1.50	1.75	1.75	
1.00	1.375	2.125	1.25	1.125	1.75	1.60	1.75	2.375	1.25	1.875	1.75	1.375	1.375	1.75	1.875	1.75	1.875	1.75	
1.75	1.125	1.625	1.125	1.75	1.50	1.75	1.75	2.25	1.25	1.75	2.00	1.125	1.375	2.25	1.25	2.00	1.875	1.875	
Averages .....	1.267	1.371	1.667	1.225	1.608	1.650	1.742	1.783	1.964	1.450	1.740	1.704	1.300	1.517	1.862	1.433	1.075	1.942	

		No. of section.			No. of section.			No. of section.			No. of section.			No. of section.		
		In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	
Recapitulation and reduction:	Maximum measurements.	B <sup>1</sup> 1.625	0.6397	B <sup>1</sup> 1.50	0.5905	B <sup>1</sup> 2.25	0.8858	B <sup>1</sup> 1.875	0.7380	B <sup>1</sup> 1.875	0.7380	B <sup>1</sup> 1.875	0.7380	B <sup>1</sup> 2.00	0.7874	
		B <sup>2</sup> 1.875	0.7380	B <sup>2</sup> 2.00	0.7874	B <sup>2</sup> 2.25	0.8858	B <sup>2</sup> 2.125	0.8366	B <sup>2</sup> 2.25	0.8858	B <sup>2</sup> 2.25	0.8858	B <sup>2</sup> 2.50	0.9842	
		B <sup>3</sup> 2.25	0.8858	B <sup>3</sup> 1.875	0.7380	B <sup>3</sup> 2.625	1.0334	B <sup>3</sup> 2.00	0.7874	B <sup>3</sup> 2.00	0.7874	B <sup>3</sup> 2.25	0.8858	B <sup>3</sup> 2.25	0.8858	
Highest .....		2.25	0.8858	2.00	0.7874	2.625	1.0334	2.125	0.8366	2.25	0.8858	2.25	0.8858	2.50	0.9842	
Minimum measurements.		B <sup>1</sup> 0.875	0.3445	B <sup>1</sup> 0.75	0.2958	B <sup>1</sup> 1.875	0.5413	B <sup>1</sup> 0.875	0.3445	B <sup>1</sup> 1.00	0.3937	B <sup>1</sup> 1.00	0.3937	B <sup>1</sup> 1.125	0.4429	
		B <sup>2</sup> 1.125	0.4429	B <sup>2</sup> 1.00	0.3937	B <sup>2</sup> 1.25	0.4921	B <sup>2</sup> 1.25	0.4921	B <sup>2</sup> 1.125	0.4429	B <sup>2</sup> 1.125	0.4429	B <sup>2</sup> 1.50	0.5905	
		B <sup>3</sup> 1.25	0.4921	B <sup>3</sup> 1.375	0.5413	B <sup>3</sup> 1.25	0.4921	B <sup>3</sup> 1.25	0.4921	B <sup>3</sup> 1.50	0.5905	B <sup>3</sup> 1.50	0.5905	B <sup>3</sup> 1.60	0.5905	
Lowest .....		0.875	0.3445	0.75	0.2958	1.25	0.4921	0.875	0.3445	1.00	0.3937	1.00	0.3937	1.125	0.4429	
Average measurements..		B <sup>1</sup> 1.267	0.4988	B <sup>1</sup> 1.225	0.4822	B <sup>1</sup> 1.742	0.6858	B <sup>1</sup> 1.450	0.5706	B <sup>1</sup> 1.396	0.5496	B <sup>1</sup> 1.396	0.5496	B <sup>1</sup> 1.433	0.5641	
		B <sup>2</sup> 1.371	0.6397	B <sup>2</sup> 1.608	0.6330	B <sup>2</sup> 1.783	0.7019	B <sup>2</sup> 1.740	0.6874	B <sup>2</sup> 1.517	0.5972	B <sup>2</sup> 1.517	0.5972	B <sup>2</sup> 1.075	0.7775	
		B <sup>3</sup> 1.667	0.8562	B <sup>3</sup> 1.650	0.6406	B <sup>3</sup> 1.964	0.7811	B <sup>3</sup> 1.704	0.6708	B <sup>3</sup> 1.862	0.7330	B <sup>3</sup> 1.862	0.7330	B <sup>3</sup> 1.942	0.7645	
Average .....		1.435	0.5640	1.494	0.5881	1.936	0.7228	1.633	0.6311	1.592	0.6267	1.592	0.6267	1.783	0.7019	
Measurements above average..		40		56		39		50		42		42		38		
Measurements below average..		50		34		51		40		43		43		52		



TABLE XXVII.—Actual measurements of length, crimp, and fineness of commercial grades—Continued.

		B.—PHILADELPHIA GRADES.																	
Catalogue number of samples..		297.			298a.			298b.			298c.			298d.			298e.		
Length of fiber in crimp .....		2½ inches.			2½ inches.			1¾ inches.			2 inches.			2¾ inches.			2¾ inches.		
Number of crimps per inch....		22.			22.			22.			22.			22.			22.		
Number of section.....		B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.
Actual measurement in centi- millimeters.		1.25	1.375	1.75	2.375	2.00	2.25	1.50	2.00	2.00	1.875	1.50	2.25	2.25	2.50	1.50	2.25	2.00	1.50
		1.25	1.75	1.625	2.375	2.50	2.00	1.25	2.25	2.375	1.50	1.50	2.00	1.50	2.375	1.50	1.50	2.375	1.50
		1.25	2.125	1.125	2.00	2.00	1.625	1.875	2.125	1.50	1.375	2.125	2.00	2.00	2.375	1.75	1.625	2.00	1.875
		1.625	1.375	1.75	2.00	1.75	2.00	1.50	2.00	2.00	2.00	2.00	2.625	2.00	2.00	2.625	2.00	1.00	1.75
		1.125	1.25	1.375	3.50	2.00	2.00	2.25	2.125	1.75	1.50	1.75	1.75	1.625	2.50	1.50	1.75	1.75	1.25
		1.375	2.25	2.00	2.25	2.00	2.25	2.00	2.25	1.75	1.50	1.625	1.75	1.50	1.625	1.875	1.75	1.75	2.00
		1.75	2.25	1.50	2.25	2.50	2.00	2.00	1.75	2.00	1.50	2.00	2.00	2.00	2.00	1.50	1.25	1.625	2.00
		1.75	1.875	1.50	2.50	2.50	2.00	1.50	2.00	2.25	1.50	2.00	2.00	2.00	2.00	1.75	2.50	1.50	2.75
		1.375	1.875	2.375	2.625	2.125	2.50	1.75	2.00	2.25	1.625	1.875	2.00	1.50	1.75	1.375	1.25	1.875	1.375
		1.25	1.75	2.00	2.00	2.00	2.125	2.00	2.125	2.00	1.50	1.50	2.125	2.00	1.50	2.25	1.50	1.25	1.625
		1.25	1.625	1.50	2.375	2.00	1.625	1.50	2.25	1.50	1.00	2.375	2.00	2.25	2.00	1.50	1.25	1.75	1.50
		1.25	2.625	1.50	1.75	2.25	1.75	1.875	2.25	1.625	1.50	2.375	2.125	1.375	2.375	1.875	1.25	1.75	1.375
		1.50	1.75	2.125	2.00	2.00	2.50	2.25	2.00	1.875	1.75	2.00	1.75	2.00	1.75	2.00	1.25	1.95	1.75
		1.00	1.75	1.75	2.25	2.50	1.625	1.50	1.75	1.75	1.50	1.875	1.75	2.00	2.195	1.25	1.25	1.625	1.625
		1.25	1.625	1.75	1.75	2.375	2.25	1.25	1.25	1.75	2.25	2.50	2.00	2.125	2.125	1.50	1.875	1.75	1.25
		1.50	1.125	1.75	2.25	2.25	2.125	1.375	1.875	2.375	1.375	2.375	2.00	2.25	1.25	1.875	1.50	1.00	2.00
		1.25	1.50	1.75	2.375	2.00	1.875	1.875	2.00	1.875	1.50	2.00	2.00	1.50	2.125	1.25	1.50	2.00	1.625
		1.75	1.75	1.75	2.125	2.25	2.00	2.00	1.75	2.125	1.00	1.875	2.00	2.00	2.25	1.75	2.00	2.00	1.15
		1.50	1.75	2.00	2.50	2.25	2.25	2.00	1.875	1.625	1.25	2.00	2.25	2.00	2.25	2.00	1.875	1.50	2.25
		1.50	1.25	1.72	1.875	2.25	2.375	1.75	1.50	1.75	1.50	2.125	2.00	1.50	1.75	2.25	1.50	1.875	2.25
	1.625	1.25	1.50	2.00	2.125	2.60	1.25	1.75	2.25	1.25	1.875	1.75	2.00	1.875	2.00	1.875	1.25	2.25	
	1.75	1.75	2.50	2.50	2.125	2.50	1.75	2.375	1.75	1.25	2.375	1.75	2.00	1.75	2.50	1.375	2.25	1.375	
	1.625	1.625	1.75	1.75	1.75	1.75	2.125	1.75	1.75	1.50	1.875	2.50	1.50	1.875	1.25	1.375	2.00	1.50	
	1.75	1.75	2.25	2.25	2.00	2.25	1.50	2.50	2.25	1.75	2.50	2.25	1.25	2.125	1.75	1.25	1.75	1.75	
	1.50	1.625	2.50	2.25	1.75	1.75	1.375	2.375	1.50	1.75	2.00	2.00	1.50	2.00	1.75	1.75	2.25	1.875	
	1.00	1.875	2.25	2.25	2.375	1.50	1.25	1.75	1.75	1.25	2.00	2.00	2.00	1.75	2.50	1.50	1.50	1.625	
	1.25	1.75	2.00	2.25	1.75	1.50	1.00	1.75	1.625	1.625	1.75	1.625	1.375	1.75	2.25	1.875	1.75	1.75	
	1.25	1.875	1.75	2.50	1.75	1.875	1.625	1.50	2.25	1.50	2.25	2.00	1.625	2.25	2.75	1.625	1.625	2.00	
	1.25	1.50	1.625	1.75	1.50	1.875	1.50	2.25	2.125	1.50	2.00	2.00	2.00	2.00	1.875	1.25	1.75	1.50	
	1.00	1.625	1.75	2.00	2.00	1.75	1.25	2.25	1.875	1.375	2.25	1.625	1.875	2.25	1.50	1.50	1.025	2.50	
Averages.....		1.391	1.708	1.867	2.188	2.088	1.996	1.654	1.079	1.908	1.483	1.979	2.004	1.729	2.083	1.758	1.479	1.792	1.767

		No. of section.			No. of section.			No. of section.			No. of section.			No. of section.		
		In centimillime- ters.	In thousandths of inch.	In centimillime- ters.	In thousandths of inch.	In centimillime- ters.	In thousandths of inch.	In centimillime- ters.	In thousandths of inch.	In centimillime- ters.	In thousandths of inch.	In centimillime- ters.	In thousandths of inch.	In centimillime- ters.	In thousandths of inch.	
Recapitulation and reduction:		B¹	1.75	0.6889	B¹	2.625	1.0334	B¹	2.25	0.8858	B¹	2.25	0.8858	B¹	2.25	0.8858
Maximum measurements.		B²	2.625	1.0334	B²	2.50	0.9842	B²	2.50	0.9842	B²	2.625	1.0334	B²	2.50	0.9842
		B³	2.50	0.9842	B³	2.50	0.9842	B³	2.875	0.9850	B³	2.50	0.9842	B³	2.75	1.0826
Highest .....			2.625	1.0334		2.625	1.0334		2.50	0.9842		2.625	1.0334		2.75	1.0826
Minimum measurements.		B¹	1.00	0.3937	B¹	1.75	0.6889	B¹	1.25	0.4921	B¹	1.00	0.3937	B¹	1.25	0.4921
		B²	1.125	0.4429	B²	1.50	0.5905	B²	1.25	0.4921	B²	1.50	0.5905	B²	1.625	0.6397
		B³	1.125	0.4429	B³	1.50	0.5905	B³	1.50	0.5905	B³	1.625	0.6397	B³	1.25	0.4921
Lowest .....			1.00	0.3937		1.50	0.5905		1.25	0.4921		1.00	0.3937		1.25	0.4921
Average measurements..		B¹	1.391	0.5476	B¹	2.188	0.8614	B¹	1.654	0.6511	B¹	1.483	0.5898	B¹	1.729	0.6307
		B²	1.708	0.6724	B²	2.088	0.8220	B²	1.979	0.7791	B²	1.979	0.7791	B²	2.083	0.8200
		B³	1.867	0.7350	B³	1.996	0.7858	B³	1.908	0.7511	B³	2.004	0.7809	B³	1.758	0.6921
Average .....			1.655	0.6515		2.091	0.8232		1.847	0.7271		1.822	0.7173		1.857	0.7311
Measurements above average..			43			46			47			48			45	
Measurements below average..			47			44			43			42			45	



TABLE XXVII.—Actual measurements of length, crimp, and fineness of commercial grades—Continued.

		B.—PHILADELPHIA GRADES.																			
Catalogue number of samples..	299.			300.			301a.			301b.			302.			303.					
Length of fiber in crimp .....	2 inches.			2 inches.			2½ inches.			1½ inches.			2½ inches.			2½ inches.					
Number of crimps per inch....	20.			20.			20.			20.			20.			20.					
Number of section.....	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .			
Actual measurement in centimillimeters.	1.75	1.875	2.00	1.50	2.00	2.375	1.75	2.375	1.75	1.25	2.00	1.75	1.875	1.50	2.50	1.625	2.00	1.625	2.00	2.00	
	1.375	1.75	2.00	1.375	2.375	2.50	2.25	2.50	1.25	0.75	2.00	2.00	1.125	2.25	2.50	1.875	2.00	1.875	2.25	2.25	
	1.25	2.125	1.75	1.375	1.75	2.00	1.75	1.75	1.75	0.875	2.00	2.25	1.50	2.00	1.875	2.00	2.00	2.00	2.00	1.50	
	1.625	2.125	2.50	1.75	2.00	2.625	1.875	2.50	1.75	1.75	2.00	2.25	1.125	2.375	2.25	2.125	2.25	2.00	2.00	1.75	
	1.25	2.00	1.50	1.50	2.00	2.25	2.50	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.75	1.75	1.75	1.875	1.875	1.875	
	1.00	2.25	1.75	1.25	1.75	1.75	1.75	2.125	3.00	2.00	1.75	2.00	2.125	1.25	2.00	2.50	2.25	2.00	2.50	2.00	1.875
	1.25	2.25	2.00	2.00	1.75	2.00	1.75	2.00	2.75	1.75	1.75	2.25	2.50	2.00	2.125	2.00	2.00	2.00	2.00	2.00	2.00
	1.875	2.00	1.75	1.75	2.125	2.00	2.00	2.50	2.875	1.625	2.50	2.25	1.625	2.25	2.00	1.50	2.00	1.50	1.50	2.25	
	1.25	1.25	1.50	1.25	2.00	1.875	1.75	2.00	2.50	1.60	2.25	2.00	1.60	1.875	2.50	2.00	2.00	2.00	2.00	1.75	
	1.875	2.50	1.75	1.25	2.25	1.875	1.75	2.25	1.75	1.875	2.125	2.75	1.875	2.125	2.75	1.625	2.00	1.75	2.25	2.25	
	1.375	1.625	1.75	1.25	1.875	1.75	2.00	2.25	2.25	1.60	2.25	2.00	1.60	2.25	2.00	1.75	2.25	2.00	2.125	1.875	
	1.125	1.75	1.50	1.875	2.375	1.75	1.75	1.625	1.75	1.60	1.50	2.00	1.75	1.25	2.125	2.25	2.125	1.75	2.25	1.50	
	1.625	2.00	1.50	1.50	1.75	2.50	2.25	1.25	2.125	1.75	2.25	2.00	1.75	1.625	2.00	1.75	2.25	1.75	2.25	1.75	
	1.375	1.75	1.50	1.375	2.375	2.25	2.25	1.875	2.25	1.60	2.25	1.625	1.375	1.25	1.50	1.75	2.00	1.75	2.00	1.875	
	1.625	1.75	1.875	1.25	1.50	1.50	2.25	1.875	2.75	1.25	2.50	2.125	1.75	1.75	2.375	1.875	1.875	1.875	1.875	1.875	
	1.75	1.75	2.125	1.75	2.00	1.60	2.00	2.00	2.25	2.00	2.125	2.00	2.00	1.75	1.875	1.50	2.00	2.00	2.00	1.875	
	1.25	1.75	1.875	1.75	2.00	1.75	1.75	1.25	3.125	1.60	2.25	2.00	2.125	1.25	1.875	2.125	2.00	2.00	2.00	1.875	
	1.875	2.00	1.75	1.375	1.875	2.00	1.00	2.00	1.875	1.25	2.00	2.25	2.25	1.75	2.00	2.00	2.00	2.00	2.00	1.75	
	1.50	1.50	1.75	1.75	2.25	1.875	2.25	2.25	1.60	1.60	1.75	2.125	2.25	1.875	1.875	1.875	2.125	1.60	2.125	1.60	
	1.25	2.00	1.75	1.75	1.60	2.00	2.00	1.625	1.875	2.00	1.75	2.50	1.375	2.00	1.75	2.00	2.00	2.00	2.00	1.75	
1.00	1.75	1.75	1.25	1.875	2.00	1.25	2.00	2.00	1.75	2.00	2.25	2.00	2.25	2.25	1.625	2.25	2.25	1.625	1.875		
1.75	2.00	1.50	1.50	2.125	2.25	2.25	1.75	2.50	2.125	1.75	2.00	2.125	1.125	1.875	1.75	1.875	1.75	2.00	1.875		
1.25	1.75	1.75	1.25	2.125	2.25	2.25	1.25	2.50	2.875	1.75	2.00	2.00	2.00	1.75	2.25	1.75	2.25	2.25	1.875		
1.625	2.25	1.50	1.25	2.25	2.00	1.875	2.00	1.25	1.625	1.50	2.25	2.00	1.625	2.50	1.50	1.75	1.75	1.75	1.875		
2.00	2.50	2.00	1.75	2.00	1.75	1.50	3.00	1.875	1.75	2.00	2.25	1.75	2.00	2.00	1.875	1.875	1.875	1.875	1.875		
1.625	1.50	2.00	1.25	1.625	2.125	2.00	2.75	2.75	1.875	1.75	1.375	1.25	2.50	1.75	1.50	2.00	2.00	2.00	1.25		
1.75	2.00	1.625	1.25	2.00	1.75	1.875	1.75	2.25	1.875	1.625	2.375	1.625	2.25	2.25	2.00	1.875	2.125	2.125	1.875		
1.25	2.50	1.50	1.875	2.50	2.75	1.875	1.25	2.125	1.25	1.75	2.75	1.375	2.25	1.75	1.75	2.25	2.25	2.125	1.875		
1.50	1.75	2.25	1.25	1.875	1.875	1.875	1.75	1.75	1.875	2.25	2.25	2.25	2.25	2.00	1.75	2.00	1.75	2.00	1.625		
2.00	1.75	2.25	1.25	1.625	2.50	1.875	2.00	1.75	1.25	2.50	2.625	1.75	2.00	2.00	1.75	1.75	1.75	1.75	1.625		
Averages.....	1.484	1.925	1.800	1.416	1.596	2.063	1.766	2.225	1.983	1.521	2.013	2.133	1.675	1.996	2.063	1.842	2.113	1.816			

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:																		
Maximum measurements.	B <sup>1</sup>	2.00	0.7874	B <sup>1</sup>	1.875	0.7360	B <sup>1</sup>	3.50	1.3779	B <sup>1</sup>	2.00	0.7874	B <sup>1</sup>	2.25	0.8858	B <sup>1</sup>	2.25	0.8858
	B <sup>2</sup>	2.50	0.9842	B <sup>2</sup>	2.50	0.9842	B <sup>2</sup>	2.00	1.1811	B <sup>2</sup>	2.50	0.9842	B <sup>2</sup>	2.75	1.0826	B <sup>2</sup>	2.75	1.0826
	B <sup>3</sup>	2.50	0.9842	B <sup>3</sup>	2.75	1.0826	B <sup>3</sup>	2.50	0.9842	B <sup>3</sup>	2.75	1.0826	B <sup>3</sup>	2.50	0.9842	B <sup>3</sup>	2.375	0.9350
Highest .....		2.50	0.9842		2.75	1.0826		3.50	1.3779		2.75	1.0826		2.75	1.0826		2.75	1.0826
Minimum measurements.	B <sup>1</sup>	1.00	0.3967	B <sup>1</sup>	1.25	0.4921	B <sup>1</sup>	1.00	0.3967	B <sup>1</sup>	0.75	0.2953	B <sup>1</sup>	1.125	0.4420	B <sup>1</sup>	1.50	0.5905
	B <sup>2</sup>	1.25	0.4921	B <sup>2</sup>	1.50	0.5905	B <sup>2</sup>	1.25	0.4921	B <sup>2</sup>	1.25	0.4921	B <sup>2</sup>	1.25	0.4921	B <sup>2</sup>	1.50	0.5905
	B <sup>3</sup>	1.50	0.5905	B <sup>3</sup>	1.50	0.5905	B <sup>3</sup>	1.25	0.4921	B <sup>3</sup>	1.375	0.5413	B <sup>3</sup>	1.50	0.5905	B <sup>3</sup>	1.25	0.4921
Lowest .....		1.00	0.3967		1.25	0.4921		1.00	0.3967		0.75	0.2953		1.125	0.4420		1.25	0.4921
Average measurements.	B <sup>1</sup>	1.484	0.5842	B <sup>1</sup>	1.416	0.5002	B <sup>1</sup>	1.766	0.6952	B <sup>1</sup>	1.521	0.5988	B <sup>1</sup>	1.675	0.6504	B <sup>1</sup>	1.842	0.7254
	B <sup>2</sup>	1.925	0.7578	B <sup>2</sup>	1.996	0.7859	B <sup>2</sup>	2.225	0.8751	B <sup>2</sup>	2.013	0.7925	B <sup>2</sup>	1.996	0.7858	B <sup>2</sup>	2.113	0.8318
	B <sup>3</sup>	1.800	0.7086	B <sup>3</sup>	2.063	0.8122	B <sup>3</sup>	1.983	0.7610	B <sup>3</sup>	2.133	0.8307	B <sup>3</sup>	2.063	0.8122	B <sup>3</sup>	1.816	0.7119
Average.....		1.700	0.6834		1.835	0.7294		1.975	0.7775		1.880	0.7436		1.911	0.7523		1.924	0.7574
Measurements above average.....		55			46			47			50			48			42	
Measurements below average.....		35			44			43			30			42			48	



TABLE XXVII.—Actual measurements of length, crimp, and fineness of commercial grades—Continued.

		B.—PHILADELPHIA GRADES.																	
Catalogue number of samples..		304.			305a.			305b.			306a.			306b.			306c.		
Length of fiber in crimp.....		2½ inches.			1¾ inches.			2¼ inches.			2¾ inches.			2¾ inches.			2¼ inches.		
Number of crimps per inch....		20.			22.			22.			22.			22.			22.		
Number of section.....		B¹	B²	B³	B¹	B²	B³	B¹	B²	B³	B¹	B²	B³	B¹	B²	B³	B¹	B²	B³
Actual measurement in centimillimeters.		2.375	1.75	2.00	1.75	2.00	2.50	1.50	2.125	2.00	2.00	2.125	2.00	1.50	1.50	1.375	1.625	1.50	1.625
		1.75	1.75	1.875	2.25	2.00	1.75	1.75	2.25	2.875	1.50	1.75	2.00	1.50	1.75	2.00	1.375	1.50	1.625
		1.875	2.00	1.75	2.00	1.875	1.75	1.75	2.00	2.50	1.75	2.00	2.50	1.75	2.00	2.00	2.00	1.50	1.625
		1.875	1.50	1.50	1.875	2.25	2.50	2.25	2.00	3.25	1.50	1.875	2.00	1.50	1.875	2.00	2.00	1.50	2.00
		1.75	2.00	2.00	1.875	2.00	2.25	1.50	1.75	2.50	1.625	1.625	2.00	1.50	2.25	2.00	1.50	1.25	1.625
		2.25	2.00	1.625	2.75	2.00	2.25	2.25	2.25	1.875	1.50	2.125	2.50	1.50	1.75	1.25	1.75	1.75	1.875
		1.25	1.75	1.75	2.50	2.25	2.00	2.50	2.00	2.50	2.00	1.75	2.00	1.875	1.875	1.75	1.875	1.75	1.625
		1.875	2.25	2.00	2.00	2.25	2.50	1.50	1.75	2.625	2.00	2.00	2.75	1.375	1.375	2.00	1.50	1.50	2.00
		2.00	2.25	1.875	1.75	2.25	2.25	2.25	2.25	2.25	2.125	2.125	2.00	1.125	2.50	1.625	2.50	1.50	1.875
		1.375	1.50	1.75	2.25	2.25	2.00	1.625	2.25	2.00	1.50	1.875	2.125	1.625	2.125	2.00	2.00	1.75	1.75
		1.875	1.75	1.75	2.00	2.25	1.75	1.75	1.75	2.00	2.50	1.75	1.75	1.25	1.50	1.50	1.625	1.625	1.75
		2.00	2.00	2.125	2.875	2.00	2.50	1.75	2.00	2.25	1.75	1.50	2.75	1.25	2.125	1.875	1.75	2.00	2.00
		1.50	1.875	1.875	2.75	2.375	2.25	1.625	2.375	3.00	1.625	2.00	2.375	1.625	2.00	1.625	2.50	2.00	1.625
		1.75	1.75	2.25	2.25	1.75	2.25	1.875	2.00	2.75	1.75	1.75	2.375	1.25	2.25	1.875	1.875	1.875	1.625
		1.875	2.00	2.00	2.00	2.00	2.25	2.25	1.75	1.875	2.375	1.625	2.50	1.375	1.75	1.50	1.50	1.50	1.75
		1.25	1.375	2.125	2.50	2.00	2.75	2.00	1.875	2.25	2.00	1.50	2.25	1.25	2.00	1.50	1.75	1.75	1.50
		1.75	2.50	2.00	2.25	2.25	2.00	2.125	2.00	2.75	2.00	2.125	2.00	1.25	2.00	1.50	1.50	1.375	1.75
		1.75	2.25	1.75	2.25	2.75	2.00	1.75	1.75	2.75	1.875	1.75	2.25	2.125	2.50	1.25	1.75	1.875	1.625
		1.875	1.75	1.875	2.25	1.875	2.00	1.75	2.25	2.50	2.00	1.75	2.75	1.625	2.00	1.75	1.625	1.75	1.75
		1.875	2.00	2.25	2.75	1.75	2.50	1.875	2.75	2.00	1.75	2.00	2.00	1.50	1.75	1.75	1.875	1.50	1.50
		1.75	2.25	2.00	2.00	2.50	2.375	2.00	1.50	3.00	2.125	1.50	2.00	1.50	1.75	2.00	2.00	2.00	1.50
		1.875	1.75	1.875	2.50	2.375	2.50	1.625	3.50	2.00	1.75	1.75	2.25	1.375	2.00	1.50	1.875	1.75	2.00
		1.50	1.375	2.50	2.50	1.75	1.625	1.75	2.75	2.25	2.50	2.375	1.75	1.50	1.875	1.50	2.125	1.75	1.50
		2.00	2.00	2.00	2.25	2.50	1.25	1.75	2.25	2.00	2.125	2.00	2.375	1.75	1.625	1.875	1.75	1.625	1.50
		2.00	2.00	1.25	2.50	1.75	2.00	1.75	2.00	2.00	1.75	2.00	2.50	2.25	2.25	2.25	2.25	2.25	1.50
	2.00	2.00	2.375	2.25	2.375	2.00	2.00	2.00	2.00	1.875	2.125	2.25	1.875	1.75	1.60	2.00	1.875	1.375	
	1.75	2.25	2.375	2.25	2.00	2.50	1.75	2.00	2.25	2.25	1.875	2.125	1.375	1.875	1.625	1.625	1.375	1.50	
	1.375	1.875	1.75	2.25	2.375	2.50	1.50	2.25	1.75	1.875	2.00	1.875	1.50	2.625	1.75	2.00	1.50	1.75	
	2.25	1.50	2.375	2.50	1.875	2.25	1.50	2.25	2.50	2.00	2.125	1.875	1.875	2.125	2.00	2.00	1.75	1.875	
	1.75	2.25	2.125	2.00	2.00	2.25	2.00	2.25	1.75	1.875	2.50	2.75	1.375	2.00	1.50	2.125	1.375	1.875	
Averages.....		1.971	1.908	1.958	2.263	2.121	2.175	1.792	2.125	2.321	1.909	1.908	2.225	1.559	1.907	1.592	1.821	1.758	1.600

		304.			305a.			305b.			306a.			306b.			306c.		
Recapitulation and reduction:		In centimillimeters.			In thousandths of inch.			In centimillimeters.			In thousandths of inch.			In centimillimeters.			In thousandths of inch.		
Maximum measurements.	B¹	2.375	0.9350	B¹	2.875	1.1318	B¹	2.25	0.8858	B¹	2.50	0.9842	B¹	2.25	0.8858	B¹	2.50	0.9842	
	B²	2.50	0.9842	B²	2.75	1.0826	B²	3.50	1.3779	B²	2.50	0.9842	B²	2.625	1.0826	B²	2.50	0.9842	
	B³	2.50	0.9842	B³	2.75	1.0826	B³	3.25	1.2795	B³	2.75	1.0826	B³	2.25	0.8858	B³	2.00	0.7874	
Highest.....		2.50	0.9842		2.875	1.1318		3.50	1.3779		2.75	1.0826		2.625	1.0826		2.50	0.9842	
Minimum measurements.	B¹	1.25	0.4921	B¹	1.75	0.6889	B¹	1.50	0.5905	B¹	1.50	0.5905	B¹	1.125	0.4429	B¹	1.375	0.5413	
	B²	1.375	0.5413	B²	1.75	0.6889	B²	1.50	0.5905	B²	1.50	0.5905	B²	1.375	0.5413	B²	1.375	0.5413	
	B³	1.25	0.4921	B³	1.25	0.4921	B³	1.50	0.5905	B³	1.75	0.6889	B³	1.25	0.4921	B³	1.25	0.4921	
Lowest.....		1.25	0.4921		1.25	0.4921		1.50	0.5905		1.50	0.5905		1.125	0.4429		1.25	0.4921	
Average measurements.	B¹	1.971	0.7750	B¹	2.263	0.8909	B¹	1.892	0.7055	B¹	1.909	0.7515	B¹	1.559	0.6137	B¹	1.821	0.7169	
	B²	1.908	0.7511	B²	2.121	0.8350	B²	2.125	0.8366	B²	1.908	0.7511	B²	1.667	0.7744	B²	1.758	0.6921	
	B³	1.958	0.7708	B³	2.175	0.8562	B³	2.321	0.9137	B³	2.225	0.8750	B³	1.592	0.6267	B³	1.600	0.6299	
Average.....		1.940	0.7661		2.186	0.8606		2.079	0.8185		2.014	0.7929		1.706	0.6716		1.726	0.6795	
Measurements above average..		40			52			35			32			42			51		
Measurements below average..		50			38			55			58			48			39		



TABLE XXVII.—Actual measurements of length, crimp, and fineness of commercial grades—Continued.

		B.—PHILADELPHIA GRADES.																			
Catalogue number of samples..		307a.			307b.			307c.			307d.			307e.			308a.				
Length of fiber in crimp.....		1½ inches.			1½ inches.			1½ inches.			1½ inches.			3¼ inches.			3 inches.				
Number of crimps per inch....		20.			20.			20.			20.			20.			20.				
Number of section.....		B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.		
Actual measurement in centimillimeters.	1.625	2.50	2.25	1.75	2.375	2.00	2.25	2.25	1.875	1.75	2.125	1.75	1.75	2.00	2.50	2.25	2.50	2.25	2.50	2.25	
	1.50	2.50	1.50	2.375	1.75	2.125	1.75	2.75	1.875	1.60	1.025	1.75	1.75	2.25	2.25	1.75	2.375	2.50	2.375	2.50	
	1.75	2.50	1.625	1.75	2.00	1.75	1.75	1.75	1.875	1.75	1.75	1.75	1.75	1.50	2.00	2.25	2.50	2.25	2.50	2.25	
	1.50	2.25	2.50	2.00	2.50	2.875	1.75	2.50	2.125	1.50	1.75	2.00	1.50	2.00	1.75	1.875	3.50	3.50	3.50	2.50	2.50
	2.00	2.00	2.375	2.00	2.50	2.25	1.75	2.25	1.875	2.00	1.875	2.00	1.875	2.00	1.875	1.50	2.00	2.25	3.25	2.375	2.375
	1.50	1.75	2.75	1.875	2.00	2.125	2.00	2.00	1.875	2.875	1.75	2.875	1.875	1.875	1.875	2.25	2.25	1.75	2.375	2.375	2.50
	1.875	2.00	2.25	2.75	2.00	2.60	2.125	2.875	1.75	2.125	2.00	1.875	1.75	1.50	2.25	2.675	2.75	2.50	2.75	2.50	2.50
	1.50	2.25	2.75	2.25	2.25	2.25	2.375	1.75	2.25	1.25	1.75	2.00	1.75	2.00	2.00	1.75	2.00	2.00	3.25	2.75	2.50
	1.625	3.00	2.125	2.25	2.00	2.25	2.50	2.25	2.25	1.75	1.75	2.25	1.75	1.875	1.875	1.75	2.00	2.50	2.50	2.75	2.75
	1.625	2.625	2.50	1.875	2.125	2.375	2.375	2.00	2.00	1.75	2.00	2.00	2.50	1.75	1.75	2.00	2.50	1.75	1.75	2.00	2.00
	1.50	2.025	2.25	2.00	2.375	2.250	2.50	2.50	1.625	1.625	1.625	2.00	2.00	1.50	2.00	2.00	1.50	2.00	2.00	2.50	2.75
	1.75	2.75	2.00	2.25	2.25	2.50	2.00	2.25	2.25	2.25	2.00	2.00	2.00	2.50	2.00	2.00	2.50	1.75	2.00	2.50	2.25
	2.25	2.00	2.00	2.00	1.875	2.75	2.125	2.625	2.875	1.875	2.25	2.125	1.875	1.75	2.50	1.875	1.75	2.50	2.25	2.75	2.25
	1.75	2.25	2.25	2.00	2.00	2.00	2.25	2.25	1.25	1.50	2.00	1.625	2.00	2.00	1.625	2.00	2.25	1.75	2.75	2.375	2.375
	1.50	1.50	2.00	1.75	2.00	1.00	2.25	2.50	1.50	1.75	2.125	1.75	2.25	1.75	2.25	1.75	1.75	3.125	2.875	2.125	2.125
	1.75	2.125	3.00	1.75	2.125	2.375	2.375	2.00	1.75	1.875	2.00	1.75	1.75	1.50	2.50	2.875	1.875	2.75	2.75	2.75	2.75
	2.00	2.50	2.75	2.25	1.75	2.125	2.25	2.25	2.25	1.75	2.00	1.75	2.75	2.25	3.00	1.60	2.875	2.50	2.50	1.50	1.50
	2.125	1.875	2.00	2.00	1.75	2.50	2.00	2.00	2.125	1.75	1.50	1.75	1.75	1.75	1.875	2.00	2.125	2.50	2.50	2.25	2.25
	1.75	2.125	1.875	2.25	2.25	2.125	2.25	1.50	2.50	2.875	2.00	1.50	2.00	1.875	1.75	2.50	2.00	2.50	2.00	2.00	2.00
	1.50	2.00	2.00	1.75	1.875	2.25	2.25	2.00	2.25	2.25	2.00	1.75	1.50	1.875	2.875	2.00	2.875	2.00	2.50	2.75	2.75
	1.50	2.75	1.75	2.00	2.50	2.50	2.375	1.75	2.125	1.75	2.00	1.75	2.00	1.75	1.625	1.75	2.25	2.375	3.00	2.875	2.875
	1.75	2.00	2.00	2.00	2.625	1.875	1.75	2.60	2.00	2.25	2.00	2.00	1.625	1.75	2.25	2.00	1.625	1.75	2.25	3.00	3.00
	1.75	2.00	2.00	1.75	2.375	1.75	2.625	2.625	1.50	1.75	2.00	1.50	1.75	2.00	1.50	1.75	2.125	1.875	2.00	2.75	2.125
	1.75	1.75	1.625	1.75	2.00	2.25	2.75	2.25	2.00	1.50	1.50	1.60	1.75	1.875	1.76	2.00	2.125	1.875	2.00	2.50	2.25
	2.25	2.00	2.25	2.25	2.25	1.875	2.75	1.875	1.50	1.50	1.75	2.00	1.75	2.00	1.625	2.25	2.00	2.00	2.75	3.00	3.00
2.00	2.00	3.25	1.50	1.75	1.50	2.50	1.75	1.75	1.75	1.625	1.625	1.75	1.75	2.00	2.00	1.875	2.25	2.50	2.50	2.50	
2.00	1.75	2.50	1.875	1.625	2.00	2.00	1.50	1.875	1.75	1.75	1.76	1.25	2.00	2.00	2.50	3.00	3.00	3.00	1.75	1.75	
1.625	1.25	2.125	2.00	2.00	2.375	2.25	2.25	2.00	1.75	1.25	2.50	1.025	1.75	2.00	2.50	2.00	2.50	3.00	2.25	2.25	
1.80	2.25	1.75	2.00	2.50	2.00	1.75	1.50	2.50	1.75	2.00	2.25	1.50	1.75	1.75	2.375	2.25	2.00	2.00	2.00	2.00	
1.875	2.625	1.50	1.75	2.50	2.50	2.00	1.00	2.25	1.50	1.75	2.125	1.75	1.75	1.75	2.125	1.75	1.75	2.125	3.125	1.75	
Averages.....	1.745	2.183	2.183	1.992	2.133	2.150	2.142	2.133	1.921	1.771	1.858	1.933	1.679	1.983	2.008	2.150	2.667	2.379			

		No. of section.			No. of section.			No. of section.			No. of section.			No. of section.			No. of section.		
		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.	
Recapitulation and reduction:	B¹	2.25	0.8958	B¹	2.75	1.0820	B¹	2.75	1.0828	B¹	2.375	0.9350	B¹	2.50	0.9842	B¹	2.50	0.9842	
Maximum measurements:	B²	3.00	1.1811	B²	2.625	1.0326	B²	2.75	1.0826	B²	3.25	0.9858	B²	3.00	1.1811	B²	3.50	1.3770	
	B³	3.25	1.2795	B³	2.875	1.1313	B³	2.50	0.9842	B³	2.50	0.9842	B³	2.875	1.1318	B³	3.25	1.2795	
Highest.....		3.25	1.2795		2.875	1.1313		2.75	1.0620		2.50	0.9842		3.00	1.1811		3.50	1.3770	
Minimum measurements:	B¹	1.50	0.5905	B¹	1.50	0.5905	B¹	1.50	0.5905	B¹	1.25	0.4921	B¹	1.25	0.4921	B¹	1.75	0.6889	
	B²	1.25	0.4921	B²	1.625	0.6397	B²	1.50	0.5905	B²	1.25	0.4921	B²	1.50	0.5905	B²	2.00	0.7874	
	B³	1.50	0.5905	B³	1.00	0.3937	B³	1.25	0.4921	B³	1.50	0.5905	B³	1.50	0.5905	B³	1.50	0.5905	
Lowest.....		1.25	0.4921		1.00	0.3937		1.25	0.4921		1.25	0.4921		1.25	0.4921		1.50	0.5905	
Average measurements:	H¹	2.740	0.8874	B¹	1.992	0.7842	B¹	2.142	0.8433	B¹	1.771	0.6972	B¹	1.691	0.6657	B¹	2.150	0.8464	
	B²	2.183	0.8504	B²	2.133	0.8307	B²	2.133	0.8307	B²	1.858	0.7314	B²	1.983	0.7810	B²	2.667	0.9499	
	B³	2.183	0.8504	B³	2.150	0.8464	B³	1.921	0.7562	B³	1.983	0.7010	B³	2.008	0.7906	B³	2.379	0.9260	
Average.....		2.037	0.8019		2.092	0.8236		2.050	0.8106		1.854	0.7209		1.873	0.7374		2.399	0.9444	
Measurements above average.....		35			42			43			42			43			30		
Measurements below average.....		35			48			47			43			47			51		



TABLE XXVII.—Actual measurements of length, crimp, and fineness of commercial grades—Continued.

Catalogue number of samples..		B.—PHILADELPHIA GRADES.																		
		308b.			308c.			308d.			309a.			309b.			310a.			
		3½ inches.			2¾ inches.			3¼ inches.			3¼ inches.			3¼ inches.			5 inches.			
		14.			14.			14.			14.			14.			—			
Number of section.....		B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	
Actual measurement in centimillimeters.		2.25	2.50	2.25	2.00	2.75	1.50	2.00	3.00	4.00	2.00	3.25	1.75	1.75	3.00	2.50	2.625	3.50	4.75	
		3.00	2.25	2.00	1.625	2.00	1.625	1.75	2.75	3.00	1.50	2.50	2.50	2.00	3.25	3.25	3.25	3.25	3.25	3.25
		2.75	2.50	2.125	2.375	2.575	1.50	2.25	2.60	3.00	1.50	2.125	3.125	2.25	2.50	2.25	3.50	3.00	3.00	3.50
		2.25	2.60	2.625	2.25	2.00	2.00	1.875	2.75	2.25	2.50	2.25	3.00	3.25	2.00	2.125	3.375	3.50	3.00	3.25
		2.375	1.60	3.00	3.00	2.00	2.00	1.75	2.50	2.00	2.125	3.375	3.50	1.75	1.50	3.75	2.75	1.75	3.00	2.625
		2.25	2.00	2.375	1.75	2.25	2.75	2.00	2.75	2.50	1.50	3.00	2.75	1.75	2.125	3.00	3.00	3.25	4.00	4.625
		2.375	2.00	2.25	1.875	2.75	2.50	1.75	3.00	3.25	2.00	3.00	2.75	1.625	3.00	3.25	3.25	3.25	3.00	3.75
		2.75	2.60	2.75	2.00	2.75	2.50	2.75	3.00	2.00	1.75	2.50	2.25	2.00	3.00	2.75	2.75	2.75	4.00	2.25
		2.25	2.875	2.25	2.50	2.375	2.625	1.50	3.00	2.50	1.875	2.25	2.625	1.875	2.25	2.625	1.875	2.25	3.50	4.125
		1.75	2.50	2.50	2.00	3.00	2.75	2.00	2.875	2.50	1.875	2.875	2.25	1.75	2.75	2.50	3.875	3.25	3.50	3.50
		1.75	3.00	2.875	1.50	3.50	2.25	2.25	2.75	3.25	1.75	2.50	2.60	1.625	1.75	2.25	2.75	2.875	3.25	3.25
		2.25	2.25	3.00	1.75	2.625	2.50	2.75	2.625	3.25	2.00	3.00	2.375	2.75	3.00	2.60	3.00	2.50	4.00	3.50
		2.375	2.50	2.25	1.25	2.75	2.25	2.50	2.75	2.50	2.00	2.25	2.00	1.75	3.25	2.75	3.75	4.00	4.00	4.75
		2.875	2.75	2.50	1.625	2.50	1.875	2.125	2.25	3.375	2.00	2.50	2.50	1.75	2.50	2.50	3.875	3.25	4.00	4.00
		2.25	3.00	2.50	1.50	2.75	2.125	2.25	2.875	2.75	1.75	1.50	1.50	1.75	2.75	2.75	3.75	3.50	4.50	4.50
		2.75	2.25	2.75	1.50	2.50	1.75	2.25	2.75	3.75	1.75	2.375	2.375	1.75	2.50	3.375	4.00	2.25	3.25	3.25
		2.125	2.75	2.00	2.00	2.75	2.25	1.75	3.25	2.25	2.25	3.00	1.75	1.75	2.75	2.50	3.25	3.75	3.60	3.60
		2.625	2.625	2.75	2.25	2.75	2.50	1.50	2.25	2.375	1.75	2.75	2.875	1.875	2.25	2.75	3.75	3.25	3.25	3.375
		2.75	2.50	2.00	2.00	2.75	2.00	2.00	2.75	2.50	1.875	2.25	3.25	1.75	3.75	2.50	3.25	3.875	3.375	3.375
		2.25	3.00	2.50	2.00	2.25	2.50	2.125	3.125	2.50	2.375	3.25	2.50	1.875	3.00	3.25	2.00	5.00	3.25	3.25
		2.25	1.75	2.00	2.25	3.00	2.50	1.875	2.75	3.125	2.125	4.00	2.00	1.00	3.00	3.25	2.25	3.00	3.25	3.25
		2.375	2.25	2.25	2.75	2.00	2.00	1.75	2.50	2.75	2.00	2.75	2.75	1.50	2.75	2.625	2.875	3.25	3.25	3.25
		1.75	3.00	2.125	1.75	2.375	2.125	2.25	2.875	3.00	2.25	2.375	2.25	1.875	2.25	2.00	2.875	2.75	4.50	4.50
		2.75	2.75	2.25	2.375	2.50	3.50	2.125	3.25	3.125	2.00	2.50	3.00	2.00	2.75	2.50	4.25	3.75	3.75	3.75
		1.875	2.50	3.00	1.25	2.50	1.50	1.75	2.25	3.00	2.00	2.25	2.75	1.875	2.50	2.75	4.75	3.25	2.625	2.625
2.50	3.25	2.75	1.25	3.50	3.125	1.25	2.375	2.50	2.00	2.625	2.00	1.625	3.25	3.00	3.50	3.875	3.875	3.875		
2.75	2.75	2.75	1.25	2.25	2.50	1.625	3.25	2.50	1.625	2.50	2.50	1.75	2.25	1.50	2.75	3.50	3.50	3.75		
2.25	3.00	2.25	1.50	2.00	2.125	1.25	2.75	3.25	1.75	2.375	2.00	1.50	2.25	2.75	3.50	4.50	3.75	3.75		
2.25	3.00	2.50	2.00	2.50	2.50	1.75	2.75	1.75	2.125	2.25	2.125	1.75	2.25	2.25	2.875	3.25	4.50	4.50		
2.25	2.50	2.75	2.375	3.00	2.25	1.75	3.00	3.25	2.25	2.625	3.00	1.75	3.00	3.125	3.875	3.50	3.375	3.375		
Averages.....		2.367	2.550	2.463	1.917	2.567	2.263	1.950	2.775	2.792	1.942	2.658	2.467	1.867	2.602	2.671	3.321	3.404	3.073	

Recapitulation and reduction:		308b.			308c.			308d.			309a.			309b.			310a.					
		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.			
Maximum measurements.		B¹	3.00	1.1811	B¹	3.00	1.1811	B¹	2.75	1.0820	B¹	2.50	0.9342	B¹	3.25	1.2795	B¹	4.75	1.8700			
Highest.....		B²	3.25	1.2795	B²	3.50	1.3779	B²	3.25	1.2795	B²	4.00	1.5748	B²	3.75	1.4768	B²	5.00	1.9085	B²	4.75	1.8700
Minimum measurements.		B³	3.00	1.1811	B³	3.50	1.3779	B³	4.00	1.5748	B³	3.50	1.3779	B³	3.50	1.3287	B³	3.875	1.3287	B³	4.75	1.8700
Lowest.....		B¹	1.75	0.6889	B¹	1.25	0.4921	B¹	1.25	0.4921	B¹	1.50	0.5905	B¹	1.00	0.3937	B¹	1.00	0.3937	B¹	2.00	0.7874
Average measurements..		B²	1.50	0.5905	B²	2.00	0.7874	B²	2.25	0.8858	B²	1.50	0.5905	B²	1.50	0.5905	B²	1.75	0.6889	B²	2.25	0.8858
Average.....		B³	2.00	0.7874	B³	1.50	0.5905	B³	1.75	0.6889	B³	1.50	0.5905	B³	1.50	0.5905	B³	1.50	0.5905	B³	2.25	0.8858
Average.....		B¹	5.50	0.5905	B¹	1.25	0.4921	B¹	1.25	0.4921	B¹	1.50	0.5905	B¹	1.00	0.3937	B¹	1.00	0.3937	B¹	2.00	0.7874
Average.....		B²	2.367	0.9318	B²	1.917	0.7547	B²	1.950	0.7677	B²	1.942	0.7645	B²	1.867	0.7350	B²	1.867	0.7350	B²	3.321	1.3074
Average.....		B³	2.550	1.0089	B³	2.567	1.0100	B³	2.775	1.0925	B³	2.658	1.0464	B³	2.692	1.0598	B³	2.692	1.0598	B³	3.404	1.3401
Average.....		B¹	2.463	0.9696	B¹	2.263	0.8909	B¹	2.702	1.0902	B¹	2.467	0.9712	B¹	2.671	1.0575	B¹	2.671	1.0575	B¹	3.675	1.4468
Average.....		B²	2.460	0.9685	B²	2.249	0.8854	B²	2.506	0.9866	B²	2.356	0.9275	B²	2.410	0.9488	B²	2.410	0.9488	B²	3.467	1.3619
Measurements above average.....		48			51			42			41			47			45					
Measurements below average.....		42			39			36			49			43			45					



TABLE XXVII.—Actual measurements of length, crimp, and fineness of commercial grades—Continued.

Catalogue number of samples..		B.—PHILADELPHIA GRADES.																			
		310b.			310c.			311a.			311b.			311c.			311d.				
Length of fiber in crimp .....		0½ inches.			½ inches.			2¼ inches.			2½ inches.			2¾ inches.			3¼ inches.				
Number of crimps per inch .....								14.			14.			14.			14.				
Number of section .....		B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.		
Actual measurement in centimillimeters.	3.125	3.50	2.25	2.875	4.25	2.75	1.875	2.875	3.25	2.75	2.875	2.75	2.875	2.75	2.875	2.125	3.25	2.375	2.25	2.125	
	4.00	2.375	3.00	3.00	4.75	2.75	2.00	2.00	4.25	3.00	2.625	3.00	2.625	3.00	2.00	3.25	2.625	2.60	2.75	1.875	
	3.50	3.875	3.75	2.75	3.00	3.50	1.75	1.875	2.375	3.00	2.875	3.00	3.00	2.875	2.75	3.60	2.375	2.60	1.60	1.60	
	3.25	5.00	4.00	2.025	3.75	4.75	2.00	2.875	1.875	2.50	3.25	3.125	2.875	3.50	2.875	3.50	2.875	1.875	2.375	2.00	
	3.50	4.50	3.75	3.50	4.50	4.25	1.75	2.625	2.00	2.75	2.25	2.625	2.00	2.00	2.00	2.00	2.75	1.875	2.875	1.00	
	2.875	3.25	4.125	3.50	2.75	4.00	1.875	2.75	2.00	2.50	2.75	3.00	2.75	3.00	3.00	2.50	3.00	2.25	2.25	1.50	
	4.50	3.375	3.00	4.00	5.00	4.00	1.875	2.625	3.00	2.75	3.00	2.75	3.00	3.25	2.125	1.625	3.25	2.50	2.75	2.625	
	3.375	3.625	4.00	4.00	4.50	3.75	2.00	2.375	3.125	3.00	2.75	3.00	2.75	3.00	2.75	3.00	2.75	2.50	2.25	2.00	
	2.875	3.50	3.25	3.75	4.00	4.75	2.00	2.00	2.50	2.75	2.75	2.75	2.75	3.125	1.625	3.25	2.50	2.75	2.125	1.00	
	3.00	4.375	4.25	3.00	4.25	6.25	1.75	2.50	2.25	2.75	2.75	3.00	2.75	3.00	2.75	2.625	3.00	2.125	1.75	2.00	
	3.25	4.00	3.50	3.625	4.00	3.50	2.00	2.50	1.625	2.75	2.125	2.75	2.125	3.00	2.375	1.75	3.00	3.75	2.00	3.00	
	4.25	3.00	4.75	2.75	3.50	3.50	2.25	2.75	2.625	2.00	2.00	2.00	3.75	3.00	1.75	2.75	3.25	2.50	1.625	2.50	
	4.00	3.00	2.75	2.75	2.75	3.00	2.00	2.625	1.50	2.875	3.875	3.00	3.875	3.00	1.625	2.00	3.00	2.50	2.00	2.25	
	3.75	3.60	3.75	3.50	3.50	4.375	1.75	2.00	2.125	3.00	2.625	3.00	2.625	2.875	2.25	3.00	2.25	1.875	2.125	2.50	
	1.875	3.00	3.50	1.75	4.00	3.00	1.75	3.50	2.125	2.125	2.875	2.875	2.875	3.00	1.25	3.25	2.00	2.625	1.25	2.50	
	2.125	3.375	4.25	1.50	3.25	1.50	2.00	2.75	2.00	2.75	2.00	2.75	2.00	1.625	1.875	3.00	2.875	3.625	1.875	2.00	
	3.00	3.25	4.00	3.75	4.75	3.60	2.00	2.50	2.75	2.875	3.25	2.875	3.25	3.25	2.125	3.25	2.625	2.125	2.00	1.25	
	2.125	3.25	3.25	3.875	3.00	5.60	2.00	3.375	2.675	3.25	2.75	3.25	2.75	3.25	3.125	2.50	3.60	2.375	2.00	2.375	
	2.125	3.75	3.25	3.625	3.25	6.25	1.875	3.25	1.875	2.00	3.25	1.875	1.75	3.50	3.125	2.00	2.50	2.875	2.00	2.00	
	2.25	3.25	3.75	3.00	3.00	4.25	2.00	3.625	2.75	2.00	2.625	3.125	3.125	3.125	2.25	2.50	2.125	2.625	2.25		
2.125	3.875	3.75	3.00	3.00	4.25	2.125	3.00	3.375	2.00	2.00	3.00	3.00	3.00	2.75	2.00	2.75	1.625	1.625	1.875		
3.00	3.50	4.25	3.00	3.75	4.50	1.75	3.875	3.375	2.375	3.00	3.00	3.00	3.25	2.50	3.25	2.625	2.25	1.50	2.50		
3.875	4.125	4.25	3.25	3.25	4.25	1.25	3.875	3.375	3.25	3.00	3.00	3.00	3.00	2.125	3.00	3.50	2.00	1.25	2.50		
2.75	3.75	3.60	4.00	5.50	4.875	2.25	3.50	2.75	1.625	3.75	3.75	3.75	3.75	2.25	2.75	3.00	2.50	1.00	1.50		
3.875	3.75	4.875	3.125	4.00	4.00	1.75	3.875	1.875	1.625	3.375	3.75	3.75	3.75	1.75	3.375	2.50	2.00	1.60	2.50		
3.75	3.25	3.60	3.375	4.30	4.00	2.00	3.25	2.25	2.25	3.25	3.00	3.00	3.00	3.00	3.00	3.375	2.75	1.625	2.50		
4.50	4.00	4.25	3.25	4.25	4.50	1.875	3.50	2.25	2.25	3.50	3.00	3.00	3.00	2.00	3.00	3.375	2.00	1.75	2.00		
3.625	3.625	5.375	3.60	3.25	4.50	2.00	3.75	1.75	3.00	3.00	3.00	3.00	3.00	2.25	3.00	3.75	2.50	1.50	2.50		
2.50	4.375	3.75	2.875	3.00	3.75	2.375	3.75	2.00	3.00	3.00	3.00	3.00	3.00	1.75	3.00	3.75	2.125	1.75	1.50		
2.25	3.50	3.75	3.75	3.60	3.375	2.75	3.75	3.00	2.50	3.00	2.50	3.00	3.00	3.125	2.75	3.75	1.25	1.75	3.00		
Averages .....	3.133	3.467	3.708	3.134	3.875	3.854	2.020	2.620	2.420	2.650	2.783	2.771	2.106	2.833	2.820	2.250	1.908	2.071			
	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:																					
Maximum measurements:	B¹	4.50	1.7716	B¹	4.00	1.5748	B¹	3.75	1.4703	B¹	3.25	1.3795	B¹	3.125	1.2908	B¹	2.75	1.0826			
	B²	6.00	1.9685	B²	5.00	2.3622	B²	4.25	1.4271	B²	3.75	1.4763	B²	3.75	1.4763	B²	2.875	1.1313			
	B³	5.375	2.1161	B³	5.50	2.1653	B³	4.25	1.6732	B³	3.75	1.4763	B³	3.75	1.4763	B³	3.00	1.1811			
Highest .....		5.375	2.1161		6.00	2.3622		4.25	1.6732		3.75	1.4763		3.75	1.4763		8.00	1.1811			
Minimum measurements:	B¹	1.875	0.7380	B¹	1.50	0.5905	B¹	1.25	0.4921	B¹	1.625	0.6397	B¹	1.25	0.4921	B¹	1.25	0.4921			
	B²	2.375	0.9350	B²	2.75	1.0626	B²	1.875	0.7380	B²	1.75	0.6880	B²	2.00	0.7874	B²	1.25	0.4921			
	B³	2.25	0.8858	B³	1.50	0.5905	B³	1.50	0.5905	B³	1.625	0.6397	B³	2.00	0.7874	B³	1.00	0.3987			
Lowest .....		1.875	0.7380		1.50	0.5905		1.25	0.4921		1.625	0.6397		1.25	0.4921		1.00	0.3987			
Average measurements:	B¹	3.133	1.2334	B¹	3.134	1.2338	B¹	2.020	0.7968	B¹	2.650	1.0433	B¹	2.106	0.8645	B¹	2.250	0.8959			
	B²	3.467	1.3649	B²	3.875	1.5255	B²	2.620	1.0350	B²	2.783	1.0956	B²	2.833	1.1153	B²	1.908	0.7511			
	B³	3.708	1.4508	B³	3.854	1.6173	B³	2.420	0.9562	B³	2.771	1.0900	B³	2.820	1.1137	B³	2.071	0.8153			
Average .....		3.436	1.3527		3.621	1.4255		2.362	0.9299		2.785	1.0767		2.619	1.0311		2.078	0.8173			
Measurements above average .....		41			42			41			50			51			47				
Measurements below average .....		46			48			49			34			39			43				



TABLE XXVII.—Actual measurements of length, crimp, and fineness of commercial grades—Continued.

		B.—PHILADELPHIA GRADES.																	
Catalogue number of samples..		312.			313a.			313b.			313c.			314a.			314b.		
Length of fiber in crimp.....		2½ inches.			2¾ inches.			3 inches.			3¼ inches.			1¾ inches.			2¼ inches.		
Number of crimps per inch....		—			10.			10.			10.			20.			20.		
Number of section.....		B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.
Actual measurement in centimillimeters.		1.25	2.625	3.875	2.125	3.00	3.56	1.75	4.00	2.75	2.00	3.75	2.875	2.50	2.75	2.00	1.375	1.75	2.125
Averages.....		1.988	2.979	2.721	1.942	2.950	2.750	2.188	2.763	2.900	2.083	2.579	2.463	1.871	1.771	1.875	1.540	1.904	1.770

Recapitulation and reduction:		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Maximum measurements.	B¹	3.50	1.3779	1.0334	B¹	2.625	1.0334	B¹	3.25	1.2795	B¹	3.00	1.1811	B¹	2.50	0.9842	B¹	2.00	0.7874
	B²	4.00	1.5748	1.6732	B²	4.25	1.6732	B²	4.00	1.5748	B²	3.75	1.4763	B²	3.125	1.2303	B²	2.375	0.9350
	B³	4.25	1.6732	1.4763	B³	3.75	1.4763	B³	3.50	1.3779	B³	3.00	1.1811	B³	3.00	1.1811	B³	2.375	0.9350
Highest.....		4.25	1.6732	1.6732		4.25	1.6732		4.00	1.5748		3.75	1.4763		3.125	1.2303		2.375	0.9350
Minimum measurements.	B¹	1.25	0.4921	0.4921	B¹	1.25	0.4921	B¹	1.50	0.5905	B¹	1.625	0.6397	B¹	1.25	0.4921	B¹	1.25	0.4921
	B²	2.00	0.7874	0.7880	B²	1.875	0.7380	B²	2.00	0.7874	B²	1.75	0.6889	B²	1.375	0.5413	B²	1.375	0.5413
	B³	1.875	0.7380	0.7874	B³	2.00	0.7874	B³	2.50	0.9842	B³	1.75	0.6889	B³	1.75	0.6889	B³	1.50	0.5905
Lowest.....		1.25	0.4921	0.4921		1.25	0.4921		1.50	0.5905		1.625	0.6397		1.25	0.4921		1.25	0.4921
Average measurements.	B¹	1.988	0.7826	0.7645	B¹	1.942	0.7645	B¹	2.188	0.8614	B¹	2.088	0.8200	B¹	1.871	0.7366	B¹	1.546	0.6283
	B²	2.979	1.1728	1.1614	B²	2.950	1.1614	B²	2.763	1.0877	B²	2.579	1.0153	B²	1.771	0.6972	B²	1.904	0.7496
	B³	2.721	1.0712	1.0820	B³	2.750	1.0820	B³	2.900	1.1417	B³	2.463	0.9606	B³	1.875	0.7380	B³	1.775	0.6983
Average.....		2.563	1.0090	1.0027		2.547	1.0027		2.617	1.0803		2.376	0.9350		1.880	0.7240		1.742	0.6883
Measurements above average.....		38				38			47			53			73			46	
Measurements below average.....		52				52			48					17				41	



TABLE XXVII.—Actual measurements of length, crimp, and fineness of commercial grades—Continued.

Catalogue number of samples..		B.—PHILADELPHIA GRADES.																	
		315a.			315b.			316.			317a.			317b.			317c.		
		1½ inches.			1½ inches.			¾ inches.			2 inches.			2¼ inches.			2½ inches.		
		20.			20.			20.			20.			20.					
Length of fiber in crimp.....		1½ inches.			1½ inches.			¾ inches.			2 inches.			2¼ inches.			2½ inches.		
Number of crimps per inch.....		20.			20.			20.			20.			20.			20.		
Number of section.....		B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.
Actual measurement in centimillimeters.		2.50	2.50	2.625	2.50	3.00	2.00	1.375	2.875	2.50	2.75	2.50	2.50	1.75	2.00	2.375	1.75	1.75	1.875
		2.25	2.125	3.625	1.50	2.375	2.25	1.50	2.25	2.25	1.875	2.00	1.625	2.00	2.00	3.00	1.75	2.00	2.00
		2.00	2.875	1.75	1.75	2.25	2.25	1.875	2.50	2.75	1.875	1.60	2.50	1.75	1.75	2.25	1.875	2.00	2.00
		1.875	2.50	2.25	2.25	1.625	2.00	1.625	2.50	3.00	3.00	2.125	2.125	1.50	2.375	2.125	1.75	2.00	2.00
		2.00	2.625	3.00	2.00	2.50	2.375	1.875	2.75	3.00	2.125	1.375	2.75	2.75	2.00	1.875	1.75	1.625	2.00
		2.00	2.875	1.75	1.75	2.75	2.25	1.375	2.75	2.75	2.25	1.25	2.00	1.50	2.00	1.75	1.75	2.375	2.00
		2.375	2.50	2.125	2.00	2.25	2.625	1.50	2.875	2.375	2.375	1.875	2.25	2.00	1.50	1.875	2.00	1.50	2.50
		2.375	3.25	2.00	2.00	2.50	2.25	1.25	2.50	2.50	2.125	1.625	1.625	2.00	1.625	2.25	2.75	1.50	2.50
		2.875	2.125	2.00	1.625	2.50	3.00	1.625	2.25	1.875	1.50	2.25	2.00	1.75	2.50	2.875	1.625	1.75	2.50
		1.875	3.25	2.00	2.00	2.50	2.25	1.50	2.25	2.25	2.00	1.50	2.50	1.75	1.875	2.00	2.00	1.75	2.00
		2.25	2.00	3.125	1.875	1.625	2.375	1.125	2.25	1.75	1.25	2.00	2.125	1.75	2.25	1.75	1.875	1.625	1.75
		2.00	2.00	2.375	1.50	2.25	2.50	1.50	1.50	2.25	1.25	1.75	2.625	2.25	2.75	2.00	2.00	2.00	1.75
		2.00	2.25	2.00	2.00	2.00	2.00	1.75	2.375	2.25	1.50	2.50	2.125	2.00	1.75	2.50	1.50	2.25	2.00
		2.00	2.25	2.375	2.125	2.00	2.625	1.875	2.375	3.00	1.50	2.75	2.25	2.00	1.50	3.75	2.125	2.00	1.75
		1.875	2.50	2.75	1.75	2.00	2.125	1.625	2.25	2.50	1.625	1.875	2.375	1.50	1.75	1.75	1.60	1.875	2.25
		2.125	2.125	2.75	2.00	1.875	2.125	1.50	2.75	2.375	1.50	2.375	2.125	1.625	1.75	2.875	2.25	1.25	1.75
		2.00	2.875	3.25	1.50	2.125	2.25	1.75	2.375	2.50	1.75	1.875	2.75	2.00	1.875	2.875	2.25	2.75	2.50
		2.25	2.00	3.00	2.25	1.75	2.125	1.50	2.75	2.50	1.75	2.25	2.25	1.50	1.625	2.50	1.25	2.00	2.50
		2.50	3.00	2.50	2.00	2.00	2.125	1.50	3.00	2.375	1.125	2.50	2.25	2.00	2.00	2.25	2.00	1.75	2.87
		1.875	2.25	2.625	1.75	2.50	2.125	1.50	2.625	2.00	1.625	2.00	2.25	2.50	2.00	2.25	1.25	2.25	2.25
		2.125	1.875	3.00	1.50	2.25	2.50	1.875	2.25	2.25	1.375	1.875	2.25	2.125	2.625	2.375	2.00	2.00	1.87
		2.50	2.50	1.75	1.375	1.50	2.375	2.00	3.00	1.375	2.125	2.25	1.50	1.50	2.875	1.50	1.75	2.00	2.00
		2.00	2.375	1.75	1.875	2.50	2.375	1.625	2.50	3.25	1.125	2.00	2.875	1.50	1.75	2.50	2.00	2.125	3.00
		1.875	2.00	2.00	2.00	2.25	2.375	1.375	2.25	2.75	2.00	2.00	2.375	1.75	1.75	2.75	1.50	2.25	2.25
		2.00	2.75	2.50	1.875	2.50	2.75	2.00	2.625	2.50	1.25	2.25	2.125	1.75	1.875	2.50	1.75	2.75	2.00
	1.75	2.00	2.75	2.125	2.375	2.125	1.75	2.50	2.25	2.00	2.00	2.00	2.00	1.875	2.25	1.50	1.75	2.00	
	1.875	2.625	2.625	1.50	1.875	2.25	2.00	2.25	2.00	1.875	2.125	1.50	1.75	1.875	2.375	1.875	2.00	2.62	
	2.00	2.375	2.00	2.00	2.125	2.00	1.75	2.25	2.375	1.75	1.75	1.875	1.25	2.00	1.75	1.75	2.25	2.50	
	1.75	2.25	2.00	1.875	2.125	2.50	1.75	2.25	1.875	1.875	2.50	2.25	2.00	2.25	2.125	1.025	2.50	2.00	
	2.25	2.25	2.25	1.75	2.50	3.00	1.75	2.25	2.25	1.25	2.375	2.375	1.875	1.75	1.75	1.625	1.875	2.00	
Averages.....		2.108	2.420	2.417	1.883	2.221	2.340	1.633	2.454	2.400	1.583	2.215	2.171	1.829	1.963	2.308	1.725	2.050	2.138

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.						
Maximum measurements.	B¹	2.50	0.8642	B¹	2.50	0.9842	B¹	2.00	0.7874	B¹	2.75	1.0820	B¹	2.75	1.0828	B¹	2.25	0.8858
	B²	3.25	1.2795	B²	3.00	1.1811	B²	3.00	1.1811	B²	2.75	1.0820	B²	2.75	1.0820	B²	2.75	1.0820
	B³	3.625	1.4271	B³	3.00	1.1811	B³	3.25	1.2705	B³	2.875	1.1318	B³	3.75	1.4763	B³	3.00	1.1811
Highest.....		3.625	1.4271		3.00	1.1811		3.25	1.2705		2.875	1.1318		3.75	1.4763		3.00	1.1811
Minimum measurements.	B¹	1.75	0.6889	B¹	1.875	0.5413	B¹	1.125	0.4429	B¹	1.125	0.4429	B¹	1.25	0.4921	B¹	1.25	0.4921
	B²	1.875	0.7380	B²	1.50	0.5905	B²	2.00	0.7874	B²	1.50	0.5905	B²	1.50	0.5905	B²	1.25	0.4921
	B³	1.75	0.6889	B³	2.00	0.7874	B³	1.75	0.6889	B³	1.50	0.5905	B³	1.75	0.6889	B³	1.875	0.5413
Lowest.....		1.75	0.6889		1.375	0.5413		1.125	0.4429		1.125	0.4429		1.25	0.4921		1.25	0.4921
Average measurements.	B¹	2.108	0.8209	B¹	1.883	0.7413	B¹	1.633	0.6429	B¹	1.583	0.6232	B¹	1.829	0.7200	B¹	1.725	0.6791
	B²	2.420	0.9569	B²	2.221	0.8744	B²	2.454	0.9661	B²	2.213	0.8712	B²	1.963	0.7728	B²	2.050	0.8070
	B³	2.417	0.9514	B³	2.340	0.8236	B³	2.400	0.9448	B³	2.171	0.8547	B³	2.308	0.9086	B³	2.133	0.8307
Average.....		2.318	0.8125		2.150	0.8464		2.162	0.8511		1.980	0.7830		2.033	0.8003		1.909	0.7751
Measurements above average.....		39		41		23		51		83		52						
Measurements below average.....		61		49		67		39		41		37						



TABLE XXVII.—Actual measurements of length, crimp, and fineness of commercial grades—Continued.

Catalogue number of samples..	B.—PHILADELPHIA GRADES.												C.—GERMAN GRADES.					
	318.			319a.			319b.			320.			1.			2.		
	3½ inches.			¾ inches.			1¼ inches.			1½ inches.			1½ inches.			1 inch.		
	—			26.			26.			20.			34.			34.		
Number of section.....	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.
2.00	2.75	3.00	1.875	1.75	2.25	1.25	1.50	1.50	1.00	1.50	1.375	2.00	2.25	2.375	1.375	1.375	1.25	
1.625	3.00	4.00	1.60	1.375	1.75	1.125	1.75	1.25	1.375	1.00	1.00	2.00	2.25	2.5	1.25	2.0	1.0	
1.875	3.125	3.00	1.875	1.875	1.75	1.50	1.50	1.00	1.875	1.75	2.75	2.375	2.0	2.125	1.125	1.375	0.875	
1.75	3.75	3.75	1.60	1.75	1.75	1.75	1.00	1.50	1.125	1.25	1.50	1.375	2.0	3.375	1.5	1.375	1.	
1.625	2.75	3.50	1.75	1.75	2.00	1.125	1.25	1.125	1.60	1.375	1.75	1.375	1.75	1.75	1.375	1.375	0.875	
1.625	2.675	4.50	1.75	1.75	1.25	1.375	1.75	1.50	1.875	1.50	1.375	2.125	1.75	1.625	1.5	1.625	1.375	
2.25	3.25	3.00	1.75	2.125	2.125	1.375	1.75	1.75	1.375	1.25	1.125	2.125	1.5	1.875	1.375	1.75	1.375	
2.25	3.00	2.75	1.875	1.625	2.375	1.125	1.75	1.125	1.25	1.25	1.50	1.5	2.0	2.125	1.25	1.375	0.875	
1.625	3.50	3.25	1.625	1.875	1.875	0.875	1.75	1.00	1.60	1.25	1.50	1.75	2.125	3.0	1.375	1.375	1.25	
2.00	3.00	3.125	1.50	1.50	2.125	1.375	1.75	1.00	1.60	1.50	1.375	1.625	1.75	1.875	1.5	1.375	1.	
1.625	3.50	2.125	1.50	1.50	2.50	1.25	1.375	1.375	1.125	1.25	1.125	1.5	1.625	2.0	1.25	1.375	1.875	
2.375	4.50	3.50	1.75	2.00	2.00	1.375	1.50	1.25	1.25	1.25	1.125	2.8	1.625	2.375	1.375	1.5	1.875	
2.375	4.00	3.50	2.00	1.75	1.625	1.00	1.50	1.25	1.25	1.50	1.25	1.875	2.0	2.0	1.5	1.875	1.125	
1.60	2.75	3.60	1.625	1.875	2.125	0.75	1.75	1.125	1.375	1.375	1.375	1.625	2.375	2.375	1.25	1.625	1.	
2.25	4.75	8.00	2.00	1.875	1.875	1.25	1.625	1.375	1.375	1.25	1.375	2.125	2.0	1.375	1.375	0.75	1.375	
2.75	2.25	3.60	1.625	1.50	1.625	1.00	1.75	1.25	1.50	1.50	1.125	1.625	2.375	2.125	1.25	1.375	1.25	
2.00	2.00	3.50	1.25	1.875	1.375	1.00	1.75	1.00	1.25	1.25	1.375	1.5	2.375	2.0	1.5	1.625	1.875	
2.00	3.00	3.25	1.75	1.50	2.00	1.25	1.375	1.125	1.125	1.375	1.125	2.0	2.25	2.625	1.625	1.75	1.125	
1.50	2.50	4.25	1.375	1.60	1.75	1.375	1.625	1.125	1.375	1.00	2.0	1.75	1.125	1.5	1.375	0.875	1.375	
1.875	3.60	3.25	2.00	1.875	1.75	1.375	1.50	0.875	1.25	1.60	1.25	2.125	1.875	1.875	1.5	1.75	1.375	
1.75	3.00	3.50	1.50	1.50	2.00	1.375	1.75	1.50	1.25	1.375	1.50	1.5	1.625	1.875	1.5	1.5	1.5	
2.00	2.50	2.50	1.75	2.00	1.75	1.125	1.375	1.375	1.50	1.25	1.75	2.0	2.0	1.875	1.5	1.5	1.25	
2.875	3.00	2.50	1.75	1.375	1.60	1.375	1.75	1.375	1.375	1.125	1.375	1.875	1.875	1.375	1.375	1.375	1.5	
2.00	2.25	1.75	2.25	1.25	1.75	1.25	1.50	1.50	1.50	1.375	1.50	1.75	2.0	2.0	1.5	1.625	1.75	
1.75	2.75	3.50	1.875	1.50	1.875	1.125	1.375	1.50	1.25	1.50	1.125	1.375	1.875	1.875	1.375	1.5	1.75	
1.875	4.25	3.375	1.375	1.625	1.60	1.25	1.375	1.50	1.25	1.375	1.125	1.75	2.25	2.0	1.5	1.625	1.625	
2.125	2.875	3.25	1.625	1.75	1.50	1.25	1.375	1.125	1.50	1.25	1.00	2.0	1.5	1.5	1.0	1.0	1.25	
2.25	3.625	4.00	1.75	1.50	1.50	1.375	1.50	1.25	1.375	1.25	1.625	2.0	1.75	1.75	1.25	1.5	1.625	
1.75	3.25	3.75	1.50	1.75	2.00	1.125	1.50	1.00	1.25	1.25	1.5	2.125	2.375	1.375	1.5	1.875	1.875	
2.125	3.00	3.50	1.75	1.75	1.75	0.875	1.375	1.50	1.375	1.125	1.00	1.375	2.125	1.75	1.375	1.5	1.875	
Averages.....	1.979	3.142	3.296	1.683	1.687	1.833	1.196	1.550	1.258	1.300	1.358	1.325	1.741	1.962	2.066	1.388	1.508	1.300

Actual measurement in centimillimeters.	318.			319a.			319b.			320.			1.			2.		
	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.
2.00	2.75	3.00	1.875	1.75	2.25	1.25	1.50	1.50	1.00	1.50	1.375	2.00	2.25	2.375	1.375	1.375	1.25	
1.625	3.00	4.00	1.60	1.375	1.75	1.125	1.75	1.25	1.375	1.00	1.00	2.00	2.25	2.5	1.25	2.0	1.0	
1.875	3.125	3.00	1.875	1.875	1.75	1.50	1.50	1.00	1.875	1.75	2.75	2.375	2.0	2.125	1.125	1.375	0.875	
1.75	3.75	3.75	1.60	1.75	1.75	1.75	1.00	1.50	1.125	1.25	1.50	1.375	2.0	3.375	1.5	1.375	1.	
1.625	2.75	3.50	1.75	1.75	2.00	1.125	1.25	1.125	1.60	1.375	1.75	1.375	1.75	1.75	1.375	1.375	0.875	
1.625	2.675	4.50	1.75	1.75	1.25	1.375	1.75	1.50	1.875	1.50	1.375	2.125	1.75	1.625	1.5	1.625	1.375	
2.25	3.25	3.00	1.75	2.125	2.125	1.375	1.75	1.75	1.375	1.25	1.125	2.125	1.5	1.875	1.375	1.75	1.375	
2.25	3.00	2.75	1.875	1.625	2.375	1.125	1.75	1.125	1.25	1.25	1.50	1.5	2.0	2.125	1.25	1.375	0.875	
1.625	3.50	3.25	1.625	1.875	1.875	0.875	1.75	1.00	1.60	1.25	1.50	1.75	2.125	3.0	1.375	1.375	1.25	
2.00	3.00	3.125	1.50	1.50	2.125	1.375	1.75	1.00	1.60	1.50	1.375	1.625	1.75	1.875	1.5	1.375	1.	
1.625	3.50	2.125	1.50	1.50	2.50	1.25	1.375	1.375	1.125	1.25	1.125	1.5	1.625	2.0	1.25	1.375	1.875	
2.375	4.50	3.50	1.75	2.00	2.00	1.375	1.50	1.25	1.25	1.25	1.125	2.8	1.625	2.375	1.375	1.5	1.875	
2.375	4.00	3.50	2.00	1.75	1.625	1.00	1.50	1.25	1.25	1.50	1.25	1.875	2.0	2.0	1.5	1.875	1.125	
1.60	2.75	3.60	1.625	1.875	2.125	0.75	1.75	1.125	1.375	1.375	1.375	1.625	2.375	2.375	1.25	1.625	1.	
2.25	4.75	8.00	2.00	1.875	1.875	1.25	1.625	1.375	1.375	1.25	1.375	2.125	2.0	1.375	1.375	0.75	1.375	
2.75	2.25	3.60	1.625	1.50	1.625	1.00	1.75	1.25	1.50	1.50	1.125	1.625	2.375	2.125	1.25	1.375	1.25	
2.00	2.00	3.50	1.25	1.875	1.375	1.00	1.75	1.00	1.25	1.25	1.375	1.5	2.375	2.0	1.5	1.625	1.875	
2.00	3.00	3.25	1.75	1.50	2.00	1.25	1.375	1.125	1.125	1.375	1.125	2.0	2.25	2.625	1.625	1.75	1.125	
1.50	2.50	4.25	1.375	1.60	1.75	1.375	1.625	1.125	1.375	1.00	2.0	1.75	1.125	1.5	1.375	0.875	1.375	
1.875	3.60	3.25	2.00	1.875	1.75	1.375	1.50	0.875	1.25	1.60	1.25	2.125	1.875	1.875	1.5	1.75	1.375	
1.75	3.00	3.50	1.50	1.50	2.00	1.375	1.75	1.50	1.25	1.375	1.50	1.5	1.625	1.875	1.5	1.5	1.5	
2.00	2.50	2.50	1.75	2.00	1.75	1.125	1.375	1.375	1.50	1.25	1.75	2.0	2.0	1.875	1.5	1.5	1.25	
2.875	3.00	2.50	1.75	1.375	1.60	1.375	1.75	1.375	1.375	1.125	1.375	1.875	1.875	1.375	1.375	1.375	1.5	
2.00	2.25	1.75	2.25	1.25	1.75	1.25	1.50	1.50	1.50	1.375	1.50	1.75	2.0	2.0	1.5	1.625	1.75	
1.75	2.75	3.50	1.875	1.50	1.875	1.125	1.375	1.50	1.25	1.50	1.125	1.375	1.875	1.875	1.375	1.5	1.75	
1.875	4.25	3.375	1.375	1.625	1.60	1.25	1.375	1.50	1.25	1.375	1.125	1.75	2.25	2.0	1.5	1.625	1.625	
2.125	2.875	3.25	1.625	1.75	1.50	1.25	1.375	1.125	1.50	1.25	1.00	2.0	1.5	1.5	1.0	1.0	1.25	
2.25	3.625	4.00	1.75	1.50	1.50	1.375	1.50	1.25	1.375	1.25	1.625	2.0	1.75	1.75	1.25	1.5	1.625	
1.75	3.25	3.75	1.50	1.75	2.00	1.125	1.50	1.00	1.25	1.25	1.5	2.125	2.375	1.375	1.5	1.875	1.875	
2.125	3.00	3.50	1.75	1.75	1.75	0.875	1.375	1.50	1.375	1.125	1.00	1.375	2.125	1.75	1.375	1.5	1.875	
Averages.....	1.979	3.142	3.296	1.683	1.687	1.833	1.196	1.550	1.258	1.300	1.358	1.325	1.741	1.962	2.066	1.388	1.508	1.300

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousands of inch.	In thousands of inch.		In thousands of inch.	In thousands of inch.		In thousands of inch.	In thousands of inch.		In thousands of inch.	In thousands of inch.						
Maximum measurements.	B¹	2.875	1.1818	B¹	2.25	0.8858	B¹	1.50	0.5905	B¹	1.50	0.5905	B¹	2.375	0.9350	B¹	1.625	0.6397
	B²	4.75	1.8700	B²	2.125	0.8369	B²	1.75	0.6889	B²	1.75	0.6889	B²	2.375	0.9350			



TABLE XXVII.—Actual measurements of length, crimp, and fineness of commercial grades—Continued.

C.—GERMAN GRADES.															
Catalogue number of samples..	3.				4.			5.			6.		7.		
Length of fiber in crimp.....	1½ inches.				1½ inches.			1½ inches.			1½ inches.		1½ inches.		
Number of crimps per inch....	30.				30.			27.			27.		25.		
Number of section.....	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .
Actual measurement in centimillimeters.	1.375	1.5	1.875	2.	1.5	1.5	1.375	1.5	1.375	1.875	1.75	2.5	1.25	1.375	1.625
	1.5	1.5	1.5	1.375	1.375	1.875	1.875	1.75	1.375	1.5	1.75	1.875	1.875	1.375	1.75
	1.25	1.375	1.875	1.75	1.625	1.5	1.875	1.625	1.875	2.375	1.875	1.5	1.375	1.375	1.5
	1.625	1.375	1.625	1.5	1.875	1.875	1.25	1.875	1.625	2.125	1.5	2.	1.	1.75	1.375
	1.125	1.375	1.75	1.75	1.625	1.75	1.875	1.25	2.	1.75	1.5	1.75	1.75	1.675	1.75
	1.6	1.375	1.625	2.	1.5	1.625	1.5	1.5	1.875	2.0	1.875	1.75	1.625	1.375	1.375
	1.75	1.875	2.125	1.25	1.375	1.875	1.5	1.5	1.875	2.0	1.5	1.5	1.25	1.375	2.
	1.5	1.875	1.875	2.25	1.375	1.75	1.5	1.875	1.25	1.75	1.25	1.875	1.75	1.5	1.75
	1.875	1.875	1.375	1.5	1.25	1.75	1.625	1.25	1.375	1.875	1.75	1.5	1.75	1.5	1.75
	1.25	1.875	1.625	1.5	1.375	1.625	1.875	1.5	1.25	1.875	1.875	1.375	1.875	1.5	1.375
	1.875	1.5	1.5	2.125	1.875	2.	1.375	1.5	2.875	1.5	1.125	1.75	1.5	2.	1.5
	1.125	2.	1.875	1.5	1.5	1.75	1.625	1.875	2.25	2.	1.5	1.5	1.375	1.625	1.875
	1.375	1.75	1.75	2.	1.125	1.875	1.5	1.375	1.875	2.125	1.875	1.875	1.25	2.25	1.75
	2.	1.875	1.25	2.	1.5	2.	1.5	1.875	1.75	1.625	2.	1.875	1.25	1.75	1.625
	1.875	1.375	1.875	2.	1.75	2.	1.625	1.625	1.875	1.875	2.	1.75	1.25	1.75	1.375
	1.5	1.75	1.375	1.75	1.5	1.75	1.875	1.625	1.5	1.5	1.75	1.5	1.	1.625	1.75
	1.375	1.375	1.625	1.375	1.5	2.25	1.5	1.375	1.375	2.375	1.875	1.875	1.75	1.75	1.25
	1.125	1.75	1.75	2.5	2.25	2.	1.5	1.25	1.25	1.875	1.5	1.75	1.75	1.5	1.375
	1.75	1.625	1.75	2.	1.875	1.875	1.875	1.25	1.375	1.875	1.875	1.375	1.25	2.25	1.875
	1.5	2.375	1.5	1.5	1.375	1.875	2.	1.875	1.5	1.75	1.875	1.5	1.5	1.375	1.875
1.75	1.25	1.5	2.125	1.875	1.75	1.75	1.75	1.375	1.875	1.875	1.625	1.5	1.5	1.75	
1.625	1.75	1.875	1.875	1.375	1.875	1.875	1.5	1.75	1.875	1.5	1.375	1.	1.75	1.875	
1.875	1.5	1.75	1.75	1.5	1.75	1.625	1.875	2.5	1.5	1.875	1.75	1.375	1.75	1.875	
1.25	1.625	1.625	1.875	1.625	1.25	1.75	1.875	1.5	2.0	1.6	2.	1.875	1.75	1.25	
1.75	1.25	2.25	2.5	1.875	1.75	2.	1.625	2.0	1.375	1.5	1.625	1.25	2.75	1.75	
1.25	1.625	1.875	2.0	1.75	1.875	1.5	1.25	1.5	2.0	1.5	1.625	1.5	1.5	1.25	
1.	2.	2.375	1.875	1.625	1.75	1.75	1.875	2.0	1.75	1.625	1.5	1.5	1.875	1.5	
1.	1.75	2.	1.875	1.5	1.75	1.875	1.25	1.375	1.625	1.75	1.625	1.5	1.625	1.625	
1.25	1.625	1.625	2.	1.875	1.875	1.5	1.375	2.875	2.0	2.375	1.875	1.375	1.75	1.375	
1.5	1.5	1.625	1.5	1.375	1.625	1.75	1.375	1.75	1.375	1.6	2.	1.875	1.5	1.25	
Averages.....	1.466	1.611	1.700	1.816	1.516	1.791	1.612	1.487	1.658	1.811	1.670	1.650	1.410	1.606	1.583

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:															
Maximum measurements.	B <sup>1</sup>	1.875	0.7381	B <sup>1</sup>	1.875	0.7381	B <sup>1</sup>	1.875	0.7381	B <sup>1</sup>	2.375	0.9350	B <sup>1</sup>	1.75	0.6889
	B <sup>2</sup>	1.875	0.7381	B <sup>2</sup>	2.25	0.8858	B <sup>2</sup>	2.5	0.9842	B <sup>2</sup>	2.5	0.9842	B <sup>2</sup>	2.75	1.0826
	B <sup>3</sup>	2.375	0.9350	B <sup>3</sup>	2.00	0.7874	B <sup>3</sup>	2.375	0.9350	B <sup>3</sup>	2.375	0.9350	B <sup>3</sup>	2.00	0.7874
Highest.....		2.375	0.9350		2.25	0.8858		2.5	0.9842		2.5	0.9842		2.75	1.0826
Minimum measurements.	B <sup>1</sup>	1.000	0.3937	B <sup>1</sup>	1.125	0.4420	B <sup>1</sup>	1.25	0.4921	B <sup>1</sup>	1.125	0.4420	B <sup>1</sup>	1.00	0.3937
	B <sup>2</sup>	1.25	0.4921	B <sup>2</sup>	1.500	0.5905	B <sup>2</sup>	1.25	0.4921	B <sup>2</sup>	1.375	0.5413	B <sup>2</sup>	1.25	0.4921
	B <sup>3</sup>	1.25	0.4921	B <sup>3</sup>	1.25	0.4921	B <sup>3</sup>	1.875	0.5413	B <sup>3</sup>	1.375	0.5413	B <sup>3</sup>	1.25	0.4921
Lowest.....		1.00	0.3937		1.125	0.4420		1.25	0.4921		1.125	0.4420		1.00	0.3937
Average measurements..	B <sup>1</sup>	1.466	0.5771	B <sup>1</sup>	1.516	0.5983	B <sup>1</sup>	1.487	0.5851	B <sup>1</sup>	1.670	0.6510	B <sup>1</sup>	1.410	0.5574
	B <sup>2</sup>	1.611	0.6460	B <sup>2</sup>	1.791	0.7051	B <sup>2</sup>	1.658	0.6527	B <sup>2</sup>	1.650	0.6496	B <sup>2</sup>	1.606	0.6322
	B <sup>3</sup>	1.700	0.6892	B <sup>3</sup>	1.612	0.6346	B <sup>3</sup>	1.811	0.7248	B <sup>3</sup>	1.650	0.6496	B <sup>3</sup>	1.583	0.6232
	B <sup>4</sup>	1.816	0.7149												
Average.....		1.655	0.6515		1.639	0.6492		1.662	0.6543		1.664	0.6551		1.635	0.6043
Measurements above average.....		54			40			40			27			39	
Measurements below average.....		66			50			50			83			51	



TABLE XXVII.—Actual measurements of length, crimp, and fineness of commercial grades—Continued.

C.—GERMAN GRADES.															
Catalogue number of samples..	8.			9.			10.			11.			12.		
Length of fiber in crimp .....	1½ inches.			1¾ inches.			1¾ inches.			1¾ inches.			1¾ inches.		
Number of crimps per inch....	25.			22.			22.			20.			20.		
Number of section.....	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.
Actual measurement in centimillimeters.	1.5	1.75	1.875	1.5	1.875	2.0	1.875	1.75	2.125	2.125	1.875	2	2.25	2.125	2.0
	1.6	1.6	1.625	1.6	1.5	1.6	1.5	1.75	1.5	1.6	2.125	2.125	2	1.5	2.0
	1.25	1.75	1.625	1.375	1.75	2.125	1.375	1.625	1.875	1.5	2	2.125	1.5	2.125	1.875
	1.25	1.375	1.5	1.375	1.6	1.875	1.75	1.75	2.125	1.75	2.25	2.25	1.75	1.5	1.75
	1.	1.625	1.375	1.375	1.875	1.375	1.5	1.625	1.5	1.75	2.25	1.75	1.5	2.125	1.875
	1.625	1.625	1.75	1.75	1.875	1.75	1.75	1.875	2	1.75	2.375	1.875	1.5	1.75	1.625
	1.6	1.625	1.375	1.875	1.875	2.0	1.375	1.5	1.875	1.625	2.25	2.0	1.375	2.25	1.5
	1.375	2.	1.375	1.875	2.0	2.125	1.5	1.625	1.75	1.5	2	1.875	1.875	1.75	1.75
	1.75	1.5	1.375	1.75	1.5	1.875	1.625	1.75	1.5	2.	2.125	1.875	1.625	1.5	2.0
	1.875	1.25	1.625	1.75	1.5	1.875	1.75	1.75	1.5	1.625	2.125	2.125	1.75	1.875	1.75
	1.6	1.625	1.375	1.5	1.5	2.125	1.75	1.5	2.	1.5	2.25	2.0	1.375	1.75	1.875
	1.375	1.275	1.825	1.875	1.875	1.875	1.875	1.625	2.125	1.75	1.375	1.875	1.75	2.125	2.0
	1.875	1.6	1.5	1.75	1.6	2.25	1.375	1.625	1.375	1.625	1.875	2.0	2.875	1.75	1.625
	1.5	1.375	1.5	1.625	1.5	2.	1.25	1.875	2.25	1.5	2.375	1.875	1.75	2.0	1.375
	1.6	1.625	1.75	1.75	1.5	1.625	1.875	1.375	2.	1.875	2.125	2.0	2.0	1.875	1.625
	1.75	1.75	1.875	1.6	1.875	1.5	1.875	1.375	1.75	1.5	1.875	2.25	2.125	1.25	1.375
	1.625	1.625	1.75	1.6	1.6	2.0	1.875	1.75	2.	1.5	2.25	2.375	1.75	1.625	1.75
	1.6	1.625	1.625	1.5	1.875	1.875	1.75	1.75	2.	1.5	1.75	2.125	2.625	1.875	2.
	1.375	1.5	1.375	1.5	1.75	1.75	1.75	1.625	1.75	1.75	2.	1.875	1.5	1.875	1.75
	1.125	1.75	1.25	1.5	1.5	2.26	1.6	1.875	1.375	2.125	2.125	2.125	2.	2.125	1.875
1.375	1.375	1.75	1.5	1.875	1.75	1.375	2.	1.75	1.125	1.875	1.75	2.5	2.375	1.75	
1.625	1.75	1.5	1.75	1.6	1.75	1.875	1.625	1.875	1.5	1.875	1.875	1.875	1.75	1.375	
1.375	1.75	1.375	2.	1.75	1.875	1.625	2.	1.875	2.125	1.75	2.375	1.5	2.	1.875	
1.875	2.25	1.875	1.875	1.75	2.	1.75	1.625	1.375	1.625	2.	1.875	2.	2.	2.125	
1.25	2.	1.5	1.6	1.6	1.75	1.75	1.5	1.75	1.875	2.375	1.875	1.875	2.	1.875	
1.	1.75	1.875	1.375	1.375	1.875	1.875	1.875	1.875	1.75	1.875	1.875	1.625	1.875	1.625	
1.5	1.75	1.625	1.375	2.0	1.625	1.75	1.5	2.	1.75	2.25	1.625	1.375	1.625	1.625	
1.375	1.5	1.375	1.75	1.625	1.375	1.125	1.625	1.125	1.625	2.25	1.875	1.5	1.75	1.25	
1.	1.75	1.375	1.625	1.875	1.875	1.75	1.875	2.	2.	2.	2.	2.	2.25	1.875	
1.375	1.5	1.25	1.875	2.0	1.875	1.875	1.625	2.	1.625	1.625	1.5	1.75	2.00	1.75	
Averages .....	1.416	1.637	1.520	1.579	1.704	1.833	1.629	1.720	1.766	1.079	2.037	2.008	1.841	1.875	1.733

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:															
Maximum measurements.	B¹	1.875	0.7381	B¹	2.00	0.7874	B¹	1.875	0.7381	B¹	2.125	0.8366	B¹	2.875	1.1318
	B²	1.75	0.6889	B²	2.00	0.7874	B²	2.125	0.8366	B²	2.375	0.9350	B²	2.375	0.9350
	B³	1.875	0.7381	B³	2.25	0.8858	B³	2.125	0.8366	B³	2.6	0.9842	B³	2.125	0.8366
Highest.....		1.875	0.7381		2.25	0.8858		2.125	0.8366		2.60	0.9842		2.875	1.1318
Minimum measurements.	B¹	1.00	0.3937	B¹	1.375	0.5413	B¹	1.125	0.4429	B¹	1.125	0.4429	B¹	1.375	0.5413
	B²	1.25	0.4921	B²	1.375	0.5413	B²	1.375	0.5413	B²	1.5	0.5905	B²	1.25	0.4921
	B³	1.25	0.4921	B³	1.375	0.5413	B³	1.125	0.4429	B³	1.625	0.6397	B³	1.25	0.4921
Lowest.....		1.00	0.3937		1.375	0.5413		1.125	0.4429		1.125	0.4429		1.25	0.4921
Average measurements..	B¹	1.416	0.5751	B¹	1.679	0.6215	B¹	1.629	0.6413	B¹	1.679	0.6610	B¹	1.841	0.7244
	B²	1.637	0.6444	B²	1.704	0.6708	B²	1.720	0.6771	B²	2.037	0.8019	B²	1.875	0.7380
	B³	1.520	0.5984	B³	1.833	0.7216	B³	1.766	0.6952	B³	2.008	0.7008	B³	1.733	0.6322
Average.....		1.504	0.5921		1.705	0.6712		1.765	0.6712		1.908	0.7511		1.8163	0.7149
Measurements above average..		38			50			68			40			44	
Measurements below average..		62			40			37			60			48	



TABLE XXVII.—Actual measurements of length, crimp, and fineness of commercial grades—Continued.

		C.—GERMAN GRADES.														
Catalogue number of samples..		13.			14.			15.			16.			17.		
Length of fiber in crimp.....		1½ inches.			1¼ inches.			1½ inches.			1¼ inches.			1½ inches.		
Number of crimps per inch....		16.			18.			14.			20.			25.		
Number of section.....		B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.
Actual measurement in centimillimeters.		2.375	1.75	2.75	2.	1.875	2.25	2.	2.625	3.0	2.875	1.875	1.75	1.875	1.5	1.5
		2.	2.75	2.	2.375	2.75	1.625	2.	2.25	2.	1.875	2.5	1.75	2.25	1.875	1.5
		1.75	1.75	2.5	1.625	1.875	1.875	2.	2.75	2.	2.75	1.875	1.875	1.75	1.5	1.75
		2.375	2.5	2.	2.375	2.125	2.5	2.	1.875	2.5	2.	2.	1.5	2.125	1.875	1.75
		1.75	2.	2.	1.75	1.625	1.75	3.25	2.625	2.625	2.625	2.	2.	2.	1.75	2.25
		2.	2.25	1.875	1.75	2.25	1.75	1.5	2.375	3.5	2.875	2.	2.	2.375	1.5	2.
		1.875	2.125	2.125	2.75	2.25	1.875	3.5	1.75	2.25	1.875	1.5	1.875	1.75	1.75	1.5
		2.	2.5	1.5	2.	1.125	1.75	2.5	1.75	1.5	1.375	2.125	1.625	1.75	1.875	1.625
		2.125	1.875	2.375	1.625	1.875	1.5	1.875	3.25	1.625	1.625	1.75	2.625	1.75	1.75	1.25
		1.875	2.	2.375	1.75	1.875	1.875	2.0	2.5	2.0	3.	2.875	2.25	1.75	1.625	1.5
		2.	2.75	1.875	1.625	1.875	2.5	2.125	3.375	2.25	2.	2.	1.625	1.5	1.5	1.5
		2.	2.	2.	1.5	1.875	1.625	1.875	3.25	2.125	1.625	2.	2.	1.75	1.5	1.5
		2.25	2.125	1.875	1.875	1.75	1.5	2.5	2.5	2.	2.	1.875	1.75	1.25	1.75	1.5
		1.75	2.	2.125	2.375	2.375	2.125	3.25	2.5	1.75	2.25	1.5	1.75	1.5	1.25	2.
		1.875	2.875	1.875	2.	1.625	2.25	2.0	2.	2.	2.375	2.	1.	2.125	1.25	1.75
		2.5	1.875	2.375	1.875	1.875	2.0	2.0	2.	2.	1.25	2.875	2.	2.	1.5	1.75
		1.875	2.125	2.125	1.625	2.	2.25	1.875	2.25	2.25	1.875	1.75	2.25	1.25	1.25	2.875
		2.25	2.	2.375	2.125	1.625	2.	2.375	2.875	2.	2.375	1.375	2.75	1.875	1.5	1.625
		2.	2.375	1.625	1.75	1.75	2.	2.75	2.375	1.625	2.5	2.375	2.	2.	2.25	1.75
		2.	2.25	2.25	1.875	1.875	2.	2.475	2.25	1.75	2.25	1.875	1.5	1.5	1.5	1.875
	2.	3.	2.5	2.25	2.125	1.875	2.25	2.25	2.	2.0	1.5	1.5	1.75	1.625	1.75	
	1.875	2.375	1.75	2.	2.625	1.875	1.875	2.5	2.5	1.5	1.75	1.75	2.125	1.875	1.875	
	1.5	1.625	2.375	1.75	2.	2.125	2.	2.5	1.75	1.875	1.75	1.75	1.75	1.75	1.6	
	1.75	2.875	2.25	1.875	2.	1.5	2.125	2.25	2.75	1.75	1.5	2.	1.75	1.5	2.25	
	2.125	2.25	1.75	2.25	1.625	1.75	2.	2.5	1.75	1.75	1.625	2.875	1.875	2.25	1.75	
	2.	2.	2.625	2.25	2.875	2.175	2.	2.25	1.75	1.875	2.	1.5	2.	1.5	1.25	
	2.	1.75	2.875	1.875	2.125	2.5	2.5	2.5	1.875	1.875	1.75	1.5	1.875	1.875	1.875	
	1.75	2.5	1.75	1.875	2.375	1.875	2.5	2.25	2.25	1.75	2.5	1.125	1.5	1.75	2.125	
	2.25	2.	2.25	1.875	2.125	1.75	2.	2.0	2.25	1.5	2.	1.75	1.625	1.5	1.5	
	1.75	2.375	1.75	2.	2.125	2.25	1.875	2.0	2.875	1.875	1.875	2.125	1.375	1.625	2.	
Averages.....		1.987	2.187	2.095	1.954	2.075	1.905	2.258	2.370	2.145	1.996	1.998	1.866	1.637	1.691	1.720

		13.			14.			15.			16.			17.		
Recapitulation and reduction:		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Maximum measurements.	B¹.	2.5	0.9842	B¹.	2.75	1.0825	B¹.	3.5	1.3779	B¹.	3.0	1.1811	B¹.	2.125	0.8366	
	B².	3.0	1.1811	B².	2.875	1.1318	B².	3.375	1.3287	B².	2.75	1.0820	B².	2.25	0.8858	
	B³.	2.625	1.0334	B³.	2.5	0.9842	B³.	3.5	1.3779	B³.	2.625	1.0334	B³.	2.375	0.9350	
Highest.....		3.0	1.1811		2.875	1.1318		3.5	1.3779		3.0	1.1811		2.375	0.9350	
Minimum measurements.	B¹.	1.5	0.5905	B¹.	1.5	0.5905	B¹.	1.5	0.5905	B¹.	1.875	0.5413	B¹.	1.25	0.4921	
	B².	1.75	0.6889	B².	1.125	0.4420	B².	1.75	0.6889	B².	1.5	0.5905	B².	1.25	0.4921	
	B³.	1.5	0.5905	B³.	1.875	0.5413	B³.	1.25	0.4921	B³.	1.125	0.4429	B³.	1.25	0.4921	
Lowest.....		1.5	0.5905		1.375	0.5413		1.25	0.4921		1.125	0.4429		1.25	0.4921	
Average measurements..	B¹.	1.987	0.7822	B¹.	1.954	0.7092	B¹.	2.258	0.8889	B¹.	1.996	0.7858	B¹.	1.637	0.6444	
	B².	2.187	0.8610	B².	2.075	0.8169	B².	2.370	0.9330	B².	1.998	0.7868	B².	1.691	0.6637	
	B³.	2.095	0.8243	B³.	1.905	0.7499	B³.	2.145	0.8444	B³.	1.866	0.7346	B³.	1.720	0.6771	
Average.....		2.069	0.8224		1.978	0.7787		2.257	0.8885		1.953	0.7658		1.682	0.6621	
Measurements above average.....		41			42			35			46			45		
Measurements below average.....		43			48			35			50			45		



TABLE XXVII.—Actual measurements of length, crimp, and fineness of commercial grades—Continued.

C.—GERMAN GRADES.																			
Catalogue number of samples..	18.			19.			20.				21.				22.				
Length of fiber in crimp.....	1 3/8 inches.			1 1/2 inches.			3 1/2 inches.				3 3/4 inches.				—				
Number of crimps per inch....	22.			25.			16.				20.				—				
Number of section.....	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .	B <sup>4</sup> .	B <sup>5</sup> .
2.5	2.125	2.0	1.875	1.5	1.625	1.875	2.0	1.5	2.875	2.5	2.125	2.125	2.	1.75	1.5	1.625	1.5	1.5	
1.5	1.5	2.875	1.75	1.875	1.75	2.	2.75	1.75	1.75	2.5	2.75	2.25	2.	1.5	1.5	1.75	1.5	1.75	
1.625	2.0	2.0	1.75	1.625	1.875	1.5	2.	1.75	2.875	2.125	2.25	1.625	1.875	1.625	1.5	2.25	1.25	1.5	
1.375	1.875	1.75	1.375	1.5	1.75	1.875	1.875	3.0	2.125	2.25	2.0	2.125	1.375	1.5	1.875	1.75	1.75	1.375	
2.25	2.	1.5	1.5	1.625	1.75	3.	2.5	1.75	1.875	2.125	2.75	2.25	1.5	1.25	1.875	1.625	1.75	1.75	
2.25	2.	1.75	1.625	1.5	0.875	1.5	2.625	2.25	1.75	2.125	1.75	2.375	1.875	1.75	1.5	1.5	1.5	1.75	
2.125	1.6	1.75	1.75	1.75	1.875	1.75	1.875	2.375	2.	2.375	3.	1.75	2.5	1.75	1.75	1.625	1.5	1.625	
2.25	1.375	1.875	1.125	1.75	1.5	1.375	2.125	2.375	2.75	2.5	1.875	1.875	1.875	1.5	1.125	1.125	1.625	1.625	
2.	1.875	1.75	1.375	1.5	2.125	2.5	2.	3.0	2.125	2.	2.0	2.5	2.	2.	1.75	1.75	1.875	1.625	
1.875	1.875	1.75	1.625	1.625	1.25	2.	2.375	2.875	2.375	2.25	2.125	1.75	1.875	1.5	1.625	1.375	1.5	1.375	
1.75	2.375	1.75	1.875	1.5	1.875	2.375	2.375	2.75	2.5	2.5	2.375	2.0	2.25	1.875	1.875	1.5	1.625	1.625	
2.	1.75	1.75	1.75	1.5	1.875	2.875	2.	2.25	1.75	2.5	1.5	1.375	2.	1.875	1.5	1.625	2.	1.5	
2.	1.75	1.875	1.625	2.	1.75	1.75	1.75	3.25	1.875	2.25	2.0	2.0	2.25	1.875	1.75	1.25	2.	1.5	
1.375	1.625	2.	1.875	1.5	1.75	2.25	1.875	3.0	2.5	2.875	2.125	2.0	1.875	2.	1.875	1.375	1.875	1.5	
1.25	1.75	2.875	1.625	2.	1.25	1.875	1.625	2.125	1.75	2.125	1.75	2.375	1.5	1.75	1.75	1.25	1.75	1.375	
2.	1.875	1.875	1.5	2.375	1.375	1.75	2.125	2.75	1.875	2.	2.25	2.375	1.875	2.	1.375	1.5	1.625	1.5	
2.	2.	1.75	1.75	1.625	1.125	1.5	2.75	2.875	2.	2.25	1.875	2.5	2.25	2.	1.75	1.5	1.875	1.25	
1.125	2.875	1.875	1.5	1.625	2.125	1.75	2.	2.875	2.375	2.875	2.875	2.375	1.875	2.375	1.625	1.75	1.375	1.25	1.125
1.875	2.	1.5	1.875	1.5	1.875	1.625	2.	3.0	1.75	2.25	1.875	2.375	2.375	1.625	1.5	1.5	1.625	1.75	
2.25	1.25	1.75	1.5	1.5	2.0	1.75	2.5	2.75	2.125	2.875	2.	2.25	2.375	1.75	1.25	1.5	1.75	1.875	
2.125	2.75	2.375	1.5	2.25	1.5	1.75	3.	1.5	2.125	2.125	2.875	2.25	2.875	1.625	1.75	1.75	1.75	1.75	
1.25	1.625	3.	1.5	2.0	1.5	1.75	1.875	1.75	2.	2.25	1.875	1.75	2.	1.5	1.75	2.	1.875	1.375	
1.25	1.625	2.375	1.75	1.75	1.375	2.	1.75	2.25	1.875	2.6	2.25	1.5	2.5	1.5	1.875	1.375	1.625	1.375	
1.75	1.5	1.5	1.5	1.25	1.625	1.375	1.875	3.0	2.375	2.125	2.125	1.75	2.125	1.75	1.75	1.625	1.75	1.25	
1.75	2.25	1.6	1.	1.5	1.875	2.	1.5	2.25	3.0	2.375	2.125	2.625	2.75	1.5	1.75	1.375	1.75	1.875	
1.375	2.125	2.5	1.5	1.75	1.625	1.5	2.375	2.875	1.875	1.5	1.875	1.625	2.0	1.625	1.75	1.875	1.75	1.25	
1.375	1.875	2.125	1.5	2.375	1.75	1.75	2.	1.75	2.	1.875	2.375	2.625	2.625	1.875	2.	1.75	1.375	1.75	
1.5	1.625	2.	1.5	2.375	2.0	1.875	1.875	2.25	2.25	2.	2.	2.125	3.	1.75	1.5	1.875	1.875	1.625	
1.875	2.0	2.625	2.0	1.75	1.75	1.875	2.	2.0	2.75	1.75	2.	1.875	1.5	1.625	1.75	1.5	1.625	1.375	
1.125	2.0	1.875	2.0	2.	1.5	1.875	1.875	2.375	3.25	1.5	2.5	2.0	1.75	1.375	1.75	1.125	1.625	2.	
Averages.....	1.725	1.895	2.062	1.605	1.720	1.650	1.864	2.108	2.395	2.179	2.221	2.166	1.996	2.100	1.667	1.675	1.565	1.636	1.533

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.						
Maximum measurements.	B <sup>1</sup>	2.5	0.9842	B <sup>1</sup>	2.0	0.7874	B <sup>1</sup>	3.0	1.1811	B <sup>1</sup>	2.875	1.1318	B <sup>1</sup>	2.0	0.7874
	B <sup>2</sup>	2.875	1.1318	B <sup>2</sup>	2.375	0.9350	B <sup>2</sup>	3.0	1.1811	B <sup>2</sup>	2.625	1.0834	B <sup>2</sup>	2.0	0.7874
	B <sup>3</sup>	3.0	1.1811	B <sup>3</sup>	2.125	0.8860	B <sup>3</sup>	3.25	1.2795	B <sup>3</sup>	3.0	1.1811	B <sup>3</sup>	2.25	0.8858
	B <sup>4</sup>			B <sup>4</sup>			B <sup>4</sup>	3.25	1.2795	B <sup>4</sup>	3.0	1.1811	B <sup>4</sup>	2.0	0.7874
Highest.....		3.0	1.1811		2.375	0.9350		3.25	1.2795		3.0	1.1811		2.25	0.8858
Minimum measurements.	B <sup>1</sup>	1.125	0.4429	B <sup>1</sup>	1.125	0.4429	B <sup>1</sup>	1.375	0.5413	B <sup>1</sup>	1.5	0.5905	B <sup>1</sup>	1.25	0.4921
	B <sup>2</sup>	1.25	0.4921	B <sup>2</sup>	1.25	0.4921	B <sup>2</sup>	1.5	0.5905	B <sup>2</sup>	1.5	0.5905	B <sup>2</sup>	1.125	0.4429
	B <sup>3</sup>	1.5	0.5905	B <sup>3</sup>	1.125	0.4429	B <sup>3</sup>	1.5	0.5905	B <sup>3</sup>	1.375	0.5413	B <sup>3</sup>	1.125	0.4429
	B <sup>4</sup>			B <sup>4</sup>			B <sup>4</sup>	1.75	0.6899	B <sup>4</sup>	1.5	0.5905	B <sup>4</sup>	1.25	0.4921
Lowest.....		1.125	0.4429		1.125	0.4429		1.375	0.5413		1.375	0.5413		1.125	0.4429
Average measurements..	B <sup>1</sup>	1.725	0.6791	B <sup>1</sup>	1.605	0.6018	B <sup>1</sup>	1.864	0.7338	B <sup>1</sup>	2.221	0.8744	B <sup>1</sup>	1.667	0.6562
	B <sup>2</sup>	1.895	0.7460	B <sup>2</sup>	1.720	0.6771	B <sup>2</sup>	2.108	0.8209	B <sup>2</sup>	2.166	0.8527	B <sup>2</sup>	1.675	0.6594
	B <sup>3</sup>	2.062	0.8118	B <sup>3</sup>	1.650	0.6531	B <sup>3</sup>	2.395	0.9429	B <sup>3</sup>	1.996	0.7858	B <sup>3</sup>	1.565	0.6161
	B <sup>4</sup>			B <sup>4</sup>			B <sup>4</sup>	2.179	0.8578	B <sup>4</sup>	2.100	0.8267	B <sup>4</sup>	1.636	0.6440
Average.....		1.894	0.7456		1.681	0.6530		2.136	0.8409		2.120	0.8346		1.615	0.6538
Measurements above average..		38			42			47			67			86	
Measurements below average..		52			48			73			53			61	



TABLE XXVII.—Actual measurements of length, crimp, and fineness of commercial grades—Continued.

C.—GERMAN GRADES.														
Catalogue number of samples..	23.			24.			25.				26.			
Length of fiber in crimp .....	1½ inches.			2½ inches.			4½ inches.				4 inches.			
Number of crimps per inch .....	16.			10.			20.				16.			
Number of section .....	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.
Actual measurement in centimillimeters.	1.75	1.5	1.5	2.5	2.625	2.25	2.5	2.75	2.875	2.6	2.0	2.875	1.75	1.875
	1.5	1.625	1.625	2.125	2.375	2.375	2.0	2.25	2.75	2.6	2.25	2.875	2.25	1.875
	2.125	1.875	1.625	2.25	2.375	2.375	2.875	2.0	2.75	2.25	2.6	2.875	2.25	1.875
	1.75	1.125	2.0	2.375	1.125	2.75	1.875	2.875	2.0	2.5	2.6	2.875	2.25	1.625
	1.75	2.25	1.625	1.875	0	0	2.875	2.5	2.5	2.25	2.0	2.75	2.75	2.0
	1.5	1.75	1.875	2.25	1.125	2.875	2.5	2.375	2.875	3.0	2.375	2.375	2.125	2.575
	2.0	1.875	1.625	2.25	2.25	2.25	2.375	2.375	1.75	1.875	2.125	2.875	2.25	2.5
	1.375	1.6	1.5	2.75	0	2.875	2.375	2.625	2.6	1.75	2.875	2.0	2.125	2.0
	1.75	1.6	1.5	2.0	2.375	2.375	2.375	2.25	2.5	3.0	2.625	2.75	1.875	2.625
	1.875	1.5	2.0	2.0	1.125	2.875	2.75	2.0	2.5	2.375	2.5	2.875	1.875	1.875
	1.375	1.75	1.875	2.0	2.25	2.875	2.5	2.5	2.625	2.75	2.75	1.875	2.0	2.5
	1.375	1.75	1.375	2.25	2.375	2.375	2.375	2.75	2.125	2.125	1.75	2.0	2.25	2.25
	1.625	1.875	1.625	1.625	2.375	2.375	2.0	2.25	2.25	2.25	1.875	2.25	1.875	2.0
	1.5	1.5	1.375	2.75	1.0	2.875	2.875	2.625	2.375	2.0	1.75	2.25	2.6	2.875
	1.875	1.875	1.375	2.625	2.25	2.875	2.75	2.375	2.375	2.5	2.0	1.625	2.75	2.375
	2.0	2.0	1.75	2.25	2.5	2.75	2.5	2.75	2.25	2.25	1.875	2.0	1.875	2.0
	1.375	1.75	1.75	1.875	2.5	2.5	2.5	2.75	2.25	2.25	2.25	2.25	2.0	2.0
	1.5	1.75	1.75	2.0	2.0	2.75	2.0	2.75	2.375	2.75	2.125	2.875	1.6	3.875
	1.375	1.625	1.625	2.0	2.0	2.875	2.0	2.625	2.0	2.6	1.375	1.875	2.25	1.6
	1.5	2.0	1.5	2.25	2.0	2.875	2.0	2.875	2.0	2.0	2.0	2.25	2.0	2.25
1.75	1.625	1.625	2.5	2.5	2.875	2.625	2.875	1.75	2.5	2.375	1.75	2.875	1.25	
1.625	1.875	1.875	1.875	2.0	2.875	2.25	3.375	1.75	2.5	1.875	1.75	2.875	2.6	
1.625	1.875	1.875	2.0	2.0	2.875	2.625	2.375	2.875	2.0	2.5	3.25	2.875	1.25	
1.5	1.75	1.5	2.0	2.0	2.875	2.625	2.375	2.875	3.5	2.875	1.875	2.0	2.5	
2.0	2.0	1.625	2.25	2.25	2.875	2.375	2.5	2.625	1.6	2.875	1.25	1.75	1.75	
1.75	2.125	2.0	2.25	2.25	2.875	2.375	2.75	2.875	2.375	2.875	2.875	2.875	2.625	
1.375	1.875	1.75	2.875	2.375	2.875	2.375	2.875	2.875	2.375	2.875	2.25	1.875	1.875	
1.75	1.875	1.375	2.0	2.375	2.875	2.375	2.0	2.875	2.375	2.875	2.0	2.125	1.875	
2.0	1.375	1.375	2.125	2.125	2.875	2.375	2.875	2.875	2.25	2.625	2.625	1.875	2.0	
2.0	1.625	1.75	2.125	2.125	2.75	2.5	3.875	2.25	2.25	2.25	2.625	1.875	2.0	
Averages .....	1.675	1.724	1.650	2.240	2.433	2.416	2.425	2.516	2.401	2.510	2.187	2.266	2.141	2.191

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:												
Maximum measurements.	B¹	2.125	0.8366	B¹	3.0	1.1811	B¹	3.375	1.3287	B¹	3.25	1.2795
	B²	2.25	0.8958	B²	3.25	1.2705	B²	3.75	1.4763	B²	3.25	1.2795
	B³	3.0	1.1811	B³	3.0	1.1811	B³	3.25	1.2705	B³	3.0	1.1811
	B⁴						B⁴	3.6	1.3770	B⁴	3.375	1.3287
Highest .....		3.0	1.1811		3.25	1.2705		3.75	1.4763		3.375	1.3287
Minimum measurements.	B¹	1.375	0.5413	B¹	1.625	0.6397	B¹	1.875	0.7381	B¹	1.375	0.5413
	B²	1.125	0.4129	B²	2.0	0.7674	B²	1.25	0.4921	B²	1.625	0.6397
	B³	1.375	0.5413	B³	1.6	0.5905	B³	1.75	0.6889	B³	1.875	0.5413
	B⁴						B⁴	1.5	0.5905	B⁴	1.25	0.4921
Lowest .....		1.125	0.4429		1.6	0.5905		1.25	0.4921		1.25	0.4921
Average measurements..	B¹	1.675	0.6594	B¹	2.246	0.8342	B¹	2.425	0.9547	B¹	2.187	0.8610
	B²	1.724	0.6787	B²	2.433	0.9378	B²	2.510	0.9905	B²	2.266	0.8921
	B³	1.650	0.6496	B³	2.416	0.9511	B³	2.491	0.9597	B³	2.141	0.8429
	B⁴						B⁴	2.516	0.9905	B⁴	2.191	0.8625
Average .....		1.693	0.6625		2.365	0.9111		2.487	0.9791		2.196	0.8645
Measurements above average..		43		45		70		60		60		60
Measurements below average..		47		45		50		60		60		60



TABLE XXVIII.—Individual extremes and averages of fineness for commercial grades.

Catalogue number of samples.	Grade.	Number of crimps per inch.	Highest.		Lowest.		Average.		Length.
			Centi-millimeters.	Thou-sandths of inch.	Centi-millimeters.	Thou-sandths of inch.	Centi-millimeters.	Thou-sandths of inch.	Inches.
BOSTON GRADES.									
275 a	Fine, unwashed	20	2.25	0.8858	1.125	0.4429	1.721	0.6775	2.00
275 b	do	20	3.50	1.3779	1.75	0.6889	2.542	1.0007	2.625
275 c	do	20	3.25	1.2705	1.75	0.6889	2.379	0.9866	1.75
275 d	do	20	2.50	0.9842	1.375	0.5413	1.853	0.7295	2.75
275 e	do	20	4.00	1.5748	1.875	0.5413	2.336	0.9196	2.75
276	Fine, from dead sheep	20	3.00	1.1811	1.00	0.3937	1.835	0.7224	2.50
277 a	Picklock	22	2.00	0.7874	1.25	0.4921	1.638	0.6488	1.875
277 b	do	22	2.00	0.7874	1.00	0.3937	1.504	0.5921	2.00
277 c	do	22	2.00	0.7874	1.00	0.3937	1.444	0.5681	2.375
278 a	XXX	22	2.00	0.7874	1.00	0.3937	1.510	0.5980	2.375
278 b	do	22	2.25	0.8858	1.00	0.3937	1.515	0.5964	1.75
279 a	XX	20	2.75	1.0826	1.00	0.3937	1.843	0.7255	2.125
279 b	do	20	3.25	1.2795	1.00	0.3937	2.022	0.7960	2.50
279 c	do	20	2.625	1.0894	1.00	0.3937	1.760	0.6929	2.125
279 d	do	20	3.00	1.1811	1.25	0.4921	1.856	0.7307	2.25
280 a	X	20	3.25	1.2705	1.00	0.3937	2.069	0.8224	1.75
280 b	do	20	3.25	1.2795	1.25	0.4921	1.849	0.7279	2.00
280 c	do	20	3.75	1.4763	1.00	0.3937	2.177	0.8570	2.125
280 d	do	20	3.00	1.1811	1.00	0.3937	1.075	0.7775	2.75
274	Between X and I	20	5.00	1.9085	1.25	0.4921	2.118	0.8338	4.625
281 a	No. 1	20	3.50	1.3779	1.25	0.4921	2.443	0.9618	2.00
281 b	do	20	2.50	0.9842	1.25	0.4921	1.864	0.7338	2.25
281 c	do	20	3.50	1.3779	1.50	0.5905	2.393	0.9421	2.50
281 d	do	20	3.00	1.1811	1.25	0.4921	2.153	0.8470	1.75
281 e	do	20	3.00	1.1811	1.25	0.4921	2.108	0.8229	2.50
281 f	do	20	3.25	1.2795	1.25	0.4921	2.257	0.8885	2.375
282 a	No. 2	16	4.25	1.6732	1.50	0.5905	2.838	1.1173	3.25
282 b	do	16	4.25	1.6732	1.50	0.5905	2.714	1.0685	2.125
282 c	do	16	4.25	1.6732	2.00	0.7874	3.122	1.2291	2.875
282 d	do	16	5.25	2.0669	1.50	0.5905	2.956	1.1637	3.125
283 a	Delaine, fine	20	3.00	1.1811	1.25	0.4921	2.075	0.8169	3.375
283 b	do	20	2.875	1.1818	1.50	0.5905	1.969	0.7830	3.50
283 c	do	20	3.50	1.3779	1.50	0.5905	2.187	0.8610	3.25
284 a	Delaine, medium	14	4.25	1.6732	1.125	0.4429	2.393	0.9085	3.625
284 b	do	14	3.75	1.4763	1.50	0.5905	2.792	1.0755	3.125
285 a	Combing, fine	14	3.50	1.3779	1.875	0.7380	2.587	1.0188	3.25
285 b	do	14	3.25	1.2795	1.875	0.5413	2.260	0.8897	4.50
285 c	do	14	4.00	1.5748	1.75	0.6889	2.732	1.0755	4.00
286 a	Combing, medium	10	4.00	1.5748	1.75	0.6889	2.704	1.0645	4.50
286 b	do	10	4.50	1.7716	1.25	0.4921	2.350	0.9251	4.625
286 c	do	10	4.125	1.6240	1.50	0.5905	2.754	1.0842	5.25
286 d	do	10	3.50	1.3779	1.50	0.5905	2.096	1.0614	4.75
287 a	Combing, coarse	4	4.25	1.6732	2.00	0.7874	3.047	1.1996	6.00
287 b	do	6	6.00	2.3622	2.50	0.9842	3.811	1.5003	5.50
287 c	do	4	4.25	1.6732	2.50	0.9842	3.390	1.3346	6.50
287 d	do	6	6.00	2.3622	1.75	0.6889	3.433	1.3515	6.50
288 a	Common	4	4.25	1.6732	2.50	0.9842	3.359	1.3224	3.00
288 b	do	6	6.75	2.6574	1.875	0.5413	3.503	1.3791	3.375
289 a	New Mexico	3	3.25	1.2795	1.25	0.4921	2.186	0.8600	2.125
289 b	do	3	3.75	1.4763	1.75	0.6889	2.755	1.0846	3.00
289 c	do	3	7.50	2.9527	1.25	0.4921	3.356	1.3212	5.00
PHILADELPHIA GRADES.									
200	Picklock, best	26	2.875	1.1318	1.25	0.4921	1.669	0.6570	1.625
201	Picklock, fair	26	2.75	1.0826	1.125	0.4429	1.658	0.6527	1.75
202	Picklock, medium	22	2.50	0.9842	1.25	0.4921	1.76	0.6929	1.25
203	Picklock, low	22	2.25	0.8858	0.875	0.3445	1.495	0.5649	2.00
204	XXX, extra	26	2.00	0.7874	0.75	0.2953	1.494	0.5889	2.00
205 a	XXX, good	26	2.625	1.0334	1.25	0.4921	1.836	0.7223	1.50
205 b	do	26	2.125	0.8366	0.875	0.3445	1.638	0.6311	2.00
205 c	do	26	2.25	0.8858	1.00	0.3937	1.592	0.6267	2.50
206	XXX, low	22	2.50	0.9842	1.125	0.4429	1.783	0.7019	2.25
207	XX, good	22	2.625	1.0334	1.00	0.3937	1.635	0.6515	2.50
208 a	XX, clothing	22	2.625	1.0334	1.50	0.5905	2.091	0.8232	2.25
208 b	do	22	2.50	0.9842	1.25	0.4921	1.847	0.7271	1.625
208 c	do	22	2.625	1.0334	1.00	0.3937	1.822	0.7173	2.00
208 d	do	22	2.75	1.0826	1.25	0.4921	1.857	0.7311	2.375
208 e	do	22	2.75	1.0826	1.00	0.3937	1.679	0.6610	2.75
209	XX, low	20	2.50	0.9842	1.00	0.3937	1.736	0.6894	2.00
300	X, good	20	2.75	1.0826	1.25	0.4921	1.835	0.7224	2.00
301 a	X, fair	20	3.50	1.3779	1.00	0.3937	1.975	0.7775	2.25
301 b	do	20	2.75	1.0826	0.75	0.2953	1.889	0.7436	1.625
302	X, low	20	2.75	1.0826	1.125	0.4429	1.911	0.7523	2.125
303	Delaine, fine	20	2.75	1.0826	1.25	0.4921	1.924	0.7574	2.50
304	Delaine, very fine	20	2.50	0.9842	1.25	0.4921	1.946	0.7601	2.625
305 a	X and above	22	2.875	1.1318	1.25	0.4921	2.186	0.8606	1.75
305 b	do	22	3.50	1.3779	1.50	0.5905	2.079	0.8185	2.25
306 a	do	22	2.75	1.0826	1.50	0.5905	2.014	0.7929	2.375
306 b	do	22	2.625	1.0326	1.125	0.4429	1.706	0.6716	2.75
306 c	do	22	2.50	0.9842	1.25	0.4921	1.726	0.6795	2.25
307 a	do	20	3.25	1.2795	1.25	0.4921	2.037	0.8019	1.875
307 b	do	20	2.875	1.1318	1.00	0.3937	2.092	0.8236	1.75
307 c	do	20	2.75	1.0826	1.25	0.4921	2.059	0.8106	1.50
307 d	do	20	2.50	0.9842	1.25	0.4921	1.854	0.7299	1.75
307 e	do	20	3.00	1.1811	1.25	0.4921	1.873	0.7374	3.25
308 a	One-fourth blood, good	14	3.50	1.3779	1.50	0.5905	2.309	0.9444	3.00
308 b	do	14	3.25	1.2795	1.50	0.5905	2.46	0.9685	1.50
308 c	do	14	3.50	1.3779	1.25	0.4921	2.249	0.8854	2.75
308 d	do	14	4.00	1.5748	1.25	0.4921	2.506	0.9866	3.75
309 a	Combing	14	4.00	1.5748	1.50	0.5905	2.356	0.9275	3.375
309 b	do	14	3.75	1.4763	1.00	0.3937	2.410	0.9484	3.50
310 a	Combing, low	5	5.00	1.9685	2.00	0.7874	3.467	1.3649	5.00
310 b	do	5	5.375	2.1161	1.875	0.7380	3.436	1.3527	6.25
310 c	do	6	6.00	2.3622	1.50	0.5905	3.621	1.4255	5.00
311 a	Three-eighths blood, good	14	4.25	1.6732	1.25	0.4921	2.362	0.9299	2.625
311 b	do	14	3.75	1.4763	1.625	0.6307	2.735	1.0767	2.125



TABLE XXVIII.—*Individual extremes and averages of fineness for commercial grades*—Continued.

Catalogue number of samples.	Grade.	Number of crimps per inch.	Highest.		Lowest.		Average.		Length.
			Centi- millime- ters.	Thou- sandths of inch.	Centi- millime- ters.	Thou- sandths of inch.	Centi- millime- ters.	Thou- sandths of inch.	Inches.
PHILADELPHIA GRADES—continued.									
311 c	Three-eighths blood, good	14	3.75	1.4763	1.25	0.4921	2.619	1.0311	2.50
311 d	do	14	3.00	1.1811	1.00	0.3937	2.076	0.8173	3.125
312	Combing	10	4.25	1.6732	1.25	0.4921	2.563	1.0090	2.75
313 a	Three-eighths and one-half blood	10	4.25	1.6732	1.25	0.4921	2.547	1.0027	2.625
313 b	do	10	4.00	1.5748	1.50	0.5905	2.617	1.0303	3.00
313 c	do	10	3.75	1.4763	1.625	0.6397	2.375	0.9350	3.25
314 a	One-half blood, high	20	3.125	1.2303	1.25	0.4921	1.839	0.7240	1.875
314 b	do	20	2.375	0.9350	1.25	0.4921	1.742	0.6858	2.75
315 a	One-half blood, regular	10	3.625	1.4271	1.75	0.6889	2.318	0.9125	1.75
315 b	do	10	3.00	1.1811	1.375	0.5413	2.15	0.8464	1.875
316	Combing, washed	20	3.25	1.2795	1.125	0.4429	2.162	0.8511	3.125
317 a	Five-eighths blood	20	2.875	1.1318	1.125	0.4429	1.989	0.7820	2.00
317 b	do	20	3.75	1.4763	1.25	0.4921	2.033	0.8003	2.25
317 c	do	20	3.00	1.1811	1.25	0.4921	1.969	0.7751	2.125
318	Cotts	26	4.75	1.8700	1.50	0.5905	2.806	1.1047	3.25
319 a	Imported Saxon	26	2.50	0.9842	1.25	0.4921	1.734	0.6826	0.75
319 b	do	26	1.75	0.6889	0.75	0.2953	1.335	0.5255	1.25
320	Domestic Saxon	26	2.75	1.0826	0.875	0.3445	1.328	0.5228	1.125



TABLE XXIX.—General extremes and averages of fineness for commercial grades.

[Reduced from Table XXVIII.]

Catalogue number of samples.	Grade.	Number of crimps per inch.	Highest.		Lowest.		Average.		Length. Inches.
			Centi-millimeters.	Thou-sandths of inch.	Centi-millimeters.	Thou-sandths of inch.	Centi-millimeters.	Thou-sandths of inch.	
BOSTON GRADES.									
275	Fine, unwashed.....	20	3.10	1.2204	1.475	0.5907	2.162	0.8511	2.355
276	Fine, from dead sheep.....	20	3.00	1.1811	1.00	0.3987	1.835	0.7224	2.50
277	Picklock.....	22	2.00	0.7874	1.083	0.4263	1.532	0.6031	2.083
278	XXX.....	22	2.125	0.8368	1.00	0.3987	1.567	0.6169	2.063
279	XX.....	20	2.908	1.1440	1.063	0.4185	1.870	0.7302	2.250
280	X.....	20	3.813	1.3043	1.063	0.4185	2.023	0.7964	2.156
274	Between X and No. 1.....	20	5.00	1.9655	1.25	0.4921	2.118	0.8938	4.625
281	No. 1.....	20	3.208	1.2629	1.292	0.5080	2.203	0.8673	2.229
282	No. 2.....	16	4.50	1.7716	1.625	0.6297	2.908	1.1448	2.844
283	Delaine, fine.....	20	3.125	1.2303	1.617	0.6366	2.084	0.8204	3.375
284	Delaine, medium.....	14	4.00	1.5748	1.313	0.5169	2.533	0.9972	3.375
285	Combing, fine.....	14	3.583	1.4106	1.667	0.6562	2.626	0.9944	3.917
286	Combing, medium.....	10	4.021	1.5670	1.50	0.5905	2.626	1.0333	4.781
287	Combing, coarse.....	10	5.155	2.0177	2.183	0.8614	3.42	1.3464	6.125
288	Common.....	10	5.50	2.1653	1.983	0.7639	3.431	1.3507	3.1875
289	New Mexico.....	10	4.50	1.7716	1.617	0.6366	2.766	1.0889	3.375
PHILADELPHIA GRADES.									
290	Picklock, best.....	26	2.875	1.1318	1.25	0.4921	1.669	0.6570	1.625
291	Picklock, fair.....	26	2.75	1.0826	1.125	0.4429	1.638	0.6527	1.75
292	Picklock, medium.....	22	2.50	0.9812	1.25	0.4321	1.76	0.6929	1.25
293	Picklock, low.....	22	2.25	0.8858	0.875	0.3445	1.435	0.5469	2.00
294	XXX, extra.....	26	2.00	0.7874	0.75	0.2953	1.434	0.5839	2.00
295	XXX, good.....	26	2.333	0.9635	1.042	0.4102	1.687	0.6641	2.00
296	XXX, low.....	22	2.50	0.9812	1.125	0.4429	1.783	0.7619	2.25
297	XX, good.....	22	2.625	1.0334	1.00	0.3987	1.655	0.6515	2.50
298	XX, clothing.....	22	2.65	1.0433	1.20	0.4724	1.859	0.7318	2.20
299	XX, low.....	20	2.50	0.9842	1.00	0.3937	1.736	0.6834	2.00
300	X, good.....	20	2.75	1.0826	1.25	0.4321	1.835	0.7221	2.00
301	X, fair.....	20	3.125	1.2363	0.875	0.3445	1.992	0.7606	1.9375
302	X, low.....	20	2.75	1.0826	1.125	0.4429	1.911	0.7523	2.125
303	Delaine, fine.....	20	2.75	1.0826	1.25	0.4921	1.924	0.7574	2.50
304	Delaine, very fine.....	20	2.50	1.9842	1.25	0.4921	1.946	0.7601	2.625
305	X and above.....	22	3.188	1.2551	1.375	0.5413	2.133	0.8397	2.00
300	do.....	22	3.025	1.4271	1.292	0.5086	1.949	0.7673	2.458
307	do.....	20	2.875	1.1318	1.20	0.4724	1.983	0.7807	2.025
308	One-quarter blood, good.....	14	3.568	1.4027	1.375	0.5413	2.404	0.9464	2.75
309	One-quarter combing.....	14	3.875	1.5255	1.26	0.4921	2.383	0.8981	3.4375
310	Combing, low.....	14	5.458	2.1483	1.792	0.7055	3.508	0.8110	5.417
311	Three-eighths blood, good.....	14	3.688	1.4519	1.281	0.5043	2.573	1.0129	2.591
312	Three-eighths combing.....	14	4.25	1.6732	1.25	0.4921	2.563	1.0090	2.75
313	Three-eighths and one-half blood.....	10	4.00	1.5748	1.453	0.5739	2.513	0.9893	2.958
314	One-half blood, high.....	20	2.75	1.0826	1.25	0.4921	1.791	0.7651	2.3125
315	One-half blood, regular.....	20	3.312	1.3039	1.563	0.6163	2.234	0.8795	1.8125
316	Combing, washed.....	20	3.25	1.2795	1.125	0.4429	2.182	0.8511	3.125
317	Five-eighths blood.....	20	3.208	1.2629	1.208	0.4755	1.997	0.7862	2.125
318	Cotts.....	20	4.75	1.8700	1.50	0.4905	2.806	1.1047	3.25
319	Saxon, imported.....	26	2.125	0.8366	1.00	0.3937	1.535	0.6043	1.00
320	Saxon, domestic.....	20	2.75	1.0826	0.875	0.3445	1.328	0.5223	1.125
GERMAN WOOLS.									
1	Super, superlecta.....	34	2.375	0.9350	1.375	0.5413	1.923	0.7570	1.125
2	do.....	34	1.875	0.7381	0.75	0.2952	1.397	0.5499	1.00
3	Superlecta.....	30	2.375	0.9350	1.00	0.3987	1.655	0.6515	1.75
4	do.....	30	2.25	0.8858	1.125	0.4429	1.639	0.6452	1.25
5	I, electa.....	27	2.50	0.9842	1.25	0.4921	1.662	0.6543	1.25
6	do.....	27	2.50	0.9842	1.125	0.4429	1.661	0.6551	1.125
7	II, electa.....	25	2.75	1.0826	1.00	0.3937	1.535	0.6043	1.25
8	do.....	25	1.875	0.7381	1.00	0.3937	1.501	0.5921	1.125
9	I, prima.....	22	2.25	0.8858	1.375	0.5413	1.705	0.6712	1.375
10	do.....	22	2.125	0.8366	1.125	0.4429	1.705	0.6712	1.25
11	II, prima.....	20	2.50	0.9812	1.125	0.4429	1.93	0.7511	1.375
12	do.....	20	2.875	1.1318	1.25	0.4921	1.791	0.7662	1.375
13	Secunda.....	16	3.00	1.1811	1.50	0.5905	2.089	0.8224	1.50
14	Tertia.....	16	2.875	1.1318	1.375	0.5413	1.978	0.7787	1.25
15	Quarta.....	14	3.50	1.3779	1.25	0.4921	2.257	0.8885	1.50
16	High-pedigree wool.....	20	3.00	1.1811	1.125	0.4429	1.653	0.7682	1.25
17	do.....	25	2.375	0.9350	1.25	0.4921	1.682	0.6621	1.25
18	Pure bred, ancient pedigree.....	22	3.00	1.1811	1.125	0.4429	1.894	0.7456	1.875
19	Impure bred wool.....	25	2.375	0.9350	1.125	0.4429	1.661	0.6399	1.25
20	French ram.....	16	3.25	1.2795	1.375	0.5413	2.136	0.8409	3.50
21	Rambouillet.....	20	3.00	1.1811	1.375	0.5413	2.120	0.8346	3.125
22	English merino.....	25	2.25	0.8858	1.125	0.4429	1.615	0.6358	1.25
23	Australian ewe.....	16	3.00	1.1811	1.125	0.4429	1.683	0.6625	1.625
24	Rager ram.....	10	3.25	1.2795	1.50	0.5905	2.305	0.9311	2.125
25	Rambouillet ewe.....	20	3.75	1.4763	1.25	0.4921	2.487	0.9791	4.125
26	Rambouillet ewe.....	10	3.375	1.3287	1.25	0.4921	2.196	0.8045	4.00



TABLE XXX.—Actual measurements of strain and stretch for commercial grades.

Catalogue number of samples..		A.—BOSTON GRADES.															
		274.				275a.				275b.				275c.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	3.00	0.75	3.00	2.75	2.75	5.75	4.00	5.75	12.00	6.50	6.25	8.00	4.50	7.00	5.25	6.00	
	2.75	1.25	5.25	2.75	4.00	4.75	3.25	8.00	11.25	7.75	8.00	7.75	4.50	4.50	5.75	8.75	
	8.00	3.50	4.50	1.75	5.25	7.50	2.25	4.50	14.00	7.00	5.25	4.50	5.50	6.50	4.25	3.25	
	12.75	1.50	5.00	1.25	3.25	12.75	3.50	6.00	10.00	6.00	7.50	3.00	6.00	7.50	5.50	6.25	
	2.50	3.25	1.75	1.25	3.25	12.50	2.75	1.75	7.00	5.50	7.25	4.75	6.00	5.25	3.25	2.50	
	12.75	1.75	7.00	5.75	4.50	7.50	3.25	1.50	9.75	8.50	6.50	4.50	4.25	5.25	3.75	1.00	
	6.00	5.00	4.00	4.50	2.00	2.25	3.00	4.50	7.00	5.50	3.50	2.50	5.50	7.00	5.25	7.00	
	4.50	2.75	2.50	1.75	12.50	3.75	5.50	6.50	6.00	6.00	2.25	6.50	7.25	6.00	3.25	5.00	
	2.75	5.00	1.50	3.75	12.50	1.50	12.00	2.75	3.00	8.25	7.00	6.00	8.25	2.00	6.50	6.75	
	12.00	1.00	1.50	12.00	2.75	4.25	3.25	4.75	8.25	7.50	6.00	4.00	7.00	7.75	5.25	5.75	
	2.25	5.75	2.25	12.00	2.50	4.75	4.00	5.50	4.50	4.25	7.50	4.00	5.00	5.25	4.00	2.75	
	2.00	5.50	2.75	1.75	2.75	3.00	3.25	7.00	3.00	6.00	6.00	2.50	4.50	5.00	7.75	6.00	
	4.00	4.00	3.75	2.50	4.50	7.25	4.75	6.75	6.00	5.25	8.00	5.50	4.50	5.75	5.50	6.50	
	2.25	1.50	5.00	6.00	3.00	6.00	4.00	8.25	4.00	1.75	11.00	7.75	7.75	7.25	7.00	7.00	
3.50	1.00	10.00	4.00	2.75	5.75	3.75	6.50	7.50	5.50	2.25	7.00	4.75	6.25	2.50	1.25		
Total .....	56.00	43.50	61.75	45.75	49.00	70.25	50.60	74.00	123.25	91.25	106.25	78.50	80.25	88.25	77.75	74.75	
Recapitulation:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest.....		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Lowest.....		10.00	154.34	6.00	30.00	5.25	81.03	8.25	41.25	14.00	216.08	8.50	42.50	7.75	119.61	7.75	38.75
Average.....		1.50	23.15	0.75	3.75	2.00	30.86	1.50	7.50	3.50	64.02	1.75	8.75	3.25	60.16	1.00	5.00
		3.92	60.50	2.97	14.85	3.31	51.08	4.89	24.00	7.03	118.07	5.63	28.25	5.26	81.18	5.43	27.15
Tests above average.....		11		13		11		14		13		16		11		17	
Tests below average.....		19		17		19		16		18		14		19		13	
Catalogue number of samples..		A.—BOSTON GRADES.															
		275d.				275e.				276.				277a.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	3.25	3.50	4.50	4.25	8.00	3.25	7.00	5.25	5.00	6.25	3.75	3.25	2.00	2.75	2.75	6.25	
	3.75	7.75	3.00	5.50	9.75	7.50	5.75	5.00	3.00	6.00	3.50	5.00	2.75	7.75	3.25	6.50	
	4.00	2.50	3.50	7.00	6.75	8.75	4.50	2.50	4.00	7.25	4.00	6.50	3.25	7.50	2.00	5.25	
	5.75	7.00	3.50	7.25	7.00	3.75	7.50	6.00	3.75	6.00	5.50	8.50	8.25	7.75	2.00	4.00	
	4.00	6.00	3.75	7.25	4.00	2.00	5.25	4.75	5.50	5.50	3.25	7.25	2.00	5.00	1.25	1.50	
	2.50	3.25	3.00	5.75	6.25	4.75	3.50	2.25	4.00	12.50	4.00	7.00	1.75	5.75	3.25	7.00	
	3.25	7.50	4.00	8.25	7.25	6.75	3.00	6.75	7.00	9.00	6.50	6.75	8.00	7.50	2.00	6.50	
	3.50	8.50	5.25	9.25	9.50	6.00	5.00	2.00	4.25	5.25	2.50	5.00	2.25	6.25	3.50	8.25	
	2.50	1.25	6.00	8.25	8.50	3.50	6.00	6.00	5.00	8.25	3.00	3.50	1.50	1.75	1.25	1.25	
	2.25	2.25	4.50	7.25	6.50	7.50	6.50	7.25	2.50	8.00	3.50	5.00	2.50	7.25	1.00	1.50	
	6.00	3.00	3.25	6.75	6.75	5.50	6.50	8.00	5.00	8.75	4.00	7.60	2.00	3.50	1.75	4.75	
	3.00	4.00	3.75	7.25	9.50	3.25	6.50	7.50	3.50	8.25	5.00	7.00	1.50	5.25	2.00	4.00	
	4.00	8.50	4.25	7.50	5.00	3.00	8.00	7.25	5.00	6.25	3.50	8.25	3.00	8.00	2.50	3.50	
	4.00	6.00	2.25	4.50	4.00	1.50	3.00	4.25	6.25	7.75	3.75	7.75	2.25	5.50	3.50	8.75	
4.75	7.50	4.25	8.75	4.50	6.00	7.75	6.75	4.25	5.75	3.25	5.50	1.25	3.25	2.00	5.25		
Total .....	56.50	24.50	53.75	105.00	103.25	73.00	93.75	89.50	69.00	106.75	61.00	93.75	34.25	83.75	34.00	74.75	
Recapitulation:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest.....		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Lowest.....		6.00	92.00	9.25	46.25	3.75	150.48	3.25	41.25	7.00	103.04	3.00	45.00	3.50	64.02	3.75	43.75
Average.....		2.25	34.72	1.25	6.25	4.00	61.74	1.50	7.50	2.50	33.58	2.50	12.50	1.00	15.43	1.25	6.25
		3.84	29.26	6.31	31.55	6.73	103.87	5.11	25.55	4.33	66.33	6.43	32.40	2.27	35.03	5.23	26.40
Tests above average.....		14		18		10		16		13		16		12		14	
Tests below average.....		16		12		14		14		18		14		16		16	



TABLE XXX.—Actual measurements of strain and stretch for commercial grades—Continued.

A.—BOSTON GRADES.																	
Catalogue number of samples..		277b.				277c.				278a.				278b.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.		
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.		
		2.50	6.00	2.00	6.25	2.25	8.50	1.75	4.75	2.25	8.00	2.25	8.25	4.50	7.50	6.00	7.00
		2.25	7.60	2.75	7.75	2.00	7.75	2.50	8.25	2.00	7.00	2.25	6.00	3.75	6.00	3.00	6.75
		3.00	3.50	3.25	3.00	3.00	9.00	1.50	8.00	2.00	7.00	1.50	5.75	5.50	8.25	2.00	1.50
		1.50	6.75	1.25	2.25	1.75	7.50	1.60	8.75	2.00	8.25	3.25	6.75	2.25	5.75	3.00	7.00
		1.50	7.25	3.00	6.25	2.00	8.00	2.00	8.00	1.75	7.50	2.75	3.75	2.20	1.75	2.50	6.25
		2.25	7.75	2.00	8.00	1.75	7.75	2.00	9.00	2.50	8.00	3.00	5.75	4.75	7.00	3.25	6.25
		3.00	8.75	2.00	7.50	2.00	7.00	2.25	8.50	2.00	8.25	2.00	5.75	3.00	6.50	4.00	3.75
		2.25	8.25	2.25	7.50	1.50	6.25	1.50	5.00	1.25	4.25	2.50	7.75	5.00	5.75	2.50	5.75
		2.25	8.50	1.50	5.25	2.50	8.00	2.00	8.00	3.50	8.56	2.25	6.50	2.50	6.25	2.00	6.25
		2.75	6.25	2.00	6.75	2.25	8.50	2.50	9.75	2.25	9.25	2.50	4.50	3.50	6.60	4.00	8.25
		1.75	6.25	2.00	7.75	1.60	8.00	2.50	8.00	2.00	6.25	2.50	4.25	4.25	8.25	4.25	6.75
		3.00	8.00	1.75	6.00	1.25	5.00	2.25	8.25	1.25	7.00	3.25	7.00	3.25	7.75	3.75	7.00
		2.00	7.00	3.00	7.50	2.00	7.50	2.75	8.25	2.25	7.00	3.25	6.00	3.25	7.75	2.50	6.00
		1.60	3.25	1.75	7.00	2.00	8.00	1.75	9.25	2.50	6.50	1.50	2.50	3.00	6.25	4.00	7.25
2.00	8.00	2.00	8.50	1.75	8.50	1.25	6.25	2.00	6.00	2.25	3.25	3.25	6.75	2.25	6.00		
Total .....		33.50	103.00	32.55	97.25	29.50	115.25	30.00	118.00	31.50	108.75	37.00	88.75	53.75	98.00	49.00	91.75
		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation:		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....		3.25	60.16	8.75	43.75	3.00	46.80	9.75	48.75	3.50	54.02	9.25	46.25	6.00	92.00	8.25	41.25
Lowest .....		1.25	19.29	3.25	10.25	1.25	19.29	4.75	23.75	1.25	19.29	2.50	12.50	2.00	30.86	1.50	7.50
Average .....		2.20	33.05	6.67	33.35	1.98	30.56	7.77	38.85	2.28	35.19	6.41	32.05	3.42	52.78	6.32	31.60
Tests above average .....		14		10		18		20		11		17		13		16	
Tests below average .....		16		11		12		10		19		13		17		14	

A.—BOSTON GRADES.																	
Catalogue number of samples..		279a.				279b.				279c.				279d.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.		
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.		
		4.00	4.00	4.60	4.00	8.25	4.00	6.00	7.25	3.00	2.00	2.25	1.25	6.75	7.60	3.50	4.25
		8.00	3.75	3.50	5.75	8.75	5.00	7.60	6.50	3.50	3.75	4.50	6.00	4.75	7.00	4.25	6.00
		8.00	3.50	2.25	2.00	7.50	8.00	6.00	4.50	3.00	2.00	8.00	3.00	5.00	6.00	3.75	7.50
		2.25	4.00	5.00	4.50	4.00	2.25	6.25	5.00	5.00	3.00	7.00	4.25	4.00	3.50	4.50	3.50
		8.00	3.00	3.25	4.00	4.00	2.25	4.60	6.50	4.25	2.75	4.25	2.00	5.00	4.75	3.25	3.00
		4.00	4.25	8.75	3.25	5.00	5.00	4.50	5.50	5.50	2.25	3.50	3.75	5.25	7.00	5.00	6.75
		3.25	4.25	6.00	6.50	6.25	7.00	10.00	6.60	6.00	7.00	4.00	5.25	4.60	2.75	5.50	6.50
		6.75	5.25	5.00	4.50	3.25	3.25	7.75	6.75	4.00	2.00	4.75	4.25	4.00	2.75	3.25	2.25
		4.00	2.00	4.50	5.00	9.00	6.25	4.00	6.75	3.25	6.00	5.00	2.75	4.50	6.25	9.50	2.25
		4.75	2.75	3.50	5.00	4.00	3.00	5.00	2.50	1.50	1.00	3.75	3.50	4.25	6.00	3.00	2.75
		3.25	2.00	4.25	3.25	4.50	4.25	4.00	3.50	4.00	3.50	2.50	1.50	3.26	3.75	4.00	3.75
		4.75	6.00	4.25	6.25	12.60	7.00	5.00	7.75	3.00	2.00	6.75	5.00	5.25	5.75	3.75	6.00
		4.75	3.75	4.75	6.75	6.00	7.00	4.00	2.25	6.75	6.50	6.25	3.25	3.50	3.25	4.75	7.00
		4.00	4.75	4.00	5.50	7.50	7.75	5.00	6.00	3.75	4.60	6.00	6.00	3.50	2.50	5.00	4.00
4.00	4.50	4.25	4.50	7.00	6.75	7.00	5.50	2.50	2.25	2.50	3.00	4.50	3.75	5.00	4.50		
Total .....		58.75	57.75	62.76	69.75	97.50	78.75	85.50	82.75	59.00	49.50	65.00	54.75	68.00	72.50	62.00	70.00
		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation:		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....		6.75	104.18	6.50	32.50	12.50	192.93	8.00	40.00	7.00	108.14	7.00	35.00	6.75	104.18	7.50	37.50
Lowest .....		2.25	34.72	2.00	10.00	3.25	50.16	2.25	11.25	1.50	23.15	1.00	5.00	3.00	46.80	2.50	12.50
Average .....		4.05	62.51	4.25	21.25	6.10	94.15	5.38	26.90	4.13	63.74	3.47	17.35	4.33	60.83	4.25	23.75
Tests above average .....		13		13		12		17		13		17		14		13	
Tests below average .....		17		15		18		13		17		13		16		16	



TABLE XXX.—Actual measurements of strain and stretch for commercial grades—Continued.

A.—BOSTON GRADES.																	
Catalogue number of samples..	280a.				280b.				280c.				280d.				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	6.50	7.75	6.00	2.25	4.50	8.00	3.25	6.00	4.50	6.00	10.00	8.50	5.25	4.00	3.50	8.00	
	4.75	4.00	4.25	7.25	5.00	5.25	4.00	4.75	5.50	7.00	4.75	7.00	5.00	8.25	5.75	7.00	
	0.75	5.50	6.25	2.25	5.75	2.50	5.50	5.50	7.00	8.50	4.50	6.75	6.50	2.75	5.00	6.50	
	0.25	5.75	5.25	1.50	5.25	6.25	3.25	2.25	10.25	6.00	7.50	8.00	5.50	5.50	8.50	6.75	
	4.50	2.50	4.25	2.00	5.75	7.75	3.25	12.00	5.50	7.75	3.00	3.75	3.00	4.75	5.50	5.25	
	4.75	6.00	7.60	5.75	3.00	4.75	6.25	3.75	4.00	4.75	6.75	5.50	7.25	8.00	7.00	5.50	
	2.60	4.50	5.00	3.50	3.75	7.25	3.50	2.00	4.75	7.75	7.50	9.60	9.25	7.00	4.00	2.00	
	3.75	3.25	8.00	5.00	7.75	7.25	5.25	6.00	5.50	9.00	4.00	4.50	7.75	0.00	4.00	7.25	
	3.75	2.25	3.25	3.25	5.25	6.75	5.00	7.50	6.25	7.50	4.00	8.60	5.75	6.75	5.00	7.75	
	3.50	6.25	5.75	6.00	6.00	7.50	4.50	3.00	5.50	4.25	5.75	5.25	8.00	3.75	7.25	8.50	
	6.50	12.75	5.00	6.75	6.00	8.60	7.25	8.00	6.00	6.25	6.25	8.75	3.50	3.50	2.60	6.00	
	12.00	2.00	5.00	7.00	4.75	1.60	4.75	5.00	10.00	9.50	5.60	6.50	3.50	3.00	4.75	6.00	
	6.25	2.25	5.00	3.25	4.50	4.25	3.75	5.00	7.50	8.50	5.00	3.50	4.75	5.75	4.75	2.25	
	8.25	8.00	7.25	6.75	3.75	4.25	8.60	3.75	9.50	6.60	6.25	7.50	6.25	7.25	5.50	8.00	
	7.00	8.50	3.50	4.25	3.00	4.50	3.75	5.50	9.00	7.00	7.75	7.60	6.75	5.00	5.25	8.25	
Total .....	78.00	71.25	81.25	66.75	74.00	85.25	71.75	81.00	100.75	106.25	89.00	103.00	88.00	81.25	78.25	96.00	
Recapitulation:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest.....		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Lowest.....		8.25	127.33	8.50	42.50	8.50	131.19	8.75	43.75	10.25	158.20	9.50	47.50	9.25	142.76	8.50	42.50
Average.....		2.00	30.86	1.50	7.50	3.00	46.30	1.50	7.50	3.00	46.90	3.50	17.50	2.50	38.58	2.00	16.06
Tests above average.....		5.30	81.80	4.60	23.00	4.85	74.85	5.97	27.85	6.32	97.54	6.97	34.85	5.54	85.50	5.00	47.50
Tests below average.....		13		14		14		14		11		17		12		17	
		17		10		10		16		10		13		18		13	
A.—BOSTON GRADES.																	
Catalogue number of samples..	281a.				281b.				281c.				281d.				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	12.75	6.50	6.00	5.50	3.00	2.25	3.75	6.75	7.00	2.50	8.00	3.25	4.75	4.50	2.50	1.50	
	5.25	4.50	5.00	2.60	4.25	3.75	5.75	5.25	6.00	3.75	5.00	4.50	4.00	4.25	5.75	5.50	
	6.75	7.50	11.25	3.75	5.00	4.25	3.00	2.75	7.25	3.75	9.00	5.00	7.00	2.25	7.50	4.25	
	9.75	3.25	13.00	4.25	3.60	5.75	3.25	3.00	3.50	3.25	8.00	2.50	7.75	3.25	8.50	1.50	
	7.00	5.00	8.50	4.25	4.25	7.00	3.50	2.75	8.25	6.25	7.75	3.75	5.50	3.25	8.00	3.75	
	8.00	6.00	9.00	2.75	4.00	3.25	5.50	4.50	5.00	4.25	6.25	3.25	5.50	2.75	5.25	3.75	
	13.00	2.25	7.00	2.00	5.25	5.25	4.00	3.00	6.00	4.50	6.25	7.25	6.00	4.25	4.60	4.50	
	6.50	6.25	8.50	4.00	5.50	5.75	5.25	4.75	10.00	6.25	5.75	2.75	2.50	1.50	4.50	2.00	
	6.60	4.25	6.50	7.00	5.25	5.00	3.50	3.50	7.50	5.25	7.75	4.00	5.00	4.75	7.25	2.25	
	9.25	7.25	7.25	7.50	5.25	7.60	5.50	3.00	7.00	5.00	8.25	5.00	4.75	1.50	7.00	5.00	
	5.50	6.00	7.50	4.50	4.50	6.75	5.75	7.25	7.00	3.60	4.25	3.00	6.50	2.50	7.00	5.50	
	9.25	2.50	9.00	3.25	4.75	4.60	5.50	6.75	10.00	2.50	6.25	2.50	4.50	1.50	4.00	4.00	
	9.00	4.50	12.00	6.50	4.50	6.75	4.00	4.25	7.25	5.25	7.60	2.50	3.50	1.75	4.25	2.00	
	9.00	4.75	9.00	5.50	4.00	4.75	8.75	3.75	8.25	3.75	7.25	4.00	5.00	6.00	5.50	4.75	
	8.00	2.00	5.50	4.00	4.25	6.50	4.25	2.25	6.75	2.00	8.50	5.00	5.00	2.00	3.00	2.00	
Total .....	125.50	74.50	125.00	67.25	67.25	79.00	66.25	62.50	106.75	61.75	105.75	58.25	77.25	46.00	70.50	52.25	
Recapitulation:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest.....		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Lowest.....		13.00	200.64	7.50	37.50	5.75	88.74	7.50	37.50	10.00	154.34	7.25	35.25	8.00	123.48	6.00	30.00
Average.....		5.00	77.17	2.00	10.00	3.00	46.30	2.25	11.25	3.50	54.02	2.60	10.00	2.50	33.58	1.50	7.50
Tests above average.....		8.35	128.87	4.72	23.00	4.45	68.68	4.71	23.55	7.08	109.27	4.00	20.00	5.22	80.56	3.27	16.35
Tests below average.....		15		13		14		15		10		12		14		14	
		15		17		10		15		14		16		16		16	



TABLE XXX.—Actual measurements of strain and stretch for commercial grades—Continued.

Catalogue number of samples..		A.—BOSTON GRADES.															
		281c.				281f.				282a.				282b.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	4.60	1.25	4.75	3.50	7.50	7.75	7.25	2.50	10.00	4.50	6.00	2.75	9.00	3.25	9.25	6.25	
	5.00	3.50	4.25	2.50	6.50	2.00	5.25	2.25	13.25	3.00	13.75	7.00	7.25	7.75	14.75	8.00	
	6.00	1.75	2.50	1.75	6.00	6.25	0.50	7.75	10.75	3.75	6.50	4.25	14.00	7.75	8.25	2.75	
	5.25	1.75	6.00	2.50	7.75	2.25	7.00	2.25	5.50	2.75	6.00	3.50	6.75	1.50	5.50	5.25	
	4.00	1.75	6.00	4.25	7.50	7.00	4.50	2.00	5.00	1.25	9.50	1.50	7.25	3.75	7.50	5.00	
	0.00	2.25	3.25	5.00	6.00	2.75	5.00	2.75	6.75	1.75	3.50	6.75	6.25	3.75	8.50	2.50	
	5.50	3.25	4.50	3.00	5.50	7.00	6.75	4.25	8.00	5.75	6.50	6.00	13.00	6.75	11.25	5.75	
	3.75	1.00	7.25	1.50	5.50	6.00	8.75	7.25	12.00	4.50	12.50	1.25	9.75	0.75	9.25	6.00	
	7.50	2.25	4.00	1.00	6.00	5.50	7.25	6.25	15.75	5.75	11.00	7.00	12.75	6.25	5.50	7.25	
	3.60	1.75	4.00	4.25	5.50	2.25	4.25	2.00	11.50	6.75	14.25	0.25	11.75	6.50	11.00	3.75	
	5.00	2.50	7.00	5.00	7.75	4.00	5.60	1.50	8.25	2.50	17.25	7.25	6.00	3.75	6.75	2.00	
	3.00	1.00	3.25	5.50	5.75	3.00	0.50	8.75	8.00	6.00	12.25	7.25	12.25	5.50	7.50	6.75	
	7.75	5.00	4.25	5.75	8.25	7.00	5.50	5.50	11.50	4.75	16.00	7.75	15.50	8.75	10.00	2.00	
	5.50	3.00	7.00	1.50	5.50	2.00	6.00	6.75	9.75	4.00	7.50	4.75	8.75	7.50	12.00	6.50	
3.75	6.00	6.25	2.25	6.00	5.25	6.75	8.00	5.50	2.00	10.25	3.25	14.00	8.75	12.00	7.00		
Total .....	70.00	38.00	73.25	49.25	97.00	60.00	92.25	64.00	141.50	59.00	156.75	76.50	154.25	88.25	139.00	70.75	
Recapitulation:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Lowest .....		7.75	119.61	6.00	30.00	6.30	97.23	4.43	22.15	17.25	265.24	7.75	38.75	15.50	239.23	8.75	43.75
Average .....		2.50	38.58	1.00	6.00	8.75	135.05	7.75	38.75	5.00	77.17	1.25	6.25	5.60	84.89	1.50	7.50
Tests above average .....		4.97	70.70	2.90	14.50	4.25	65.59	1.50	7.50	9.94	153.41	4.51	22.55	9.77	150.79	5.50	27.50
Tests below average .....		15	15	13	17	15	15	14	16	15	15	14	16	13	17	17+	12+

Catalogue number of samples..		A.—BOSTON GRADES.															
		282c.				282d.				283a.				283b.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	12.25	5.25	14.50	1.75	6.50	3.50	9.50	2.00	4.50	3.00	9.25	7.50	4.75	7.00	3.50	4.00	
	13.00	3.75	10.75	7.75	11.50	3.25	9.25	2.25	5.60	2.25	6.75	5.25	4.00	5.25	5.50	7.25	
	13.25	3.00	16.00	4.75	8.00	3.50	7.50	2.25	6.50	8.25	9.50	3.00	4.75	5.25	4.50	4.25	
	21.00	7.50	10.00	6.75	10.75	4.75	7.00	4.50	7.25	6.00	5.75	4.00	5.50	0.50	8.00	5.00	
	8.00	2.00	8.75	1.25	12.25	4.50	10.00	4.50	7.25	8.25	8.00	5.50	3.25	6.25	7.50	6.75	
	13.75	1.75	17.00	7.50	6.75	6.25	10.50	2.50	4.00	4.75	8.75	6.50	3.25	3.25	4.50	5.75	
	16.00	1.25	23.00	6.75	7.00	3.00	9.50	3.25	5.50	1.50	8.50	8.25	6.00	4.50	5.00	5.75	
	18.75	8.50	17.50	3.00	18.50	7.00	12.00	5.00	5.00	5.60	4.00	7.50	7.00	7.25	4.00	6.00	
	14.50	7.00	12.25	4.00	15.00	6.75	8.75	5.00	4.50	5.00	5.00	1.25	4.00	2.50	3.60	5.75	
	13.00	4.75	12.50	5.00	13.60	5.00	9.25	4.75	5.00	2.50	8.00	7.75	4.25	8.00	5.00	7.75	
	13.75	4.00	13.75	5.60	12.00	5.60	9.00	4.75	6.50	6.75	5.50	2.50	5.25	5.00	5.50	7.25	
	18.00	2.75	15.75	6.50	12.25	3.75	7.50	4.25	4.75	5.00	5.00	5.00	5.75	4.00	5.25	7.00	
	19.00	7.75	12.00	6.60	12.60	3.00	10.00	6.75	5.75	4.75	3.25	4.25	4.25	5.75	5.50	6.25	
	10.50	7.50	15.50	3.00	8.50	4.50	14.75	7.00	6.25	8.00	4.50	4.25	6.00	6.25	4.00	5.00	
7.50	4.75	13.25	4.75	8.75	3.00	17.00	5.75	4.25	6.50	7.00	7.25	5.75	7.75	6.00	7.25		
Total .....	210.25	71.50	224.60	74.75	161.75	66.75	151.50	64.50	81.50	78.00	92.75	79.75	72.75	84.50	72.25	91.00	
Recapitulation:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Lowest .....		23.00	346.99	8.50	42.50	17.00	262.38	7.00	35.00	9.25	142.76	8.25	41.25	7.60	115.75	8.00	40.00
Average .....		7.50	115.75	1.25	6.25	6.50	100.32	2.00	10.00	3.25	50.10	1.25	6.25	3.00	40.30	2.50	12.50
Tests above average .....		14.49	218.55	4.87	24.35	10.44	161.13	4.37	21.85	6.80	89.52	5.25	26.25	4.83	74.54	5.85	29.25
Tests below average .....		15	15	14	16	13	17	17	13	11	19	14+	15+	15	15	15	15



TABLE XXX.—Actual measurements of strain and stretch for commercial grades—Continued.

A.—BOSTON GRADES.																	
Catalogue number of samples..		283c.				283a.				284b.				285a.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	5.00	4.25	5.00	7.00	15.00	5.50	7.00	4.00	9.50	4.25	8.00	3.00	10.50	2.00	10.75	4.00	
	4.25	5.50	8.25	7.00	6.75	4.00	8.25	2.50	8.00	3.00	13.50	7.00	7.25	1.50	11.25	2.50	
	5.25	4.25	5.50	2.75	17.00	8.00	8.50	7.00	6.25	2.25	7.50	5.75	13.75	7.25	12.75	5.50	
	4.50	1.50	8.50	6.00	9.00	4.50	7.00	6.00	5.00	3.00	7.50	5.00	7.00	1.75	9.25	5.00	
	4.00	1.50	4.75	12.00	17.00	7.00	7.50	3.25	9.00	6.50	5.50	7.75	7.50	2.25	6.75	1.50	
	6.25	7.25	7.00	4.75	9.50	1.50	13.00	3.00	10.75	7.00	7.00	7.25	15.50	3.75	9.25	5.50	
	5.00	3.75	6.00	3.00	11.00	8.50	16.25	7.50	6.50	2.00	9.50	6.00	8.50	1.75	0.00	1.50	
	4.50	3.75	4.75	5.00	13.25	1.25	12.25	7.50	6.50	6.25	15.25	2.00	9.00	3.50	7.50	8.25	
	5.50	2.00	5.75	3.50	8.75	3.00	10.00	5.75	10.00	2.50	15.00	7.00	7.50	3.75	6.75	2.25	
	4.25	1.50	7.00	4.75	11.25	7.00	12.50	3.50	5.75	1.50	13.00	2.75	8.25	6.50	6.75	1.25	
	5.00	4.00	5.00	3.50	12.00	6.00	10.50	8.00	5.75	3.00	12.00	6.25	9.00	5.50	6.00	1.50	
	3.25	1.25	4.50	1.50	14.75	7.00	12.75	8.25	6.50	7.00	6.00	2.00	5.75	4.75	9.25	8.00	
	7.75	2.00	6.00	8.50	8.00	7.00	15.00	4.75	13.50	6.00	7.00	6.50	7.00	1.50	8.25	5.00	
	6.50	3.50	4.00	2.00	9.75	8.25	7.00	6.25	10.00	4.00	9.50	4.75	6.00	3.75	7.50	2.75	
6.25	4.50	5.00	2.00	14.25	5.00	20.00	9.00	9.25	2.00	14.50	8.25	8.25	4.50	11.50	5.00		
Total .....	78.25	49.60	85.00	59.25	176.25	89.50	167.60	85.25	121.25	61.25	150.75	81.25	130.75	54.00	132.50	54.50	
Recapitulation:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Lowest .....		8.25	127.33	7.25	36.25	20.00	308.68	0.00	45.00	15.25	235.37	3.25	41.25	15.50	239.23	8.00	40.00
Average .....		3.25	50.16	1.25	6.25	6.75	104.18	1.25	6.25	6.00	77.17	1.60	7.50	5.75	88.74	1.25	6.25
Tests above average .....		6.44	62.90	3.62	18.10	11.45	176.75	5.62	28.10	9.00	139.83	4.75	23.75	8.77	135.36	3.61	18.05
Tests below average .....		13		14		15		16		14		15+		13		14	
		17		10		15		14		16		14+		17		16	

A.—BOSTON GRADES.																	
Catalogue number of samples..		285b.				285c.				286a.				286b.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	7.00	2.00	9.00	2.00	5.75	3.00	7.50	8.50	8.50	2.75	16.00	6.00	5.50	1.25	10.75	1.25	
	0.00	1.75	10.50	6.25	6.00	4.50	11.00	8.50	15.25	3.00	9.50	3.00	32.00	2.50	10.75	2.75	
	5.50	1.75	7.75	5.00	7.00	8.25	6.00	6.00	12.25	7.25	6.00	4.50	12.00	1.50	9.75	8.00	
	6.75	2.00	6.75	1.50	5.00	5.25	8.50	6.75	11.75	6.75	10.00	2.00	8.50	4.25	7.00	3.75	
	4.00	1.50	6.50	3.25	6.75	8.25	9.50	4.50	6.50	3.75	13.50	6.00	12.00	5.00	14.50	6.25	
	7.75	6.50	3.50	1.75	9.00	7.00	11.50	7.50	9.00	4.00	11.50	6.50	9.00	4.25	14.25	8.00	
	8.00	1.50	6.50	3.25	7.25	7.00	6.50	6.75	10.00	5.00	9.25	2.25	13.25	3.25	19.00	6.00	
	7.00	2.50	6.75	2.50	9.00	8.75	14.75	6.00	17.75	6.00	18.50	7.50	15.25	2.00	5.25	6.00	
	8.00	7.25	10.00	7.25	7.50	4.50	10.25	8.50	13.00	5.25	8.25	2.00	6.50	2.00	6.50	1.50	
	6.75	2.50	7.75	1.50	6.75	5.75	14.50	4.25	3.00	3.00	9.00	6.00	11.00	3.25	5.50	4.25	
	8.00	2.00	9.00	7.25	7.25	5.00	7.75	6.50	8.75	4.50	7.00	1.50	14.00	7.00	4.00	5.75	
	12.25	7.50	5.50	4.25	13.00	6.00	7.50	7.25	10.50	6.00	10.00	7.00	10.00	4.25	10.00	2.75	
	6.75	2.50	5.00	2.25	11.00	7.25	9.25	5.50	8.00	2.00	7.25	2.75	5.50	7.50	7.00	2.75	
	3.00	2.50	7.00	5.25	13.50	6.75	7.25	6.50	10.00	7.50	5.00	2.75	11.00	6.50	5.50	2.50	
5.00	1.75	6.25	1.25	7.25	6.50	13.25	3.00	14.00	5.25	3.75	7.50	11.00	5.50	10.75	3.00		
Total .....	104.75	44.50	107.75	54.50	121.00	85.75	145.00	93.00	172.25	72.00	148.50	66.75	150.50	60.00	140.50	62.50	
Recapitulation:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Lowest .....		12.25	189.07	7.50	37.50	14.75	227.66	8.75	43.75	19.00	293.25	7.50	37.50	19.00	293.25	8.00	40.00
Average .....		3.50	51.02	1.25	6.25	5.00	77.17	3.00	15.00	6.00	77.17	1.50	7.50	4.00	81.73	1.25	6.25
Tests above average .....		7.15	110.37	3.30	15.50	8.86	136.75	5.95	29.75	10.69	164.99	4.62	23.10	9.90	152.80	4.08	20.40
Tests below average .....		12		9		13		17		11		15		17		15	
		18		21		17		13		10		15		13		15	



TABLE XXX.—Actual measurements of strain and stretch for commercial grades—Continued.

Catalogue number of samples..		A.—BOSTON GRADES.																
		286c.				286d.				287a.				287b.				
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
		6.00	1.00	10.00	6.75	5.25	4.75	7.25	1.75	19.25	8.00	18.50	7.50	23.50	6.50	23.00	7.60	7.60
		5.50	2.25	9.00	1.75	10.25	7.75	16.00	7.75	25.50	7.50	18.75	7.00	29.00	8.50	22.00	7.00	7.00
		6.50	2.50	9.25	3.25	12.00	7.50	10.00	2.50	14.00	6.75	17.00	7.50	16.75	5.00	17.00	7.50	7.50
		11.75	6.50	5.75	5.75	9.25	4.00	16.25	6.75	22.00	7.50	23.00	7.25	26.50	7.75	11.75	6.00	6.00
		14.00	7.25	0.50	4.50	11.75	1.50	10.00	5.00	14.00	8.50	21.75	7.25	18.00	7.00	23.25	7.00	7.00
		9.00	7.00	14.00	6.00	7.75	4.50	11.25	2.25	21.25	5.50	23.50	7.50	27.00	8.00	29.00	7.25	7.25
		10.50	4.25	0.50	4.50	11.60	2.50	11.25	5.50	21.50	7.00	10.25	7.00	20.50	8.00	13.50	8.00	8.00
		5.00	4.25	5.75	4.50	12.50	7.50	11.75	4.75	12.50	4.00	16.75	7.00	31.00	7.00	14.50	6.50	6.50
		11.00	5.00	7.00	5.25	6.25	3.00	12.25	4.75	29.00	7.25	19.00	6.75	34.00	8.00	30.00	7.75	7.75
		6.50	3.00	7.00	4.50	6.25	2.75	9.50	3.00	12.25	6.25	20.50	7.25	20.25	6.75	19.00	5.75	5.75
		5.75	1.75	6.25	2.75	6.00	1.60	9.00	2.00	25.25	7.75	13.00	6.25	19.75	7.00	26.25	6.75	6.75
		11.00	3.25	7.50	6.50	7.50	1.50	7.00	5.75	30.00	8.00	29.00	8.25	22.00	7.50	22.00	8.00	8.00
5.75	2.25	16.50	7.75	15.50	7.75	16.00	8.00	19.50	5.75	22.00	7.50	11.00	5.00	29.00	7.50	7.50		
9.00	5.25	10.75	6.75	11.25	7.00	5.00	4.00	12.75	7.25	16.50	7.25	19.00	9.00	14.00	6.25	6.25		
11.00	7.90	7.00	6.25	10.00	3.00	0.75	4.00	24.00	8.00	31.00	8.25	24.75	7.75	16.75	8.00	8.00		
Total .....		128.25	63.00	131.75	73.75	143.00	66.50	162.25	67.75	302.75	105.00	306.50	109.50	343.00	108.75	321.00	106.75	
		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		
Recapitulation and reduction:		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	
Highest .....		16.50	254.67	7.75	33.75	16.75	250.81	8.00	40.00	31.00	478.47	8.50	42.53	34.00	524.77	9.00	45.00	
Lowest .....		5.50	84.89	1.00	5.00	5.00	77.17	1.50	7.50	12.00	185.21	4.00	20.00	11.00	169.78	5.00	25.00	
Average .....		8.66	133.66	4.55	22.75	10.17	156.96	4.47	22.35	20.30	313.32	7.15	35.75	22.13	341.66	7.18	35.90	
Tests above average .....		15		14		14		15		15		19		13		16		
Tests below average .....		15		16		10		15		15		11		17		14		
Catalogue number of samples..		A.—BOSTON GRADES.																
		287c.				287d.				288a.				288b.				
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
		10.00	6.50	23.00	8.00	20.75	3.75	15.25	2.60	15.25	7.50	20.25	8.00	19.75	8.50	20.25	4.50	
		13.50	4.00	14.00	6.25	13.75	5.00	10.00	2.50	13.00	3.75	15.25	2.00	20.00	8.25	14.00	6.75	
		10.50	7.75	6.50	4.25	13.00	5.75	21.75	6.25	21.25	8.00	13.75	7.25	14.00	7.00	13.75	5.00	
		18.25	5.00	12.50	4.50	10.00	4.50	9.25	3.25	13.50	6.50	14.25	3.75	25.00	6.25	14.25	7.25	
		10.00	8.00	15.00	8.25	14.25	5.00	13.25	2.00	15.75	5.75	18.00	8.00	13.50	2.25	7.50	3.00	
		10.00	6.75	23.00	6.75	10.50	6.00	20.25	6.50	15.25	6.00	14.50	7.50	13.25	5.00	15.50	7.75	
		20.50	0.60	13.00	3.50	19.00	4.75	13.00	6.50	21.75	7.75	18.00	7.25	7.00	4.75	8.75	2.00	
		8.25	7.25	17.00	1.50	10.00	4.50	12.25	8.25	13.00	6.00	20.50	8.00	5.75	4.25	22.00	7.00	
		18.00	5.00	6.75	5.25	15.75	8.50	15.00	4.50	16.25	6.75	20.50	8.75	21.00	6.50	19.00	7.75	
		12.00	2.75	17.50	5.00	21.25	5.75	7.50	2.00	20.00	8.25	14.00	3.75	11.25	0.75	14.00	5.00	
		11.25	5.00	7.50	1.50	12.25	3.25	7.25	5.00	15.00	2.50	14.50	4.25	8.25	2.25	15.50	7.75	
		10.25	3.25	17.50	4.50	9.50	3.50	21.75	2.25	9.50	2.50	13.50	6.25	6.25	3.00	23.75	7.25	
19.50	5.00	11.00	7.00	20.75	0.00	10.25	3.00	18.75	8.75	19.75	6.50	15.00	0.00	10.00	6.00			
10.75	2.00	7.25	7.50	12.75	3.50	29.00	6.75	15.75	5.25	17.75	6.00	13.00	4.50	11.75	5.50			
9.25	8.25	17.25	8.25	10.60	4.50	18.50	7.50	20.00	7.50	10.50	4.25	16.25	3.50	11.00	8.75			
Total .....		192.00	83.00	208.75	82.00	214.00	74.25	224.25	68.75	244.00	92.75	245.00	91.50	209.25	75.75	221.00	90.25	
		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		
Recapitulation and reduction:		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	
Highest .....		23.00	354.91	8.25	41.35	29.00	447.60	8.50	42.60	21.75	335.70	8.75	43.75	25.00	377.08	8.75	43.75	
Lowest .....		0.60	103.32	1.50	7.50	7.25	111.90	2.00	10.00	9.50	146.62	2.00	10.00	5.75	88.74	2.00	10.00	
Average .....		13.35	206.05	5.60	27.50	14.60	225.34	4.76	23.80	16.30	251.52	6.14	30.70	14.34	221.33	6.53	27.65	
Tests above average .....		13		14		12		14		12		18		12		14		
Tests below average .....		17		16		18		16		18		12		18		16		



TABLE XXX.—Actual measurements of strain and stretch for commercial grades—Continued.

Catalogue number of samples..	A.—BOSTON GRADES.												B.—PHILADELPHIA GRADES.			
	289a.				289b.				289c.				290.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	3.75	4.50	4.50	4.50	8.50	3.00	7.25	4.75	61.00	8.25	10.00	8.50	2.50	8.25	2.25	5.50
	3.25	2.50	4.50	2.75	8.75	8.75	15.00	6.50	45.00	8.25	13.50	7.00	3.00	8.50	3.75	6.75
	4.50	2.00	3.00	4.75	11.50	5.00	6.50	4.75	48.00	7.50	4.00	6.00	4.50	7.50	2.50	6.25
	3.50	2.25	6.25	4.50	5.00	3.00	6.75	8.00	51.00	8.50	9.25	4.00	5.00	7.25	3.00	7.75
	3.00	4.25	3.75	2.00	12.00	2.00	9.00	4.50	43.00	7.50	6.50	6.25	2.50	7.00	3.00	4.25
	4.50	3.25	4.00	3.50	8.75	2.75	5.50	7.00	45.00	7.25	13.00	7.25	4.25	6.00	8.00	5.00
	4.75	2.75	3.25	3.50	10.00	5.25	8.50	4.75	33.50	9.50	4.25	2.00	2.75	7.25	2.25	5.25
	5.25	3.50	5.75	4.00	10.00	8.00	4.00	2.00	35.00	7.25	0.50	7.25	3.50	7.00	2.25	6.50
	3.50	12.25	6.00	4.50	9.50	7.00	7.50	4.25	47.50	8.75	3.75	2.00	3.75	5.75	8.00	5.25
	5.00	3.75	7.00	4.50	4.00	2.00	11.50	2.00	42.00	7.50	4.50	4.00	3.25	4.50	2.25	6.50
	6.00	4.75	12.75	13.50	5.00	7.75	1.5	5.00	50.00	9.00	5.75	7.00	3.50	6.25	2.75	7.00
	5.50	3.50	3.00	12.00	8.00	8.25	4.00	1.50	60.00	8.75	9.00	5.00	3.50	7.00	2.50	7.50
	4.25	6.00	4.00	12.00	6.50	12.75	5.50	1.50	44.00	8.25	9.00	6.25	3.00	4.50	2.75	5.50
	3.00	1.75	4.50	12.25	12.00	7.00	13.00	4.75	50.00	8.25	13.50	8.50	2.00	6.50	2.60	5.75
4.50	6.50	4.50	4.25	7.25	3.25	8.00	1.50	39.00	7.00	9.00	7.50	2.75	4.25	2.75	4.60	
Total .....	63.25	52.50	66.75	51.75	135.25	60.00	119.75	50.25	705.00	121.50	124.50	87.50	49.75	95.50	40.50	89.25
Recapitulation:																
Highest .....	7.00	108.04	6.00	30.00	15.00	231.51	8.00	40.00	60.00	926.07	8.50	47.50	5.00	77.17	8.50	42.50
Lowest .....	2.75	42.44	1.75	8.75	4.00	61.73	1.50	7.50	3.75	57.87	2.00	16.00	2.00	30.86	4.25	21.25
Average .....	4.33	68.83	3.47	17.35	8.50	131.10	3.97	10.85	27.65	426.76	6.96	34.80	3.00	46.30	6.15	30.75
Tests above average .....	10		17		13		15		15		22		9		17	
Tests below average .....	14		13		15		15		15		8		15		13	
B.—PHILADELPHIA GRADES.																
Catalogue number of samples..	291.				292.				293.				295a.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
Actual measurement in grams and millimeters.	5.75	3.75	4.75	8.00	5.25	7.50	4.25	7.25	4.00	5.00	2.25	3.50	6.75	8.25	5.75	8.50
	4.75	5.50	3.50	4.75	4.75	4.75	5.25	3.50	3.50	4.00	3.25	5.00	3.25	2.00	4.75	2.50
	4.25	5.75	4.50	7.00	4.00	4.50	4.25	3.75	3.00	6.50	5.00	6.25	5.00	5.75	6.00	4.50
	5.25	8.00	3.00	3.25	5.75	8.75	3.50	5.00	3.00	2.50	2.75	3.75	4.25	6.25	5.25	4.25
	3.75	4.75	3.75	5.00	6.25	6.75	5.00	3.00	2.00	3.75	3.25	4.00	3.75	5.50	3.75	3.50
	5.25	5.25	3.00	4.75	4.00	3.50	6.00	4.25	2.25	3.50	2.25	5.50	6.00	7.25	3.75	2.75
	5.25	7.25	4.50	5.00	3.75	7.25	4.25	7.00	3.00	4.25	3.75	4.00	4.25	4.00	5.00	4.75
	4.75	7.00	5.00	7.75	3.75	3.50	5.50	8.00	2.25	5.00	3.50	4.75	6.00	8.00	5.75	4.50
	5.00	7.00	5.00	5.00	5.00	4.75	3.00	4.50	2.50	4.00	2.25	4.50	4.00	3.00	5.25	3.00
	5.00	8.50	4.00	7.25	8.00	8.00	4.25	6.50	4.25	3.50	2.00	3.50	4.75	4.95	6.00	2.50
	5.00	9.00	4.25	6.25	3.75	4.00	6.25	6.75	3.50	4.50	3.00	5.50	5.50	3.50	5.00	2.75
	4.00	7.50	3.50	7.00	4.25	5.50	4.00	4.50	3.50	6.25	2.00	5.00	6.25	5.25	4.50	3.75
	3.00	4.25	4.25	8.00	5.25	6.75	5.00	8.00	2.50	5.00	3.50	5.00	11.50	3.00	5.00	2.75
	3.50	5.75	4.25	7.00	3.50	2.50	6.50	7.50	3.00	6.25	5.00	3.00	4.00	2.00	5.25	4.00
	5.50	6.25	5.00	7.75	4.00	4.50	4.00	2.75	3.75	3.50	2.00	5.75	4.50	7.50	3.75	5.00
Total .....	72.00	95.50	64.25	93.75	69.25	82.50	71.00	80.25	46.00	66.50	45.75	60.00	72.75	70.50	74.75	64.00
Recapitulation:																
Highest .....	5.75	88.74	9.00	45.00	6.50	100.82	8.75	43.75	5.00	77.17	6.25	31.25	6.75	104.18	8.25	41.25
Lowest .....	3.00	46.30	3.25	16.25	3.00	46.80	2.50	12.50	2.00	30.86	2.50	12.50	3.25	50.10	2.60	10.00
Average .....	4.60	70.99	5.30	31.50	4.67	72.08	5.42	27.10	3.05	47.07	4.51	22.55	4.91	75.77	4.15	20.75
Tests above average .....	10		15		14		14		13		14		16		13	
Tests below average .....	14		15		16		10		17		10		14		17	



TABLE XXX.—Actual measurements of strain and stretch for commercial grades—Continued.

Catalogue number of samples..		B.—PHILADELPHIA GRADES.																
		295b.				295c.				294.				296.				
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
		5.00	3.75	3.50	1.50	3.00	3.00	3.75	4.50	3.25	5.25	3.75	4.00	3.50	6.00	6.25	6.75	6.75
		4.00	2.75	3.25	1.50	3.75	6.00	3.25	6.50	3.75	6.50	4.25	6.50	5.00	6.25	5.75	4.75	4.75
		4.50	4.60	6.00	5.50	3.50	5.00	2.25	1.50	2.50	2.75	2.75	2.00	6.50	6.75	4.25	7.00	7.00
		4.00	4.50	5.25	2.75	3.50	6.25	3.00	6.25	3.00	2.00	3.00	7.25	5.00	6.00	4.50	6.25	6.25
		5.50	4.75	4.75	0.00	3.00	3.00	3.75	7.00	3.00	5.75	2.75	4.25	6.25	4.00	2.00	3.00	3.00
		4.50	2.75	4.25	4.75	3.25	3.00	3.25	6.50	3.00	7.50	4.00	7.50	4.50	0.00	5.75	4.25	4.25
		3.50	2.00	3.75	4.25	3.00	2.75	2.25	5.00	4.25	6.00	5.00	8.00	6.75	7.50	4.00	3.75	3.75
		3.25	2.25	3.75	8.50	5.25	6.75	2.75	3.00	2.25	4.00	5.50	7.00	7.00	4.50	3.75	3.00	3.00
		5.50	5.50	3.50	5.75	3.25	6.00	3.50	5.75	3.00	2.00	4.00	8.00	5.00	2.50	5.25	4.75	4.75
		5.75	6.50	4.50	3.75	3.25	3.75	3.00	6.00	3.00	6.75	3.25	7.50	6.25	8.50	5.50	6.00	6.00
		3.50	2.00	5.75	0.50	2.75	4.00	4.50	6.50	2.50	5.25	2.50	2.25	3.75	5.50	7.25	6.00	6.00
		4.25	3.75	5.00	2.50	4.00	5.75	2.25	6.50	5.00	8.75	2.75	6.25	3.50	2.50	3.50	2.75	2.75
		5.00	6.00	4.75	6.00	4.25	6.00	3.00	2.00	4.25	7.50	3.00	5.00	4.50	4.00	5.50	3.25	3.25
		3.00	1.50	4.00	3.50	3.50	5.25	3.25	5.25	3.50	7.25	4.00	5.25	5.50	5.25	6.50	7.00	7.00
5.25	1.50	3.75	5.25	2.50	2.25	3.50	8.00	3.50	5.50	3.00	2.00	5.25	6.50	4.00	3.75	3.75		
Total .....	66.50	54.00	65.75	63.00	51.75	66.75	47.25	86.25	51.75	82.75	51.50	83.00	78.25	81.75	73.75	72.25		
Recapitulation:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		
Highest .....		grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	
Lowest .....		6.00	82.60	6.50	32.50	5.25	81.03	8.00	40.00	5.25	81.03	8.75	43.75	7.25	111.90	8.50	42.50	
Average .....		3.00	46.30	1.50	7.50	2.25	34.72	1.50	7.50	2.25	34.72	2.00	10.00	2.00	80.86	2.50	12.50	
Average .....		4.40	67.91	3.90	19.50	3.30	50.93	4.90	24.50	3.44	53.09	5.52	27.00	5.06	78.00	5.13	25.65	
Tests above average.....		15		14		12		10		12		16		15		16		
Tests below average.....		15		16		18		11		18		14		15		14		

Catalogue number of samples..		B.—PHILADELPHIA GRADES.															
		297.				298a.				298b.				298c.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
		8.50	4.75	3.00	1.50	6.50	4.50	5.75	5.00	3.00	3.00	7.50	4.00	6.00	5.50	3.00	4.00
		3.00	3.50	4.00	1.75	5.00	2.50	4.25	3.75	5.60	4.00	7.25	5.75	4.50	5.75	5.00	7.00
		3.00	4.25	4.00	5.00	6.00	6.75	0.25	6.50	7.00	8.00	6.00	6.25	2.50	2.50	4.00	4.50
		4.00	6.50	3.00	2.50	5.50	2.75	8.50	5.75	4.75	7.25	7.25	6.25	4.00	7.00	3.00	2.50
		4.75	4.50	3.75	5.50	7.50	4.50	7.00	4.00	4.25	5.00	6.50	3.25	5.50	6.00	3.25	6.50
		4.00	6.25	2.25	3.25	5.00	7.00	5.60	3.50	7.75	7.00	7.25	3.50	5.25	7.75	5.50	5.50
		3.25	4.00	3.25	5.00	6.25	7.00	5.50	2.00	4.00	7.00	6.50	7.00	4.00	7.00	4.00	4.60
		3.75	4.75	3.00	4.50	4.25	3.75	6.75	6.50	8.00	5.75	6.50	6.00	5.50	8.75	3.75	4.75
		3.50	1.75	4.25	5.25	4.25	2.00	8.25	8.50	9.25	7.50	7.50	8.50	4.75	8.00	3.75	5.00
		8.75	2.25	5.00	7.50	6.25	5.00	5.50	2.75	6.25	7.75	3.25	5.00	5.75	4.75	5.25	4.40
		3.50	3.75	4.25	6.00	7.50	5.50	5.75	2.75	4.00	3.00	8.00	5.25	3.75	4.50	4.00	4.00
		4.00	7.50	4.25	4.75	6.75	7.75	5.50	4.00	6.00	3.00	3.00	3.75	6.50	8.25	4.50	3.00
		3.75	7.75	3.60	3.25	7.00	14.50	6.00	7.50	5.50	3.25	6.25	3.00	4.00	4.00	7.00	7.50
		2.50	3.00	3.00	3.00	7.75	7.00	6.75	5.00	6.50	6.00	6.50	7.00	3.75	3.00	3.00	5.00
4.75	1.50	5.00	4.00	7.25	3.50	9.00	5.50	6.00	7.50	6.75	8.00	4.00	8.00	5.00	4.50		
Total .....	55.00	60.00	58.00	67.75	95.75	74.00	96.25	73.00	87.75	85.00	94.00	82.50	69.75	90.75	64.00	72.75	
Recapitulation:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....		grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Lowest .....		5.50	84.89	8.00	40.00	9.50	146.62	8.50	42.60	9.25	142.76	8.50	42.50	6.50	100.32	8.75	43.75
Average .....		2.25	34.72	1.60	7.50	4.25	65.59	2.00	10.00	3.00	46.30	3.00	15.00	2.50	88.63	2.50	12.50
Average .....		3.70	67.10	4.45	22.25	6.40	98.78	4.90	24.50	6.05	93.37	5.58	27.00	4.45	63.68	5.45	27.25
Tests above average.....		16		16		13		14		16		17		14		14	
Tests below average.....		14		14		17		16		14		13		16		16	



TABLE XXX.—Actual measurements of strain and stretch for commercial grades—Continued.

Catalogue number of samples..		B.—PHILADELPHIA GRADES.															
		298d.				298a.				299.				300.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	4.00	6.25	4.25	2.00	4.00	2.00	4.00	5.00	7.25	8.00	8.25	6.25	8.75	1.60	8.25	8.25	2.50
	4.60	4.00	6.50	7.00	4.00	6.50	8.25	2.25	7.75	7.75	6.50	6.25	5.00	4.50	5.00	5.00	1.75
	4.75	6.50	4.00	5.75	4.25	7.50	2.50	3.50	8.00	4.00	5.00	5.50	5.50	4.00	7.00	7.00	5.00
	3.00	4.00	8.75	5.50	3.50	8.25	2.50	2.50	7.50	5.75	3.00	6.50	8.25	6.75	5.25	5.25	7.50
	2.00	5.00	4.00	3.25	6.75	7.50	2.25	8.50	7.25	5.50	4.75	2.25	6.75	5.00	5.00	3.00	3.00
	5.00	6.00	4.00	6.00	3.00	5.50	8.25	4.25	5.50	3.75	6.25	8.50	4.50	5.25	3.75	2.50	2.50
	6.25	7.00	2.75	5.00	4.50	8.50	3.25	5.50	6.75	7.25	3.25	5.00	6.25	6.75	5.00	3.25	3.25
	3.50	2.00	3.50	3.00	2.00	2.00	3.50	3.50	5.50	5.00	5.25	5.00	4.25	3.75	7.00	4.00	4.00
	6.25	7.50	6.75	5.50	3.00	1.75	2.75	4.50	4.25	5.00	6.75	7.00	2.00	2.00	2.25	6.50	6.25
	5.75	4.00	3.50	3.75	4.25	7.25	4.00	3.25	8.00	6.50	6.50	5.50	3.50	2.50	4.75	7.75	7.75
	5.00	7.00	6.50	5.25	4.75	8.00	4.00	2.00	5.25	2.00	7.00	2.00	8.00	5.00	3.75	3.00	3.00
	4.00	3.00	6.75	7.75	5.75	6.00	3.00	3.50	3.50	4.25	5.00	3.00	3.75	3.50	7.00	5.50	5.50
	4.50	3.00	4.00	4.00	3.00	2.00	3.50	4.25	4.25	2.00	6.75	3.00	3.00	4.00	8.50	6.00	6.00
	3.00	4.00	4.75	3.75	3.75	3.00	4.25	6.25	5.00	3.50	4.25	5.00	5.00	5.75	5.00	8.25	8.25
4.25	8.00	5.25	5.75	8.50	4.00	5.25	6.00	4.50	4.00	6.00	3.00	6.25	4.75	3.50	2.00	2.00	
Total .....	66.75	79.25	71.75	73.25	59.00	74.75	50.00	69.75	80.75	75.25	83.50	65.75	77.75	65.25	70.25	63.25	63.25
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Lowest .....		6.75	104.18	8.00	40.50	5.75	88.74	8.50	42.50	8.25	127.83	6.00	40.00	8.50	131.10	7.75	38.75
Average .....		2.75	42.44	2.00	10.00	2.00	30.86	1.75	8.75	3.00	46.80	2.00	10.00	3.00	46.80	1.50	7.50
Average .....		4.01	71.13	4.85	24.25	3.63	56.02	4.43	22.40	5.67	87.61	4.70	23.50	5.23	80.72	4.28	21.40
Tests above average .....		13		17		14		13		13		10		13		14	
Tests below average .....		17		13		10		17		17		14		17		16	

Catalogue number of samples..		B.—PHILADELPHIA GRADES.															
		301a.				301b.				302.				303.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	3.75	3.00	4.75	2.00	8.25	5.25	5.25	2.50	5.75	2.25	7.00	5.75	8.00	8.50	6.25	7.00	
	4.00	2.00	8.25	4.00	6.75	5.50	6.00	2.25	5.75	3.00	5.25	4.50	6.50	4.50	7.00	7.50	
	4.50	2.75	3.75	4.00	6.75	6.25	5.00	3.25	5.00	3.75	7.00	8.00	6.75	6.50	6.25	8.00	
	5.00	5.00	5.09	5.00	4.50	5.50	4.75	5.50	4.75	5.75	4.25	2.00	3.50	4.00	6.25	8.00	
	7.50	2.50	7.25	2.75	6.25	4.75	3.00	3.00	5.25	3.25	5.00	4.75	8.00	8.50	8.00	6.50	
	4.75	8.25	5.50	2.00	4.00	5.25	4.00	5.75	5.00	5.75	8.75	4.00	4.50	7.75	4.00	7.50	
	3.50	2.00	3.50	2.25	3.00	2.50	4.00	3.00	5.25	5.00	6.75	2.50	7.50	7.75	6.00	6.25	
	7.50	5.25	5.59	6.00	2.50	3.00	5.00	3.00	3.50	2.00	4.75	3.25	8.50	4.75	8.00	8.00	
	6.25	6.00	8.75	2.00	5.00	3.00	3.25	2.00	5.00	2.75	4.00	3.75	5.00	5.25	5.00	5.75	
	7.25	4.00	3.00	2.75	4.75	2.50	6.00	5.00	4.00	2.00	3.00	1.25	5.00	4.75	5.00	6.00	
	2.50	2.50	3.50	2.00	6.00	5.00	8.50	5.25	4.25	4.50	5.75	2.75	5.75	6.75	5.75	5.00	
	6.00	2.00	6.50	2.00	4.00	2.00	4.00	3.25	7.25	6.00	6.50	4.25	6.00	7.00	5.25	5.50	
	4.50	3.25	4.00	3.50	8.50	3.00	5.00	3.00	6.00	4.00	5.00	3.00	7.50	7.50	8.25	7.50	
	3.00	2.50	3.75	3.50	6.00	7.00	6.00	2.50	2.75	8.25	3.50	4.00	4.00	7.75	8.25	6.50	
5.00	8.25	5.50	5.75	5.25	5.75	3.75	2.25	3.50	5.00	2.00	1.50	5.75	7.00	5.00	7.00		
Total .....	75.00	52.25	78.50	51.50	76.50	62.25	73.50	51.50	73.50	68.25	77.50	52.25	86.25	98.25	92.25	97.00	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Lowest .....		8.50	131.10	8.00	30.00	8.50	131.10	7.00	35.00	7.25	111.00	6.00	30.50	8.25	127.33	8.50	42.50
Average .....		2.50	88.58	2.00	16.00	2.50	88.50	2.00	10.00	2.75	42.44	1.25	6.25	3.50	54.92	8.00	15.00
Average .....		5.11	78.87	3.43	17.25	5.00	77.17	3.92	10.00	5.03	77.63	3.68	18.40	5.95	91.83	6.50	32.50
Tests above average .....		13		12		12+		13		13		15		15		16+	
Tests below average .....		18		18		15+		17		17		15		15		11+	



TABLE XXX.—Actual measurements of strain and stretch for commercial grades—Continued.

Catalogue number of samples..		B.—PHILADELPHIA GRADES.																
		304.				305a.				305b.				306a.				
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
		9.50	7.00	6.50	4.50	6.00	7.25	4.75	3.75	4.25	4.75	4.50	4.50	6.50	5.00	4.50	7.00	
		10.50	8.25	6.50	6.50	5.25	0.25	5.25	5.75	8.50	8.00	4.75	8.00	6.50	6.25	5.25	7.75	
		7.00	6.00	7.00	6.25	5.50	6.25	5.75	6.00	7.00	4.25	6.25	6.75	5.50	6.75	5.75	7.00	
		8.00	5.50	6.25	4.00	8.50	7.25	5.75	5.25	4.00	4.25	8.50	8.60	5.25	5.25	4.00	7.50	
		7.00	8.25	9.00	8.00	6.25	8.50	6.00	6.00	7.00	8.00	6.00	7.00	5.00	5.25	0.25	6.75	
		8.75	5.25	4.50	2.75	7.25	7.75	6.25	6.25	3.75	3.75	4.50	4.25	6.00	7.50	6.00	7.50	
		5.50	2.25	9.50	7.75	6.75	6.50	6.50	4.60	6.00	6.75	6.00	2.50	5.00	5.25	5.00	7.50	
		7.00	4.23	5.00	3.00	5.50	6.25	5.50	7.00	6.25	7.25	3.50	5.25	4.00	7.75	5.00	7.50	
		5.00	4.75	8.00	6.00	5.25	4.75	9.50	5.75	5.00	3.50	7.25	6.25	8.50	7.00	6.00	6.25	
		8.75	8.25	7.00	7.50	4.00	2.25	5.00	4.00	4.75	5.25	6.00	7.00	6.00	7.25	6.00	5.75	
		7.25	6.75	8.75	6.75	7.50	6.00	5.00	7.75	7.75	6.00	5.25	6.25	5.75	5.25	6.50	8.25	
		10.50	7.25	5.00	3.75	5.00	6.75	6.00	4.75	7.00	0.50	7.00	8.25	4.50	7.50	6.00	7.75	
		5.75	5.25	7.50	4.50	7.75	7.50	10.00	7.25	5.50	4.75	5.75	7.75	3.25	0.25	5.50	7.00	
		6.00	5.00	8.00	6.50	5.25	7.75	7.50	5.75	6.50	7.00	5.00	5.75	4.25	4.75	5.00	7.00	
6.75	6.50	7.00	7.25	6.75	4.25	6.00	5.50	6.00	0.25	5.25	7.00	7.00	8.00	4.25	4.25			
Total .....		113.25	90.50	103.60	85.00	91.60	94.25	94.75	83.25	87.25	86.25	85.50	98.00	70.50	95.00	81.00	104.75	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		
		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	
		Highest.....	10.50	162.05	8.25	41.25	10.00	154.34	8.50	42.50	8.50	131.19	8.50	42.50	7.00	108.04	8.25	41.25
		Lowest.....	4.60	60.45	2.25	11.25	4.00	61.74	2.25	11.25	3.50	54.02	2.50	12.50	3.25	50.16	4.25	21.25
		Average.....	7.22	111.43	5.85	29.25	6.20	76.01	5.91	29.55	5.75	88.74	5.97	29.85	5.35	82.57	6.65	33.25
Tests above average.....		12		17		11		15		16		18		15		11		
Tests below average.....		18		13		19		15		13		12		15		10		
Catalogue number of samples..		B.—PHILADELPHIA GRADES.																
		306b.				306c.				307a.				307b.				
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
		4.00	8.50	5.75	8.00	5.25	6.75	3.75	3.75	2.25	2.75	4.50	4.00	5.00	3.75	6.00	6.75	
		5.00	5.00	5.00	6.25	3.00	6.25	3.25	7.25	4.00	3.25	4.00	2.00	4.00	3.25	4.50	6.50	
		6.00	6.75	4.00	7.75	6.75	8.25	5.50	7.00	7.25	8.25	4.75	6.75	4.25	3.00	5.00	3.50	
		4.25	5.50	4.00	8.25	5.60	7.25	3.75	5.25	3.00	2.25	0.50	5.25	6.00	6.75	5.75	3.50	
		6.00	8.25	5.00	7.00	5.00	7.50	5.00	4.75	4.00	4.50	8.75	3.75	7.50	6.50	6.75	4.50	
		4.75	8.75	4.75	7.20	6.25	7.75	3.00	5.75	4.00	2.25	4.75	3.00	6.25	6.25	3.25	2.50	
		4.00	6.00	3.25	6.25	5.00	8.25	4.50	7.75	5.00	4.50	5.00	6.75	5.00	4.50	3.75	3.50	
		0.00	7.75	6.75	8.00	3.25	6.25	3.00	7.50	5.75	1.00	4.75	7.50	7.00	6.75	9.50	7.25	
		3.75	7.75	5.00	6.00	3.60	6.00	3.00	5.25	2.75	2.75	4.25	3.00	8.00	5.50	6.00	7.00	
		3.50	6.25	4.00	6.50	4.25	8.00	3.75	6.50	4.25	3.50	8.50	7.25	4.00	3.25	5.50	2.00	
		6.00	6.00	4.75	7.50	0.75	6.75	4.50	5.50	4.75	5.75	4.00	6.25	5.50	2.00	5.75	3.50	
		5.00	8.00	3.75	7.75	5.50	7.50	5.25	6.75	6.75	6.50	7.50	7.50	3.00	4.25	6.75	5.75	
		4.75	8.75	4.00	8.00	3.50	6.50	5.25	5.50	7.00	6.75	3.00	2.00	5.75	5.00	4.75	4.75	
		7.00	6.50	5.00	6.75	3.50	7.00	3.25	6.00	8.75	5.50	4.75	4.00	7.25	7.25	5.75	5.75	
6.50	8.00	4.00	6.50	6.25	7.75	3.00	4.50	4.00	5.75	2.60	3.25	7.50	6.50	7.75	7.25			
Total .....		75.50	107.75	69.00	107.75	73.25	107.75	59.75	93.00	73.50	85.25	77.50	72.25	88.00	73.50	86.75	74.00	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		
		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	
		Highest.....	7.00	108.04	8.75	43.75	8.75	104.18	8.75	43.75	8.75	135.05	8.25	41.25	8.50	146.62	7.25	36.25
		Lowest.....	3.25	50.16	5.00	25.00	3.00	46.30	4.50	22.50	2.25	34.72	1.00	6.00	3.00	46.30	2.00	10.00
		Average.....	4.81	74.23	7.18	35.90	4.43	63.37	6.69	33.45	5.03	77.63	3.43	17.15	5.75	88.74	4.91	24.55
Tests above average.....		14		16		15		17		9		10		13		15		
Tests below average.....		10		14		15		13		21		11		13		15		



TABLE XXX.—Actual measurement of strain and stretch for commercial grades—Continued.

B.—PHILADELPHIA GRADES.																	
Catalogue number of samples..	307c.				307d.				307e.				308a.				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
Actual measurement in grams and millimeters.	6.00	5.00	5.00	6.25	5.00	6.00	4.75	7.00	9.00	5.00	6.00	5.50	8.25	3.00	9.00	5.75	
	7.50	6.00	7.00	6.00	5.00	3.75	6.75	5.25	6.00	7.50	11.25	6.00	6.75	2.00	4.50	7.00	
	6.25	6.75	4.75	3.00	5.00	6.50	4.50	4.00	9.00	4.25	4.25	7.25	12.00	8.25	6.00	4.25	
	5.25	3.50	8.00	4.75	4.50	4.00	3.75	2.25	4.75	4.50	5.00	5.50	8.50	3.25	7.50	8.00	
	6.00	3.75	8.00	4.50	6.00	8.00	8.75	7.00	6.00	3.00	4.00	6.75	8.00	6.00	10.75	6.50	
	5.00	3.25	7.00	6.75	4.00	7.00	5.25	2.25	6.25	7.00	4.75	5.00	9.25	3.00	6.25	2.50	
	3.25	2.00	6.75	7.25	4.75	4.00	6.25	4.00	11.50	6.75	10.00	6.75	8.50	4.00	10.50	7.50	
	5.75	3.50	7.75	6.25	4.00	6.00	5.75	4.75	5.00	6.00	4.25	6.50	60.00	7.50	8.50	5.00	
	7.50	5.25	4.75	2.25	5.50	8.00	4.75	5.25	4.75	5.00	5.00	7.50	7.00	2.75	15.25	7.75	
	6.75	6.00	6.50	5.25	5.50	4.25	5.00	6.50	5.75	5.75	6.25	6.00	12.00	5.50	8.00	2.50	
	7.75	5.00	7.25	6.00	5.25	3.00	6.75	7.00	6.25	8.50	5.75	8.00	10.00	6.25	14.00	5.50	
	5.25	6.25	5.00	4.25	5.50	5.50	4.00	7.00	7.25	2.50	3.50	6.00	11.50	6.25	7.50	3.00	
	5.00	3.00	6.25	4.25	5.00	5.75	3.00	3.50	5.25	5.25	5.25	6.00	11.75	7.25	9.50	5.50	
	8.00	8.50	3.50	3.25	5.75	4.00	5.25	7.50	4.75	3.75	3.25	2.00	10.00	6.25	6.00	2.25	
	5.00	2.50	4.25	3.00	5.50	3.00	4.50	8.50	6.00	7.00	6.25	7.50	9.00	5.75	8.50	4.25	
Total .....	87.25	57.25	91.75	73.00	76.75	78.75	79.00	81.75	97.50	81.75	83.75	90.25	140.50	77.00	131.75	77.25	
Recapitulation:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Lowest .....		8.00	123.47	7.25	36.25	3.75	135.05	8.50	42.50	11.50	177.50	8.50	42.50	15.25	235.53	8.25	41.25
Average .....		3.25	50.16	2.00	10.00	3.00	46.30	2.25	11.25	3.25	50.16	2.00	10.00	4.50	69.45	2.00	10.00
		5.90	91.99	4.07	23.35	5.19	80.10	5.35	26.75	6.04	93.22	5.73	28.65	9.98	140.14	5.14	23.70
Tests above average .....		10		16		14		15		10		18		13		17	
Tests below average .....		14		14		16		15		20		12		17		13	

B.—PHILADELPHIA GRADES.																	
Catalogue number of samples..	308b.				308c.				308d.				308a.				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
Actual measurement in grams and millimeters.	8.50	4.75	7.50	2.00	11.75	7.50	6.00	5.75	9.50	6.00	13.75	7.00	10.50	7.75	9.50	6.00	
	11.75	8.00	13.00	6.75	12.00	7.50	12.00	7.25	6.00	7.00	8.50	3.50	7.25	1.25	6.50	8.50	
	6.75	3.00	12.50	6.50	12.75	7.00	10.50	6.25	10.00	3.00	9.50	6.00	8.50	6.25	8.50	4.50	
	6.75	6.75	10.00	6.75	7.25	7.00	8.25	6.50	8.00	6.00	8.00	3.50	10.00	3.00	11.25	5.75	
	15.00	7.00	10.50	7.50	13.00	8.00	11.00	8.00	11.00	7.75	8.00	7.25	15.50	7.00	6.75	2.00	
	9.50	4.75	9.00	6.25	12.00	6.50	8.25	6.50	6.00	2.50	15.25	8.25	11.00	8.25	9.75	4.75	
	13.00	8.50	10.00	5.00	16.00	8.75	11.00	8.25	8.25	6.75	7.00	10.00	17.50	8.25	7.50	8.25	
	12.00	6.50	16.25	6.25	16.00	7.25	17.00	7.00	5.75	3.50	14.75	8.25	8.00	4.50	8.25	7.50	
	16.25	5.25	11.25	2.75	11.75	6.75	13.25	5.50	12.50	8.50	10.25	8.25	8.00	8.25	10.00	3.00	
	9.00	5.00	12.00	7.25	9.00	7.25	10.00	7.00	11.50	6.75	9.00	4.50	11.75	6.50	6.00	6.50	
	10.50	7.50	11.00	4.50	10.00	6.00	13.00	7.25	14.00	7.50	16.00	5.75	9.00	8.00	10.00	8.25	
	6.75	1.75	8.00	5.25	13.25	6.00	8.25	7.50	9.25	5.00	8.25	7.00	7.00	5.50	10.25	7.00	
	9.25	7.75	10.50	2.25	11.75	8.75	7.75	7.50	9.00	7.75	11.00	6.50	8.25	7.75	11.25	7.25	
	17.25	4.75	7.00	3.75	9.00	6.50	7.00	3.00	16.00	7.75	10.50	4.00	10.00	8.00	11.25	2.50	
	12.00	7.00	15.00	6.25	10.75	8.50	8.75	7.50	9.00	3.00	12.00	7.50	9.75	7.00	9.50	1.50	
Total .....	156.25	86.25	163.50	79.00	176.25	107.25	152.00	100.75	151.25	89.00	172.75	94.75	152.00	91.25	106.25	71.25	
Recapitulation:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Lowest .....		16.25	230.81	8.50	42.50	17.00	262.39	8.75	43.75	13.75	258.53	6.50	42.50	17.50	270.11	8.25	41.25
Average .....		6.75	104.18	1.75	8.75	6.00	92.61	3.00	15.00	5.75	89.75	2.50	12.50	6.00	92.61	1.25	6.25
		10.66	164.53	5.51	27.55	10.94	168.85	6.93	34.65	10.80	166.69	6.13	30.15	9.61	148.33	5.42	27.10
Tests above average .....		13		16		16		18		12		17		15		16	
Tests below average .....		17		14		14		12		18		13		16		14	



TABLE XXX.—Actual measurements of strain and stretch for commercial grades—Continued.

Catalogue number of samples..		B.—PHILADELPHIA GRADES.															
		309b.				310a.				310b.				310c.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	6.00	2.00	0.50	4.50	11.00	4.75	18.00	8.25	27.75	7.00	30.00	8.00	28.00	8.00	8.00	28.75	
	6.25	2.25	13.00	5.75	15.00	3.00	25.00	7.00	23.50	5.50	17.00	7.00	14.00	2.25	25.00	4.00	
	6.25	1.25	8.00	3.25	17.00	6.75	15.00	6.25	19.00	5.75	27.00	7.00	23.75	8.00	17.00	4.00	
	11.00	5.00	11.25	5.50	26.00	7.25	21.00	5.75	26.00	8.00	25.00	6.25	16.00	3.00	14.00	2.75	
	8.50	3.75	7.00	2.50	16.25	8.50	12.00	4.00	27.00	6.50	10.00	4.25	25.00	3.50	16.25	3.00	
	8.00	4.25	12.75	7.50	13.00	4.50	16.25	7.50	83.00	8.00	28.00	6.50	23.50	2.50	41.00	8.50	
	11.00	4.50	11.50	5.75	11.00	4.75	10.25	7.50	14.00	6.00	18.00	6.00	42.00	8.50	19.25	7.00	
	9.25	6.25	10.00	5.00	18.50	4.50	24.00	7.50	24.75	8.50	23.00	6.75	12.00	5.00	28.75	6.75	
	7.50	4.00	11.50	2.75	15.50	6.75	26.75	7.50	22.00	6.50	24.00	6.50	20.00	7.50	29.75	8.00	
	7.50	1.25	8.00	6.25	26.00	6.75	21.00	7.75	26.00	8.00	31.00	7.25	14.00	2.50	14.25	0.75	
	12.00	5.00	7.50	5.00	17.50	3.75	20.00	4.00	15.00	3.25	18.50	7.50	24.00	6.25	30.00	7.50	
	14.00	7.25	10.00	4.00	11.00	7.25	14.00	6.25	15.25	6.50	15.50	6.60	18.00	5.50	14.00	4.25	
	11.00	4.25	8.00	1.50	20.00	8.75	18.75	7.00	21.25	8.00	24.75	6.75	27.25	4.00	19.00	7.50	
	13.50	7.75	9.75	3.00	15.00	4.25	10.00	5.00	21.00	3.00	23.00	7.50	10.00	2.00	16.75	7.50	
	8.00	3.00	13.60	6.50	18.00	7.25	22.50	7.75	19.00	6.75	25.00	7.50	30.50	6.50	17.50	4.00	
Total .....	139.75	61.75	157.25	67.75	250.75	88.75	274.50	99.00	334.50	101.25	347.75	101.25	323.00	75.00	335.25	84.00	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Lowest .....		14.00	216.08	7.75	33.75	26.25	405.16	8.75	43.75	33.00	509.34	8.50	42.50	42.00	648.25	8.50	42.60
Average .....		6.00	92.61	1.25	6.25	10.00	154.35	3.00	15.00	10.00	154.35	3.25	10.25	10.00	154.35	2.00	10.00
Average .....		0.70	149.72	4.22	21.60	17.51	270.26	6.26	31.30	22.74	350.98	6.75	33.75	22.11	341.28	5.30	26.50
Tests above average .....		15		15		14		17		17		14		14		15	
Tests below average .....		15		15		16		13		13		13		16		15	

Catalogue number of samples..		B.—PHILADELPHIA GRADES.															
		311a.				311b.				311c.				311d.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	13.00	6.25	8.00	6.75	6.25	2.75	7.00	2.25	10.50	6.75	12.50	7.75	5.75	6.00	7.00	1.75	
	8.25	5.00	8.00	5.25	10.00	6.00	6.50	5.75	8.50	6.00	6.00	5.00	4.25	5.25	8.75	3.00	
	5.50	3.00	5.75	5.00	10.00	3.00	0.75	5.50	10.75	5.75	11.00	6.75	2.50	3.75	6.00	0.50	
	8.25	7.75	13.50	4.00	6.60	5.25	10.00	5.60	12.50	6.60	8.50	4.00	3.50	3.75	6.25	4.25	
	8.50	5.25	10.75	3.00	10.00	6.50	8.50	2.25	9.00	6.75	11.00	5.50	6.00	1.75	7.00	2.50	
	6.00	5.25	6.00	3.60	9.25	6.75	18.75	5.00	8.60	8.00	7.00	6.25	8.00	3.25	8.50	5.50	
	9.25	8.25	7.60	2.25	8.00	3.25	11.50	4.60	10.50	5.50	14.00	8.00	4.25	4.00	8.00	2.00	
	13.00	8.75	6.75	6.60	11.50	4.00	7.75	4.75	7.25	2.50	6.00	3.50	5.75	7.75	5.00	4.75	
	12.00	6.25	7.50	1.60	11.25	6.00	0.25	6.00	10.00	2.00	10.00	2.60	8.00	3.50	9.00	6.00	
	7.50	6.50	9.75	2.25	15.00	4.00	11.75	6.00	12.25	2.50	14.00	7.00	8.00	6.50	5.50	0.50	
	8.25	5.00	7.00	4.00	7.25	6.50	9.50	5.00	11.25	6.50	11.00	4.75	7.50	4.50	3.75	3.00	
	13.00	4.25	6.00	4.00	15.00	8.00	16.00	9.25	13.75	6.00	16.00	7.50	6.00	6.50	7.25	2.50	
	8.25	6.25	20.00	6.75	7.00	2.50	6.25	6.75	11.00	7.50	12.00	6.00	3.25	5.25	2.50	1.50	
	11.00	5.00	9.00	6.25	11.00	2.00	0.00	6.50	11.00	6.00	8.00	12.75	5.50	4.25	6.50	3.25	
	6.25	7.00	8.00	6.60	14.60	7.00	0.50	3.50	6.60	8.00	18.75	7.50	10.25	6.25	6.25	1.25	
Total .....	136.00	89.75	132.00	66.60	152.50	69.60	151.00	74.60	153.25	83.25	168.75	85.75	87.50	71.25	90.25	64.25	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Lowest .....		20.00	308.69	8.75	43.75	18.75	289.40	8.00	40.00	18.75	289.40	0.00	45.00	10.25	158.20	7.75	38.75
Average .....		5.00	77.17	1.50	7.50	6.25	96.47	2.00	10.00	6.00	92.61	2.00	10.00	2.50	88.69	1.25	6.25
Average .....		8.93	137.83	5.21	26.50	10.12	156.20	4.80	24.00	10.75	165.61	5.63	28.15	5.93	91.53	4.18	20.90
Tests above average .....		10		16		10		18		16		16		14		15	
Tests below average .....		20		14		20		12		14		14		16		15	



TABLE XXX.—Actual measurements of strain and stretch for commercial grades—Continued.

B.—PHILADELPHIA GRADES.																	
Catalogue number of samples..	312.				313a.				313b.				313c.				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	8.00	5.00	9.50	2.75	5.25	2.25	10.60	3.00	12.00	2.00	10.75	2.50	9.75	3.25	10.50	6.25	
	8.00	3.50	10.00	12.75	7.75	5.75	16.00	4.00	8.75	2.75	6.00	2.25	12.00	6.25	23.75	8.00	
	18.75	5.00	5.25	12.25	14.00	3.75	5.60	1.25	9.00	1.50	7.00	2.00	19.25	5.25	8.75	5.25	
	14.00	6.75	19.00	7.00	11.25	3.00	4.25	1.60	9.00	2.00	5.25	1.75	9.25	8.75	10.00	4.00	
	6.00	5.00	10.25	6.25	6.50	1.50	7.25	8.50	7.25	2.00	6.50	1.75	10.00	2.00	12.00	8.60	
	12.00	7.25	17.00	7.50	10.00	7.00	9.25	4.00	12.50	1.25	9.00	4.60	12.50	3.00	10.75	7.60	
	13.25	2.00	7.00	12.00	7.75	4.00	6.50	2.00	7.00	1.75	8.00	3.25	15.00	8.50	15.00	2.25	
	9.75	2.25	17.00	12.75	6.00	5.00	9.00	3.50	7.00	2.50	10.00	2.25	8.00	2.50	5.00	4.00	
	6.50	5.25	16.00	5.25	5.75	2.50	9.25	2.50	10.00	3.50	6.25	2.50	8.00	2.75	10.50	6.25	
	16.00	5.75	8.75	6.75	12.00	6.50	5.25	3.75	10.00	6.60	8.25	1.25	21.25	9.25	30.00	5.75	
	9.00	0.75	3.00	3.00	10.00	3.25	10.00	2.00	9.00	1.25	11.00	8.60	12.60	7.00	13.25	8.75	
	8.60	2.50	12.75	8.25	14.00	4.00	9.25	8.60	9.25	1.00	10.00	8.60	12.60	3.25	8.60	2.00	
	13.25	8.00	10.50	6.50	12.75	3.75	12.00	5.00	14.00	6.75	5.00	1.00	14.00	6.75	11.50	2.50	
	10.00	4.60	10.50	3.75	6.50	2.40	10.50	3.50	5.50	1.75	5.00	1.25	17.00	6.00	11.75	6.50	
13.50	7.00	5.25	2.50	6.75	4.75	9.00	4.00	10.25	4.00	0.75	1.50	15.25	7.25	16.00	6.75		
Total .....	106.00	76.50	165.25	69.25	136.25	59.00	139.50	47.00	140.50	40.50	123.75	34.75	196.25	69.75	195.75	73.25	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Lowest .....		19.00	202.26	8.25	41.25	16.00	240.95	7.00	35.00	14.00	210.08	6.75	33.75	23.75	366.57	8.00	40.00
Average .....		5.25	81.03	2.00	10.00	4.25	93.60	1.25	6.25	5.00	77.17	1.00	5.00	5.00	77.17	2.00	10.00
Tests above average .....		11.04	170.40	4.86	24.30	8.90	138.70	3.53	17.65	8.81	135.08	2.51	12.55	13.07	201.73	4.77	23.85
Tests below average .....		12		17		17		14		18		9		12		15	
		18		13		13		10		12		21		18		15	
B.—PHILADELPHIA GRADES.																	
Catalogue number of samples..	314a.				314b.				315a.				315b.				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	4.00	1.75	9.00	6.25	6.75	8.00	4.50	11.25	6.00	2.25	10.60	2.00	8.00	3.25	4.75	3.25	
	6.75	6.75	5.00	8.25	6.25	6.75	4.25	8.75	5.00	2.00	7.75	6.75	11.00	3.25	4.25	3.00	
	4.75	3.50	5.00	6.50	8.00	7.00	5.00	2.00	10.60	6.75	8.00	3.25	9.00	5.60	6.50	4.00	
	5.25	3.00	4.75	2.75	7.00	3.50	5.75	5.25	8.00	7.00	7.50	2.00	5.25	8.75	6.25	3.00	
	5.00	6.00	5.75	2.00	7.00	6.50	3.75	3.50	9.75	2.50	5.00	2.00	4.75	5.50	5.00	4.50	
	6.00	5.75	4.00	2.25	5.75	2.25	6.75	8.00	7.00	4.00	5.50	6.50	8.00	2.00	7.25	1.50	
	5.00	3.00	3.25	1.75	5.75	8.00	6.00	4.00	5.25	2.50	7.00	5.75	3.50	1.75	7.75	3.25	
	7.00	8.75	7.00	2.25	4.75	1.75	7.00	5.00	6.00	2.60	5.00	2.00	4.50	1.75	6.50	7.50	
	4.60	2.25	0.25	5.25	6.25	3.25	5.25	5.50	7.25	2.75	7.25	4.25	6.50	4.25	5.00	2.25	
	7.00	4.75	3.25	4.75	7.00	4.00	5.00	3.00	5.00	3.50	7.00	6.00	8.00	1.25	5.25	4.25	
	6.00	2.00	5.00	2.00	8.00	6.25	5.00	5.75	8.00	4.50	8.00	4.25	8.25	4.25	6.00	6.50	
	6.00	4.50	7.00	5.75	5.75	2.00	7.00	6.00	8.00	4.60	5.00	2.00	4.25	2.75	6.00	2.25	
	4.75	2.00	7.50	5.50	5.00	1.25	6.50	4.50	6.25	8.75	5.25	4.00	4.50	2.50	7.25	2.50	
	10.00	7.00	6.00	3.00	5.03	7.00	6.75	3.50	7.00	4.75	8.00	5.75	3.50	2.00	6.00	6.00	
5.50	2.00	6.00	2.00	4.50	5.50	7.25	6.25	6.60	6.00	5.00	3.00	5.50	5.00	5.25	2.00		
Total .....	57.50	63.60	84.75	55.25	92.75	68.00	85.75	67.25	105.50	63.75	103.25	59.50	92.50	48.75	92.00	55.75	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Lowest .....		10.00	154.35	8.75	43.75	8.00	123.48	8.00	40.00	10.00	154.35	8.75	43.75	11.00	169.78	7.50	37.50
Average .....		3.25	60.16	1.75	8.75	3.75	57.89	1.25	6.25	5.00	77.17	2.00	10.00	3.50	54.62	1.25	6.25
Tests above average .....		5.74	83.50	3.94	19.70	5.95	91.84	4.51	22.55	6.90	107.43	4.11	20.55	6.15	94.92	3.48	17.40
Tests below average .....		15		13		15		14		17		14		12		12	
		15		17		15		16		13		16		18		19	



TABLE XXX.—Actual measurements of strain and stretch for commercial grades—Continued.

Catalogue number of samples..		B.—PHILADELPHIA GRADES.															
		316.				317a.				317b.				317c.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	11.00	5.00	7.25	3.25	6.25	3.75	4.00	2.25	5.00	6.75	5.00	5.00	6.00	5.25	6.00	5.00	
	13.00	6.75	6.00	2.25	4.25	2.75	4.25	5.50	5.00	5.50	5.00	1.25	6.75	6.00	5.75	6.50	
	6.00	2.75	9.00	5.50	4.75	4.50	4.00	1.50	5.25	7.75	3.00	3.25	5.75	4.75	3.00	4.00	
	12.00	7.00	9.25	7.50	5.50	4.25	3.75	3.50	5.00	3.75	5.00	6.75	3.75	3.50	6.00	6.50	
	8.50	2.25	13.75	8.00	3.50	2.25	6.00	3.25	6.50	6.00	0.00	5.25	5.00	6.00	5.75	5.50	
	0.00	6.50	7.50	6.25	3.25	2.00	5.75	5.50	3.50	1.25	5.00	1.75	5.50	7.00	6.00	2.00	
	8.75	7.25	6.00	3.50	6.25	3.75	4.75	3.75	6.75	8.00	2.50	7.50	4.25	4.50	5.00	5.50	
	8.00	0.00	7.00	3.00	6.75	4.00	6.00	3.00	8.25	4.25	6.25	3.75	4.00	0.00	5.50	5.50	
	9.00	7.25	14.00	0.60	4.75	1.50	4.50	2.00	4.00	4.25	4.50	3.25	4.25	2.50	4.50	6.50	
	9.00	7.25	6.25	2.50	3.25	1.50	4.50	6.00	4.00	3.50	5.50	3.75	4.50	5.00	5.00	7.00	
	6.00	2.50	7.00	2.25	5.50	3.75	4.00	2.00	5.75	2.25	5.00	7.50	0.75	5.00	0.50	2.00	
	7.00	2.50	9.50	6.00	3.25	1.75	3.25	4.25	6.75	0.50	5.25	6.25	4.50	5.00	5.50	7.25	
	8.00	2.00	8.00	4.25	3.50	1.75	5.25	3.50	4.00	2.00	3.25	4.00	5.75	4.50	4.75	2.50	
	8.00	2.50	8.00	0.50	3.25	2.00	5.00	3.25	4.00	4.50	4.00	2.00	5.75	4.50	4.25	6.00	
5.00	2.75	7.00	3.25	5.50	2.25	4.00	3.00	4.00	3.50	4.00	6.25	5.00	6.00	5.75	5.25		
Total .....	128.25	69.25	125.50	7.50	68.50	41.75	69.00	57.25	77.75	69.75	74.25	67.50	77.50	75.50	79.25	70.00	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Lowest .....		14.00	216.08	8.00	40.00	6.25	96.47	6.00	30.00	8.50	131.19	8.00	40.00	6.75	104.18	7.25	36.25
Average .....		5.00	77.17	2.00	10.00	3.25	50.16	1.50	7.50	3.00	41.30	1.25	6.25	3.00	46.30	2.00	10.00
Tests above average .....		13		15		14		15		11		13		16		15	
Tests below average .....		17		15		16		15		10		17		14		15	

Catalogue number of samples..		B.—PHILADELPHIA GRADES.															
		318.				319a.				319b.				320.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	21.00	6.75	21.60	6.75	2.00	2.25	3.75	3.25	4.00	5.00	2.25	3.75	2.00	4.75	2.50	5.25	
	21.00	8.25	25.00	7.25	3.50	6.25	3.00	2.00	2.75	5.25	2.50	3.25	2.00	2.25	2.25	4.00	
	15.00	3.75	18.00	4.00	2.00	3.50	4.00	5.25	3.00	4.25	2.75	3.50	2.00	5.25	2.00	3.50	
	26.00	7.75	13.25	2.00	3.50	2.75	2.00	1.50	2.00	4.25	2.00	2.00	2.25	2.25	2.00	3.25	
	18.00	6.00	20.00	7.75	3.00	6.75	2.25	4.00	2.00	1.50	2.00	2.75	3.50	2.00	3.00	2.25	
	18.00	7.00	19.00	3.25	2.25	2.50	2.75	4.00	3.00	0.50	3.00	3.75	2.59	6.00	2.25	5.75	
	18.00	7.50	24.75	8.00	3.00	3.00	3.75	4.50	2.25	2.25	3.00	4.50	2.00	5.00	2.00	2.00	
	25.00	8.00	20.25	7.25	2.00	1.50	3.00	6.25	3.00	2.25	2.75	4.50	2.00	4.25	2.50	4.25	
	23.00	7.25	18.00	7.50	2.50	3.00	3.00	4.00	2.50	2.25	2.75	4.50	1.75	4.50	2.00	4.00	
	20.00	8.00	14.00	7.00	3.00	3.25	2.50	1.25	4.00	5.50	2.50	2.50	1.75	4.50	2.00	4.00	
	18.50	6.00	20.00	7.75	2.25	4.00	3.00	5.75	2.25	3.00	3.00	4.00	2.00	4.50	2.00	3.25	
	23.00	6.75	15.00	5.50	3.75	3.50	3.00	5.00	3.25	4.25	3.00	4.00	2.25	4.75	1.75	6.00	
	15.00	3.50	27.00	7.50	3.25	6.00	3.50	4.75	2.75	2.00	2.00	3.75	2.50	5.00	2.00	3.00	
	24.50	8.50	25.00	8.50	3.25	5.00	2.75	2.00	3.00	5.00	2.25	5.25	2.00	2.50	2.25	6.25	
19.75	5.00	15.50	6.00	1.50	1.75	2.00	3.50	2.25	2.25	2.50	3.75	2.25	4.50	2.25	4.25		
Total .....	305.75	98.00	296.25	96.00	40.50	54.50	43.50	56.25	41.50	62.75	38.25	54.25	31.75	64.00	31.75	59.25	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Lowest .....		27.00	416.73	8.50	42.50	4.00	61.74	6.75	33.75	4.00	61.74	6.50	32.50	2.50	38.59	6.00	30.00
Average .....		13.25	204.50	2.00	10.00	1.50	23.15	1.25	6.25	2.00	30.87	1.50	7.50	1.75	27.01	2.00	10.00
Tests above average .....		13		19		16		13		16		16		13		16	
Tests below average .....		17		11		14		17		14		14		17		14	



TABLE XXX.—Actual measurements of strain and stretch for commercial grades—Continued.

C.—GERMAN GRADES.																
Catalogue number of samples..	321.				322.				323.				324.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	4.00	3.00	5.00	2.75	2.75	3.25	2.75	3.50	6.00	5.75	3.00	7.25	3.25	4.50	4.25	6.00
	4.00	6.25	3.50	5.75	3.00	3.50	2.00	3.50	4.25	5.25	5.00	4.50	3.50	3.50	4.00	2.50
	4.25	5.00	3.50	4.75	2.50	5.00	2.75	5.00	3.00	6.25	5.00	4.25	3.50	7.00	3.00	3.00
	4.25	7.50	3.00	5.25	3.50	4.25	2.50	2.50	3.00	6.50	6.50	5.25	3.25	2.00	3.75	5.25
	5.00	4.00	5.00	4.50	3.00	4.00	2.75	2.25	3.50	6.00	4.00	7.75	4.75	7.00	4.00	3.50
	5.00	3.50	4.00	5.50	2.00	4.00	3.00	4.25	2.00	3.75	4.00	7.75	3.75	7.00	4.00	3.50
	5.00	5.25	5.75	5.50	2.75	3.50	3.50	4.00	4.50	7.50	5.00	3.75	4.75	7.00	4.00	3.50
	5.75	4.50	3.00	3.75	3.25	3.50	3.00	4.00	4.00	7.00	6.00	6.00	4.00	4.25	3.00	2.00
	4.75	3.00	4.00	4.50	2.25	2.75	2.50	3.75	3.75	3.25	3.50	4.50	3.75	2.50	3.25	5.00
	5.25	7.00	4.00	5.50	2.50	4.75	2.75	3.00	3.00	4.75	3.50	5.00	3.75	2.50	4.00	6.00
	4.00	5.75	5.00	4.50	3.00	3.50	2.75	3.50	3.00	5.67	3.25	5.50	3.25	2.50	4.00	6.00
	5.00	5.75	5.75	4.75	3.00	4.75	3.00	2.50	3.00	2.00	3.25	4.00	4.50	4.00	3.25	5.00
	4.00	3.50	3.50	6.00	2.25	2.00	2.75	3.25	3.25	7.25	3.50	4.00	3.25	4.00	3.25	6.00
	4.00	5.75	4.75	5.50	2.50	4.00	3.00	5.00	4.50	4.00	4.75	7.50	3.00	3.00	3.50	2.50
4.00	5.00	5.00	5.00	3.50	2.25	3.25	3.25	3.75	4.75	4.25	6.00	3.00	3.00	4.00	3.50	
Total .....	68.25	74.75	64.75	73.50	41.75	55.00	42.25	53.25	61.50	81.00	63.50	81.25	55.00	68.25	34.50	66.25
Recapitulation:																
Highest.....	5.75	88.75	7.50	37.50	3.50	74.02	5.00	25.00	6.00	92.61	7.75	38.75	5.00	77.17	7.00	35.00
Lowest.....	3.00	46.30	2.75	13.75	2.00	30.87	2.00	10.00	3.00	46.30	3.00	15.00	3.00	46.30	2.00	10.00
Average.....	4.43	63.37	4.94	24.70	2.80	43.22	3.61	18.95	4.17	64.34	5.41	27.65	3.65	56.34	4.48	22.40
Tests above average.....	14		17		13		13		14		15		16		14	
Tests below average.....	10		13		17		17		16		15		14		10	

C.—GERMAN GRADES.																
Catalogue number of samples..	325.				326.				327.				328.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	3.00	3.00	3.00	4.00	5.00	4.00	4.00	3.00	4.25	8.00	4.00	4.00	2.75	1.50	3.00	3.25
	2.75	4.25	3.00	6.25	5.00	6.25	3.00	4.50	3.00	2.75	3.50	4.00	2.75	2.50	5.25	5.00
	5.00	5.75	4.75	5.00	3.25	3.50	3.00	3.50	4.00	5.50	3.50	6.75	2.25	3.00	3.25	3.00
	5.50	5.25	4.75	6.00	4.00	3.00	4.50	5.00	4.00	4.00	4.00	6.25	2.75	3.00	3.00	2.00
	3.25	5.50	3.75	5.25	6.00	7.75	4.00	5.75	3.00	8.50	4.00	5.00	2.00	3.75	3.00	4.50
	2.50	4.00	3.00	2.75	5.00	5.75	4.50	6.50	4.00	5.00	4.25	3.00	2.00	1.50	3.00	3.00
	2.50	3.00	2.50	4.00	4.00	6.50	3.50	4.75	3.25	4.50	3.25	5.00	2.00	1.75	3.50	5.25
	2.00	3.50	3.00	4.00	3.25	2.50	3.25	2.00	4.00	5.00	4.00	7.00	3.25	5.00	3.25	4.75
	2.50	3.75	2.75	2.00	3.25	2.00	5.00	6.00	3.75	8.00	4.25	6.25	4.75	8.50	3.00	6.00
	4.00	3.50	4.00	3.00	4.50	5.25	5.50	5.00	3.50	3.25	4.00	5.00	3.00	2.00	3.00	2.25
	2.50	6.00	3.00	5.00	4.75	3.00	3.75	5.00	3.25	5.50	4.00	3.50	4.00	6.00	3.25	4.50
	4.00	6.00	3.00	5.75	3.00	2.00	4.25	3.00	3.00	5.00	3.50	4.50	3.00	2.00	2.00	4.00
	2.50	3.00	5.00	2.50	3.00	2.75	4.50	4.50	4.75	8.75	4.00	5.50	3.00	2.00	3.50	5.50
	4.00	6.75	4.50	5.75	3.00	4.25	4.25	4.75	3.50	6.75	3.25	2.50	3.00	6.50	3.50	3.25
4.00	5.00	3.50	6.50	4.00	3.75	3.75	3.25	3.25	4.25	3.00	3.50	4.50	5.75	2.00	3.25	
Total .....	50.00	66.25	53.50	66.75	61.00	62.25	66.75	66.50	54.50	82.75	66.50	76.75	49.00	55.75	47.50	50.50
Recapitulation:																
Highest.....	5.50	84.89	6.75	33.75	6.00	92.61	7.75	38.75	4.75	73.31	8.75	43.76	5.25	81.03	6.50	32.50
Lowest.....	2.00	30.87	2.00	10.00	3.00	46.30	2.00	10.00	3.00	46.30	2.50	12.50	2.00	30.87	1.50	7.50
Average.....	3.45	53.25	4.43	22.15	4.06	62.66	4.29	21.45	3.70	57.11	5.32	26.60	3.22	49.70	3.84	19.20
Tests above average.....	13		15		13		15		16		13		13		15	
Tests below average.....	17		15		17		15		14		17		17		15	



TABLE XXX.—Actual measurements of strain and stretch for commercial grades—Continued.

Catalogue number of samples..		C.—GERMAN GRADES.															
		329.				330.				331.				332.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
Total .....		66.50	71.50	60.25	70.00	56.75	60.50	58.75	73.25	60.50	83.00	63.50	83.25	60.50	85.25	58.25	96.25

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
	Highest .....	7.50	115.76	3.50	42.50	5.60	84.89	0.75	33.75	5.25	81.03	8.00	40.00	5.50	84.89	8.00
Lowest .....	3.00	46.30	2.00	10.00	2.00	30.87	2.25	11.25	3.00	40.30	3.50	17.50	3.00	46.30	3.00	15.00
Average .....	4.43	63.37	4.72	28.00	3.85	59.42	4.70	23.80	4.13	63.74	5.54	27.70	3.90	61.12	6.05	30.25
Tests above average.....	13		13		18		17		13		12		16		17	
Tests below average.....	17		17		12		13		17		18		14		13	

Catalogue number of samples..		C.—GERMAN GRADES.															
		333.				334.				335.				336.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
Total .....		74.75	59.50	77.00	67.75	72.25	77.50	72.25	71.00	94.50	67.50	93.75	60.25	60.75	45.50	61.75	58.90

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
	Highest .....	7.50	115.76	7.50	37.50	7.00	103.04	7.00	35.00	8.75	135.05	7.50	37.50	5.75	88.75	5.75
Lowest .....	3.75	57.88	1.50	7.60	3.25	50.16	2.50	12.50	4.00	61.74	2.00	10.00	3.00	46.30	1.50	7.50
Average .....	5.06	78.10	4.24	21.20	4.82	74.39	4.95	24.75	6.28	96.93	4.46	22.30	4.08	62.97	3.47	17.35
Tests above average.....	11		17		13		16		13		13		11		13	
Tests below average.....	19		13		17		14		17		17		19		17	



TABLE XXX.—Actual measurements of strain and stretch for commercial grades—Continued.

Catalogue No. of samples..		C.—GERMAN GRADES.																				
		337.				333.				339.				340.				341.				
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.
	5.00	8.50	3.00	5.00	4.50	2.60	3.00	4.25	3.25	6.50	3.00	5.75	5.00	3.00	5.00	5.00	6.50	3.25	6.25	6.25	4.50	6.25
	3.50	4.75	3.00	6.00	3.75	6.00	3.00	3.75	12.50	12.50	3.00	3.00	5.00	5.00	3.50	5.00	6.50	7.00	6.25	7.50	8.50	6.25
	4.25	3.50	5.00	2.00	12.00	12.00	12.00	12.00	12.00	12.00	4.50	3.25	4.25	5.50	2.75	5.75	8.00	9.75	7.50	5.00	6.00	6.75
	2.75	12.50	3.00	6.75	4.00	4.00	12.00	1.50	12.00	12.00	4.25	3.00	2.00	6.00	4.50	6.25	6.50	7.50	6.25	6.50	6.50	5.00
	2.25	6.75	4.00	6.50	4.00	12.25	12.00	12.00	12.00	12.00	4.50	3.00	2.50	4.25	6.00	6.00	4.00	5.50	5.00	5.00	5.00	5.25
	5.00	4.25	3.00	5.75	4.00	3.00	12.00	2.75	3.00	3.00	2.75	12.50	4.00	3.50	7.00	5.75	4.00	5.25	5.00	5.50	5.50	7.25
	4.00	12.50	12.75	2.00	12.00	4.50	12.50	12.50	12.50	12.50	4.50	4.00	4.00	5.00	3.25	7.50	4.25	2.50	5.75	7.00	6.25	7.00
	4.00	5.25	4.25	5.00	2.00	12.50	12.00	3.00	4.00	4.25	12.00	4.00	6.00	5.00	7.00	8.00	5.50	7.00	7.00	9.00	6.25	6.25
	2.25	3.50	3.25	5.50	4.00	3.00	12.00	3.00	4.00	4.25	12.00	4.00	5.75	5.25	8.00	8.00	5.50	5.25	5.50	5.50	8.75	5.75
	4.00	2.25	3.00	6.00	2.00	12.00	12.00	3.00	4.00	4.00	4.00	4.75	7.50	6.00	5.00	8.50	6.00	6.50	6.50	6.50	6.50	6.50
	4.00	5.50	5.00	5.50	12.75	12.00	1.50	1.50	12.00	1.50	12.00	3.25	3.00	3.75	8.00	2.75	4.50	3.25	5.75	7.00	6.75	7.00
	2.50	4.00	4.50	6.75	12.00	3.00	4.00	5.50	12.00	3.00	12.00	4.50	5.50	7.50	5.00	7.50	8.00	3.50	5.00	6.00	6.00	6.00
2.50	5.25	3.50	5.25	4.00	4.75	5.00	3.75	12.00	3.75	12.00	5.00	5.00	5.00	5.25	6.00	7.75	6.25	9.25	7.00	8.00	7.50	
2.00	3.25	3.00	3.50	2.00	12.25	3.00	3.50	12.00	3.50	12.00	2.75	6.50	3.00	3.00	8.75	2.50	8.00	8.00	8.00	7.50	7.50	
1.50	5.50	4.75	3.00	3.50	3.25	3.00	3.75	12.00	3.75	12.00	2.00	3.00	4.75	4.75	6.00	3.00	8.00	4.00	4.50	4.50	4.50	
Total .....	51.75	66.00	53.50	78.50	47.75	45.75	47.00	44.25	46.50	71.50	46.00	59.50	90.00	70.25	91.00	91.00	98.00	86.25	97.00	93.75		
Recapitulation:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		
Highest .....		gms.	grs.	mm.	p. ct.	gms.	grs.	mm.	p. ct.	gms.	grs.	mm.	p. ct.	gms.	grs.	mm.	p. ct.	gms.	grs.	mm.	p. ct.	
Lowest .....		2.50	38.50	2.25	11.25	2.00	90.87	1.50	7.50	2.00	30.87	2.00	10.00	4.25	65.00	2.75	13.75	4.00	61.74	2.50	12.50	
Average .....		3.51	54.18	4.82	24.10	3.18	10.08	3.00	15.00	3.08	47.54	4.37	21.85	6.03	93.01	5.68	28.46	6.50	100.33	8.00	30.00	
Tests above average .....		10		18		12		11+		13		15		9		10		11+		19+		
Tests below average .....		20		12		18		10+		17		15		21		11		16+		10+		

Catalogue No. of samples..		C.—GERMAN GRADES.																				
		342.				343.				344.				345.				346.				
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.
	4.00	5.75	3.25	3.25	5.25	5.50	3.00	4.00	4.00	2.50	5.00	8.25	4.00	2.25	4.25	1.00	7.50	3.25	5.00	5.00	4.25	4.25
	3.00	5.00	4.00	3.00	3.00	2.25	3.00	5.75	3.00	7.00	8.50	6.50	4.25	2.25	1.00	5.00	4.00	5.50	5.50	5.50	5.50	5.00
	3.00	7.25	2.50	6.50	12.00	3.00	3.00	4.50	4.50	7.00	8.00	8.50	5.00	2.50	3.00	1.50	6.75	4.50	4.00	3.25	3.25	3.25
	3.00	4.50	2.75	3.75	4.00	7.00	4.75	4.25	4.25	7.50	7.00	5.00	5.25	5.00	1.00	7.00	8.25	8.00	8.00	7.00	7.00	7.00
	4.75	6.50	12.25	3.50	4.00	4.75	5.50	3.50	4.25	5.25	6.25	4.00	4.25	2.50	1.00	4.50	5.25	3.50	5.00	5.00	5.75	5.75
	3.50	5.75	2.50	4.75	12.25	2.00	3.50	5.30	4.00	2.75	5.00	5.00	4.00	2.50	3.00	5.50	2.75	7.25	5.00	5.75	4.75	4.75
	2.75	4.50	12.75	8.25	12.50	3.50	5.00	5.00	5.75	6.50	6.00	12.00	4.50	1.00	3.50	1.50	5.50	3.25	4.00	4.00	2.25	2.25
	3.00	5.00	3.50	5.00	4.00	4.00	3.00	5.25	4.00	5.00	5.00	7.00	6.00	3.25	5.25	1.50	8.00	7.50	6.50	5.25	6.50	5.25
	4.00	7.25	3.00	5.75	3.50	5.50	3.00	0.00	5.25	8.75	5.00	6.75	4.00	2.00	4.75	1.50	6.50	8.00	8.25	5.25	8.75	5.25
	2.25	4.25	3.50	5.25	3.75	3.00	4.25	4.00	4.00	2.00	4.00	3.50	4.00	2.50	5.75	1.50	7.25	8.00	6.75	2.75	2.75	2.75
	4.00	4.25	2.25	5.00	2.50	3.75	4.50	4.50	4.50	7.25	5.00	3.50	5.25	1.50	4.00	4.00	7.75	4.00	2.00	8.75	6.00	6.00
	4.00	6.50	3.25	6.00	4.00	4.00	3.00	3.75	3.00	7.00	3.00	6.25	5.00	1.50	5.75	5.00	7.50	7.50	6.25	2.50	2.50	2.50
3.00	4.00	3.25	3.50	3.25	4.25	2.50	4.75	3.00	7.50	4.50	6.50	4.00	1.50	4.25	2.25	8.00	6.25	8.00	8.25	8.25	8.25	
2.75	4.00	4.75	8.50	3.00	8.75	3.75	5.30	4.25	4.50	5.00	2.50	4.75	3.25	3.00	1.25	4.00	2.00	5.00	5.00	5.00	5.00	
2.50	3.75	4.50	5.25	2.75	3.50	3.75	4.75	3.75	6.00	5.50	5.75	3.00	1.00	5.00	2.75	5.00	3.00	6.00	6.00	6.00	6.00	
Total .....	50.00	78.25	48.00	71.25	49.75	50.75	50.75	70.00	84.00	82.00	82.00	70.50	65.25	80.50	60.25	27.50	95.00	74.00	92.75	73.25		
Recapitulation:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		
Highest .....		gms.	grs.	mm.	p. ct.	gms.	grs.	mm.	p. ct.	gms.	grs.	mm.	p. ct.	gms.	grs.	mm.	p. ct.	gms.	grs.	mm.	p. ct.	
Lowest .....		2.25	34.73	3.00	15.00	2.00	30.87	2.00	10.00	4.00	61.74	2.00	10.00	2.50	38.59	1.00	5.00	4.00	61.74	2.00	10.00	
Average .....		3.27	50.47	4.98	24.90	3.35	51.77	4.33	21.65	5.53	85.25	5.38	20.90	4.38	67.00	1.93	9.68	6.20	96.62	4.91	24.55	
Tests above average .....		11		10		13		14		11		10		16		15		15		16		
Tests below average .....		19		14		17		16		19		14		14		15		15		14		



TABLE XXXI.—Individual extremes and averages of strain and stretch for commercial grades.

Catalogue No. of samples.	Grade.	STRAIN.						STRETCH.					
		Highest.		Lowest.		Average.		Highest.		Lowest.		Average.	
		grams.	grains.	grams.	grains.	grams.	grains.	m. m.	per ct.	m. m.	per ct.	m. m.	per ct.
<b>BOSTON GRADES.</b>													
275 a	Fine, unwashed	5.25	81.03	2.00	30.88	3.31	61.08	8.25	41.25	1.50	7.50	4.80	24.00
275 b	do	14.00	210.08	3.60	54.02	7.65	118.07	8.50	42.50	1.75	8.75	5.65	28.25
275 c	do	7.75	119.61	3.25	51.16	5.26	81.18	7.75	38.75	1.00	5.00	5.43	27.15
275 d	do	6.00	92.60	2.25	34.72	3.84	59.20	9.25	46.25	1.25	6.25	6.31	31.55
275 e	do	9.75	150.48	4.00	61.74	6.73	103.87	8.25	41.25	1.50	7.50	5.11	25.55
276	Fine, from dead sheep	7.00	108.04	2.60	38.68	4.33	66.83	9.00	45.00	2.50	12.50	6.48	32.40
277 a	Picklock	3.50	54.02	1.00	15.43	2.27	35.03	8.75	43.75	1.25	6.25	5.28	26.40
277 b	do	3.25	50.16	1.25	19.29	2.20	33.95	8.75	43.75	3.25	16.25	6.67	33.35
277 c	do	3.00	49.30	1.25	19.29	1.98	30.60	9.75	48.75	4.75	23.75	7.77	38.85
277 d	do	3.50	54.02	1.25	19.29	2.28	35.19	9.25	46.25	2.60	12.50	6.41	32.05
278 a	XXX	6.00	92.60	2.00	30.88	3.42	52.73	8.25	41.25	1.50	7.50	6.32	31.60
278 b	XXX	6.75	104.18	2.25	34.72	4.05	62.51	6.50	32.50	2.00	10.00	4.25	21.25
279 a	XX	12.50	192.98	3.25	60.16	6.10	94.15	8.00	40.00	2.25	11.25	5.38	26.90
279 b	XX	7.00	108.14	1.50	23.15	4.13	63.74	7.00	35.00	1.00	5.00	3.47	17.35
279 c	XX	6.75	104.18	3.00	46.30	4.33	66.83	7.50	37.50	2.60	12.50	4.75	23.75
280 a	X	8.25	127.33	2.60	30.86	5.30	81.80	8.50	42.50	1.50	7.50	4.60	23.00
280 b	X	8.50	131.19	3.00	46.30	4.85	74.85	8.75	43.75	1.50	7.50	5.57	27.85
280 c	X	10.25	168.20	3.00	46.30	6.32	97.54	9.50	47.50	3.50	17.50	6.07	34.85
280 d	X	9.25	142.76	2.50	38.68	5.54	85.50	8.50	42.50	2.00	10.00	5.90	47.50
274	Between X and 1	10.00	154.34	1.50	23.15	3.92	60.50	6.00	30.00	0.75	3.75	2.97	14.85
281 a	No. 1	13.00	200.64	5.00	77.17	8.35	128.87	7.50	37.50	2.00	10.00	4.72	23.60
281 b	do	5.75	88.74	3.00	46.30	4.45	88.68	7.50	37.50	2.25	11.25	4.71	23.55
281 c	do	10.00	154.34	3.50	54.02	7.08	109.27	7.25	36.25	2.00	10.00	4.00	20.00
281 d	do	8.00	128.48	2.50	38.68	5.22	80.56	6.00	30.00	1.50	7.50	3.27	16.35
281 e	do	7.75	119.61	2.50	38.68	4.97	78.70	6.00	30.00	1.00	5.00	2.90	14.60
281 f	do	8.30	97.23	8.75	135.05	4.25	65.59	4.43	22.15	7.75	38.75	1.50	7.50
282 a	No. 2	17.25	265.24	5.00	77.17	9.94	158.41	7.75	38.75	1.25	6.25	4.61	22.65
282 b	do	15.50	239.23	6.50	84.89	9.77	150.79	8.75	43.75	1.50	7.50	5.60	27.60
282 c	do	23.00	346.99	7.50	115.75	14.49	218.55	8.50	42.50	2.25	11.25	4.87	24.35
282 d	do	17.00	262.38	6.00	100.32	10.44	161.13	7.00	35.00	2.00	10.00	4.37	21.85
283 a	Delaine, fine	9.25	142.76	3.25	50.16	5.80	89.52	8.25	41.25	1.25	6.25	5.25	26.25
283 b	do	7.50	115.75	3.00	46.30	4.83	74.54	8.00	40.00	2.60	12.50	5.85	29.25
283 c	do	8.25	127.33	3.25	50.16	5.44	83.96	7.25	36.25	1.25	6.25	3.62	18.10
284 a	Delaine, medium	20.00	308.68	6.75	104.18	11.45	176.75	9.00	45.00	1.25	6.25	5.62	28.10
284 b	do	15.25	235.37	5.00	77.17	9.06	139.83	8.25	41.25	1.50	7.50	4.75	23.73
285 a	Combing, fine	15.50	239.23	5.75	88.74	8.77	135.30	8.00	40.00	1.25	6.25	3.61	18.05
285 b	do	12.25	189.07	3.50	54.02	7.15	110.37	7.50	37.50	1.25	6.25	3.80	18.50
285 c	do	14.75	227.66	5.00	77.17	8.86	136.75	8.75	43.75	3.00	15.00	5.95	29.75
286 a	Combing, medium	19.00	295.25	5.00	77.17	10.69	164.99	7.50	37.50	1.50	7.50	4.62	23.10
286 b	do	19.00	295.25	4.00	51.73	9.90	152.80	8.00	40.00	1.25	6.25	4.08	20.40
286 c	do	16.50	254.67	5.50	84.89	8.66	113.60	7.75	38.75	1.00	5.00	4.55	22.75
286 d	do	16.25	250.81	5.00	77.17	10.17	156.96	8.00	40.00	1.60	7.50	4.47	22.35
287 a	Combing, coarse	31.00	478.47	12.00	185.21	20.30	313.32	8.50	42.50	4.00	20.00	7.15	35.75
287 b	do	34.00	524.77	11.00	169.78	22.13	341.66	9.00	45.00	5.00	25.00	7.18	35.90
287 c	do	23.00	354.91	6.60	100.32	13.35	206.05	8.25	41.25	1.50	7.50	5.60	27.50
287 d	do	20.00	447.60	7.25	111.90	14.60	225.34	8.50	42.50	2.00	10.00	4.76	23.80
288 a	Common	21.75	335.75	0.50	146.62	18.30	251.62	8.75	43.75	2.00	10.00	6.14	30.70
288 b	do	25.00	377.08	5.75	88.74	14.34	221.33	8.75	43.75	2.00	10.00	5.53	27.65
289 a	New Mexico	7.00	108.04	2.75	42.44	4.33	66.83	6.00	30.00	1.75	8.75	3.47	17.35
289 b	do	15.00	231.51	4.00	61.73	8.50	131.19	8.00	40.00	1.50	7.50	3.07	15.85
289 c	do	60.00	926.07	3.75	57.87	27.65	428.70	9.50	47.50	2.00	10.00	6.96	34.80
<b>PHILADELPHIA GRADES.</b>													
290	Picklock, best	5.00	77.17	2.00	30.86	3.00	46.30	8.50	42.50	4.25	21.25	6.15	30.75
291	do	5.75	88.74	3.00	46.30	4.60	70.99	9.00	45.00	3.25	16.25	6.30	31.50
292	do	0.50	100.32	3.00	46.30	4.67	72.08	8.75	43.75	2.60	12.50	5.42	27.10
293	do	5.00	77.17	2.00	30.86	3.05	47.07	6.25	31.25	2.60	12.50	4.51	22.55
294	XXX	5.25	81.03	2.25	34.72	3.44	59.00	8.75	43.75	2.00	10.00	5.52	27.60
295 a	XXX	6.75	104.18	3.25	50.16	4.01	75.77	8.25	41.25	2.00	10.00	4.15	20.75
295 b	XXX	6.00	92.60	3.00	46.30	4.40	67.91	6.50	32.50	1.60	7.50	3.90	19.50
295 c	XXX	6.25	81.03	2.25	34.72	3.30	50.93	8.00	40.00	1.50	7.50	4.90	24.50
296	XXX	7.25	111.90	2.00	30.86	5.00	78.00	8.50	42.50	2.60	12.50	5.13	25.65
297	XX	5.50	84.89	2.25	34.72	3.70	57.10	8.00	40.00	1.60	7.50	4.45	22.25
298 a	XX	9.50	146.62	4.25	65.59	6.40	98.78	8.00	40.00	2.00	10.00	4.00	24.50
298 b	XX	9.25	142.76	3.00	46.30	6.05	93.37	8.50	42.50	3.00	15.00	5.58	27.90
298 c	XX	6.60	100.32	2.50	38.68	4.45	68.68	8.75	43.75	2.50	12.50	5.45	27.25
298 d	XX	6.75	104.18	2.75	42.44	4.61	71.15	8.00	40.00	2.00	10.00	4.85	24.25
299 e	XX	5.75	88.74	2.00	30.86	3.63	66.02	8.50	42.50	1.75	8.75	4.48	22.40
299	XX	8.25	127.33	3.00	46.30	4.61	66.02	8.50	42.50	2.00	10.00	4.70	23.50
300	X	8.50	131.19	3.00	46.30	5.07	87.51	8.00	40.00	2.00	10.00	4.28	21.40
301 a	X	8.50	131.19	2.50	38.68	5.23	80.72	7.75	38.75	1.50	7.50	3.45	17.25
301 b	X	8.50	131.19	2.50	38.68	5.11	78.87	6.00	30.00	2.00	10.00	3.92	19.60
302	X	7.25	111.90	2.75	42.44	5.03	77.17	7.00	35.00	2.00	10.00	3.68	18.40
303	Delaine, fine	8.25	127.33	3.50	54.02	5.95	81.83	8.00	40.00	1.25	6.25	6.60	32.50
304	Delaine, very fine	10.50	162.05	4.50	69.45	7.22	111.43	8.25	41.25	2.25	11.25	5.85	29.25
305 a	X and above	10.00	154.34	4.00	61.74	5.20	76.01	8.50	42.50	2.25	11.25	5.01	29.55
305 b	do	8.50	131.19	3.50	54.02	5.75	88.74	8.50	42.50	2.50	12.50	5.07	29.85
306 a	do	7.00	108.04	2.25	50.16	5.35	82.57	8.25	41.25	4.25	21.25	6.05	33.25
306 b	do	7.00	108.04	3.25	50.16	4.81	74.28	8.75	43.75	5.25	25.00	7.18	35.90
300 c	do	6.75	104.18	3.00	46.30	4.43	68.37	8.75	43.75	4.50	22.50	6.09	33.45
307 a	do	8.75	135.05	2.25	34.72	5.08	77.63	8					



TABLE XXXI.—Individual extremes and averages of strain and stretch for commercial grades—Continued.

Catalogue No. of samples.	Grade.	STRAIN.						STRETCH.					
		Highest.		Lowest.		Average.		Highest.		Lowest.		Average.	
		grams.	grains.	grams.	grains.	grams.	grains.	m. m.	per ct.	m. m.	per ct.	m. m.	per ct.
PHILADELPHIA GRADES.													
313 a	Low combing, mixed $\frac{3}{8}$ , $\frac{1}{2}$ .....	16.00	246.95	4.25	65.60	8.99	138.76	7.00	35.00	1.25	6.25	3.53	17.65
313 b	do .....	14.00	216.08	5.00	77.17	8.81	135.98	6.75	33.75	1.00	5.00	2.51	12.55
313 c	do .....	23.75	366.57	5.00	77.17	13.07	201.73	8.00	40.00	2.00	10.00	4.77	23.85
314 a	General medium, $\frac{1}{2}$ series .....	10.00	154.35	3.25	50.16	5.74	87.59	8.75	43.75	1.75	8.75	3.94	19.70
314 b	do .....	8.00	123.48	3.75	57.88	5.95	91.84	8.00	40.00	1.25	6.05	4.51	22.55
315 a	do .....	10.00	154.35	5.00	77.17	6.96	107.43	8.75	43.75	2.00	10.00	4.11	20.55
315 b	do .....	11.00	169.78	3.50	54.02	6.15	94.92	7.50	37.50	1.25	6.25	3.48	17.40
316	Combing, $\frac{1}{2}$ series .....	14.00	216.08	5.00	77.17	6.25	96.47	8.00	40.00	2.00	10.00	4.66	23.30
317 a	Combing, $\frac{3}{8}$ series .....	6.25	96.47	3.25	50.16	4.58	70.69	6.00	30.00	1.50	7.50	3.13	15.65
317 b	do .....	8.50	131.19	3.00	46.30	5.07	78.25	8.00	40.00	1.25	6.25	4.58	22.90
317 c	do .....	6.75	104.18	3.00	46.30	5.23	80.72	7.25	36.25	2.00	10.00	5.05	25.23
318	Cottswold .....	27.00	416.73	13.25	204.50	20.07	309.77	8.50	42.50	2.00	10.00	6.47	32.35
319 a	Imported Saxon .....	4.00	61.74	1.50	23.15	2.80	43.22	6.75	33.75	1.25	6.25	3.73	18.63
319 b	do .....	4.00	61.74	2.00	30.87	2.66	41.06	6.50	32.50	1.50	7.50	3.57	17.85
320	Domestic Saxon .....	2.50	38.59	1.75	27.01	2.11	32.57	6.00	30.00	2.00	10.00	4.11	20.66



TABLE XXXII.—General extremes and averages of strain and stretch for commercial grades.

Catalogue No. of samples.	Grado.	STRAIN.						STRETCH.					
		Highest.		Lowest.		Average.		Highest.		Lowest.		Average.	
		grams.	grains.	grams.	grains.	grams.	grains.	mm.	per ct.	mm.	per ct.	mm.	per ct.
A.—BOSTON GRADES.													
274	Between X and No. 1	10.00	154.34	1.50	23.15	3.92	60.50	6.00	30.00	0.75	3.75	2.97	14.85
275	Fine, unwashed	8.55	131.97	3.00	46.30	5.34	82.42	8.40	42.00	1.40	7.00	5.49	27.30
276	Fine, from dead sheep	7.00	108.04	2.50	38.58	4.33	68.58	9.00	45.00	2.50	12.50	6.43	32.40
277	Picklock	3.25	50.16	1.17	18.06	2.15	33.18	9.08	45.40	3.03	15.40	0.57	32.55
278	XXX	4.75	73.81	1.68	26.16	2.85	43.99	8.75	43.75	2.00	10.00	6.37	31.55
279	XX	8.25	127.34	3.38	51.40	4.65	71.77	7.25	36.25	1.94	9.70	4.46	22.30
280	X	9.00	139.84	2.03	40.59	5.50	84.89	8.81	44.05	4.25	21.25	5.76	28.80
281	No. 1	8.47	130.73	4.21	64.98	5.72	83.23	6.48	32.40	2.75	13.75	3.62	12.60
282	No. 2	18.19	280.76	6.13	94.61	11.10	172.25	8.00	40.00	1.50	7.50	4.81	24.05
283	Delaine, fine	8.33	128.57	3.17	48.93	5.30	82.73	7.89	39.15	1.67	8.35	4.91	24.55
284	Delaine, medium	17.03	272.11	5.88	90.76	8.84	105.57	8.63	43.15	1.38	6.90	5.19	25.95
285	Combing, fine	14.17	218.72	4.75	73.81	8.29	127.49	8.08	40.40	1.83	9.15	4.29	21.45
286	Combing, medium	17.09	378.04	4.88	75.32	9.86	152.18	7.81	39.05	1.31	6.55	4.43	22.15
287	Combing, coarse	20.25	451.40	9.19	141.84	17.60	271.65	8.81	44.05	3.13	15.65	6.15	30.75
288	Common	23.38	360.86	7.03	117.77	15.32	236.46	8.75	43.75	2.00	10.00	5.34	20.70
289	New Mexico	27.33	421.83	3.50	54.02	13.49	208.21	7.83	39.15	1.75	8.75	4.80	24.00
B.—PHILADELPHIA GRADES.													
290	Picklock, best	5.00	77.17	2.00	30.86	3.00	46.30	8.50	42.50	4.25	21.25	6.15	30.75
291	Picklock, fair	5.75	88.74	3.00	46.30	4.60	10.99	9.00	45.00	3.25	16.25	6.30	31.60
292	Picklock, medium	6.50	100.32	3.00	46.30	4.67	72.08	8.75	43.75	2.50	12.50	5.42	27.10
293	Picklock, low	5.00	77.17	2.00	30.86	3.05	47.07	6.25	31.25	2.50	12.50	4.51	22.55
294	XXX, extra	5.25	81.03	2.25	34.72	3.44	53.09	8.75	43.75	2.00	10.00	6.52	27.00
295	XXX, good	6.00	92.61	2.83	43.68	4.23	65.29	7.58	37.00	1.67	8.35	4.28	21.40
296	XXX, low	7.25	111.00	2.00	30.98	5.00	78.09	8.50	42.50	2.50	12.50	5.13	26.65
297	XX, good	5.50	84.89	2.25	31.72	3.70	57.10	8.00	40.00	1.50	7.50	4.45	22.25
298	XX, clothing	7.55	116.53	2.00	44.76	5.03	77.64	8.45	42.25	2.25	11.25	5.05	25.25
299	XX, low	8.25	127.33	3.00	40.30	5.67	87.51	8.00	40.00	2.00	10.00	4.70	23.60
300	X, good	8.50	131.19	3.00	46.30	5.23	80.72	7.75	38.75	1.50	7.50	4.28	21.40
301	X, fair	8.50	131.19	2.50	38.59	5.05	77.94	6.50	32.50	2.00	10.00	3.69	18.45
302	X, low	7.25	111.90	2.75	42.44	5.03	77.63	6.00	30.00	1.25	6.25	3.68	18.40
303	Delaine, fine	8.25	127.33	3.50	54.02	5.05	91.83	8.50	42.50	3.00	15.00	6.50	32.60
304	Delaine, very fine	10.50	162.05	4.60	69.45	7.22	111.43	8.25	41.25	2.25	11.25	5.85	29.25
305	X and above	9.25	142.77	3.75	67.88	5.98	92.30	8.50	42.50	2.38	11.90	5.94	29.70
306	do	0.92	106.81	3.17	48.93	4.86	75.01	8.58	42.90	4.58	22.00	6.84	34.20
307	do	9.30	143.64	2.95	45.53	5.60	86.43	7.95	39.75	1.85	9.25	4.83	24.10
308	One-quarter blood, good	16.31	251.74	6.75	88.75	10.37	160.00	8.50	42.50	2.31	11.65	5.99	29.65
309	Combing	15.75	243.09	6.00	92.61	6.60	149.10	8.00	40.00	1.25	6.25	4.82	24.10
310	Combing, low	33.75	520.92	10.00	154.35	20.79	320.88	8.58	42.00	2.75	13.75	6.10	30.50
311	Three-eighths blood, good	16.94	261.46	4.94	76.25	8.93	137.83	8.38	41.90	1.69	8.45	4.98	24.80
312	Combing	19.00	293.26	5.25	81.08	11.64	170.40	8.25	41.25	2.00	10.00	4.88	24.30
313	Three-eighths and one-half blood	17.92	276.60	4.75	73.31	10.29	158.82	7.25	36.25	1.42	7.10	3.60	18.00
314	One-half blood, high	9.00	139.91	3.50	54.02	5.85	90.29	8.38	41.90	1.50	7.50	4.23	21.15
315	One-half blood, regular	10.50	162.06	4.25	65.60	6.56	101.25	8.13	40.65	1.63	8.15	3.70	18.05
316	Combing, washed	14.00	216.08	5.00	77.17	6.25	96.47	8.00	40.00	2.00	10.00	4.66	23.30
317	Five-eighths blood	7.17	110.67	3.08	47.64	4.96	76.56	7.68	35.40	1.68	7.90	4.20	21.30
318	Cotta	27.00	416.73	13.25	204.50	20.07	309.77	8.60	42.50	2.00	10.00	6.47	32.35
319	Saxon, imported	4.00	61.74	1.75	27.01	2.73	42.14	6.63	33.15	1.38	6.90	3.65	18.25
320	Saxon, domestic	2.60	38.59	1.75	27.01	2.11	32.57	0.00	30.00	2.00	10.00	4.11	20.55
C.—GERMAN GRADES.													
321	Super-superlecta	5.75	89.75	3.00	40.30	4.43	68.37	7.50	37.50	2.75	13.75	4.94	24.70
322	do	3.60	74.02	2.00	30.87	2.60	43.22	5.00	25.00	2.00	10.00	3.61	18.05
323	Superlecta	6.00	92.61	3.00	46.30	4.17	64.34	7.75	38.75	3.00	15.00	5.41	27.05
324	do	5.00	77.17	3.00	46.30	3.65	56.34	7.00	35.00	2.00	10.00	4.48	22.40
325	I, electa	5.50	84.89	2.00	30.87	3.45	53.25	6.75	33.75	2.00	10.00	4.43	22.15
326	do	6.00	92.61	3.00	46.30	4.03	62.66	7.75	38.75	2.00	10.00	4.29	21.45
327	II, electa	4.75	73.31	3.00	46.30	3.70	49.70	6.50	32.60	1.50	7.50	3.84	19.20
328	do	5.25	81.03	2.00	30.87	3.22	49.70	6.50	32.60	1.50	7.50	3.84	19.20
329	I, prima	7.50	115.76	3.00	40.30	4.43	68.37	8.50	42.50	2.00	10.00	4.72	23.60
330	do	5.50	84.89	2.00	30.87	3.85	59.42	6.75	33.75	2.23	11.23	4.74	23.90
331	II, prima	5.25	81.03	3.00	40.30	4.13	63.74	8.00	40.00	3.50	17.50	5.54	27.70
332	do	5.60	84.89	3.00	40.30	3.90	61.12	8.00	40.00	3.00	15.00	6.05	30.25
333	Secunda	7.00	108.04	3.25	50.16	4.82	74.39	7.00	35.00	2.50	12.50	4.95	24.75
334	Tertia	8.75	135.05	4.00	61.74	6.28	96.03	7.50	37.50	1.50	7.50	4.24	21.20
335	Quarta	8.75	135.05	4.00	61.74	6.28	96.03	7.50	37.50	2.00	10.00	4.46	22.30
336	High-pedigree wool	5.75	88.75	3.00	40.30	4.08	62.07	5.75	28.75	1.50	7.50	3.47	17.35
337	do	5.00	77.17	2.50	35.63	3.51	54.13	6.75	33.75	2.25	11.25	4.82	24.10
338	Pure-bred, ancient pedigree	4.50	69.46	2.00	30.87	3.18	49.08	6.00	30.00	1.50	7.50	3.00	15.00
339	Impure bred wool	4.25	65.60	2.00	30.87	3.08	47.64	6.50	32.50	2.00	10.00	4.37	21.55
340	French ram	8.75	135.05	4.25	65.60	6.93	93.01	7.50	37.50	2.75	13.75	5.68	28.40
341	Rambouillet	3.75	50.49	4.00	61.74	6.50	100.23	8.00	40.00	2.50	12.50	6.00	30.00
342	English merino	4.75	73.31	2.25	34.73	3.27	60.47	7.25	36.25	3.00	15.00	4.98	24.00
343	Australian owe	5.50	84.89	2.00	30.87	3.35	51.77	7.00	35.00	2.00	10.00	4.33	21.65
344	Roger ram	8.25	127.34	4.00	61.74	5.63	85.25	8.50	42.50	2.00	10.00	5.88	26.90
345	Rambouillet owo	6.25	90.47	2.50	38.59	4.38	67.60	3.25	16.25	1.00	5.00	1.93	9.65
846	do	8.75	135.05	4.00	61.74	6.28	96.62	8.25	41.25	2.00	10.00	4.91	24.55



TABLE XXXIII.—General averages of all measurements upon commercial grades.

Catalogue number of sample.	Grade.	Number of crimps per inch.	Length.		Fineness.		Strain.		Stretch.		Strain in grams for same stretch and diameter of fiber reduced to 4 centimeters.
			Inches.	Centimillimeters.	Thousandths of inch.	Grams.	Grains.	Millimeters.	Per cent.		
BOSTON GRADES.											
274	Between X and No. 1	20	4.625	2.118	0.8358	3.92	60.50	2.97	14.85	13.981	
275	Fine, unwashed	20	2.355	2.162	0.8511	5.34	82.42	5.46	27.30	18.820	
276	Fine, from dead sheep	20	2.500	1.835	0.7224	4.33	66.83	6.48	32.40	20.576	
277	Picklock	22	2.083	1.532	0.6081	2.15	33.18	6.57	32.85	14.657	
278	XXX	22	2.663	1.567	0.6169	2.85	43.99	6.87	31.85	18.567	
279	XX	20	2.250	1.870	0.7362	4.65	71.77	4.46	22.80	21.275	
280	X	20	2.156	2.023	0.7061	5.50	84.80	5.76	28.80	21.500	
281	No. 1	50	2.229	2.203	0.8073	5.72	88.29	3.52	17.60	18.859	
282	No. 2	10	2.844	2.908	1.1448	11.16	172.25	4.81	24.05	21.116	
283	Delaine, fine	20	3.375	2.061	0.8204	5.36	82.73	4.01	24.55	19.747	
284	Delaine, medium	14	3.375	2.533	0.9972	6.84	105.67	5.19	25.95	17.057	
285	Combing, fine	14	3.917	2.530	0.9044	8.20	127.49	4.29	21.45	20.711	
286	Combing, medium	10	4.781	2.656	1.0338	9.86	152.18	4.43	22.15	22.877	
287	Combing, coarse	10	6.125	3.420	1.3404	17.00	271.85	6.15	30.75	24.077	
288	Common	10	3.1875	3.431	1.3507	15.32	230.46	5.34	26.70	20.823	
289	Now Mexico	10	3.375	2.766	1.0880	13.49	208.21	4.80	24.00	28.211	
PHILADELPHIA GRADES.											
290	Picklock, best	26	1.625	1.669	0.6570	3.00	46.30	6.15	30.75	17.280	
291	Picklock, fair	20	1.75	1.638	0.6527	4.60	70.99	6.30	31.50	20.750	
292	Picklock, medium	22	1.25	1.70	0.6929	4.67	72.68	5.42	27.10	24.119	
293	Picklock, low	22	2.00	1.435	0.5469	3.05	77.07	4.61	22.55	23.215	
294	XXX, extra	20	2.00	1.494	0.5889	3.44	69.09	5.52	27.00	24.659	
295	XXX, good	20	2.00	1.687	0.6941	4.23	65.29	4.28	21.40	23.781	
296	XXX, low	22	2.25	1.783	0.7019	5.00	78.09	5.13	25.63	25.436	
297	XX, good	22	2.50	1.655	0.6515	3.70	57.10	4.45	22.25	21.614	
298	XX, clothing	22	2.20	1.850	0.7318	5.03	77.84	5.05	25.25	23.284	
299	XX, low	20	2.00	1.736	0.6374	5.67	87.61	4.70	23.50	80.166	
300	X, good	20	2.00	1.835	0.7224	5.23	80.73	4.28	21.40	24.853	
301	X, fair	20	1.0375	1.032	0.7600	5.05	77.04	3.69	18.45	21.044	
302	X, low	20	2.125	1.011	0.7523	5.03	77.03	3.68	18.40	22.037	
303	Delaine, fine	20	2.50	1.924	0.7574	5.95	91.83	6.60	32.60	25.715	
304	Delaine, very fine	20	2.625	1.940	0.7661	7.22	111.43	5.85	28.25	80.504	
305	X, and above	22	2.00	2.133	0.8397	5.08	92.30	5.94	20.70	21.029	
306	do	22	2.458	1.949	0.7673	4.80	75.01	6.84	34.20	50.474	
307	do	20	2.025	1.963	0.7807	5.60	80.43	4.83	24.10	22.770	
308	One-fourth blood, good	14	2.75	2.404	0.9164	10.37	160.06	5.68	29.65	28.757	
309	One-fourth, combing	14	3.4375	2.833	0.9881	6.56	149.10	4.82	24.10	27.216	
310	Combing, low	14	5.417	3.508	1.3810	20.79	329.83	6.10	30.60	37.087	
311	Three-eighths blood, good	14	2.694	2.573	1.0129	8.93	127.83	4.06	24.80	21.683	
312	Three-eighths, combing	14	2.75	2.563	1.0090	11.04	170.40	4.86	24.20	26.890	
313	Three-eighths and 1/4 blood	10	2.058	2.513	0.9883	10.29	158.82	3.60	18.00	26.071	
314	One-half blood, high	20	2.3125	1.701	0.7051	5.85	90.29	4.23	21.15	20.177	
315	One-half blood, regular	20	1.8125	2.294	0.8705	6.50	101.25	3.79	18.95	21.030	
316	Combing, washed	20	3.125	2.162	0.8311	6.25	96.47	4.66	23.80	21.395	
317	Five-eighth blood	20	2.125	1.097	0.7362	4.06	78.56	4.20	21.30	13.900	
318	Cotts	20	3.25	2.800	1.1047	20.07	309.77	6.47	32.35	40.783	
319	Saxon, imported	20	1.00	1.935	0.6343	2.73	42.14	3.85	18.25	18.540	
320	Saxon, domestic	26	1.125	1.328	0.6228	2.11	32.57	4.11	20.55	19.198	
GERMAN GRADES.											
321	Super, superlecta	34	1.125	1.923	0.7570	4.43	68.37	4.94	24.70	19.167	
322	do	34	1.00	1.297	0.5499	2.80	43.22	3.61	18.05	20.635	
323	Superlecta	30	1.75	1.655	0.6515	4.17	64.34	6.41	27.05	24.359	
324	do	30	1.25	1.639	0.6452	3.65	56.34	4.48	22.40	21.742	
325	I, electa	27	1.25	1.662	0.6543	3.45	53.25	4.43	22.15	20.420	
326	do	27	1.125	1.664	0.6551	4.03	62.06	4.20	21.45	23.286	
327	II, electa	25	1.25	1.535	0.6043	3.70	57.11	5.32	26.00	25.127	
328	do	25	1.125	1.604	0.5921	3.22	49.70	3.84	19.20	21.812	
329	I, prima	22	1.875	1.705	0.6712	4.43	68.37	4.72	2.360	24.883	
330	do	22	1.25	1.705	0.6712	3.85	59.42	4.70	23.80	21.190	
331	II, prima	20	1.875	1.860	0.7511	4.13	63.74	5.54	27.70	10.897	
332	do	20	1.375	1.791	0.7062	3.06	61.12	6.05	30.25	10.699	
333	Secunda	10	1.50	2.080	0.8224	5.06	78.10	4.24	21.20	18.553	
334	Tertia	10	1.25	1.978	0.7787	4.82	74.89	4.95	24.75	19.714	
335	Quarta	14	1.50	2.257	0.8885	6.28	96.93	4.46	22.30	10.725	
336	High pedigree wool	20	1.25	1.933	0.7688	4.08	62.07	3.47	17.85	17.116	
337	do	25	1.25	1.682	0.6621	3.51	54.18	4.82	24.10	19.893	
338	Pure-bred, ancient pedigree	28	1.875	1.894	0.7456	3.18	40.08	3.00	15.00	14.185	
339	Impure-bred wool	25	1.25	1.661	0.6539	3.08	47.54	4.37	21.83	17.662	
340	French ram	16	3.50	2.136	3.8469	6.03	93.01	5.08	28.40	21.149	
341	Rambouillet	20	3.125	2.120	0.8940	6.50	100.33	6.00	30.00	23.110	
342	English merino	16	1.615	0.6358	3.27	50.47	4.98	24.90	20.001		
343	Australian ewe	16	1.625	1.683	0.6625	3.35	51.77	5.23	21.65	18.920	
344	Roger ram	16	2.125	2.365	0.9311	5.53	85.25	4.38	26.90	15.820	
345	Rambouillet ewe	20	4.125	2.487	0.9791	4.38	66.00	1.93	9.65	11.331	
346	do	16	4.00	2.196	0.8645	6.26	96.63	4.01	24.55	20.771	







## CHAPTER VII.

### ULTIMATE VALUE OF THE WOOLS EXAMINED.

Referring to the description and discussion of Table XIV, in the preceding pages of this report, we find a statement of the method employed for the determination of the tensile strain necessary to produce a stretch in the fibers and the permanent stretch or set corresponding with such strain and total stretch. Selection of typical results from Table XIV has been made by my friend and colleague N. Clifford Ricker, professor of architecture in the University of Illinois, who has reduced them in such a way as to make it possible to institute comparisons of wool with other materials used in the arts, and to determine the ultimate value of each sample of wool or indeed each fiber represented. The results of his calculations and comparisons are embodied in the following pages.

There seems to be no doubt that the methods here followed furnish means for the absolute determination of the industrial value of the staple. We therefore take great pleasure in submitting the result of Professor Ricker's work.

#### A.—MEASUREMENTS AND TESTS OF FIBERS.

##### (1) AVERAGE DIAMETER OF FIBERS.

The average diameter of fiber was determined for each sample of wool by measuring a large number of the fibers by means of a microscope, and then taking the mean of all their diameters as the average for that sample. These measurements were made and recorded in centimillimeters or hundredths of a millimeter.

##### (2) TENSILE STRENGTH AND STRETCH OF FIBERS.

Usually 15, rarely 35, fibers were selected from each sample of wool, and a length of each fiber equal to 2 centimeters was subjected to a gradually increased tensile strain until a stretch or increase of length of 1 millimeter was produced. The strain then being removed, the permanent elongation of the fiber was measured. A strain was then applied sufficient to cause a stretch of 2 millimeters, and the corresponding permanent stretch was measured. The process was generally, though not always, repeated for each consecutive millimeter of elongation until the fiber was ruptured. Each strain was recorded in grains, with the corresponding total and permanent stretch in millimeters.

The following will serve as an illustration of the method:

[No. 189. Cotswold. Average diameter of fiber = 4.412 centimillimeters.]

No. 1 fiber.			No. 2 fiber.			No. 3 fiber.			No. 4 fiber.			No. 5 fiber.		
Strain.	Temporary stretch.	Permanent stretch.	Strain.	Temporary stretch.	Permanent stretch.	Strain.	Temporary stretch.	Permanent stretch.	Strain.	Temporary stretch.	Permanent stretch.	Strain.	Temporary stretch.	Permanent stretch.
17.50	1.00	0.25	14.50	1.00	0.25	18.75	1.00	0.25	17.50	1.00	0.25	16.50	1.00	0.25
20.00	2.00	0.75	17.50	2.00	0.75	20.75	2.00	0.75	20.00	2.00	0.75	18.75	2.00	1.00
21.25	3.00	1.00	18.25	3.00	1.25	22.00	3.00	1.25	20.50	3.00	1.00	20.75	3.00	1.25
22.50	4.00	1.75	18.75	4.00	1.75	23.50	4.00	1.75	21.50	4.00	1.75	22.50	4.00	1.75
23.75	5.00	2.25	19.75	5.00	2.25	24.75	5.00	2.25	22.50	5.00	2.25	23.50	5.00	2.25
26.50	6.00	3.00	21.50	6.00	3.00	27.50	6.00	3.00	25.00	6.00	3.00	25.75	6.00	3.00
30.50	7.00	3.75	22.75	6.50	.....	31.75	7.00	4.00	29.25	7.00	3.75	29.75	7.00	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	31.50	7.50	.....	.....	.....	.....
No. 6 fiber.			No. 7 fiber.			No. 8 fiber.			No. 9 fiber.			No. 10 fiber.		
Strain.	Temporary stretch.	Permanent stretch.	Strain.	Temporary stretch.	Permanent stretch.	Strain.	Temporary stretch.	Permanent stretch.	Strain.	Temporary stretch.	Permanent stretch.	Strain.	Temporary stretch.	Permanent stretch.
11.75	1.00	0.25	20.50	1.00	0.25	15.25	1.00	0.25	20.75	1.00	0.25	10.25	1.00	0.25
14.50	2.00	0.75	21.75	2.00	0.75	16.50	2.00	0.75	22.50	2.00	0.75	12.50	2.00	0.75
16.00	3.00	1.00	22.50	3.00	1.00	17.25	3.00	1.00	24.50	3.00	1.25	13.50	3.00	1.25
16.50	4.00	1.75	23.50	4.00	1.75	18.00	4.00	1.75	26.00	4.00	2.00	14.50	4.00	1.75
17.75	5.00	2.25	25.25	5.00	2.25	19.50	5.00	2.25	27.50	5.00	2.50	14.50	5.00	2.50
25.50	6.00	3.00	28.25	6.00	3.00	22.75	6.75	.....	30.25	6.00	3.00	15.75	6.00	3.25
21.75	6.25	.....	33.50	7.00	3.75	.....	.....	.....	35.50	7.00	4.00	.....	.....	.....
.....	.....	.....	37.50	7.75	.....	.....	.....	.....	37.25	7.75	.....	.....	.....	.....



[No. 139. Cotswold. Average diameter of fiber=4.412 centimillimeters—Continued.]

No. 11 fiber.			No. 12 fiber.			No. 13 fiber.			No. 14 fiber.			No. 15 fiber.		
Strain.	Temporary stretch.	Permanent stretch.	Strain.	Temporary stretch.	Permanent stretch.	Strain.	Temporary stretch.	Permanent stretch.	Strain.	Temporary stretch.	Permanent stretch.	Strain.	Temporary stretch.	Permanent stretch.
22.00	1.00	0.25	21.75	1.00	0.25	19.50	1.00	0.25	13.75	1.00	0.25	21.00	1.00	0.25
20.00	1.00	0.75	24.50	2.00	0.75	22.50	2.00	0.75	17.25	2.00	0.75	24.50	2.00	0.75
27.50	3.00	1.25	25.75	3.00	1.25	24.50	3.00	1.25	19.25	3.00	1.25	26.25	3.00	1.00
28.75	4.00	1.75	27.25	4.00	1.75	25.25	4.00	1.75	20.50	4.00	2.00	27.50	4.00	1.75
30.00	5.00	2.25	29.25	5.00	2.25	26.75	5.00	2.50	21.50	4.50	.....	28.75	5.00	2.50
34.50	6.00	3.25	33.25	6.00	3.25	29.75	6.00	3.25	.....	.....	.....	33.00	6.00	3.25
38.50	6.75	.....	36.75	6.75	.....	32.75	6.50	.....	.....	.....	.....	36.75	6.75	.....

## B.—MODE OF AVERAGING RESULTS FOR EACH SAMPLE.

From the records of the tests made on fibers taken from the samples were selected the results for the ten fibers which exhibited the greatest elongation before breaking. Several fibers usually broke with a small amount of elongation, suggesting a probability that they might have been injured when being fastened in the testing machine or were originally defective. Since the data obtained from them would only affect a portion of the averages for the sample, it is evident that more accurate results would be obtained by their omission; for while this might indicate a tensile strength and elasticity slightly higher than the true one, this error would not materially affect the relative values of the averages for different samples and different breeds, or the comparison of these averages.

## (1) PLOTTING DIAGRAM OF STRAINS, TOTAL AND PERMANENT STRETCH.

The tensile strains and permanent elongations corresponding to total elongations in even millimeters were usually observed, though these were not always consecutive. Therefore, to obtain intermediate values, as well as the strains corresponding to permanent elongations, in even and half millimeters, it becomes necessary to plot curves or broken lines, representing the results of the tests, from which the required values could be obtained.

Paper ruled in even rectangles was employed for this purpose, the side of the sheet being a scale of tensile strains in grams and the bottom a scale of elongations in millimeters.

Two lines were drawn for each fiber, one representing the total, the other the permanent elongations and the corresponding strains.

Points were located in each line at the intersections of horizontals through the given strains, and verticals through the given elongations, as obtained from the records of tests. These points were then connected by short straight lines, which produced broken or approximately-curved lines. When two lines had been plotted for each of the ten selected fibers of the sample, the appearance of the diagram was similar to that shown in Plate I, which represents the lines for sample No. 139, Cotswold, fibers 1, 3, 4, 5, 7, 9, 11, 12, 13, and 15.

## (2) COMPUTING THE AVERAGES FOR A SAMPLE.

On the vertical through 1 millimeter stretch, the points of intersection with the ten lines of total stretch were noted, and the corresponding strains read off and set down in a column of a table. The same was done for the verticals through 2 millimeters, &c., finally producing a table of strains and total elongations similar to that given below in Table I.

In the same way a table of strains and elongations was obtained for the permanent stretch, excepting that the verticals were taken at intervals of a half millimeter, to insure greater accuracy. Table II is a specimen of this form of table.

If the strains found in any vertical column of a table be added, and their sum be divided by their number, the quotient will be the required average strain producing the amount of elongation corresponding to that column of the table. By treating all the columns in the same way, we may obtain the required average strains and the corresponding total and permanent elongations for the sample of wool considered.

These averages may be plotted on the diagrams already drawn, as shown on Plate I, where they are represented by heavier lines.

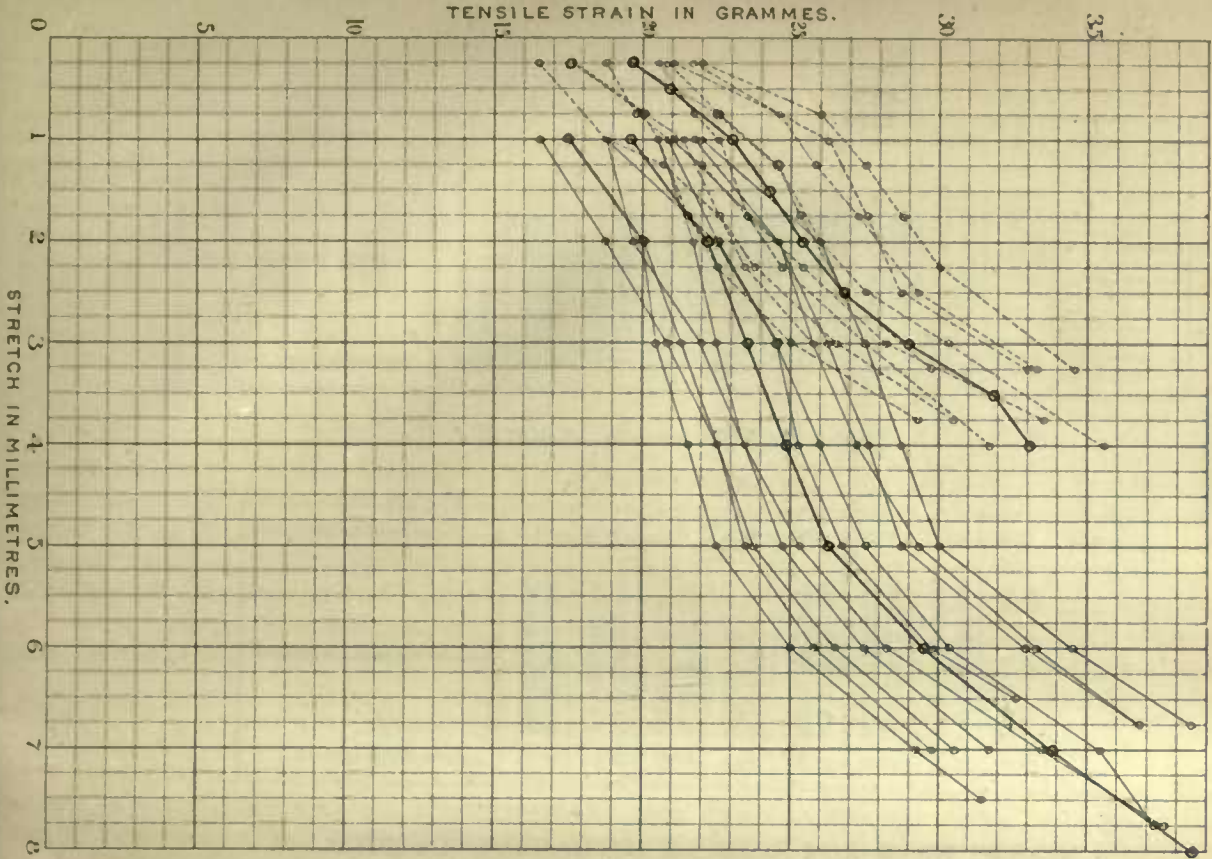
Light-dotted lines represent permanent elongations and strains; light full lines, total elongations and strains.

To insure the maximum possible accuracy of the final averages, this process of averaging results was applied to ten samples of wool, taken from five different breeds, thus comprising the results of the tests made on fifty different samples and 500 separate fibers.

The breeds represented are Oxforddown, Southdown, Lincoln, Merino, and Cotswold. Each sample was taken from a different fleece, with the single exception of 164 Lincoln, from different portions of which five samples were taken, to make up the desired number of ten specimens from each breed. The results of the tests made on these five samples differ fully as much as do those made on samples from different fleeces.



AVERAGES FOR A SAMPLE COMPRISING 10 FIBRES 189 COTSWOLD.  
**PLATE 1.**



AVERAGES FOR A BREED, 10 SAMPLES. OXFORD DOWN.  
**PLATE 2.**

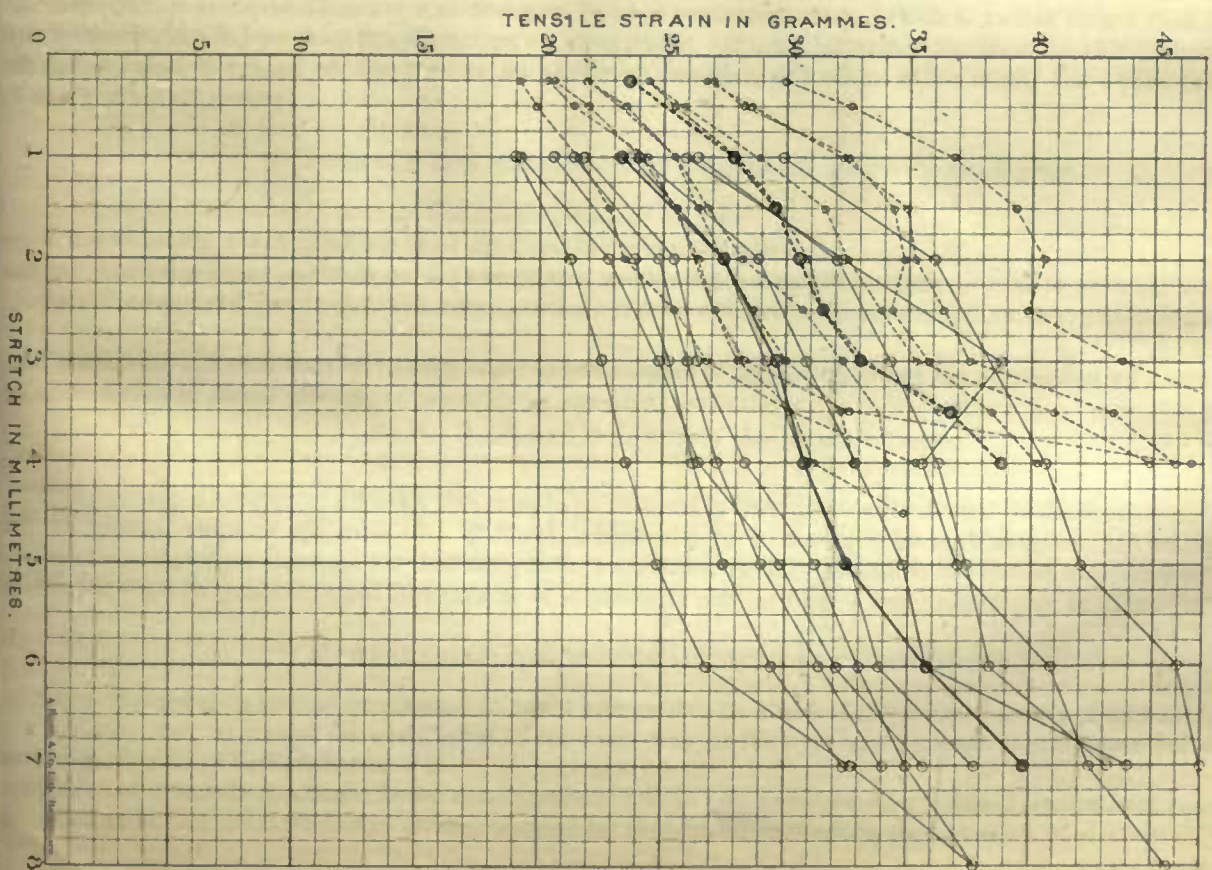








TABLE 1.—Strains and permanent stretch.

[No. 189, Cotswold.]

Stretch in millimeters.....	.25	.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00
Tensile strains in grams....	22.00	24.00	26.75	28.15	29.35	31.10	33.35	35.50	35.50	.....	.....
	21.75	23.10	26.25	27.10	27.90	29.25	32.00	31.75	35.50	.....	.....
	21.00	22.75	25.15	20.50	27.90	28.75	31.50	34.50	31.75	.....	.....
	20.75	21.60	23.50	25.00	26.00	27.50	30.25	32.90	31.75	.....	.....
	20.50	21.00	23.50	24.00	25.00	26.75	28.75	31.75	30.75	.....	.....
	19.50	21.00	22.50	23.15	24.25	26.25	28.25	30.50	.....	.....	.....
	18.75	19.75	21.40	22.75	24.10	25.70	27.50	29.05	.....	.....	.....
	17.50	18.75	21.25	22.10	23.10	24.70	26.50	28.15	.....	.....	.....
	16.50	18.75	20.50	21.60	23.00	24.25	25.75	27.85	.....	.....	.....
	17.50	17.25	18.75	21.20	22.00	23.35	25.00	.....	.....	.....	.....
Average tensile strains..	19.58	20.81	22.90	24.25	25.36	26.70	28.89	31.84	33.05	.....	.....

TABLE 2.—Strains and total stretch.

[No. 189, Cotswold.]

Stretch in millimeters.....	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00
Tensile strains in grams....	22.00	26.00	27.50	28.75	30.00	34.50	38.50	39.00	.....
	21.75	24.50	26.23	27.50	29.25	33.25	38.00	37.75	.....
	21.00	24.50	25.75	27.25	28.75	33.00	38.00	.....	.....
	20.75	22.80	24.50	26.00	27.50	30.25	35.50	.....	.....
	20.50	22.50	24.50	25.25	26.75	29.75	33.50	.....	.....
	19.50	21.75	22.50	23.50	25.25	28.25	31.75	.....	.....
	18.75	20.75	22.00	23.50	24.75	27.60	30.50	.....	.....
	17.50	20.00	21.25	22.50	23.75	26.50	29.75	.....	.....
	17.00	20.00	20.75	22.50	23.50	25.75	29.25	.....	.....
	16.50	18.75	20.50	21.50	22.50	25.00	.....	.....	.....
Average tensile strains..	19.58	22.13	23.55	24.83	26.20	29.38	33.86	38.28	.....

## C.—MODE OF AVERAGING RESULTS FOR EACH BREED.

As previously stated, the average diameter of fiber was determined for each sample by measuring a large number of fibers and taking their mean as the required diameter.

But, to compare the average results for different samples in order to obtain the general averages for a breed, it is evident that the fibers must be theoretically reduced to the same common diameter. For the sake of convenience this common diameter was assumed to be 4 centimillimeters, which is rather larger than the average for all breeds, but is less than the diameters of some fibers. Since the value assumed for this diameter does not affect the relative values of the results for different samples, any other value might have been taken without affecting the final results.

## (1) FORMULA FOR REDUCTION OF FIBERS TO UNIFORM DIAMETER.

Let 4 centimillimeters = assumed common diameter of fiber.

Let  $d$  = actual average diameter of fiber for the given sample.

Let  $S$  = actual tensile strain on fiber in grams, producing a certain elongation, total or permanent.

Let  $S^1$  = required tensile strain in grams, on a similar fiber 4 centimillimeters in diameter, producing an identical elongation.

The strains will evidently be to each other as the squares of the diameters of the corresponding fibers, supposing sections of similar form. Hence

$$d^2 : 4^2 :: S : S^1, \text{ and } S^1 = S \frac{16}{d^2} = \text{the required strain.}$$

The average diameter of fiber for the sample considered is then to be substituted in the formula in place of  $d$ , and the decimal value of the ratio  $16 \div d^2$  found, which will be a constant for each sample. By multiplying the average tensile strains obtained for that sample in the manner already described, we obtain the values of the tensile strains required to produce equal elongations of a perfectly similar fiber 4 centimillimeters in diameter.

## (2) AVERAGING THE REDUCED VALUES FOR EACH BREED.

Since the reduced strains correspond to equal elongations of fibers of the same theoretical diameter, they may be tabulated and averaged for each breed in the same way as the averages for each sample were found. This is done in Tables III, IV, V, VI, and VII.

The sum of the strains found in the same vertical column and corresponding to equal elongations, being divided by their number, gives the average strain required for that breed to produce that amount of stretch of the fiber.



TABLE 3.—Averages for Oxforddown.

[10 samples; 100 fibers.]

	PERMANENT STRETCH IN MILLIMETERS.											Number of sample.
	0.25	0.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	
Tensile strains in grams on fibers 4 centimillimeters in diameter.	24.12	25.27	26.89	27.70	28.47	29.41	30.54	32.47	35.71	36.38	41.64	151
	22.79	23.77	24.64	26.00	26.07	27.95	29.14	30.51	31.70	39.92	37.77	150
	22.62	23.04	24.04	24.77	25.35	26.07	27.14	29.37	32.19	34.23	.....	159
	20.64	21.60	22.59	23.79	24.39	25.06	26.17	28.01	31.17	.....	.....	160
	19.81	20.56	22.19	23.17	23.89	24.72	26.14	28.00	29.58	36.04	37.85	161
	22.60	23.15	24.40	25.29	25.92	26.58	27.44	29.24	31.45	.....	.....	157
	17.18	17.71	18.73	19.58	20.19	20.90	21.70	23.29	25.70	28.92	32.07	158
	24.59	25.35	26.28	28.96	29.70	30.65	32.18	34.59	37.79	.....	.....	154
	21.03	21.98	23.78	24.48	25.11	26.05	27.55	28.98	30.34	32.78	43.70	153
	23.02	23.91	25.00	25.79	26.44	27.40	28.80	31.68	33.63	36.81	41.22	152
	Average tensile strains for the breed.....	22.03	22.62	24.08	24.94	25.64	26.48	27.68	29.61	31.93	34.01	39.04
TOTAL STRETCH IN MILLIMETERS.												Number of sample.
1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00				
Tensile strains in grams on fibers 4 centimillimeters in diameter.	23.00	26.18	27.30	28.28	29.58	31.40	35.29	39.44	.....	.....	151	
	21.13	24.23	25.80	27.18	28.44	30.71	33.88	37.50	39.81	.....	150	
	22.44	23.74	24.48	25.32	26.60	29.13	32.58	36.64	.....	.....	159	
	20.89	22.72	23.54	24.39	25.48	27.85	31.98	31.88	.....	.....	160	
	19.81	22.02	22.88	23.81	24.90	27.26	30.61	34.10	37.70	.....	101	
	17.06	18.50	19.33	20.19	21.44	23.19	27.16	30.00	36.88	.....	158	
	22.58	24.23	25.00	25.85	26.80	29.02	32.80	39.00	.....	.....	157	
	23.54	28.11	28.81	29.57	30.78	33.02	36.80	40.05	.....	.....	154	
	20.93	23.59	24.22	25.08	26.32	28.58	31.77	33.42	.....	.....	153	
	22.72	24.59	25.18	25.87	27.14	29.40	35.56	37.70	.....	.....	152	
	Average tensile strains for the breed.....	21.50	23.79	24.87	25.55	26.75	28.96	32.70	35.97	38.13		

TABLE 4.—Averages for Lincoln.

	PERMANENT STRETCH IN MILLIMETERS.											Number of samples.
	0.25	0.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	
Tensile strains in grams.....	17.08	17.70	19.00	20.42	21.16	22.16	23.07	24.52	27.16	29.16	.....	165
	14.58	14.91	15.58	16.12	10.79	18.04	19.63	22.27	24.47	.....	.....	168
	14.83	15.25	16.08	16.57	17.25	18.51	20.66	22.66	25.20	.....	.....	167
	10.90	17.48	18.17	18.78	10.56	20.96	23.16	24.72	27.06	.....	.....	160
	13.64	14.13	15.02	15.58	12.68	10.98	18.37	20.14	23.96	27.56	29.20	164
	11.43	11.80	12.50	12.95	13.50	14.53	16.07	17.11	19.80	.....	.....	169
	21.07	21.72	22.94	23.05	24.56	25.27	26.24	28.09	31.71	36.60	38.68	*134
	17.91	18.48	19.75	20.65	21.57	22.65	23.39	27.21	.....	.....	.....	†164
	18.31	18.92	20.09	21.12	21.88	22.11	22.80	.....	.....	.....	.....	†164
	10.35	19.84	20.87	21.66	22.22	22.87	23.77	25.47	28.51	28.76	.....	§164
	Average tensile strains for the breed.....	16.51	17.03	18.01	18.78	19.12	20.41	21.72	23.58	25.98	30.52	33.94
TOTAL STRETCH IN MILLIMETERS.												Number of sample.
1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00				
Tensile strains in grams.....	16.88	18.90	20.03	21.00	22.16	24.27	27.48	28.57	.....	.....	165	
	14.53	15.16	15.69	16.20	17.10	19.25	21.03	26.50	.....	.....	168	
	14.81	15.59	16.17	16.80	17.81	20.42	24.98	26.55	.....	.....	167	
	16.75	17.77	18.32	19.11	20.46	23.63	27.20	29.57	.....	.....	160	
	13.04	14.74	15.30	15.84	16.85	18.75	22.02	28.55	.....	.....	164	
	11.55	12.25	12.69	13.15	14.21	16.23	19.20	21.19	.....	.....	169	
	21.07	22.80	23.70	24.58	25.76	27.83	31.44	35.85	41.50	.....	*134	
	17.75	19.24	20.33	21.43	22.71	24.45	.....	.....	.....	.....	†164	
	18.20	10.80	20.96	21.00	22.87	24.50	.....	.....	.....	.....	†164	
	19.30	20.65	21.47	22.27	23.52	25.24	28.73	33.23	.....	.....	§164	
	Average tensile strains for the breed.....	16.45	17.70	18.47	19.23	20.35	22.47	25.26	28.75	.....	.....	

\* Shoulder.

† Body

‡ Hip.

§ Side.



TABLE 5.—Averages for Southdown.

		PERMANENT STRETCH IN MILLIMETERS.										Number of sample.
		0.25	0.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	
Tensile strains in grams.....	}	20.58	21.91	24.08	25.48	26.25	27.06	28.04	30.35	31.09	34.82	137
		21.92	23.21	25.47	26.77	28.19	30.62	32.30	33.81	34.03	.....	138
		26.58	28.60	32.25	34.92	35.16	36.43	37.37	43.18	45.80	.....	139
		27.03	28.28	32.38	34.45	34.72	34.15	35.82	38.16	40.16	.....	140
		29.84	32.44	36.78	39.25	40.40	39.89	43.58	49.04	.....	.....	141
		20.17	21.38	24.23	25.20	26.41	27.07	28.34	32.55	46.34	.....	142
		24.18	25.77	28.84	31.51	32.37	33.90	35.16	40.93	44.74	.....	143
		19.12	19.85	21.45	22.74	23.47	25.40	26.75	29.98	35.23	.....	145
		21.94	23.40	25.39	26.43	27.40	28.64	30.02	32.21	32.68	.....	146
		24.14	25.54	28.07	29.79	30.82	31.54	33.24	36.10	.....	.....	147
Average tensile strains for the breed.....		23.55	25.04	27.80	29.65	30.52	31.48	33.06	36.63	38.76	.....	

		TOTAL STRETCH IN MILLIMETERS.									Number of sample.
		1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	
Tensile strains in grams.....	}	20.58	23.92	25.19	26.25	27.02	29.53	32.38	.....	.....	137
		21.58	25.28	26.39	28.29	31.18	32.94	34.97	37.83	.....	138
		25.96	32.23	38.81	35.27	36.95	40.77	42.47	46.46	.....	139
		26.27	32.01	34.15	36.14	37.24	38.24	43.10	.....	.....	140
		29.84	35.90	38.19	40.45	41.98	46.02	47.18	.....	.....	141
		19.16	22.84	24.70	26.43	29.72	32.07	40.57	.....	.....	142
		24.00	28.77	30.88	32.75	34.82	35.67	43.98	.....	.....	143
		18.98	21.34	22.51	23.49	24.75	26.67	32.74	37.86	.....	145
		21.25	24.80	25.96	27.30	28.97	31.40	34.10	.....	.....	146
		23.81	27.46	29.26	30.80	32.83	33.91	42.87	.....	.....	147
Average tensile strains for the breed.....		23.14	27.46	29.60	30.72	32.61	35.72	39.74	.....	.....	

TABLE 6.—Averages for Merino.

		PERMANENT STRETCH IN MILLIMETERS.										Number of sample.
		0.25	0.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	
Tensile strains in grams.....	}	17.15	18.20	19.97	22.26	23.70	23.55	25.23	.....	.....	.....	104
		21.15	22.40	24.68	25.96	27.91	29.66	31.47	33.16	39.11	.....	102
		17.47	18.34	20.22	21.76	22.59	23.30	24.42	29.53	31.14	32.12	99
		15.12	16.12	17.68	19.11	20.18	20.97	22.84	25.17	26.74	30.81	97
		16.91	17.65	18.83	19.94	20.97	22.30	22.60	24.59	.....	.....	96
		16.15	17.07	19.09	21.53	22.98	29.81	32.18	47.42	.....	.....	90
		19.20	19.53	21.42	22.75	23.96	25.05	26.91	24.04	28.76	.....	89
		16.84	17.99	20.03	20.22	21.23	23.75	25.32	32.61	46.41	.....	88
		15.76	16.90	18.99	20.01	20.89	22.32	24.37	26.72	36.83	.....	87
		28.63	30.34	33.56	36.63	38.64	36.40	38.00	41.75	.....	.....	86
Average tensile strains for the breed.....		18.44	19.45	21.45	23.02	24.30	25.71	27.34	31.65	34.83	.....	

		TOTAL STRETCH IN MILLIMETERS.									Number of sample.
		1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	
Tensile strains in grams.....	}	15.67	19.26	21.02	23.55	26.76	.....	.....	.....	.....	104
		20.21	24.09	25.53	28.04	29.91	32.35	38.36	.....	.....	102
		17.08	19.73	21.49	22.59	23.97	28.92	29.98	35.82	.....	99
		14.48	17.11	18.40	20.18	21.47	24.10	27.81	29.45	.....	97
		15.88	18.09	19.20	20.90	22.52	23.56	.....	.....	.....	96
		15.33	18.49	20.95	22.82	25.51	33.60	.....	.....	.....	90
		18.36	20.77	22.11	23.92	26.34	26.46	28.76	31.78	.....	89
		14.88	18.80	21.62	23.79	24.40	24.10	.....	.....	.....	88
		14.95	17.77	19.53	20.89	22.39	25.39	36.65	.....	.....	87
		27.80	32.54	35.76	38.61	38.76	42.67	.....	.....	.....	86
Average tensile strains for the breed.....		17.46	20.67	22.50	24.53	26.20	29.02	31.23	32.35	.....	



TABLE 7.—Averages for Cotswold.

		PERMANENT STRETCH IN MILLIMETERS.										Number of sample.		
		0.25	0.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50		5.00	
Tensile strains in grams.....	}	15.87	16.40	17.51	18.25	18.84	19.78	21.44	23.72	24.25	.....	.....	174	
		14.54	15.00	15.90	16.43	17.14	18.00	19.05	21.48	22.58	.....	.....	176	
		18.15	16.57	17.44	18.13	18.72	20.06	20.38	20.52	.....	.....	.....	183	
		14.57	15.20	16.11	16.92	17.43	18.06	18.93	20.34	.....	.....	.....	184	
		14.16	14.36	14.76	15.12	15.51	16.23	10.13	16.38	17.65	19.31	20.88	.....	185
		16.78	17.17	17.87	18.47	19.20	20.15	21.79	24.12	26.56	30.24	.....	.....	186
		12.19	12.47	13.23	13.65	14.20	15.14	16.18	17.05	17.23	17.80	.....	.....	187
		14.95	15.28	15.88	16.81	16.90	17.87	18.08	21.58	24.40	.....	.....	.....	188
		16.09	17.11	18.88	19.08	20.84	21.99	23.75	26.17	27.16	.....	.....	.....	189
		19.11	20.01	21.72	22.84	23.67	24.76	25.91	26.80	27.65	.....	.....	.....	190
Average tensile strains for the breed.....		15.44	15.96	16.93	17.61	18.25	19.21	20.16	21.82	23.37	.....	.....		

		TOTAL STRETCH IN MILLIMETERS.								Number of sample.		
		1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00		9.00	
Tensile strains in grams.....	}	15.67	16.97	17.79	18.73	19.77	22.13	25.60	.....	.....	174	
		14.25	15.37	16.04	17.68	19.50	22.00	24.32	.....	.....	170	
		10.21	17.37	18.04	18.72	19.59	21.62	.....	.....	.....	183	
		14.44	15.91	16.64	17.43	18.38	20.13	21.68	22.04	.....	184	
		14.11	14.52	14.86	15.27	15.58	16.23	18.56	19.41	22.98	.....	185
		16.76	17.52	18.06	18.62	19.65	21.79	25.09	28.30	.....	180	
		12.05	12.77	13.37	13.93	14.89	16.32	18.54	.....	.....	187	
		14.27	15.53	15.98	16.63	17.69	19.66	21.39	29.87	.....	188	
		16.09	18.19	19.36	20.41	21.51	24.15	27.33	31.54	.....	189	
		18.89	20.89	22.42	23.60	25.52	27.02	30.25	.....	.....	190	
Average tensile strains for the breed.....		15.27	16.50	17.26	18.00	19.03	20.86	23.44	25.92	.....		

Graphical diagrams are not necessary for obtaining these averages, but, as an illustration, one has been drawn for the purpose of exhibiting the relation of the averages for each sample and the general averages for the Southdown breed. (See Plate II.)

Dotted lines represent permanent stretch and strains for the averages for the ten samples. Full lines likewise represent total stretch, and the corresponding strains for the same. Heavy lines indicate the general averages for the breed for total and permanent elongations and the corresponding tensile strains.

D.—VARIATION IN STRENGTH OF FIBERS TAKEN FROM DIFFERENT PARTS OF THE SAME FLEECE.

Four specimens were selected from No. 164—a Lincoln fleece—from the hip, shoulder, belly, and side. The results of tests made on ten fibers for each sample are here used. The averages were found for each sample, as already described, then reduced to a common diameter of fiber of 4 centimillimeters, and the results are given in Table VIII, in which the general average of the four samples is also to be found.

TABLE 8.—Variation in parts of same fleece.

164. Lincoln.

		PERMANENT STRETCH IN MILLIMETERS.										Sample.	
		0.25	0.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50		5.00
Tensile strains in grams.....	}	21.07	21.72	22.94	23.95	24.56	25.27	26.24	28.09	31.71	36.60	38.00	Shoulder. Belly. Hip. Side.
		17.91	18.48	19.75	20.65	21.57	22.65	23.39	27.21	.....	.....	.....	
		18.31	18.92	20.09	21.12	21.83	22.11	22.30	.....	.....	.....	.....	
		19.35	19.84	20.67	21.66	22.22	22.87	23.77	25.47	28.51	28.76	.....	
Average tensile strains for the four samples ..		19.10	19.74	20.91	21.85	22.56	23.23	24.05	26.92	30.11	32.68	38.00	

		TOTAL STRETCH IN MILLIMETERS.								Sample.	
		1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00		9.00
Tensile strains in grams.....	}	21.07	22.80	23.70	24.56	25.76	27.83	31.44	35.85	41.50	Shoulder. Belly. Hip. Side.
		17.75	19.24	20.33	21.43	22.71	24.55	.....	.....	.....	
		18.20	19.86	20.00	21.90	22.87	24.56	.....	.....	.....	
		19.30	20.65	21.47	22.27	23.52	25.24	28.73	33.23	.....	
Average tensile strains for the four samples ..		19.08	20.64	21.02	22.54	23.72	25.52	30.09	34.54	41.50	

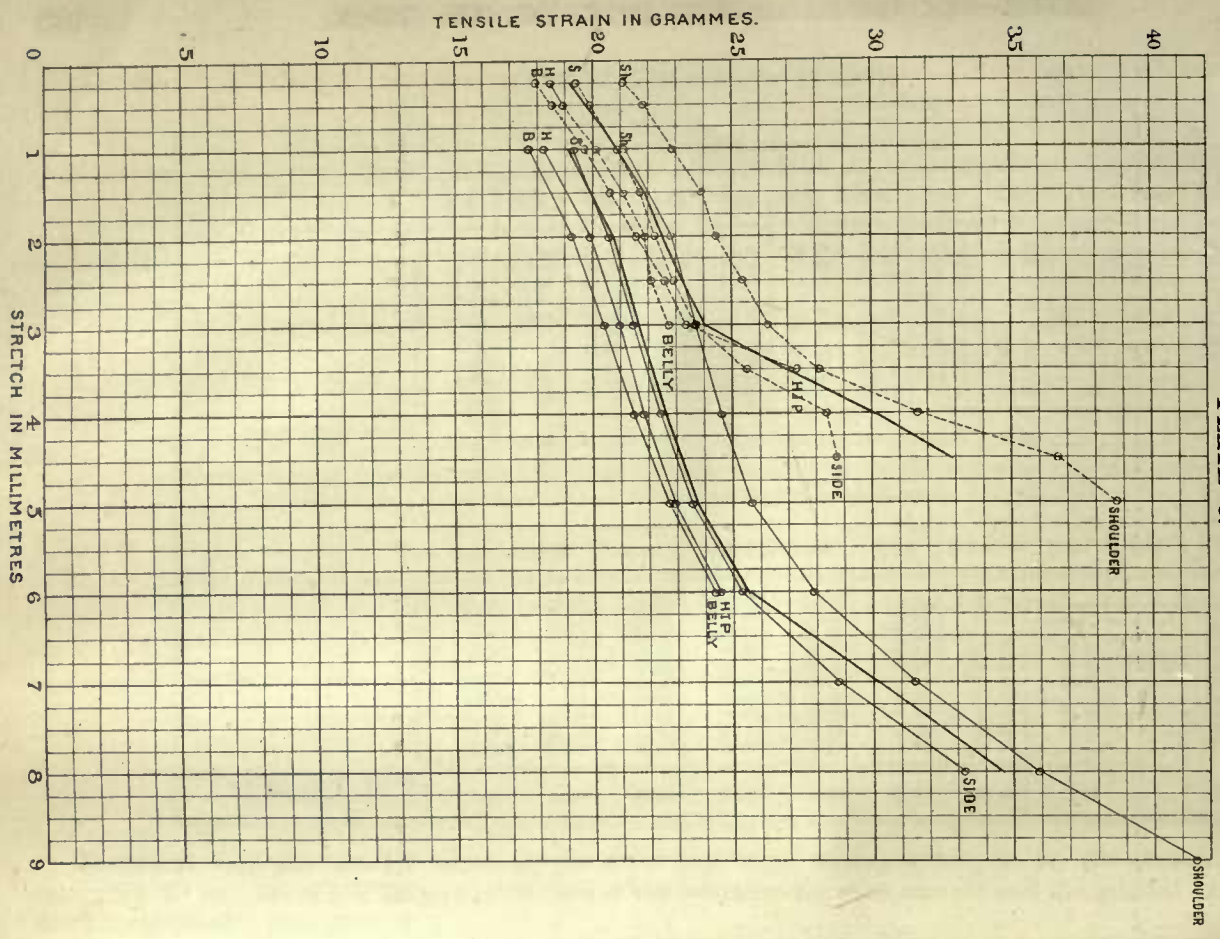






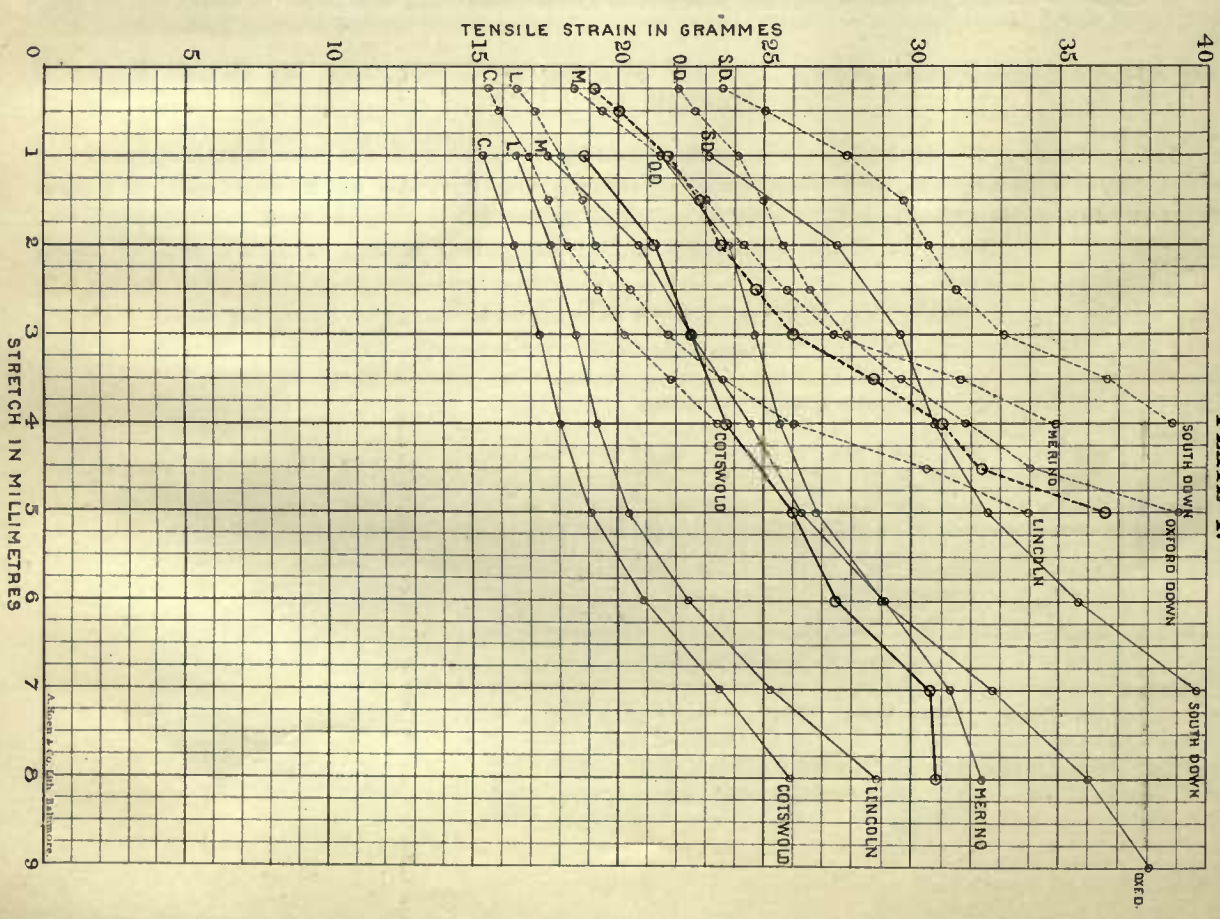
DIFFERENT PARTS OF SAME FLEECE. 164 LINCOLN.

PLATE 3.



GENERAL AVERAGES FOR THE FIVE BREEDS.

PLATE 4.





The same results are also shown in a different manner in the graphical diagram of Plate III, constructed in the same way as those on Plates I and II.

This diagram shows the following to be true for this fleece:

1. The fibers taken from the shoulder are considerably stronger than the average for the fleece reduced to a common diameter and weight.
2. The shoulder is therefore the most valuable part of the fleece by weight.
3. The relative economical values of the different parts are as follows, from greatest to least: Shoulder, side, hip, belly.
4. Fibers taken from the side closely approximate the average for the entire fleece.
5. The belly is much the least valuable part of the fleece.

Of course these deductions might be materially modified by applying the same method to a large number of fleeces belonging to different breeds.\*

#### E.—MODE OF AVERAGING RESULTS FOR THE FIVE BREEDS.

The general averages for each breed can be compared in the way already described for the different fleeces of the same breed, so as to obtain a general average for the five breeds or for wool.

This comparison is made numerically in Table IX and graphically on Plate IV.

TABLE 9.—General average for the five breeds.

	PERMANENT STRETCH IN MILLIMETERS.											Breed.
	0.25.	0.50.	1.00.	1.50.	2.00.	2.50.	3.00.	3.50.	4.00.	4.50.	5.00.	
Tensile strains in grams.....	22.03	22.62	24.08	24.94	25.04	26.43	27.68	29.61	31.93	34.01	39.04	Oxforddown. Lincoln. Southdown. Merino. Cotswold.
	16.51	17.68	18.01	18.78	19.12	26.41	21.72	23.58	25.98	30.52	33.94	
	23.55	23.01	27.89	29.65	30.52	31.48	33.06	36.63	38.76	.....	.....	
	18.44	19.45	21.45	23.02	24.80	25.71	27.84	31.05	34.83	.....	.....	
	15.44	15.96	16.63	17.61	18.25	19.21	20.16	21.22	23.37	.....	.....	
Average tensile strains for the five breeds.....	19.19	20.02	21.67	22.80	23.57	24.60	25.99	28.00	30.98	32.27	36.49	
	TOTAL STRETCH IN MILLIMETERS.											Breed.
	0.25.	0.50.	1.00.	1.50.	2.00.	2.50.	3.00.	3.50.	4.00.	4.50.	5.00.	
Tensile strains in grams.....	21.50	23.79	24.67	25.55	26.75	28.06	32.76	35.97	38.13	.....	.....	Oxforddown. Lincoln. Southdown. Merino. Cotswold.
	16.45	17.70	18.47	19.23	20.85	22.47	25.26	28.75	.....	.....	.....	
	23.14	27.46	29.60	30.72	32.61	35.72	39.74	.....	.....	.....	.....	
	17.46	20.67	22.50	24.53	26.20	29.02	31.23	32.35	.....	.....	.....	
	15.27	16.50	17.26	18.00	19.03	20.86	23.44	25.92	.....	.....	.....	
Average tensile strains for the five breeds.....	18.76	21.22	22.50	23.61	24.90	27.41	30.69	36.75	38.13	.....	.....	

On Plate IV, dotted lines indicate permanent stretch and tensile strains for each breed; full lines, total stretch and corresponding tensile strains; heavy dotted lines, average permanent stretch and strain for the five breeds, or for wool; heavy full lines, average total stretch and tensile strains for the same.

This diagram and the figures upon which it is based appear to establish the following:

1. Southdown wool is much stronger than that of any other of the breeds considered.
2. It is consequently more valuable, pound for pound, for manufacturing purposes.
3. If the manufactured articles are made of the same weight, those composed of the Southdown wool ought, according to the above tables, to be much stronger and more durable for the same cost.
4. If all are to be of equal strength, the Southdown fabrics will be considerably lighter and cheaper than the others, allowing a greater profit, provided the wool is purchased at the same price per pound.
5. Cotswold wool requires more weight for equal strength.
6. The wool of the five breeds ranks in economical value as follows, from greatest to least: Southdown, Oxforddown, Merino, Lincoln, and Cotswold.
7. In point of strength, Merino wool closely approximates the average values for the five breeds considered. Its economical value would therefore be a mean between those of Southdown and Cotswold.

\* Modifications due to age and sex of the animal represented would doubtless also occur. Further tests must therefore be made with a sufficient number of samples of the same kind to definitely determine the relations here shown.—MCM.



7.—COMPARATIVE ECONOMICAL VALUES OF WOOLS OF THE DIFFERENT BREEDS.

Now, if it be accepted that the Southdown, as has apparently been shown, is the strongest and most valuable of the five kinds represented, and if we adopt it as the standard of comparison and place its value at 100, the relative value of any other kind of wool is to 100, or that of the Southdown, exactly as are the relative tensile strains required to produce equal elongations of the wools considered.

Let S=strain producing a certain amount of elongation in Southdown wool.

Let S'=strain producing an equal elongation in any other kind.

Then S : S':: 100 : required value of the wool, relative to that of Southdown, taken as a standard.

The corresponding strains and elongations were taken from Table IX, and by application of the preceding formula the results given in the following table were obtained:

TABLE 10.—Relative values of different kinds of wool.

	PERMANENT STRETCH IN MILLIMETERS.									TOTAL STRETCH IN MILLIMETERS.							Breed.
	0.25.	0.50.	1.00.	1.50.	2.00.	2.50.	3.00.	3.50.	4.00.	1.00.	2.00.	3.00.	4.00.	5.00.	6.00.	7.00.	
Relative values of the kinds of wool.	93.5	90.3	86.5	84.	84.	84.	83.6	81.	82.5	92.8	86.7	83.4	83.3	82.	81.	82.5	Oxforddown. Lincoln. Southdown. Merino. Cotswold.
	70.	68.	64.0	63.3	62.6	65.	65.5	64.5	67.	71.	64.5	62.5	62.5	62.5	63.	63.5	
	160.	100.	100.	100.	109.	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.	100.	
	78.3	77.6	82.5	77.5	79.7	81.6	82.7	86.5	90.	75.3	82.	76.	80.	80.5	81.3	78.7	
	65.5	63.7	68.3	59.5	59.8	61.	61.	58.3	59.	66.	63.	58.3	58.7	58.5	58.3	59.	

This table shows that the relative values of the different kinds of wool are nearly the same for both permanent and total stretch.

To make these relative values more clearly evident to the eye, the same results are given graphically in Plate V for permanent elongation, and in Plate VI for total stretch. The relative values do not materially differ in the two plates, as may be seen from the similar forms and positions of the lines.

These diagrams exhibit the following facts:

1. The value of each of the four kinds of wool, relative to that of Southdown breed, diminishes slightly as the strain and stretch increase.

2. The values of Oxforddown and Merino are nearly identical, approximately four-fifths that of Southdown.

3. The values of Lincoln and Cotswold are also similar, approximately three-fifths that of Southdown, or three-fourths those of Merino and Oxforddown.

4. If the values for all elongations, both total and permanent, be averaged, the relative values of the five kinds of wool will be as follows:

Southdown, 100; Oxforddown, 85; Merino, 80.5; Lincoln, 65; Cotswold, 61.

5. These averages would be practically the relative economic values of the wool of the five different breeds considered, provided that the density and weight of fiber are assumed to be the same for all kinds for equal diameters, which is probably practically true.

6. Relative values of total, permanent, and elastic stretch.

(1) *Permanent stretch corresponding to any total stretch.*—These are produced by the same tensile strain. On Plate IV, suppose a horizontal line to be drawn through the intersection of the line representing the total stretch and strain for the kind of wool considered, with a vertical line through the assumed elongation. The intersection of this horizontal with the line representing permanent stretch and strain for the same kind of wool is noted, and the required value of the permanent stretch is easily read off.

The values given in the following table were found in this manner.

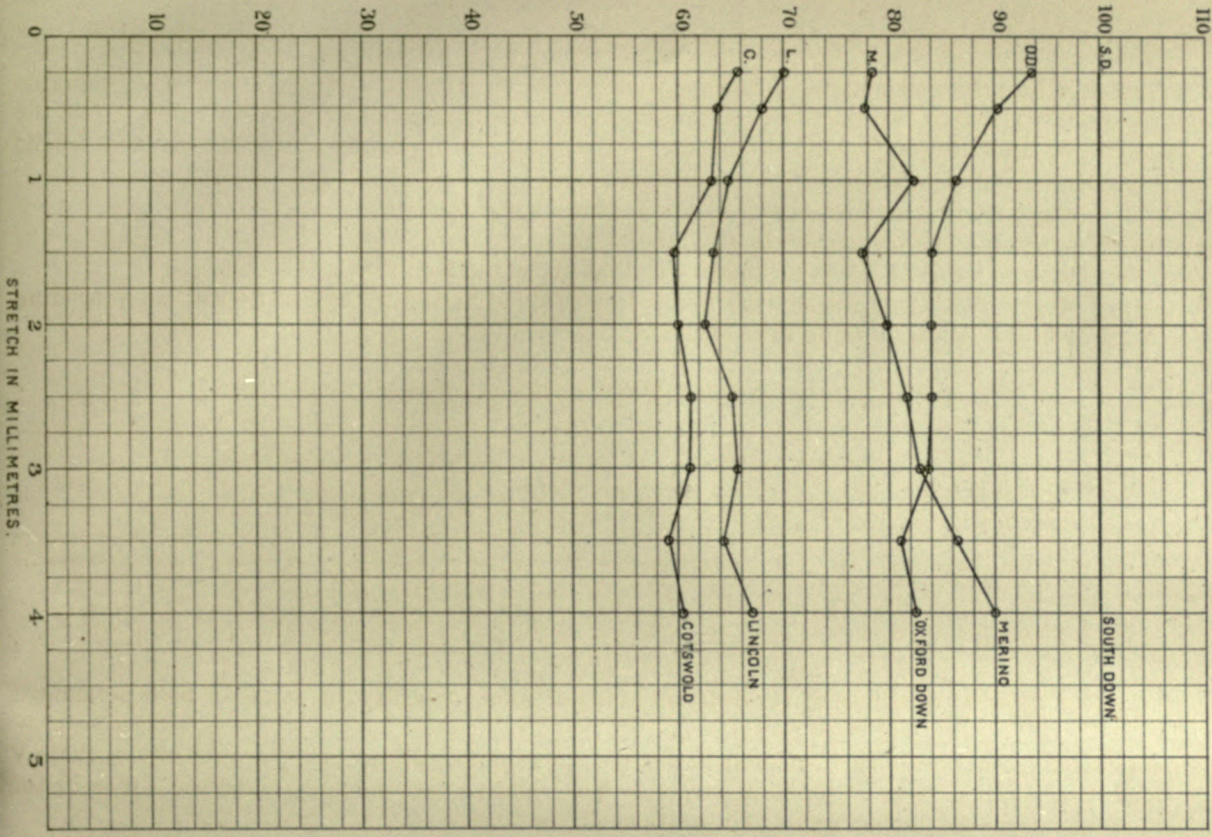
TABLE 11.—Relative total and permanent stretch for equal total elongations.

	TOTAL STRETCH OF FIBERS IN MILLIMETERS.										Breed.
	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	
Permanent stretch of fibers in millimeters.	0.15	0.88	1.45	2.10	2.88	3.35	4.20	.....	.....	.....	Southdown. Oxforddown. Merino. Lincoln. Cotswold.
	0.09	0.90	1.35	1.90	2.63	3.85	4.20	4.70	4.90	.....	
	0.00	0.80	1.87	2.05	2.63	3.20	3.45	3.60	.....	.....	
	0.20	0.85	1.33	2.05	2.50	3.20	3.88	4.30	.....	.....	
	0.15	0.75	1.25	1.80	2.40	3.20	4.05	.....	.....	.....	
Average permanent stretch in millimeters for the five breeds.....	0.10	0.83	1.35	1.98	2.61	3.06	3.95	4.20	4.90	.....	



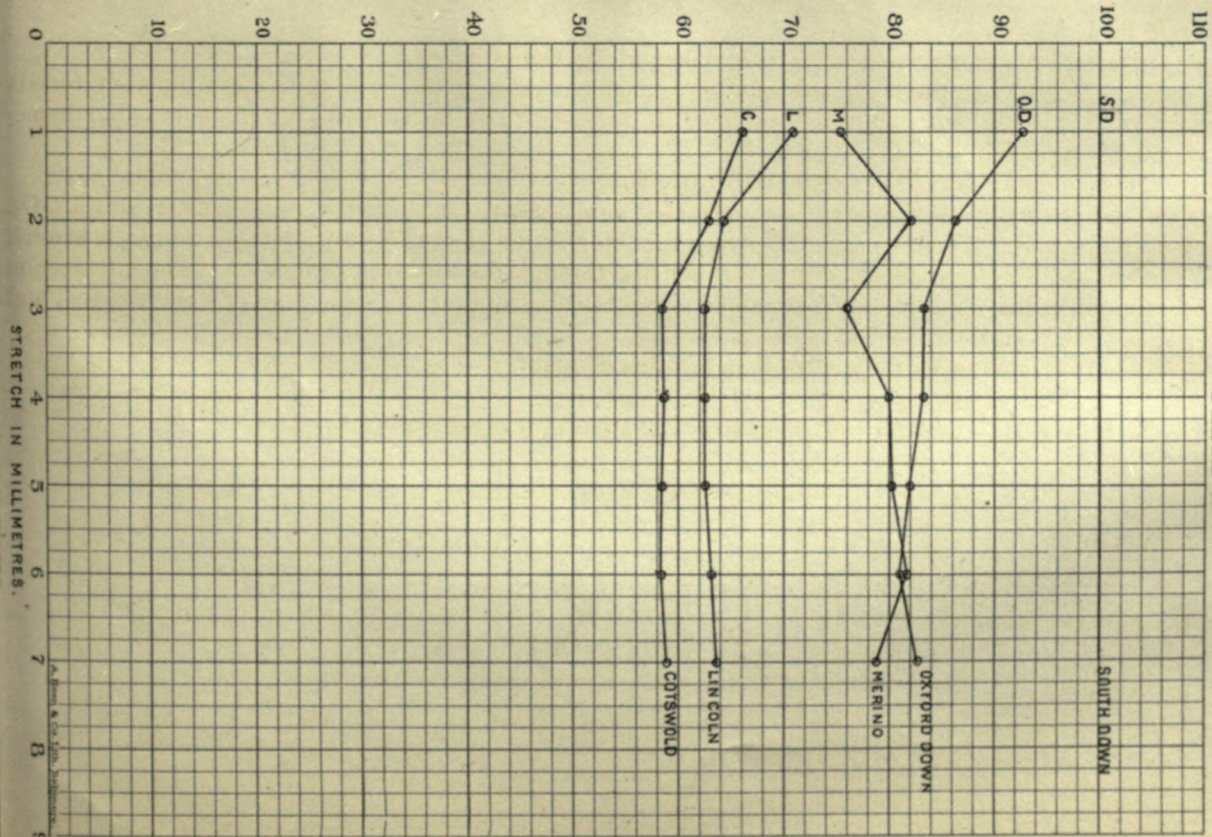
RELATIVE RESISTANCE TO PERMANENT STRETCH OF DIFFERENT BREEDS.

PLATE 5.



RELATIVE RESISTANCE TO TOTAL STRETCH FOR DIFFERENT BREEDS.

PLATE 6.







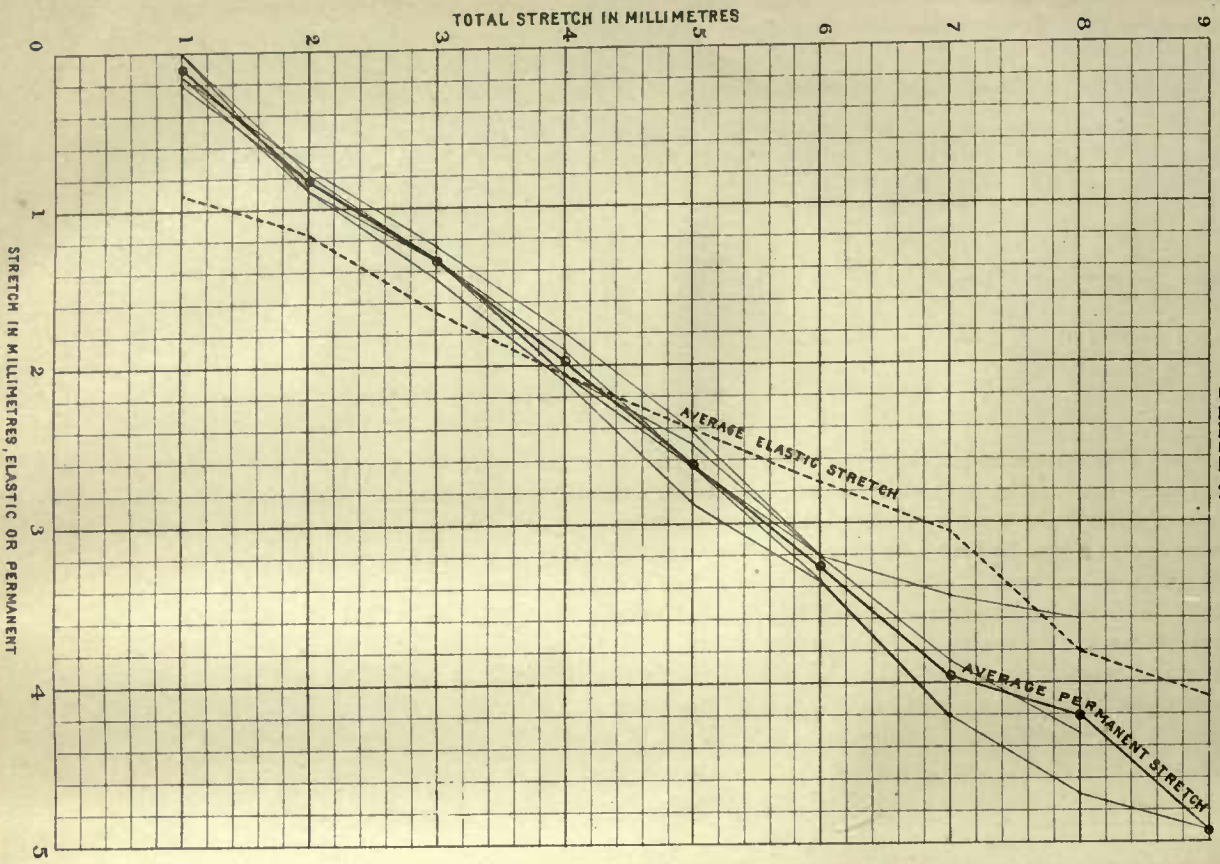






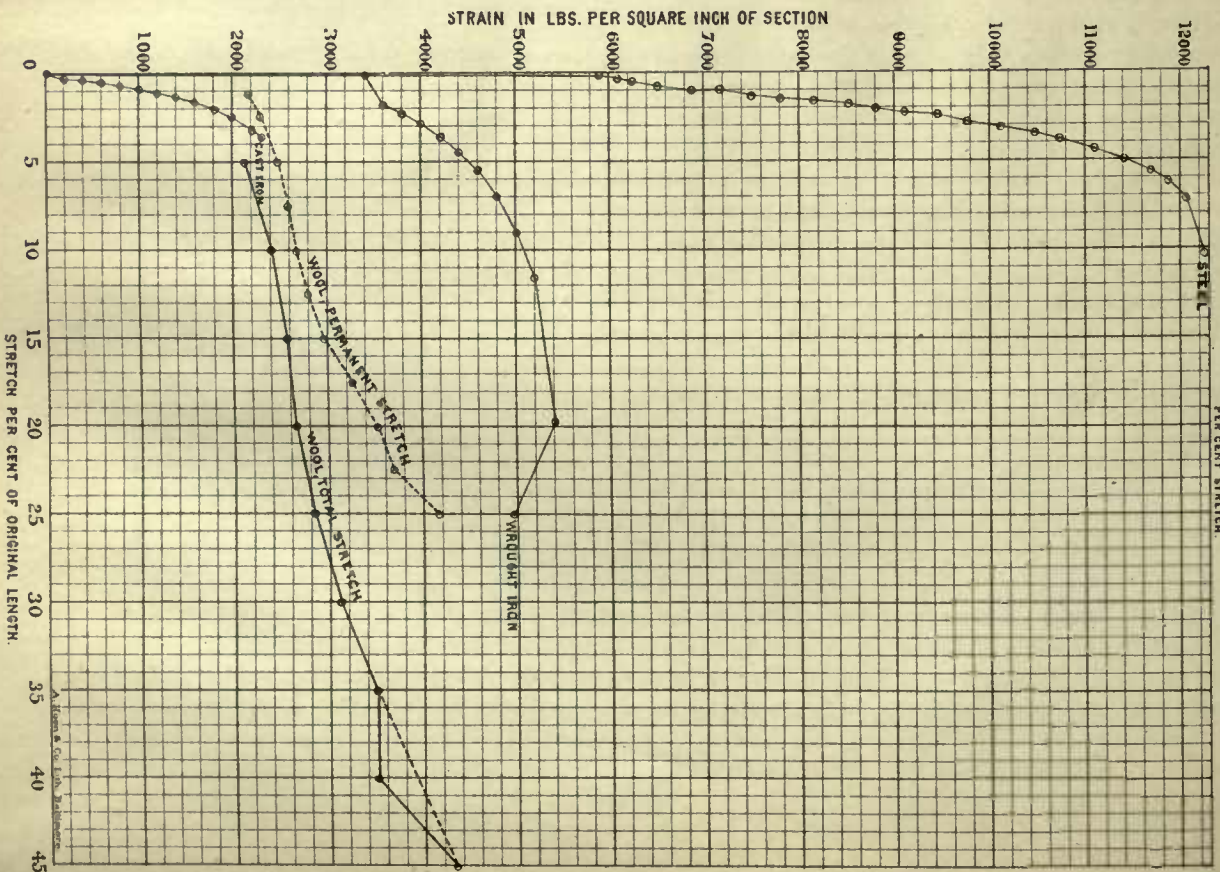
RELATIVE TOTAL, PERMANENT AND ELASTIC STRETCH.

PLATE 7.



COMPARATIVE TENACITY OF WOOL, IRON AND STEEL.

PLATE 8.





(2) *Elastic stretch corresponding to any total stretch.*—This evidently equals the difference of the total and permanent stretch just found. These differences form the following table:

TABLE 12.—*Relative total and elastic stretch for equal total elongations.*

	ELASTIC STRETCH OF FIBERS IN MILLIMETERS.									Breed.
	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	
Elastic stretch of fibers in millimeters.	0.85	1.12	1.55	1.90	2.12	2.65	2.80	.....	.....	Southdown. Oxforddown. Merino. Lincoln. Cotswold.
	1.00	1.10	1.65	2.10	2.37	2.65	2.80	3.30	4.10	
	1.00	1.20	1.63	1.95	2.37	2.80	3.65	4.40	.....	
	0.80	1.17	1.67	1.95	2.50	2.80	3.17	3.70	.....	
	0.85	1.25	1.75	2.20	2.60	2.80	2.95	.....	.....	
Average elastic stretch in millimeters for the five breeds.....	0.90	1.17	1.65	2.05	2.30	2.74	3.05	3.80	4.10	

These values are also represented graphically in Plate VII. A scale of total elongations in millimeters is laid off along the vertical side of the table, with a similar scale of permanent and elastic elongations along its top and bottom. Points are then easily found by means of the data given in Tables 11 and 12, and being connected by right lines, a broken line is obtained for each breed, as shown by the full lines. By averaging the values, as in the tables, the average value is obtained for wool, indicated by a heavy, full line for permanent stretch, and by a heavy, full line for elastic stretch. To avoid confusion of lines, the lines of elastic stretch for the different breeds are omitted.

This diagram shows the following facts:

1. The permanent stretch increases nearly as fast as the total stretch.
2. The elastic stretch increases about half as fast as the total.
3. Consequently, the elastic stretch only changes about half as rapidly as the permanent stretch.
4. The permanent and elastic stretch are equal, as an average, when the total stretch equals about 4.3 millimeters, or 21.5 per cent. of the original length of the fiber.

II.—COMPARATIVE TENSILE STRENGTH OF WOOL, WROUGHT IRON, CAST IRON, AND STEEL.

To render this comparison more readily intelligible, it becomes necessary to change the average tensile strains in grams, on fibers of wool 4 centimillimeters in diameter, to corresponding strains in pounds per square inch of section of fiber.

The common diameter of fiber = 4 centimillimeters.

Its area of right cross-section = 12.5664 square centimillimeters.

One gram on a fiber having this area of cross-section corresponds to 10,000 grams ÷ 12.5664 per square millimeters of section, = 10 kilograms ÷ 12.5664 = .795773 kilogram per square millimeter of section of fiber.

One kilogram per square millimeter of section corresponds to 1422.308 pounds per square inch of section. (Thurston, Mat. Eng., I, 308.)

Consequently, one gram tensile strain on a fiber 4 centimillimeters in diameter exactly equals a strain of .795773 × 1422.308 = 1131.834 pounds per square inch of section.

Therefore, if the general average tensile strains for wool, already found, be multiplied by this coefficient, we shall obtain their corresponding values in pounds per square inch. As this multiplier is constant, it does not affect the relative values of the different kinds of wool at all.

The results of this multiplication are found in the following table:

TABLE 13.—*Relative resistance and stretch of wool.*

Permanent stretch in millimeters.....	0.25	0.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00
Resistance in pounds per square inch.....	21.720	22.650	24.527	25.805	26.677	27.911	29.416	32.439	35.065	36.524	41.800
Total stretch in millimeters.....	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	.....	.....
Resistance in pounds per square inch.....	21.233	24.018	25.465	26.723	28.285	31.024	34.736	34.804	43.157	.....	.....

Since the original length of each fiber tested was 20 millimeters, if the stretch be multiplied by 5, we may obtain its expression in per cents of the original length, which is more convenient for comparison.

The average values for wool, given in Table XIII, are next compared with corresponding values obtained for wrought iron, cast iron, and steel, by experiments made by the United States Testing Board, published in Thurston's Materials of Engineering, Vol. II, pp. 351, 352, 398.

This comparison is made graphically on Plate VIII.



The line of permanent stretch for wool is broken, that of total stretch being a heavy full line. Since the lines of permanent stretch or set for the metals correspond very nearly with those for total stretch, they are here omitted for the sake of clearness.

A scale of strains, expressed in pounds per square inch, forms the vertical sides of the plate, while its top and bottom are scales of stretches in per cents of the original length of the piece.

This diagram exhibits the following facts:

1. That the curve of the total stretch for wool is of about the same inclination as that for wrought iron, but it is concave upward, the latter being convex.
2. The tensile strain for wool is about one-half that required to produce the same per cent. of total stretch in a wrought-iron bar of equal cross-section.
3. A permanent set commences in wool at about 59 per cent. of the amount of strain required to originate a set in a wrought-iron bar, or at about 37 per cent. of the ultimate tenacity of wrought iron of good quality.
4. For steel, the corresponding value is 34 per cent.
5. The ultimate average tenacity of wool appears to be nearly double that of average cast iron of equal cross-section, about four-fifths that of good wrought iron, and a little more than one-third that of good steel.
6. The maximum stretch of wool is much greater than that of either metal, being 1.75 times that of wrought iron, 12.8 times that of cast iron, and 4.5 times that of steel.
7. The permanent stretch or set of wool appears to commence only when the total stretch equals nearly 5 per cent. of the original length of the fibers, which is at least ten times greater than the corresponding value for either metal.
8. The curve for wool most nearly approximates that for wrought iron, but is plainly an ogee curve, while those for the metals are merely concave.
9. Wool has more than twice the strength of the toughest wood, 1½ times that of bone, 4 times that of white pine, 2.7 times that of ivory, 5.6 times that of whalebone, and nearly as much as soft brass wire, phosphor bronze, annealed iron wire, or steel-wire rope.

## I.—COMPARATIVE MODULI OF ELASTICITY OF WOOL FOR THE FIVE BREEDS.

### (1) FORMULA FOR MODULUS OF ELASTICITY OF WOOL.

The term "modulus of elasticity," much employed in the discussion of the resistance of materials, may be defined in either of two ways.

(a) It is the ratio between the elongation of a bar of any material (whose section is a square unit and its length a linear unit of similar denomination) and the tensile strain producing that elongation; its numerical value equaling the quotient of the strain by the elongation. The length of the bar is usually an inch, its section a square inch, and the strain is taken in pounds.

(b) It is the tensile strain in pounds which would theoretically stretch a bar of one square inch section, to just twice its original length, neglecting the reduction of section which occurs.

The definition first given is that most frequently employed and is the one here intended.

Let  $E$  = the required modulus of elasticity.

Let  $S$  = tensile strain on a fiber of wool 4 centimillimeters in diameter, in grams.

Then  $1131.834 S$  = strain on fiber in pounds per square inch.

Let  $e$  = corresponding total elongation in millimeters.

Since the length of fiber tested = 20 millimeters, we have  $5e$  = per cent. stretch, placing original length of fiber = 100. Consequently

$$E = \frac{1131.834 S}{\frac{5e}{100}} = 22637 \frac{S}{e}$$

which is the required formula.

Applying this formula to the average strains corresponding to the different elongations of fiber for wool of different breeds, as given in Table IX, total stretch, we obtain the values of the modulus of elasticity given in the following table, and which are also graphically represented on Plate IX.

Since the numerical value of the modulus evidently increases directly as the amount of strain required to produce a certain elongation of the fiber, it follows that the most resistant fibers will have the greater modulus.

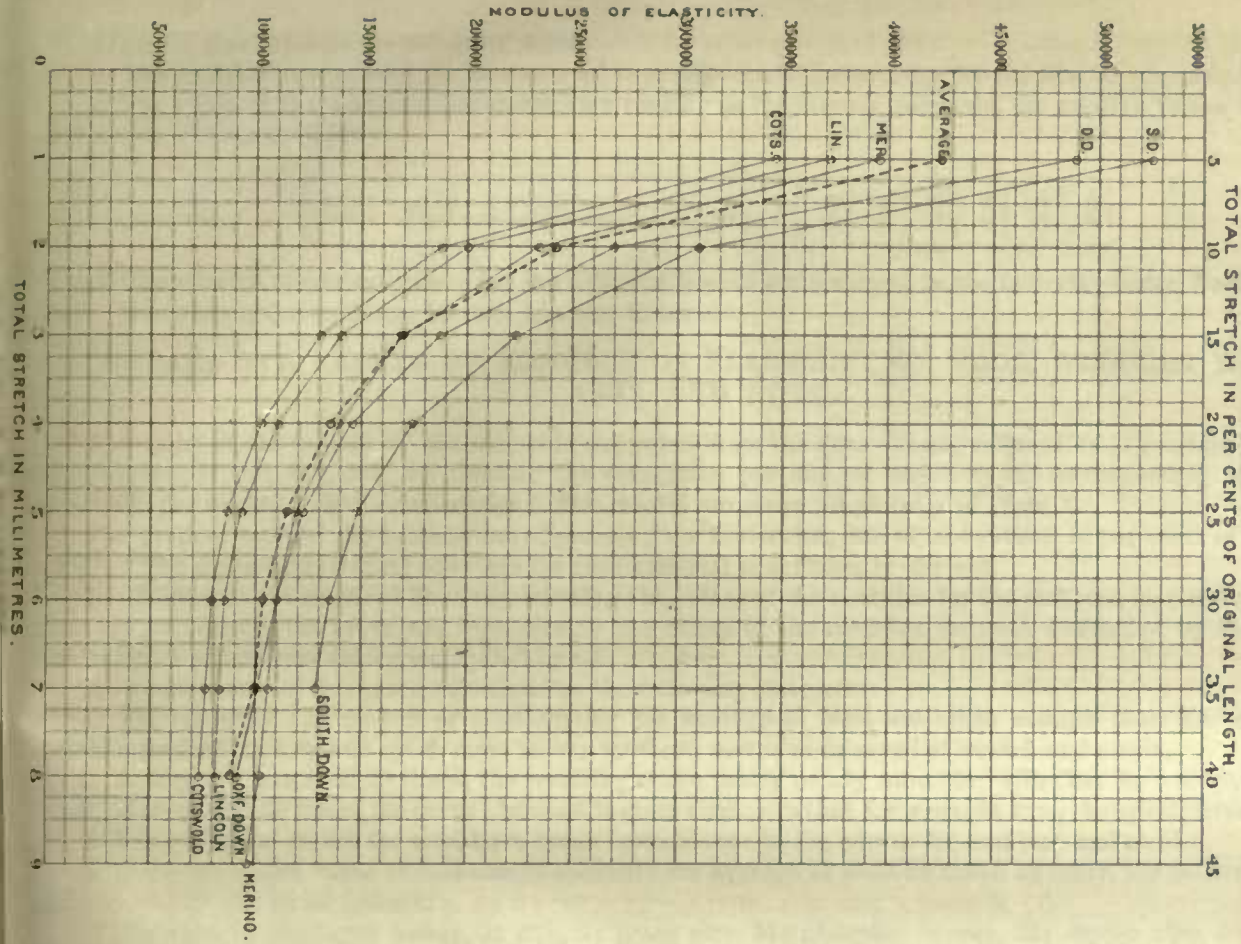
Consequently, the lines representing the values of the moduli of elasticity for the different breeds, under different elongations, will be arranged in the same order, as are the lines on Plate IV, representing the same breeds. A comparison of Plates IV and IX makes this evident.

The heavy dotted line indicates the average value of the modulus for all five breeds, under different amounts of stretch.



COMPARATIVE MODULI OF ELASTICITY FOR DIFFERENT BREEDS.

PLATE 9.



COMPARATIVE MODULI OF ELASTICITY OF WOOL, IRON AND STEEL.

PLATE 10.

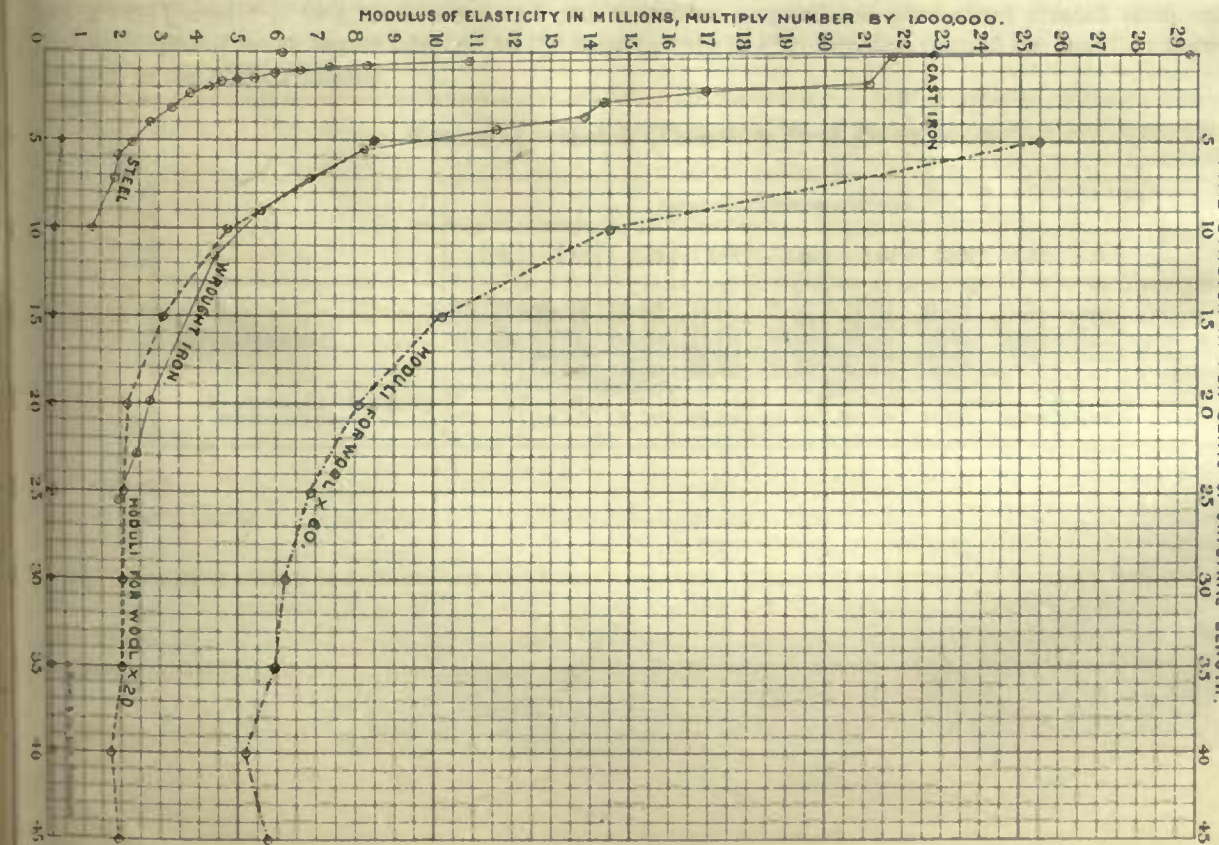








Plate IX also exhibits the following facts:

1. The modulus of elasticity for Merino wool is pretty nearly the average for the five breeds considered.
2. The value of the modulus diminishes very rapidly as the stretch increases, the relative values for the general average being as follows:

Stretch in per cent. of original length.....	5	10	15	20	25	30	35	40
Relative value of modulus of elasticity.....	100	57	40	32	27	24	24	21

3. The relative numerical values for the different breeds are arranged in the following order, from greatest to least: Southdown, Oxforddown, Merino, Lincoln, Cotswold.

#### J.—COMPARATIVE VALUES OF MODULUS OF ELASTICITY OF WOOL, WROUGHT IRON, CAST IRON, AND STEEL.

The value of the moduli for the metals is computed from the data already referred to (Thurston, Materials of Engineering, II, 351, 352, 398), by dividing the elongation per inch of length by the corresponding tensile strain in pounds per square inch of cross-section. The results are given graphically in Plate X.

The vertical scale of the table is one of pounds; the horizontal, one of elongations in per cents of the original length. The manner of plotting the lines for each material is sufficiently obvious.

In addition to the required lines representing the values of the modulus for the different materials, two dotted lines are also drawn, the lower one representing the values of the modulus for wool multiplied by 20; the upper line exhibiting the same values multiplied by 60.

An examination of this plate substantiates the following statements:

1. The values of the moduli of elasticity for the average of wool are much smaller than for either of the metals examined, but remain much more nearly uniform, under an increase of stretch and strain.
2. If they are increased 20 times, the resulting curve pretty nearly coincides with that for wrought iron.
3. If increased 60 times, the curve obtained is quite similar to that for wrought iron, though differently located.
4. None of these curves for wool have much resemblance to the curves for cast iron and steel.
5. If the maximum value of modulus of elasticity for average of wool be taken as unity, the relative values for other materials will be as follows:

White pine, 4; strongest woods, 5; silk, 3; brass wire, 34; phosphor bronze, 33; copper wire, 40; cast iron, average, 37; wrought iron, average, 59; steel, average, 67.

This relatively low value of the modulus of elasticity for wool does not affect its actual tensile strength, as it results from the much greater stretch produced in wool by the same strain than in almost any other material, but it only permits it to stretch more and with a smaller proportional permanent stretch than other materials, thus rendering it much better adapted to the manufacture of clothing, &c., than if the modulus were several times greater, or the stretch smaller.

TABLE 14.—Moduli of elasticity for different breeds.

	TOTAL STRETCH IN MILLIMETERS.									Breed.
	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	
Moduli of elasticity.....	372,374	200,335	139,367	108,826	92,131	84,774	81,636	81,251	.....	Lincoln. Oxforddown. Cotswold. Merino. Southdown.
	468,659	269,269	180,149	144,592	121,106	103,250	105,910	101,780	95,704	
	545,662	186,753	130,236	101,865	88,155	73,700	75,801	73,843	.....	
	895,237	233,950	169,775	138,819	118,010	109,480	100,992	95,537	.....	
	523,813	310,502	223,349	173,850	147,637	134,454	128,512	.....	.....	
Average moduli of elasticity for the five breeds.....	424,755	240,221	169,735	133,590	113,529	103,333	98,586	88,003	95,704	



MISCELLANEOUS EXAMINATIONS.

TABLE XXXIV.—Results of measurements of fineness of Merino wools, submitted by Mr. Samuel Archer, Saint Louis, Mo.

Catalogue number of sample	347.			348.			349. TOP OF WRINKLE.			349. BETWEEN WRINKLES.			350.			351.		
Length of fiber in crimp .....	3½.			3½.			2½.			3¼.			2½.			3.		
Number of crimps per inch ....	16.			16.			14.			20.			20.			20.		
Number of section .....	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.
Actual measurement in centimillimeters.	1.75	1.75	2.25	1.75	2.00	1.75	2.50	2.625	2.25	2.375	3.00	2.00	2.75	1.75	2.125	1.50	1.625	1.375
	1.50	2.00	3.00	1.75	3.00	1.75	1.75	2.50	2.50	1.75	1.875	3.00	2.25	2.125	2.875	2.00	1.25	2.00
	1.125	2.50	2.00	1.875	1.75	2.00	2.00	2.50	5.00	1.50	2.00	1.75	2.25	1.75	2.125	1.75	1.75	1.50
	1.125	2.625	2.25	3.125	3.25	2.25	2.375	2.125	4.25	2.00	1.875	2.50	2.00	2.125	2.125	1.375	1.50	2.00
	1.00	2.25	2.50	2.75	1.625	1.25	2.375	2.375	2.75	1.75	1.875	2.25	2.25	2.25	2.25	1.375	1.75	2.25
	3.125	2.125	1.875	2.00	1.75	1.375	2.00	2.25	2.50	1.625	2.25	3.125	2.50	2.25	2.50	1.375	1.75	1.75
	1.625	1.625	2.00	2.25	2.125	2.25	2.25	2.375	2.625	1.625	1.75	2.375	2.00	1.75	2.375	1.50	1.75	1.75
	1.00	2.00	1.50	1.625	2.75	2.125	2.00	2.50	2.875	1.75	1.75	2.25	2.625	2.00	2.00	1.625	1.625	2.375
	1.50	1.50	2.25	1.625	2.75	1.75	1.875	2.875	2.50	2.00	1.875	2.00	2.25	2.00	2.00	1.75	1.75	2.25
	2.00	2.00	1.625	1.75	2.00	1.625	2.00	2.25	2.75	2.25	1.75	3.25	2.375	2.00	2.00	1.25	1.50	1.50
	2.50	1.75	1.50	1.50	2.125	1.75	3.50	2.00	3.375	2.00	2.25	2.50	2.00	2.00	2.25	1.25	1.50	1.25
	1.25	1.75	1.50	2.00	2.00	2.125	2.25	2.25	3.00	2.375	2.50	3.25	2.50	2.25	2.00	2.25	2.00	1.625
	0.75	1.50	2.25	2.75	2.25	1.50	2.00	2.375	2.375	1.50	1.75	1.75	2.50	2.125	3.125	1.50	1.75	1.875
	2.125	1.125	2.00	1.75	1.875	1.50	1.75	2.50	2.375	1.875	1.75	2.00	2.50	2.125	2.00	1.375	1.375	1.375
	2.25	2.25	1.50	2.00	1.75	1.75	2.625	3.25	2.75	2.00	2.25	2.375	2.25	2.25	2.00	2.25	2.00	1.25
	1.25	2.00	1.60	2.25	2.25	2.25	3.00	2.00	3.50	1.75	1.875	2.25	2.25	2.00	2.00	1.75	1.375	1.50
	2.125	2.125	2.125	2.75	2.625	1.50	2.00	2.50	2.50	2.25	2.25	2.25	2.125	1.75	2.50	1.25	1.50	1.25
	1.25	2.25	2.25	1.60	2.50	1.75	2.125	3.75	2.75	2.00	2.125	2.25	2.25	2.25	2.00	1.50	1.50	1.50
	2.375	1.25	2.00	1.625	1.50	1.75	2.50	1.75	2.25	2.00	1.875	2.25	2.25	2.25	2.25	1.25	1.50	1.375
	2.00	1.625	1.625	1.75	1.75	2.25	2.125	2.25	2.25	2.125	1.75	2.25	2.25	2.00	2.50	2.75	1.50	1.375
2.875	3.00	1.75	1.75	2.25	2.00	2.25	2.375	3.25	1.875	2.00	2.125	2.25	2.375	2.375	1.75	1.25	1.625	
1.375	2.50	1.75	2.25	2.00	2.25	1.875	3.00	3.875	1.75	1.50	2.00	2.50	1.875	2.00	1.75	1.375	2.25	
2.00	3.875	1.625	1.875	1.875	1.375	3.00	2.375	3.75	2.00	2.125	2.50	2.375	1.75	2.50	1.375	2.00	1.75	
2.125	2.00	1.875	1.875	1.875	1.50	2.75	2.50	3.375	2.00	2.00	2.25	2.25	2.25	2.25	2.00	2.00	2.00	
1.875	1.00	2.75	2.50	2.00	1.50	2.25	1.75	2.875	1.875	2.25	2.25	2.25	2.375	2.50	1.875	1.75	1.50	
2.25	1.125	1.625	1.75	2.25	1.75	2.50	2.50	2.75	2.75	2.50	2.00	3.00	2.00	2.75	2.25	1.75	1.75	
2.75	1.50	1.875	2.50	1.875	2.25	2.125	1.625	3.50	2.125	1.75	2.00	2.25	1.75	2.25	1.75	2.00	1.25	
1.50	3.00	2.50	2.00	1.625	1.875	2.50	2.00	3.125	2.00	2.50	2.75	2.125	1.875	2.00	1.75	1.75	1.25	
1.125	1.625	1.625	1.625	1.75	1.75	2.00	3.75	2.75	1.50	2.00	2.00	2.00	2.50	2.625	1.50	1.50	1.75	
1.50	1.375	1.50	1.75	1.875	1.625	2.50	1.875	2.25	1.75	2.25	2.125	2.50	2.00	2.50	1.375	1.25	1.75	
Averages .....	1.766	1.95	1.945	2.008	2.10	1.804	2.308	2.433	2.945	1.929	2.093	2.32	2.337	2.045	2.291	1.641	1.629	1.695

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.						
Maximum measurements.	B¹	3.125	1.2308	B¹	3.125	1.2303	B¹	3.50	1.3779	B¹	2.50	0.9842	B¹	3.00	1.1811	B¹	2.25	0.8862
	B²	3.375	1.3287	B²	3.25	1.2795	B²	3.75	1.4763	B²	3.00	1.1811	B²	2.50	0.9842	B²	2.00	0.7874
	B³	3.00	1.1811	B³	2.25	0.8862	B³	5.00	1.9685	B³	3.25	1.2795	B³	3.125	1.2303	B³	2.375	0.9350
Highest .....		3.375	1.3287		3.25	1.2795		5.00	1.9685		3.25	1.2795		3.125	1.2303		2.375	0.9350
Minimum measurements.	B¹	0.75	0.2953	B¹	1.50	0.5905	B¹	1.75	0.6889	B¹	1.50	0.5905	B¹	2.00	0.7874	B¹	1.25	0.4921
	B²	1.00	0.3937	B²	1.50	0.5905	B²	1.625	0.6397	B²	1.50	0.5905	B²	1.75	0.6889	B²	1.25	0.4921
	B³	1.50	0.5905	B³	1.25	0.4921	B³	2.00	0.7874	B³	1.75	0.6889	B³	2.00	0.7874	B³	1.25	0.4921
Lowest .....		0.75	0.2953		1.25	0.4921		1.625	0.6397		1.50	0.5905		1.75	0.6889		1.25	0.4921
Average measurements.	B¹	1.766	0.6952	B¹	2.008	0.7905	B¹	2.308	0.9086	B¹	1.929	0.7594	B¹	2.337	0.9200	B¹	1.641	0.6460
	B²	1.95	0.7677	B²	2.10	0.7913	B²	2.433	0.9578	B²	2.093	0.8003	B²	2.045	0.8051	B²	1.629	0.6413
	B³	1.945	0.7657	B³	1.804	0.7102	B³	2.945	1.1564	B³	2.32	0.9133	B³	2.291	0.9019	B³	1.695	0.6673
Average .....		1.887	0.7429		1.971	0.7759		2.562	1.0086		2.094	0.8244		2.224	0.8755		1.655	0.6515
Measurements above average .....		43			40			32			40			51			42	
Measurements below average .....		47			50			58			50			39			48	



TABLE XXXIV.—Results of measurements of fineness of Merino wools, &c.—Continued.

Catalogue number of samples..	352.			353.			354.			355.			356.			357.		
Length of fiber in crimp .....	2½ inches.			2½ inches.			2½ inches.			2½ inches.			2½ inches.			2½ inches.		
Number of crimps per inch....	20.			20.			22.			20.			20.			20.		
Number of section.....	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.
Actual measurement in centimillimeters.	1.50	2.00	1.75	1.75	1.75	2.125	1.50	2.50	1.75	2.00	2.50	2.875	2.00	2.375	2.50	1.75	2.75	2.00
	1.75	1.50	1.50	1.50	2.50	2.25	1.50	1.50	2.00	1.75	1.50	2.125	2.50	2.25	1.025	1.75	1.875	1.75
	2.25	1.875	3.25	1.75	1.875	1.625	1.50	2.75	2.25	2.00	2.125	2.00	2.25	2.25	1.875	1.875	2.125	2.25
	1.875	1.375	1.75	1.75	1.875	1.625	1.50	2.75	1.875	2.50	1.75	2.00	2.25	2.50	1.75	1.75	2.25	2.75
	2.00	1.75	2.00	1.625	1.625	2.00	1.50	1.75	1.75	1.75	1.50	1.875	2.50	2.375	2.25	2.375	2.50	1.50
	2.00	1.75	2.00	1.75	2.00	1.75	1.875	1.50	1.50	2.25	2.25	2.50	1.75	1.875	2.00	3.25	2.25	2.00
	1.75	2.00	1.625	2.00	2.75	2.00	1.50	1.625	1.875	2.625	2.00	2.00	2.75	3.50	2.125	1.25	2.50	1.50
	2.00	1.875	1.50	1.75	1.875	1.875	1.50	2.00	1.75	3.00	2.50	2.50	2.50	2.25	1.875	1.50	2.50	1.75
	2.25	1.75	1.375	1.875	1.75	1.50	1.625	1.75	2.00	2.00	1.50	3.00	2.00	2.75	2.00	1.875	2.50	2.50
	1.75	1.50	2.00	2.00	1.50	1.75	1.75	2.00	1.50	3.00	2.50	2.875	2.00	2.25	1.875	1.50	1.875	1.75
	2.00	1.75	1.50	1.625	1.75	1.75	1.25	2.50	1.625	1.625	1.875	2.50	2.50	2.625	1.75	2.125	2.25	1.75
	2.00	1.875	1.75	1.75	1.50	1.875	1.50	1.75	1.75	2.75	1.75	2.25	2.50	2.125	1.875	1.50	2.25	1.50
	1.75	1.60	1.75	2.25	1.875	1.75	2.50	2.25	1.75	1.75	1.75	1.75	2.50	2.50	2.50	1.25	1.75	1.50
	2.00	1.75	2.00	2.25	1.75	2.125	1.25	2.25	1.75	2.75	1.50	2.50	2.875	4.50	1.75	1.875	1.875	1.50
	2.25	2.00	1.25	1.75	2.00	1.875	1.50	2.00	1.50	2.375	2.25	2.125	2.25	2.00	2.00	2.25	2.25	1.75
	1.625	1.50	1.50	1.625	1.875	1.875	1.50	1.875	2.00	2.125	2.25	2.00	2.50	1.625	1.875	1.625	1.875	1.75
	1.75	1.625	1.75	1.875	1.50	2.00	1.875	2.875	3.25	1.875	1.625	1.75	2.00	2.25	1.875	1.125	2.00	1.875
	2.50	1.625	2.00	2.75	2.125	2.00	1.50	2.00	2.00	1.875	2.50	2.50	2.00	1.75	1.75	1.125	2.00	1.75
	1.75	2.25	1.60	1.75	2.875	1.75	1.50	2.00	2.00	1.75	1.75	2.875	2.00	1.75	3.50	1.375	1.625	1.50
	1.75	2.00	2.00	2.25	1.50	1.75	1.375	3.25	1.625	1.875	2.00	2.60	1.75	2.00	2.50	1.50	1.75	2.00
	1.875	1.75	1.875	1.625	1.75	2.00	2.25	1.25	1.75	2.125	2.00	2.25	2.00	2.00	2.25	1.50	2.25	2.25
	2.00	1.75	1.50	1.625	1.875	2.00	1.25	1.875	2.00	1.50	2.00	2.875	2.25	2.125	1.875	2.00	3.00	1.875
	2.25	1.875	1.75	2.00	1.50	1.50	2.75	2.00	2.25	2.00	1.875	2.00	2.50	1.75	2.00	1.50	2.00	1.625
	1.875	1.50	1.75	2.00	2.75	1.375	1.875	1.75	2.00	2.00	2.00	2.25	2.25	2.25	2.00	1.25	2.00	3.50
	1.875	2.125	1.875	2.50	1.50	1.75	1.75	1.75	1.50	2.00	2.25	2.50	1.875	2.50	1.875	1.875	1.875	2.00
1.875	1.875	2.50	1.875	1.50	2.00	1.75	1.50	2.625	2.50	2.125	2.25	1.625	2.00	2.00	1.25	1.75	1.75	
1.75	1.75	1.875	2.00	2.875	1.50	1.50	2.625	2.00	1.75	2.625	2.75	2.50	1.625	2.125	1.125	1.875	1.50	
1.50	1.75	2.125	1.625	1.875	2.50	1.875	1.75	2.25	2.25	2.50	2.50	1.75	2.50	2.50	1.25	1.625	2.00	
1.25	2.25	2.00	1.50	1.875	1.875	1.125	2.00	1.875	2.00	3.875	3.00	1.875	2.25	2.875	1.50	3.00	1.75	
1.75	2.00	2.75	1.75	1.25	1.625	2.00	1.625	2.00	2.00	2.50	2.00	2.125	2.25	1.75	1.50	2.50	1.75	
Averages .....	1.90	1.787	1.868	1.887	1.883	1.833	1.012	2.016	1.941	2.137	2.058	2.295	2.237	2.30	2.05	1.620	2.154	1.887

Recapitulation and reduction:	352.			353.			354.			355.			356.			357.		
	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Maximum measurements.	B¹	2.50	0.9842	B¹	2.75	1.0626	B¹	2.75	1.0626	B¹	3.00	1.1811	B¹	3.00	1.1811	B¹	3.25	1.2795
	B²	2.25	0.8862	B²	2.875	1.1318	B²	3.25	1.2795	B²	3.875	1.3287	B²	4.50	1.7716	B²	3.00	1.1811
	B³	3.25	1.2795	B³	2.50	0.9842	B³	2.25	0.8862	B³	3.00	1.1811	B³	3.50	1.3779	B³	3.50	1.3779
Highest .....		3.25	1.2795		2.875	1.1318		3.25	1.2795		3.375	1.3287		4.50	1.7716		3.50	1.3779
Minimum measurements.	B¹	1.25	0.4921	B¹	1.50	0.5905	B¹	1.125	0.4429	B¹	1.50	0.5905	B¹	1.625	0.6397	B¹	1.125	0.4429
	B²	1.875	0.5413	B²	1.25	0.4921	B²	1.25	0.4921	B²	1.50	0.5905	B²	1.625	0.6397	B²	1.625	0.6397
	B³	1.25	0.4921	B³	1.875	0.5413	B³	1.50	0.5905	B³	1.75	0.6889	B³	1.875	0.5413	B³	1.50	0.5905
Lowest .....		1.25	0.4921		1.25	0.4921		1.125	0.4429		1.50	0.5905		1.375	0.5413		1.125	0.4429
Average measurements.	B¹	1.90	0.7480	B¹	1.887	0.7429	B¹	1.612	0.6340	B¹	2.137	0.8413	B¹	2.237	0.8807	B¹	1.620	0.6413
	B²	1.787	0.7035	B²	1.883	0.7413	B²	2.016	0.7936	B²	2.058	0.8102	B²	2.30	0.9055	B²	2.154	0.8480
	B³	1.858	0.7314	B³	1.833	0.7216	B³	1.941	0.7641	B³	2.295	0.9035	B³	2.05	0.8070	B³	1.887	0.7429
Averages .....		1.848	0.7275		1.867	0.7350		1.856	0.7307		2.163	0.8515		2.195	0.8641		1.890	0.7440
Measurements above average.		43			43			41			40			42			34	
Measurements below average.		47			47			49			50			48			56	



TABLE XXXIV.—Results of measurements of fineness of Merino wools, &c.—Continued.

Catalogue number of samples.....	358.			359.			360.			361.		
	2½ inches.			2½ inches.			2½ inches.			2½ inches.		
Length of fiber in crimp.....	20.			20.			20.			20.		
Number of crimps per inch.....	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.
Number of section.....												
Actual measurement in centimillimeters.	1.875	2.50	2.00	1.75	1.875	1.875	2.50	2.00	1.50	1.75	1.75	2.375
	2.00	1.75	2.50	2.00	1.50	1.875	1.875	2.75	2.375	1.875	1.375	1.50
	2.00	1.50	2.00	2.00	1.50	2.125	2.50	2.25	1.875	1.125	2.25	1.875
	1.875	2.00	2.25	1.75	1.75	1.75	2.375	2.00	2.00	1.75	1.875	2.00
	2.125	2.75	2.375	1.75	2.00	2.50	2.50	2.75	2.50	1.50	2.60	2.00
	2.00	2.25	2.50	1.50	1.50	2.00	2.375	2.25	2.00	1.625	2.875	2.125
	1.875	1.75	2.00	1.75	1.875	1.875	2.25	2.50	1.75	2.00	1.50	2.00
	1.50	1.625	2.25	2.25	2.00	1.50	3.00	2.00	2.00	1.625	1.75	2.375
	1.75	1.75	1.875	2.25	1.375	2.50	2.75	1.625	2.50	2.00	1.625	1.75
	2.50	1.875	2.50	2.50	1.625	2.50	2.00	3.00	2.875	1.50	1.625	1.625
	2.625	2.50	2.75	1.75	1.50	1.75	2.00	2.00	1.50	1.75	1.75	2.50
	2.25	2.25	2.375	1.875	1.625	1.75	3.25	1.875	2.00	1.75	2.25	1.75
	2.25	2.00	2.125	2.00	2.25	1.50	2.25	2.50	1.75	1.75	1.75	1.50
	1.75	1.75	1.625	1.50	2.25	2.25	2.25	2.125	1.875	2.75	1.50	1.625
	2.00	1.75	2.00	1.75	2.50	2.375	2.50	2.50	2.50	1.875	1.625	2.00
	2.75	1.25	2.00	2.25	2.00	1.875	2.875	2.00	2.25	1.50	2.125	1.875
	1.75	1.625	2.125	1.50	1.50	2.00	1.875	2.25	3.25	2.00	1.50	1.75
	1.75	2.00	2.25	1.75	2.00	2.25	1.75	2.00	2.25	2.00	2.00	2.00
	2.125	2.00	2.25	2.00	1.50	2.375	2.25	2.125	3.25	1.75	1.875	1.75
	2.625	1.50	2.50	1.75	1.25	2.125	2.25	2.00	2.25	1.50	1.625	2.00
2.25	1.50	1.875	1.75	2.50	2.25	2.75	2.50	1.875	2.00	1.625	2.00	
1.875	1.75	2.00	1.375	1.625	1.75	2.25	1.50	3.00	1.75	2.00	2.375	
2.00	1.75	3.25	2.75	1.75	1.75	1.75	2.50	2.50	1.50	1.60	2.00	
2.00	1.75	1.25	2.00	1.375	2.00	2.50	2.50	1.75	1.75	1.75	2.00	
2.00	1.75	1.875	1.875	2.00	1.50	2.00	2.375	2.25	2.125	1.75	1.75	
1.625	1.75	2.75	1.50	1.75	2.50	2.00	2.75	2.125	1.75	1.75	1.875	
2.25	2.00	1.875	1.75	1.75	2.50	2.50	2.25	3.00	2.00	2.00	2.50	
1.875	1.75	2.25	1.50	2.00	2.25	1.75	2.75	2.00	1.75	1.25	2.50	
1.625	2.00	3.00	1.75	1.75	1.75	2.125	2.00	2.50	1.875	2.25	2.625	
2.00	1.75	1.875	1.75	1.50	1.75	2.125	2.75	2.25	2.00	1.875	2.125	
Averages.....	2.02	1.879	2.20	1.845	1.754	2.825	2.270	2.270	2.25	1.820	1.820	2.004

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:												
Maximum measurements.....	B¹ B² B³	2.75 2.75 2.25	1.0820 1.0820 1.2795	B¹ B² B³	2.75 2.50 2.60	1.0820 0.9842 0.9842	B¹ B² B³	3.25 3.00 3.25	1.2795 1.1811 1.2795	B¹ B² B³	2.75 2.875 2.625	1.0820 1.1318 1.0334
Highest.....		3.25	1.2795		2.75	1.0820		3.25	1.2795		2.875	1.1318
Minimum measurements.....	B¹ B² B³	1.50 1.25 1.25	0.5905 0.4921 0.4921	B¹ B² B³	1.375 1.25 1.50	0.5413 0.4921 0.5905	B¹ B² B³	1.75 1.50 1.50	0.6889 0.5905 0.5905	B¹ B² B³	1.125 1.25 1.50	0.4429 0.4921 0.5905
Lowest.....		1.25	0.4921		1.25	0.4921		1.50	0.5905		1.125	0.4429
Average measurements.....	B¹ B² B³	2.02 1.879 2.20	0.7952 0.7397 0.8061	B¹ B² B³	1.845 1.754 2.025	0.7263 0.6905 0.7972	B¹ B² B³	2.270 2.270 2.25	0.8936 0.8930 0.8858	B¹ B² B³	1.820 1.820 2.004	0.7165 0.7165 0.7889
Averages.....		2.033	0.8003		1.874	0.7377		2.263	0.8909		2.215	0.8720
Measurements above average.....		32			43			30			14	
Measurements below average.....		58			47			54			76	



TABLE XXXIV.—Results of tests of strain and stretch of Merino wools submitted by Mr. Samuel Archer, Saint Louis, Mo.

Catalogue number of samples..	317.				348.				349. TOP OF WRINKLE.				340. BETWEEN WRINKLE.				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	5.75	3.25	11.75	1.25	7.00	2.75	7.50	5.00	21.00	7.00	11.50	3.25	7.00	2.25	10.00	6.25	
	2.75	2.75	7.50	3.00	4.00	3.00	5.75	3.00	12.50	6.25	17.00	4.50	13.00	7.00	4.00	4.25	
	8.00	1.00	4.75	1.00	3.75	4.75	4.00	3.50	10.50	3.00	11.50	3.75	3.75	2.00	4.00	2.00	
	8.00	3.00	7.75	1.50	2.00	3.25	2.50	3.00	6.25	2.50	14.25	4.50	5.00	5.00	5.00	3.00	
	0.00	2.00	0.00	5.50	0.00	5.50	6.25	6.50	11.25	6.50	11.25	6.00	3.50	6.50	4.00	4.00	
	5.00	2.00	6.50	1.75	7.75	5.25	16.00	6.00	8.75	1.25	7.00	4.50	5.00	4.00	3.50	1.50	
	3.00	2.00	4.50	2.50	10.00	3.75	6.00	4.75	15.50	6.00	6.00	4.75	4.00	3.00	5.00	4.00	
	14.00	7.75	7.25	7.00	5.00	1.00	4.00	6.00	19.25	5.75	6.00	4.50	4.25	8.50	6.00	2.75	
	10.75	5.25	8.75	6.00	3.25	5.50	8.00	6.50	4.25	3.50	12.50	1.75	3.75	3.00	3.00	3.00	
	11.00	7.00	5.00	3.00	4.25	3.75	4.00	7.00	5.50	5.00	13.50	5.75	8.25	6.25	3.75	1.00	
	14.25	8.00	3.75	1.00	4.25	6.25	10.00	6.00	20.00	4.25	6.00	4.00	7.00	6.50	4.00	4.75	
	3.25	1.50	5.25	1.75	6.25	6.00	3.25	4.75	4.00	1.50	15.50	3.50	10.00	6.50	8.25	5.00	
	3.25	1.25	6.50	8.00	7.00	5.50	4.50	5.00	12.00	4.75	8.00	4.00	4.75	6.50	4.00	1.50	
	5.25	4.00	12.50	7.50	11.00	5.50	3.00	3.00	12.50	2.50	12.75	2.50	3.75	3.00	4.00	5.25	
	3.00	1.25	5.00	4.75	5.00	5.00	6.25	7.25	6.00	2.00	10.00	5.50	4.00	3.75	4.00	2.25	
Total .....	103.25	51.00	105.75	55.50	89.50	78.75	91.00	79.75	168.25	57.25	168.50	60.25	00.00	61.25	63.00	51.75	
Recapitulation:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	
Lowest .....	14.25	219.94	8.00	40.00	16.00	246.95	7.25	36.25	21.00	324.13	7.00	35.00	13.00	200.65	7.00	35.00	
Average .....	2.75	42.44	1.00	5.00	2.00	30.67	1.00	5.00	4.00	61.74	1.25	6.25	3.50	54.02	1.50	7.50	
	0.07	107.53	3.05	18.25	6.02	92.93	5.29	26.45	11.23	173.33	3.92	10.60	5.10	78.72	3.86	19.80	
Tests above average .....	13		13		13		15		17		10		10		14		
Tests below average .....	17		17		17		15		13		14		20		16		
Catalogue number of samples:	350.				351.				352.				353.				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	4.25	3.50	3.00	2.75	3.00	4.00	5.50	5.75	5.00	2.50	5.50	7.75	3.75	4.00	4.75	4.25	
	6.00	3.00	5.25	3.00	4.75	4.25	2.75	2.75	5.00	2.50	4.75	6.00	10.00	6.25	5.00	3.00	
	8.00	6.00	5.00	6.00	6.75	6.75	4.25	7.00	4.00	4.25	8.75	5.00	3.00	3.00	4.00	6.00	
	7.00	5.75	12.75	8.00	3.50	5.50	2.00	5.50	4.50	1.75	7.50	5.75	3.00	2.00	5.75	5.75	
	3.75	1.75	6.50	8.00	3.25	6.50	2.75	4.00	4.75	6.25	6.00	6.50	8.00	7.50	6.50	7.00	
	5.00	2.25	4.25	4.00	3.00	2.25	3.00	3.00	3.75	5.75	5.00	2.75	4.00	5.50	4.00	1.00	
	7.00	3.50	5.00	6.00	5.00	4.00	2.00	3.25	4.25	5.00	5.50	5.50	4.75	1.50	5.00	5.00	
	6.00	7.25	5.00	2.75	4.00	4.50	6.50	4.00	4.00	4.00	3.00	2.75	8.25	5.00	7.00	5.00	
	3.50	4.00	7.00	5.25	9.25	6.50	3.00	7.25	4.00	6.75	4.50	3.00	4.75	7.25	5.25	6.00	
	5.00	5.00	5.20	1.50	3.00	6.50	5.00	7.00	12.75	7.50	3.50	3.25	4.00	2.75	6.25	7.00	
	5.25	4.25	5.50	5.00	3.00	5.75	6.00	4.25	4.00	2.00	7.50	2.75	4.00	3.00	3.50	3.50	
	5.75	2.50	5.75	3.50	5.00	4.00	3.75	7.00	11.00	7.00	3.00	3.50	5.00	6.25	9.50	3.25	
	9.50	7.50	3.50	3.00	2.50	5.50	5.50	8.00	5.00	1.25	5.00	6.25	5.00	5.00	8.75	3.75	
	6.00	4.75	5.50	6.50	2.00	2.00	6.50	2.00	3.50	6.25	5.00	4.00	5.75	1.50	5.00	5.00	
	4.00	2.50	6.00	6.25	5.00	1.50	8.75	4.25	5.50	6.00	7.00	6.00	4.00	1.75	4.00	2.00	
Total .....	86.00	63.50	95.25	60.50	63.00	69.50	64.25	76.00	81.00	69.75	61.50	79.75	77.75	62.25	84.25	67.60	
Recapitulation:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	
Lowest .....	12.75	196.79	8.00	40.00	9.25	142.77	7.25	36.25	12.75	196.79	7.75	38.75	10.00	154.35	7.50	37.50	
Average .....	3.00	46.30	1.50	7.50	2.00	36.87	1.50	7.50	3.00	46.30	1.25	6.25	3.00	46.30	1.00	5.00	
	5.75	88.13	4.60	23.00	4.24	65.44	4.65	23.25	5.42	83.66	4.65	23.25	5.40	83.35	4.23	21.65	
Tests above average .....	13		15		12		13		10		16		10		15		
Tests below average .....	17		15		18		17		20		14		20		15		



TABLE XXXIV.—Results of tests of strain and stretch of Merino wools, &c.—Continued.

Catalogue number of samples..	354.				355.				356.				357.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	2.75	2.75	6.50	2.25	12.00	5.50	8.50	5.00	6.00	6.50	5.25	5.75	6.25	5.50	11.00	6.75
	5.00	4.00	4.50	5.50	6.00	5.25	6.75	5.00	4.75	2.75	5.75	7.50	8.00	2.75	5.25	4.25
	2.75	1.50	9.00	4.00	4.75	3.75	7.50	1.00	8.00	7.75	4.00	4.50	17.75	4.75	5.50	3.25
	3.00	4.60	5.25	2.00	11.50	2.75	6.50	4.75	6.25	5.50	3.00	1.00	8.00	5.25	4.25	3.75
	5.50	1.75	3.00	3.00	7.25	5.50	5.00	5.75	5.75	4.50	5.25	6.00	14.00	3.25	9.00	5.25
	5.75	7.00	0.75	6.25	10.75	4.50	8.50	5.00	4.00	2.00	8.00	5.50	11.25	6.50	9.50	4.25
	5.00	3.75	7.00	2.00	5.50	2.50	4.00	4.50	8.00	8.00	6.00	4.00	4.50	3.00	4.00	7.50
	8.00	4.50	4.50	3.00	5.75	6.50	6.50	5.00	4.25	4.25	4.75	2.50	11.75	2.75	10.00	4.00
	3.25	7.00	4.00	3.00	6.00	4.00	3.75	1.50	5.00	7.50	4.75	6.75	5.25	1.50	4.00	2.00
	5.25	2.75	2.75	6.00	5.00	2.00	5.50	4.00	5.25	4.25	7.00	4.50	8.75	8.00	5.00	4.75
	3.50	1.00	5.25	5.75	9.25	4.00	7.00	3.50	3.50	3.25	3.75	2.75	8.25	4.00	6.00	4.75
	3.25	4.25	3.00	4.50	0.00	1.50	4.25	1.25	5.00	5.00	6.75	6.50	16.00	4.75	16.00	4.75
	3.75	1.00	4.75	1.25	4.25	2.50	7.00	3.50	3.50	1.25	5.25	2.00	6.00	6.50	13.00	6.00
	5.75	6.25	3.00	5.00	3.75	2.50	8.00	2.75	4.00	7.00	4.50	4.00	4.00	7.00	17.00	4.25
6.50	2.25	6.00	6.00	5.00	3.25	4.00	6.25	6.00	4.00	5.50	7.00	4.75	7.50	14.00	7.25	
Total .....	69.00	55.75	73.25	59.50	102.75	56.00	102.75	58.75	70.25	67.50	79.50	70.25	134.50	73.00	133.50	72.75
Recapitulation:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
	9.00	138.91	7.00	35.00	12.00	185.22	6.50	32.50	8.00	123.48	8.00	40.00	17.75	273.96	8.00	40.01
	2.75	42.44	1.00	5.00	3.75	57.88	1.25	6.25	3.00	46.30	1.00	5.00	4.00	61.74	1.50	7.50
	4.81	74.24	3.84	19.20	6.85	105.73	3.83	19.15	5.29	81.65	4.50	22.95	8.94	137.98	4.86	24.30
Tests above average.....	15		15		11		16		12		13		13		12	
Tests below average.....	15		15		19		14		18		17		17		18	

Catalogue number of samples..	358.				359.				360.				361.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	4.00	2.00	5.00	4.25	5.00	5.75	4.50	2.00	8.25	4.50	6.50	5.00	4.75	6.25	7.00	5.50
	5.00	5.00	5.00	2.00	9.00	5.00	7.00	3.75	6.00	4.75	8.25	5.75	5.00	2.25	7.75	5.50
	5.75	4.00	6.00	6.50	5.00	5.50	7.00	5.00	7.25	5.00	12.00	6.50	5.00	3.00	4.75	5.50
	5.75	6.00	6.00	2.00	4.25	4.50	4.00	4.00	6.00	4.25	7.00	4.75	4.50	5.50	4.00	5.50
	4.75	4.00	0.00	4.60	4.75	4.50	4.75	3.75	8.00	4.00	9.00	3.50	3.00	2.75	6.00	5.00
	5.00	2.50	6.75	5.25	4.75	7.00	4.00	4.00	6.00	6.00	5.50	1.50	5.75	3.25	3.75	3.25
	8.00	3.50	5.50	2.00	7.00	4.50	8.25	4.00	10.50	5.75	7.00	6.00	5.00	6.25	3.25	3.75
	6.00	5.00	8.75	7.75	8.50	3.75	8.25	2.25	7.00	5.00	5.00	3.75	3.50	4.00	3.50	2.75
	6.50	3.25	9.75	3.50	4.50	5.50	5.25	4.25	5.00	4.50	5.75	2.25	3.50	2.75	7.00	2.00
	7.50	5.00	7.00	5.00	4.50	4.50	5.00	2.75	12.00	4.00	11.00	6.25	5.00	2.25	4.00	3.00
	6.00	6.00	5.00	0.50	5.50	2.25	9.25	4.00	5.25	2.50	9.25	6.75	7.00	4.75	3.00	5.25
	7.25	8.25	7.00	4.50	6.00	4.50	4.00	3.75	6.75	5.50	9.00	4.50	4.50	5.00	3.75	4.75
	4.75	6.00	6.00	3.50	7.25	2.00	6.50	6.50	12.00	7.50	10.75	7.00	4.00	6.00	6.50	7.00
	6.00	3.50	6.00	5.50	9.75	2.50	7.50	2.50	8.50	1.00	5.75	4.50	8.75	6.25	7.75	5.25
5.00	5.00	4.50	1.00	10.75	2.75	5.00	3.25	6.00	3.50	5.00	1.50	4.25	4.75	4.75	5.75	
Total .....	87.25	71.00	91.25	68.75	97.00	64.50	81.75	59.50	115.00	68.25	116.75	69.50	73.50	65.00	76.75	69.00
Recapitulation:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
	8.75	135.05	8.25	41.25	10.75	165.92	7.00	35.00	12.00	185.22	7.50	37.50	8.75	135.05	7.00	35.00
	4.50	69.46	1.00	5.00	4.00	61.74	2.00	10.00	5.00	77.17	1.00	5.00	3.00	46.30	2.00	10.00
	5.95	91.84	4.49	22.45	6.29	97.08	4.13	20.65	7.73	119.31	4.59	22.95	5.01	77.33	4.47	22.35
Tests above average.....	17		16		13		15		13		15		9		18	
Tests below average.....	13		14		17		15		17		15		21		12	



TABLE XXXV.—Measurements of the length, crimp, and fineness of fiber of Merino wools, submitted by Hon. J. T. Rich, M. C. from Michigan.

Catalogue number of samples..	362. SIDE.			363. SHOULDER.			364. SIDE.			365. SHOULDER.				366. SHOULDER.			
	1½ inches.			2 inches.			2½ inches.			3 inches.				3 inches.			
	16.			16.			21.			17.				19.			
	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.
2.0	2.6	1.25	1.5	2.25	2.25	2.25	1.75	2.5	1.75	2.25	1.8	1.8	2.0	3.0	2.0	1.25	
1.75	2.0	2.0	1.75	2.0	2.0	2.0	1.5	2.6	2.25	1.75	1.75	1.5	1.6	2.5	2.0	1.5	
2.25	2.25	1.5	2.0	2.5	2.25	2.0	1.5	2.25	1.75	2.0	1.75	1.75	2.25	2.0	2.25	2.5	
2.0	2.25	1.75	1.75	2.0	2.25	1.75	1.75	2.0	2.0	1.75	2.25	2.0	2.0	1.75	2.5	1.75	
2.5	3.0	2.0	2.75	1.75	1.5	1.75	1.75	2.25	1.75	2.0	2.0	1.25	2.0	2.0	2.0	1.5	
2.0	2.5	2.0	2.5	2.5	2.6	1.6	1.5	2.5	2.25	1.75	2.75	1.75	1.6	3.0	2.25	1.75	
2.5	2.5	1.75	1.75	2.6	1.75	2.0	2.75	2.25	1.75	2.5	1.75	1.25	1.5	3.0	3.25	2.0	
2.5	1.75	2.0	2.0	2.25	2.25	2.25	2.25	2.25	2.25	1.75	2.0	2.25	2.25	2.5	2.25	1.75	
2.0	1.75	1.5	1.75	1.75	2.75	2.0	1.5	2.0	1.6	2.5	2.25	1.75	1.75	2.0	2.0	1.75	
2.0	1.25	1.5	1.6	1.75	3.25	1.75	1.75	2.75	2.75	1.5	2.25	2.25	1.75	1.25	2.25	2.0	
2.25	2.75	1.75	2.0	2.25	2.0	2.25	2.5	1.75	2.0	1.75	2.0	1.75	1.5	2.25	2.0	2.0	
1.75	2.25	3.0	1.75	2.75	2.0	2.25	1.75	2.5	2.0	2.0	2.25	1.75	1.6	1.75	2.25	1.5	
1.75	2.25	2.75	2.5	1.75	1.75	2.25	1.75	1.25	1.75	2.0	2.0	2.25	1.5	2.0	1.75	1.0	
2.25	2.25	1.5	2.0	1.75	2.0	1.75	2.25	2.0	2.0	2.0	2.0	2.0	2.0	2.25	2.0	2.5	
1.75	2.0	1.75	2.25	3.25	1.75	1.75	2.0	2.25	1.6	2.0	2.5	2.25	1.5	1.75	2.25	1.6	
2.0	2.25	2.75	2.6	1.75	1.5	1.6	2.75	3.0	2.75	1.75	2.0	1.75	2.5	1.75	1.5	2.0	
2.25	2.5	3.0	2.75	2.5	2.25	2.25	2.25	1.5	2.0	1.75	1.75	1.5	1.25	2.0	2.5	2.25	
2.0	2.0	2.0	2.75	2.0	1.75	2.0	1.5	1.75	1.5	1.5	1.75	2.0	2.0	2.0	2.0	1.25	
2.0	2.0	2.5	2.25	3.0	1.75	1.75	1.75	1.75	2.25	1.25	2.0	2.75	2.0	2.25	2.0	1.6	
1.75	2.25	2.0	2.75	2.25	2.0	2.25	1.75	2.75	1.75	1.75	1.5	1.75	1.75	2.0	2.75	2.25	
2.0	2.0	2.25	2.25	1.75	1.5	1.75	2.25	3.0	3.0	3.0	2.0	2.0	2.0	1.75	2.5	2.0	
2.75	2.0	2.25	2.0	2.0	1.5	3.0	2.25	2.25	2.25	1.75	2.25	2.0	1.75	1.6	2.0	2.25	
2.5	2.0	1.6	2.5	2.25	1.75	2.25	2.5	2.6	2.6	1.5	1.75	1.75	1.75	2.25	2.5	2.25	
1.75	2.25	1.0	2.0	1.75	2.0	2.0	2.25	2.25	2.25	1.75	2.0	2.6	2.0	1.75	1.75	2.0	
2.0	2.25	2.75	2.25	1.75	1.5	1.5	2.0	2.75	1.75	1.5	1.75	1.5	1.5	1.75	2.6	1.5	
2.0	2.5	1.75	2.0	2.6	2.0	1.75	1.75	2.0	2.0	1.75	2.0	1.25	1.75	2.0	2.5	1.25	
1.75	1.75	2.75	2.75	2.25	1.75	1.75	2.0	2.5	2.0	2.0	2.25	2.0	2.0	1.6	1.75	3.25	
1.75	1.75	1.5	2.0	1.25	2.0	2.25	2.25	2.75	1.5	2.25	1.6	1.75	1.75	2.25	2.75	2.0	
2.25	2.5	2.25	2.0	1.75	1.5	1.5	1.6	2.5	1.5	2.25	2.0	1.75	1.25	2.5	2.6	1.5	
2.0	2.6	2.0	1.75	1.75	2.0	2.0	3.0	2.25	2.25	1.75	2.25	1.75	1.75	2.0	2.25	1.6	
<b>Averages .....</b>	<b>2.058</b>	<b>2.191</b>	<b>1.975</b>	<b>2.133</b>	<b>2.133</b>	<b>1.966</b>	<b>1.991</b>	<b>2.088</b>	<b>2.266</b>	<b>1.800</b>	<b>2.000</b>	<b>1.975</b>	<b>1.800</b>	<b>1.700</b>	<b>2.208</b>	<b>2.283</b>	<b>1.766</b>

Recapitulation and reduction:	362. SIDE.			363. SHOULDER.			364. SIDE.			365. SHOULDER.				366. SHOULDER.			
	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.		
Maximum measurements.	B¹	2.75	1.0826	B¹	2.75	1.0826	B¹	3.0	1.1811	B¹	2.5	0.9842	B¹	2.25	0.8958		
	B²	3.0	1.1811	B²	3.25	1.2705	B²	3.0	1.1811	B²	2.75	1.0826	B²	3.0	1.1811		
	B³	3.0	1.1811	B³	3.25	1.2705	B³	3.0	1.1811	B³	2.75	1.0826	B³	2.75	1.0826		
Highest .....	3.0	1.1811	3.25	1.2705	3.0	1.1811	2.75	1.0826	3.25	1.2705	3.0	1.1811	2.75	1.0826			
Minimum measurements.	B¹	1.75	0.6889	B¹	1.5	0.5905	B¹	1.5	0.5905	B¹	1.25	0.4921	B¹	1.25	0.4921		
	B²	1.25	0.4921	B²	1.75	0.6889	B²	1.5	0.5905	B²	1.5	0.5905	B²	1.5	0.5905		
	B³	1.0	0.3937	B³	1.5	0.5905	B³	1.25	0.4921	B³	1.25	0.4921	B³	1.25	0.4921		
Lowest .....	1.0	0.3937	1.5	0.5905	1.25	0.4921	1.25	0.4921	1.25	0.4921	1.25	0.4921	1.25	0.4921			
Average measurements.	B¹	2.058	0.8102	B¹	2.133	0.8397	B¹	1.991	0.7838	B¹	1.800	0.7088	B¹	1.700	0.6662		
	B²	2.191	0.8625	B²	2.133	0.8397	B²	2.088	0.7965	B²	2.000	0.7874	B²	2.208	0.8662		
	B³	1.975	0.7775	B³	1.966	0.7740	B³	2.266	0.8921	B³	1.975	0.7775	B³	2.283	0.8988		
<b>Averages .....</b>	<b>2.074</b>	<b>0.8165</b>	<b>2.077</b>	<b>0.8177</b>	<b>2.088</b>	<b>0.8220</b>	<b>1.898</b>	<b>0.7452</b>	<b>1.889</b>	<b>0.7890</b>	<b>1.889</b>	<b>0.7890</b>	<b>1.889</b>	<b>0.7890</b>			
Measurements above average.	37		35		44		57		71								
Measurements below average.	63		55		40		63		49								



TABLE XXXV.—Measurements of the length, crimp, and fineness of fiber of Merino wools, &c.—Continued.

Catalogue number of samples.....	367. SHOULDER.				368. SIDE.				369. BELLY.			370. SIDE.		
	3 inches.				2½ inches.				2¼ inches.			2½ inches.		
Length of fiber in crimp.....	10.				13.				16.			18.		
Number of crimps per inch.....	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B¹.	B².	B³.
Number of section.....														
1.75	2.25	1.75	2.0	1.25	1.75	2.0	1.75	2.5	2.25	2.5	1.75	1.75	1.5	
1.5	1.75	3.0	2.75	1.25	1.75	3.5	1.25	2.5	2.5	2.0	1.75	1.75	2.75	
1.5	1.6	2.5	1.5	1.5	2.0	1.75	1.75	2.0	2.25	1.5	2.0	1.5	1.5	
1.5	2.0	1.5	1.75	1.25	2.0	3.25	2.75	2.5	2.5	1.5	2.0	2.5	1.75	
1.5	2.5	2.0	1.5	1.5	2.5	2.25	2.5	2.25	2.25	2.0	2.0	2.25	2.0	
1.5	2.5	1.75	1.25	1.25	1.75	2.0	2.75	2.0	2.25	1.5	1.5	1.5	2.25	
1.25	2.5	2.5	1.25	1.6	2.75	1.5	1.75	2.0	2.0	1.25	1.5	2.0	3.0	
1.75	2.0	1.75	1.25	1.5	2.0	2.0	2.0	2.0	2.5	2.25	1.5	1.75	2.25	
2.0	2.0	2.0	1.25	1.5	1.75	2.0	2.25	2.0	2.25	1.5	1.5	2.0	2.25	
1.25	2.25	3.5	2.0	1.75	2.0	2.0	1.75	2.5	2.0	2.5	1.5	2.0	2.25	
1.25	2.0	2.25	2.75	1.6	1.75	1.75	1.75	2.5	2.5	2.5	1.5	2.0	2.25	
1.25	1.75	1.75	1.5	1.25	2.25	1.5	2.25	2.5	2.5	1.75	2.0	1.75	2.25	
2.0	2.25	1.75	1.0	1.75	2.6	2.25	4.5	2.5	2.25	1.5	1.6	1.75	2.25	
1.5	2.0	2.25	1.25	2.25	4.0	2.5	2.0	2.5	2.25	1.25	3.0	1.75	2.25	
1.5	2.0	2.0	1.25	1.6	2.0	2.25	2.5	2.0	2.5	2.25	2.0	2.0	1.5	
1.75	2.25	1.75	1.5	1.5	2.5	1.75	2.5	2.0	2.0	1.25	1.75	2.25	1.5	
1.5	4.0	1.75	2.75	2.0	2.25	2.75	1.5	2.0	2.25	1.5	2.0	1.75	1.75	
1.5	2.5	2.5	1.25	1.75	2.6	2.25	1.5	1.6	2.5	1.25	2.5	1.75	2.25	
1.5	2.0	2.0	1.5	2.25	3.5	3.0	1.5	2.0	2.0	2.0	2.0	1.75	2.25	
1.5	2.0	1.5	1.75	1.75	2.25	2.25	2.0	2.0	2.0	1.5	1.5	2.0	2.5	
2.6	2.5	1.75	1.75	1.5	2.0	2.25	2.5	2.0	2.0	2.0	1.5	2.25	2.25	
1.5	2.0	1.5	3.0	1.75	2.0	1.75	1.5	1.75	2.25	1.5	2.0	1.5	2.25	
3.25	2.0	2.5	1.5	1.5	2.5	1.75	1.5	2.75	2.25	2.5	2.0	2.25	2.25	
1.6	3.5	1.75	1.75	1.25	2.75	2.5	2.25	2.0	2.5	1.75	1.75	1.75	2.25	
1.5	2.5	1.75	2.75	2.0	2.5	2.0	1.25	2.25	2.5	1.5	1.75	2.0	2.0	
1.5	2.5	2.25	1.25	1.5	2.0	2.25	1.25	1.5	2.0	2.25	2.0	2.0	1.5	
1.25	2.25	2.0	2.0	1.75	2.6	1.75	2.25	2.25	2.25	2.25	1.5	1.75	2.25	
1.6	2.0	2.5	2.25	1.5	2.5	1.75	2.25	2.0	2.5	2.25	1.75	2.0	2.0	
1.75	2.25	1.75	1.5	2.0	1.75	2.0	2.0	2.0	2.0	2.0	2.0	2.6	1.75	
1.5	1.75	1.5	1.25	1.75	2.0	4.5	1.75	2.25	2.25	1.25	1.5	2.5	2.0	
Averages.....	1.616	2.241	2.033	1.733	1.675	2.275	2.233	2.041	2.150	2.266	1.791	1.833	1.933	2.091

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.			
Maximum measurements.....	B¹	3.25	1.2795	B¹	2.25	0.8858	B¹	2.75	1.0826	B¹	3.0	1.1811
	B²	4.0	1.5748	B²	4.0	1.5748	B²	2.5	0.9842	B²	2.5	0.9842
	B³	3.5	1.3779	B³	4.6	1.7716	B³	2.5	0.9842	B³	3.0	1.1811
	B⁴	3.0	1.1811	B⁴	4.5	1.7716						
Highest.....		4.0	1.5748		4.6	1.7716		2.75	1.0826		3.0	1.1811
Minimum measurements.....	B¹	1.25	0.4921	B¹	1.25	0.4921	B¹	1.5	0.5905	B¹	1.5	0.5905
	B²	1.5	0.5905	B²	1.75	0.6899	B²	2.0	0.7874	B²	1.5	0.5905
	B³	1.5	0.5905	B³	1.5	0.5905	B³	1.25	0.4921	B³	1.5	0.5905
	B⁴	1.0	0.3937	B⁴	1.25	0.4921						
Lowest.....		1.0	0.3937		1.25	0.4921		1.25	0.4921		1.5	0.5905
Average measurements.....	B¹	1.616	0.6352	B¹	1.675	0.6594	B¹	2.150	0.8464	B¹	1.833	0.7216
	B²	2.241	0.8822	B²	2.275	0.8956	B²	2.266	0.8763	B²	1.933	0.7610
	B³	2.033	0.8003	B³	2.233	0.8791	B³	1.791	0.7051	B³	2.091	0.8232
	B⁴	1.733	0.6322	B⁴	2.041	0.8035						
Averages.....		1.905	0.7499		2.056	0.8094		2.069	0.8145		1.952	0.7685
Measurements above average.....		53			43			44			52	
Measurements below average.....		67			77			46			36	



TABLE XXXV.—Results of tests of strain and stretch of Merino wools, submitted by Hon. John T. Rich, Elba, Mich.

Catalogue No. of samples..	362. SIDE.				363. SHOULDER.				364. SIDE.				365. SHOULDER.				366. SHOULDER.				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.			
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.			
	7.25	1.00	7.20	2.50	6.60	4.75	6.75	4.25	6.60	5.00	5.75	9.00	8.25	8.00	7.50	6.50	4.25	4.00	5.00	3.25	
	4.75	7.00	10.50	2.00	4.75	4.75	12.00	6.25	3.25	8.00	4.50	7.50	0.00	5.50	6.00	4.25	5.25	4.75	7.00	1.75	
	5.00	3.75	2.75	3.75	10.00	7.00	5.50	6.25	6.25	5.75	5.50	1.75	7.00	9.00	5.90	8.00	3.25	7.75	7.00	5.00	
	8.50	2.50	4.25	5.00	3.00	3.00	5.25	4.00	7.25	7.75	4.25	6.50	4.75	2.50	3.25	5.00	4.25	4.00	3.50	4.75	
	9.00	5.25	5.25	8.00	11.00	8.25	6.25	2.00	8.50	3.50	3.25	8.25	6.00	4.50	3.00	4.25	5.50	5.00	4.00	5.75	
	6.75	1.00	4.00	6.50	5.00	4.25	7.75	3.75	3.25	8.75	3.50	8.50	6.50	3.00	5.00	8.00	7.00	7.50	5.00	3.00	
	6.00	7.25	3.25	3.25	10.00	3.75	8.00	3.00	3.50	5.50	3.00	4.50	4.50	4.75	9.00	8.75	7.00	6.00	5.00	3.00	
	4.75	6.50	5.00	1.75	10.25	6.50	3.00	3.00	7.00	7.00	3.00	6.50	6.00	7.25	4.00	2.00	4.50	5.00	5.60	8.00	
	4.00	6.75	5.00	5.00	13.00	3.75	4.00	2.75	3.00	2.25	5.00	2.00	4.75	8.00	6.25	4.75	5.25	7.00	3.75	8.00	
	5.75	4.00	6.75	4.50	4.75	3.60	5.25	5.50	3.25	6.00	3.25	5.00	3.00	7.50	3.50	7.00	5.25	4.00	5.00	9.00	
	4.00	3.00	5.50	7.00	3.75	2.00	3.75	5.25	6.50	4.00	3.25	5.00	6.00	4.75	5.00	10.00	7.00	6.50	8.50	7.00	
	4.00	3.75	10.25	4.25	2.50	2.00	6.25	5.00	3.75	6.75	6.00	2.75	3.75	8.00	2.50	2.50	5.00	5.75	4.00	2.50	
	3.50	2.75	4.25	6.00	2.00	2.00	6.75	7.00	8.25	7.50	7.00	3.00	3.75	7.50	6.75	4.50	5.00	6.00	3.50	3.25	
	8.50	1.00	10.00	2.60	8.50	3.50	4.75	4.75	5.00	4.00	8.50	6.00	3.75	6.00	6.50	6.50	5.00	6.00	3.50	3.75	
4.00	3.00	5.75	5.75	7.50	5.25	8.00	4.00	4.60	6.50	3.50	7.50	3.25	5.25	6.00	6.00	5.00	7.50	6.50	5.50		
Total.....	81.75	54.50	89.75	68.25	100.50	68.75	98.75	66.75	73.25	88.25	73.25	88.25	77.25	88.50	77.75	87.50	83.50	87.25	83.75	81.50	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grs.	mm.	per ct.	grams.	grs.	mm.	per ct.	grams.	grs.	mm.	per ct.
Highest.....		10.50	162.00	8.00	40.00	13.00	200.65	8.75	43.75	8.50	131.10	6.00	45.00	9.00	138.91	10.00	50.00	3.75	135.05	9.00	45.00
Lowest.....		2.75	42.44	1.00	5.00	2.00	30.87	2.00	10.00	3.00	46.30	1.75	8.75	2.50	38.50	1.50	7.50	3.50	54.02	1.75	8.75
Average.....		5.72	88.29	4.10	20.80	6.61	102.49	4.45	22.25	4.88	75.32	5.90	29.50	5.17	79.81	5.80	29.00	5.58	80.13	5.63	28.15
Tests above average.....		13		14		12		10		14		17		15		10		9		10	
Tests below average.....		17		16		13		14		10		13		15		14		21		14	
Catalogue No. of samples..	367. SHOULDER.				368. SIDE.				369. BELLY.				370. SIDE.								
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.							
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.							
	2.50	1.00	2.25	4.25	3.00	7.00	3.50	8.25	5.25	4.00	2.00	2.50	5.50	4.50	0.25	7.50					
	5.00	8.50	3.50	5.50	3.25	3.75	4.25	7.00	1.75	5.75	3.25	8.00	3.50	7.50	3.00	7.25					
	3.50	7.75	2.50	4.75	8.00	7.25	10.00	5.00	3.25	3.50	5.50	4.00	3.00	4.50	5.50	1.50					
	3.25	5.00	4.75	6.75	6.25	7.25	4.50	6.50	7.00	5.00	6.25	2.25	5.50	6.75	4.00	8.50					
	4.50	7.00	2.75	5.75	4.25	7.00	4.75	7.00	3.50	5.75	3.75	2.00	3.50	1.25	3.00	7.25					
	3.25	7.00	2.25	6.00	10.00	9.00	4.00	7.00	3.50	5.00	6.00	4.00	3.00	3.00	3.75	7.75					
	4.00	7.00	3.75	5.50	4.00	4.00	3.75	8.75	4.00	1.75	2.00	4.50	2.75	4.00	3.25	1.50					
	2.25	5.25	3.75	3.75	6.25	7.00	7.25	8.50	3.75	3.00	4.00	2.50	5.00	8.25	5.00	3.25					
	4.00	6.00	8.50	8.50	4.00	3.25	3.25	6.75	5.50	4.50	5.75	5.25	3.00	5.00	3.00	7.00					
	11.00	8.75	10.00	6.00	4.00	6.00	4.50	7.50	5.25	5.25	3.00	2.00	3.25	5.75	3.00	6.00					
	3.75	7.25	4.00	8.00	5.00	6.00	4.50	4.50	4.00	1.50	4.00	1.50	4.00	7.00	6.00	3.75					
	7.75	6.50	5.50	8.00	5.50	9.00	5.50	7.25	5.75	2.50	8.25	4.00	5.25	2.75	3.00	7.00					
	3.00	3.50	4.00	3.75	5.25	6.50	3.25	5.00	5.00	5.50	6.50	6.50	6.25	5.75	4.25	4.25					
	3.00	5.50	3.25	7.00	3.25	7.00	0.25	8.75	6.00	3.00	4.00	4.00	4.00	7.00	2.75	7.00					
4.00	3.00	5.00	5.75	5.25	7.25	11.00	8.50	2.00	3.00	5.75	3.00	2.50	2.00	4.25	7.50						
Total.....	65.75	80.00	63.75	89.25	77.25	96.25	81.75	99.25	65.50	50.00	65.50	55.50	60.00	81.00	61.00	86.00					
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.					
		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.				
Highest.....		11.00	169.73	8.75	43.75	11.00	169.73	9.00	45.00	8.25	127.24	6.50	32.50	6.25	90.47	8.50	42.50				
Lowest.....		2.25	34.73	1.00	5.00	3.00	46.30	3.25	16.25	1.50	23.15	1.00	5.00	2.50	38.59	1.25	6.25				
Average.....		4.38	67.60	5.94	29.70	5.40	83.35	6.52	32.60	4.37	67.45	3.82	19.10	4.63	62.20	5.57	27.85				
Tests above average.....		9		10		11		18		14		17		11		18					
Tests below average.....		21		14		19		12		16		13		19		12					



TABLE XXXVI.—Measurements of length, crimp, and fineness of Merino wools, submitted by Mr. William G. Markham, Avon, N. Y.

Catalogue number of samples .....	371.			372.			373.		
	2½ inches.			2½ inches.			2½ inches.		
Length of fiber in crimp .....	20			22			25		
Number of crimps per inch .....	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.
Number of section .....									
Actual measurement in centimillimeters .....	2.00	3.00	2.00	2.50	3.00	1.50	2.00	2.00	2.125
	2.625	2.00	2.125	2.25	2.25	2.50	2.25	1.50	1.75
	1.875	2.00	2.50	1.75	2.50	2.75	1.375	2.00	2.50
	1.75	2.25	2.375	2.00	2.00	3.00	1.75	1.75	2.25
	2.00	1.75	3.50	2.125	2.375	2.00	2.125	1.25	2.375
	2.00	1.475	2.00	2.00	1.875	2.25	2.00	1.75	2.00
	2.25	2.25	2.00	1.375	1.75	1.75	1.50	1.50	1.50
	2.125	2.125	2.25	2.00	2.50	3.00	1.75	1.25	2.00
	2.00	2.75	2.00	2.00	2.25	2.50	2.25	2.00	2.00
	2.125	2.125	2.25	2.25	2.25	1.875	2.375	1.50	2.00
	2.375	2.625	2.25	1.875	1.625	1.75	1.875	2.00	2.125
	2.25	1.75	1.625	1.625	2.00	2.50	2.50	1.75	2.00
	2.00	2.375	1.75	1.75	1.625	2.00	1.625	1.50	2.25
	2.00	2.00	2.125	1.75	2.00	2.75	1.875	2.00	1.875
	2.50	2.00	2.00	2.00	1.50	1.75	1.875	2.00	2.125
	2.00	2.75	2.375	2.125	1.50	2.375	1.75	1.50	1.875
	2.125	1.75	1.75	2.25	1.875	3.00	2.25	2.125	2.125
	2.00	2.50	2.125	1.75	2.50	2.50	2.375	1.75	2.00
	1.875	1.625	2.125	1.50	1.625	2.25	1.875	1.75	2.50
	2.00	2.125	2.25	1.625	2.50	1.875	1.75	1.75	1.50
	1.875	2.00	2.25	1.75	1.025	1.75	1.75	1.50	2.25
	2.125	1.875	2.50	1.625	1.50	2.125	1.25	1.75	2.00
	2.50	1.75	1.75	2.50	1.50	4.00	1.50	1.625	1.875
	2.50	2.50	2.125	1.75	1.875	2.125	1.75	2.00	2.375
	2.125	1.75	1.75	1.625	2.75	1.75	2.25	1.625	2.00
2.25	1.75	2.00	1.75	2.125	2.00	2.25	1.50	1.75	
2.50	2.25	1.75	1.75	2.00	2.25	1.375	2.00	1.75	
2.375	2.25	2.00	1.50	1.875	1.25	1.50	1.25	1.50	
2.25	2.00	2.125	1.625	1.50	1.60	2.00	1.875	1.50	
2.25	1.875	2.375	1.375	1.875	2.25	1.75	2.00	2.00	
Averages .....	2.154	2.121	2.133	1.858	2.004	2.220	1.863	1.725	1.983

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:									
Maximum measurements .....	B¹ B² B³	2.625 3.00 3.50	1.0334 1.1811 1.3770	B¹ B² B³	2.50 3.00 4.00	0.9842 1.1811 1.5748	B¹ B² B³	2.50 2.125 2.50	0.9842 0.8366 0.9842
Highest .....		3.50	1.3770		4.00	1.5748		2.50	0.9842
Minimum measurements .....	B¹ B² B³	1.75 1.625 1.625	0.6889 0.6397 0.6397	B¹ B² B³	1.375 1.50 1.25	0.5413 0.5965 0.4921	B¹ B² B³	1.25 1.25 1.50	0.4921 0.4921 0.5905
Lowest .....		1.625	0.6397		1.25	0.4921		1.25	0.4921
Average measurements .....	B¹ B² B³	2.154 2.121 2.133	0.8480 0.8350 0.8397	B¹ B² B³	1.858 2.004 2.220	0.7314 0.7889 0.8775	B¹ B² B³	1.863 1.725 1.988	0.7413 0.6791 0.7826
Averages .....		2.136	0.8409		2.030	0.7992		1.865	0.7342
Measurements above average .....		34			35			50	
Measurements below average .....		56			55			40	



TABLE XXXVI.—Results of tests of strain and stretch of samples of Merino wools, submitted by Mr. William G. Markham, Avon, N. Y.

Catalogue number of samples.....	371.				372.				373.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>
Actual measurements in grams and millimeters .....	4.00	5.25	3.50	6.75	4.00	3.00	3.25	6.50	3.00	5.25	4.50	6.00
	4.50	7.75	8.50	8.25	2.50	6.00	3.00	2.25	5.25	8.00	3.00	4.00
	5.75	7.75	3.75	5.75	5.75	5.75	4.00	5.25	3.75	7.00	3.00	4.75
	3.00	3.75	5.00	4.50	8.75	8.25	3.00	3.75	3.00	1.75	2.50	3.25
	4.25	6.75	6.00	3.00	2.00	6.75	3.75	5.50	5.50	7.50	2.00	2.25
	6.00	5.75	6.25	5.00	4.00	6.00	6.00	7.00	3.00	5.50	6.00	9.00
	8.00	8.00	10.50	7.50	2.75	6.00	3.25	7.25	3.50	2.50	3.00	3.25
	5.00	7.25	4.50	6.50	2.25	5.00	4.00	7.00	4.25	5.50	2.50	4.50
	4.75	5.75	5.00	8.25	4.00	5.00	3.00	6.00	4.00	7.50	3.00	3.75
	4.00	5.50	5.00	7.00	7.00	5.50	5.00	8.00	3.00	3.00	3.00	5.25
	7.00	7.50	7.25	8.00	3.00	8.00	3.00	2.75	3.25	6.50	2.75	1.75
	9.00	8.50	4.00	6.75	3.50	7.50	5.75	3.50	4.25	7.00	4.25	5.75
	4.25	7.00	6.00	9.00	3.00	6.75	3.75	6.50	2.25	2.75	2.50	2.25
	4.50	7.50	8.00	6.50	4.25	3.00	5.25	6.00	2.00	3.50	2.25	5.00
	8.00	8.00	5.50	7.75	4.50	5.75	3.00	2.75	4.00	8.75	2.00	4.75
	Total .....	82.00	102.00	88.75	100.50	61.25	88.25	59.00	80.00	54.00	80.00	46.25
	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation:	<i>grams.</i>	<i>grains.</i>	<i>mm.</i>	<i>per ct.</i>	<i>grams.</i>	<i>grains.</i>	<i>mm.</i>	<i>per ct.</i>	<i>grams.</i>	<i>grains.</i>	<i>mm.</i>	<i>per ct.</i>
Highest.....	10.50	162.06	9.00	45.00	8.75	135.05	8.25	41.25	6.00	92.60	9.00	45.00
Lowest.....	3.00	46.30	3.00	15.00	2.00	30.87	2.25	11.25	2.00	30.87	1.75	8.75
Average.....	5.69	87.82	6.75	33.75	4.00	61.74	5.60	28.00	3.34	51.55	4.85	24.25
Tests above average.....	13		16		9		18		11		15	
Tests below average.....	17		11		16		12		19		15	



TABLE XXXVII.—Actual measurements of length and fineness of Angora goat hair.

Catalogue number of samples.....	194.				195.				196.				197.				382.			
	6 inches.				5½ inches.				9 inches.				9¼ inches.				7½ inches.			
	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	B⁴.	B¹.	B².	B³.	
Actual measurement in centimillimeters.	2.25	3.25	2.25	3.0	2.875	2.875	2.875	2.375	2.875	3.5	3.5	3.25	3.375	2.25	2.375	1.75	2.875	3.75	4.25	
	2.875	3.25	2.625	2.375	2.375	3.25	3.0	2.75	3.375	3.375	4.5	4.125	4.5	5.5	1.75	3.75	2.375	1.50	3.00	
	2.625	2.0	3.0	3.375	2.875	2.825	2.75	2.75	3.375	4.25	3.0	3.125	2.5	1.5	2.125	2.25	3.0	2.50	3.625	
	2.875	2.375	2.125	2.375	3.5	2.875	2.625	2.375	4.0	3.0	3.25	3.375	3.0	1.375	1.25	2.5	2.75	3.50	3.00	
	2.75	2.875	2.0	2.875	3.0	2.875	2.75	2.0	3.25	3.0	3.375	4.375	3.0	2.375	2.0	2.5	2.75	3.50	4.25	
	2.25	3.25	2.0	2.875	3.5	2.875	2.875	2.5	4.625	3.875	3.375	3.375	3.125	2.0	1.875	2.5	3.375	3.00	3.50	
	2.75	2.375	2.375	3.0	3.25	3.5	2.75	2.5	5.375	4.625	3.5	3.0	2.75	2.0	2.625	3.25	3.00	3.625	2.375	
	3.0	2.25	3.125	2.5	3.0	2.875	2.5	2.0	3.0	2.875	4.875	4.875	2.5	1.625	1.875	2.5	3.0	4.375	2.75	
	3.0	2.75	2.5	2.125	2.875	3.0	3.25	2.0	3.25	3.0	4.25	4.25	1.625	2.875	2.5	1.75	4.375	2.50	3.625	
	3.0	2.25	1.875	2.5	2.75	2.0	2.0	1.0	3.5	2.5	3.125	3.625	2.125	2.375	3.375	3.5	3.00	3.00	2.875	
	2.375	1.875	2.0	2.125	2.875	3.25	2.5	2.0	2.75	4.5	5.0	3.5	1.375	2.0	2.875	2.875	3.00	3.25	2.75	
	2.25	2.625	2.625	2.875	3.25	3.0	2.875	2.0	2.0	3.75	4.875	4.25	1.75	1.5	2.75	3.5	3.375	3.00	2.00	
	2.875	1.75	1.875	2.875	3.25	3.0	2.0	2.0	1.875	3.75	4.5	3.5	4.25	1.75	2.0	2.25	4.0	3.25	2.625	
	2.5	3.0	2.125	2.25	4.25	2.5	3.0	2.375	4.375	4.0	4.625	3.875	2.25	2.5	2.75	3.0	4.75	2.75	2.875	
	2.5	2.0	1.625	3.25	2.75	2.5	2.875	2.0	3.0	3.25	5.375	4.0	1.5	1.375	2.75	2.5	4.00	4.00	3.75	
	3.375	3.625	3.0	3.375	3.5	3.0	2.875	2.25	5.0	4.0	4.5	3.0	1.625	1.375	2.25	2.0	3.25	3.00	2.75	
	2.875	2.75	3.125	1.875	2.5	2.5	2.5	2.5	3.875	3.0	3.0	2.875	1.5	2.875	2.25	3.625	2.75	3.75	3.00	
	2.375	2.375	2.25	2.375	3.375	2.375	3.0	2.125	2.5	3.125	3.375	3.0	1.375	1.75	2.375	2.75	2.875	3.00	1.625	
	2.625	2.875	2.375	2.625	2.875	3.5	3.0	2.5	4.75	3.0	3.75	2.875	2.0	2.0	3.5	2.75	4.375	3.375	2.875	
	2.375	2.25	2.875	2.5	2.875	2.75	2.625	2.625	3.75	4.375	3.5	3.0	3.0	1.375	1.875	3.375	3.50	4.375	2.50	
	2.875	1.875	2.25	2.375	3.25	2.75	3.5	2.5	3.75	3.25	4.375	2.875	2.875	1.75	3.25	2.5	3.00	2.75	2.00	
	2.0	1.5	1.625	2.375	2.75	2.75	2.75	1.875	3.75	4.75	2.875	3.5	1.5	2.625	2.125	3.75	4.50	3.00	2.00	
	2.75	2.375	2.875	2.5	1.875	2.25	3.0	2.25	3.375	3.0	4.375	4.375	1.25	2.5	2.25	3.375	1.75	3.50	2.875	
	3.75	2.0	2.25	2.375	2.375	3.375	3.25	2.625	3.25	2.375	2.875	3.875	1.375	3.0	2.0	1.875	4.00	2.625	2.75	
	2.875	2.0	2.375	2.0	2.625	3.25	2.75	1.5	3.125	3.75	3.0	3.75	1.5	2.75	1.125	3.5	3.375	1.50	3.00	
	1.75	1.5	2.75	2.75	2.75	2.875	2.75	2.0	4.625	3.75	1.5	3.75	2.375	2.875	2.375	2.875	2.50	2.875	2.125	
	2.75	2.25	1.5	2.625	2.5	2.875	2.875	2.5	2.75	4.375	4.25	4.75	9.625	2.5	1.5	2.75	4.25	4.00	2.25	
	2.25	3.25	3.0	2.875	2.0	2.5	3.375	2.25	4.5	3.625	4.25	4.375	8.5	2.75	2.25	3.875	3.25	4.00	4.75	
	2.375	1.75	2.625	2.875	1.0	3.0	2.25	2.5	3.5	5.0	5.25	3.75	1.375	2.75	2.75	3.875	3.50	3.625	2.625	
	1.5	1.75	2.0	1.75	2.875	2.875	2.25	1.5	4.25	4.25	3.25	2.875	1.0	3.0	2.5	2.875	3.25	3.25	3.125	
	Averages.....	2.583	2.412	2.358	2.591	3.171	2.819	2.795	2.225	3.758	3.417	3.716	3.470	2.408	2.175	2.429	2.954	3.287	3.212	2.916

Reduction and recapitulation:	No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.		No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.		No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.	
		B¹	B²		B¹	B²		B¹	B²		B¹	B²		B¹	B²		B¹	B²
Maximum measurements.	B¹	3.750	1.4763	B¹	10.00	3.9370	B¹	5.375	1.3287	B¹	9.625	3.7893	B¹	4.50	1.7716	B¹	4.50	1.7716
	B²	3.625	1.4271	B²	3.50	1.3779	B²	5.000	1.0665	B²	3.0	1.1811	B²	4.375	1.7224	B²	4.375	1.7224
	B³	3.125	1.2303	B³	3.50	1.3779	B³	4.875	1.0192	B³	3.75	1.4763	B³	4.75	1.8700	B³	4.75	1.8700
	B⁴			B⁴	2.75	1.0826	B⁴	4.75	1.8700	B⁴	4.0	1.5743	B⁴			B⁴		
Highest.....		3.750	1.4763		10.00	3.9370		5.375	1.3287		9.625	3.7893		4.75	1.8700			
Minimum measurements.	B¹	1.500	0.5905	B¹	1.875	0.7381	B¹	2.5	0.9842	B¹	1.0	0.3937	B¹	1.50	0.5905	B¹	1.50	0.5905
	B²	1.500	0.5905	B²	2.000	0.7874	B²	2.5	0.9842	B²	1.375	0.5413	B²	1.50	0.5905	B²	1.50	0.5905
	B³	1.625	0.6397	B³	2.000	0.7874	B³	1.5	0.5905	B³	1.125	0.4429	B³	1.625	0.6397	B³	1.625	0.6397
	B⁴			B⁴	1.000	0.3937	B⁴	2.125	0.8366	B⁴	1.75	0.6869	B⁴			B⁴		
Lowest.....		1.500	0.5905		1.000	0.3937		1.5	0.5905		1.0	0.3937		1.50	0.5905			
Average measurements..	B¹	2.583	1.0169	B¹	3.171	1.2484	B¹	3.758	1.4795	B¹	2.408	0.9450	B¹	3.287	1.2940	B¹	3.287	1.2940
	B²	2.412	0.9496	B²	2.819	1.1098	B²	3.417	1.3452	B²	2.175	0.8562	B²	3.212	1.2645	B²	3.212	1.2645
	B³	2.353	0.9263	B³	2.795	1.1098	B³	3.710	1.4629	B³	2.429	0.9562	B³	2.916	1.1480	B³	2.916	1.1480
	B⁴	2.591	1.0200	B⁴	2.225	0.8759	B⁴	3.470	1.3661	B⁴	2.954	1.1629	B⁴			B⁴		
Averages.....		2.484	0.9779		2.752	1.0834		3.590	1.4133		2.491	0.9607		3.138	1.2354			
Tests above average.....		61			66			59			62			50			40	
Tests below average.....		59			54			61			58			40			40	



TABLE XXXVII.—Actual measurements of length and fineness of Angora goat hair—Continued.

Catalogue number of sample...	388.			389.			390.			391.			392.		
Length of fiber .....	5 inches.			7½ inches.			4½ inches.			7 inches.			5½ inches.		
Number of section .....	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.
Actual measurement in centimillimeters.	4.50	4.25	4.625	2.25	4.25	3.50	2.125	2.75	3.375	2.875	4.50	3.375	3.875	4.50	3.75
	3.875	4.60	4.125	3.50	4.00	3.625	2.75	2.875	2.875	3.25	4.00	5.00	2.25	3.75	3.875
	2.875	3.375	3.875	4.75	3.50	3.50	2.375	2.50	3.625	2.25	2.75	1.875	2.25	2.60	3.75
	4.25	3.875	4.00	3.75	4.625	4.25	2.375	2.75	4.125	2.75	4.00	1.875	2.875	2.75	3.875
	2.875	3.75	4.00	4.875	3.50	3.875	2.875	3.50	3.75	3.00	3.75	3.875	3.25	4.50	3.00
	4.875	4.50	2.25	4.75	3.375	3.125	3.25	3.75	4.00	5.75	3.75	3.75	1.60	4.25	3.375
	3.00	3.00	4.00	4.75	3.00	3.75	2.25	2.875	2.60	2.875	3.875	2.625	3.00	3.00	4.25
	3.75	3.50	4.50	4.75	3.375	4.00	4.00	2.75	3.25	4.375	3.60	4.875	4.00	3.875	4.50
	3.25	4.00	4.375	4.875	3.625	3.75	3.75	2.25	2.875	2.75	4.25	4.875	3.875	3.875	3.50
	2.25	3.875	4.00	3.375	3.00	2.375	3.00	2.75	3.125	3.75	3.375	3.25	3.125	4.00	4.00
	2.50	3.625	4.75	4.875	3.25	4.00	2.50	2.50	3.50	5.75	4.75	4.50	3.00	4.375	4.00
	4.00	4.50	4.50	4.00	2.60	3.625	2.50	3.875	3.125	2.625	3.25	3.25	3.125	4.875	3.60
	5.25	3.50	4.625	4.25	3.25	3.25	2.375	2.25	2.375	2.75	4.875	3.00	2.50	4.875	4.375
	4.00	4.75	4.00	4.50	4.125	2.875	2.50	3.75	2.60	2.60	4.75	1.625	3.00	4.00	3.625
	4.00	5.375	4.375	4.00	4.00	3.50	2.625	2.875	2.875	4.60	2.625	4.00	4.00	3.25	3.00
	3.60	3.75	4.25	4.50	3.60	2.875	1.50	2.50	2.875	3.875	3.50	4.00	3.75	3.00	3.00
	3.25	5.00	4.00	4.50	4.00	3.875	3.00	4.00	3.00	3.75	4.00	4.50	2.25	3.50	3.25
	4.875	5.375	4.25	4.125	3.75	3.00	2.50	4.125	3.875	2.75	2.375	4.75	3.75	4.00	2.60
	4.00	3.875	4.50	3.875	4.25	3.00	2.025	3.625	3.625	3.25	2.50	2.875	2.60	5.60	3.375
	4.00	4.75	4.00	4.375	4.25	2.25	3.125	3.375	2.50	2.625	4.50	3.00	4.125	4.25	3.75
4.75	3.50	3.875	3.875	2.625	2.625	3.00	3.00	2.25	2.375	3.50	2.125	2.60	3.875	4.00	
2.875	4.50	4.375	4.50	3.875	2.50	3.125	3.00	3.60	3.875	3.25	3.625	3.50	4.25	3.875	
4.60	4.375	4.25	4.50	4.00	3.125	2.375	2.375	2.75	2.50	4.375	4.00	2.50	3.875	4.375	
4.60	4.00	3.375	4.75	3.60	3.00	2.625	2.375	3.50	2.50	4.875	2.25	2.875	3.25	3.75	
4.60	5.375	4.375	4.00	4.60	3.75	2.25	2.50	2.875	2.75	3.00	4.25	2.125	4.00	4.00	
3.00	4.375	4.50	4.50	3.875	3.00	3.25	3.75	3.875	4.00	4.75	3.375	3.00	4.00	3.75	
4.60	4.25	4.75	4.125	4.00	1.75	3.875	4.00	2.625	2.75	2.75	3.25	1.875	3.375	3.25	
3.375	5.25	4.25	3.75	3.60	3.25	2.75	3.625	3.25	4.00	4.25	3.75	4.25	2.50	3.75	
4.50	5.125	5.25	4.25	3.00	3.50	2.60	2.875	2.60	3.625	3.75	4.60	3.75	3.25	3.25	
2.875	4.25	3.50	4.50	2.375	3.75	2.50	2.60	3.25	4.75	5.00	5.00	3.125	3.375	4.875	
Averages .....	3.758	4.270	4.210	4.229	3.640	3.275	2.775	3.071	3.204	3.287	3.795	3.550	2.990	3.812	3.687

Reduction and recapitulation:	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.						
Maximum measurements.	B¹.	5.25	2.0000	B¹.	4.875	1.0102	B¹.	4.00	1.5748	B¹.	5.75	2.2637	B¹.	4.25	1.6732
	B².	5.375	2.1161	B².	4.625	1.8208	B².	4.125	1.6240	B².	5.00	1.9685	B².	5.50	2.1653
	B³.	5.25	2.0089	B³.	4.25	1.6732	B³.	4.125	1.6240	B³.	5.00	1.9685	B³.	4.875	1.9192
Highest .....		5.375	2.1161		4.875	1.0192		4.125	1.6240		5.75	2.2637		5.50	2.1653
Minimum measurements.	B¹.	2.25	0.8858	B¹.	2.25	0.8858	B¹.	1.50	0.5905	B¹.	2.25	0.8858	B¹.	1.50	0.5905
	B².	3.00	0.1811	B².	2.50	0.0842	B².	2.25	0.8858	B².	2.50	0.9842	B².	2.50	0.9842
	B³.	3.25	0.2795	B³.	1.75	0.6389	B³.	2.375	0.9350	B³.	1.375	0.5413	B³.	3.00	1.1811
Lowest .....		2.25	0.8858		1.75	0.6389		1.50	0.5905		1.375	0.5413		1.50	0.5905
Average measurements.	B¹.	3.758	1.4795	B¹.	4.229	1.6649	B¹.	2.775	1.0925	B¹.	3.287	1.2910	B¹.	2.990	1.1771
	B².	4.270	1.6810	B².	3.640	1.4354	B².	3.071	1.2000	B².	3.795	1.4910	B².	3.812	1.5007
	B³.	4.216	1.6506	B³.	2.275	1.2893	B³.	3.204	1.2614	B³.	3.550	1.3976	B³.	3.687	1.4515
Averages .....		4.081	1.6106		3.717	1.4633		3.017	1.1877		3.544	1.2952		3.406	1.3763
Tests above average .....		45			50			39			43			46	
Tests below average .....		45			40			51			47			44	



TABLE XXXVII.—Actual measurements of length and fineness of Angora goat hair—Continued.

Catalogue number of samples ..	383.			384.			385.			386.			387.		
	6 inches.			4½ inches.			11½ inches.			6½ inches.			7 inches.		
	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.	B¹.	B².	B³.
Actual measurement in centi- millimeters.	4.50	4.50	3.375	2.00	2.00	1.75	3.375	4.00	3.25	3.375	2.50	2.00	3.75	2.75	3.125
	4.00	4.00	3.75	2.125	1.75	2.00	2.00	2.625	3.375	3.625	2.375	2.25	3.50	3.00	3.125
	1.50	5.00	4.00	2.50	2.50	2.00	1.75	3.375	2.875	3.00	2.50	2.50	3.25	3.25	2.50
	5.00	4.25	3.75	2.25	2.875	1.50	1.625	3.375	4.50	2.375	2.875	2.00	3.275	2.00	3.75
	4.00	4.25	4.90	2.25	2.375	2.00	3.50	4.25	3.00	2.25	2.875	2.50	2.75	3.375	2.50
	4.60	3.75	4.625	1.625	2.125	2.375	3.00	2.75	3.375	2.75	2.50	1.625	3.50	2.875	3.25
	3.50	3.875	4.00	2.50	2.25	2.00	3.50	4.00	4.625	2.50	2.50	2.75	3.75	3.875	3.75
	4.625	3.25	4.75	2.50	2.50	2.25	3.25	3.00	3.625	2.75	3.25	2.75	3.00	3.25	2.875
	3.60	3.50	3.875	1.875	2.00	1.75	3.00	4.25	4.50	3.50	2.875	2.00	2.375	3.125	3.00
	4.50	4.25	4.50	2.00	1.875	2.00	2.875	3.375	4.00	3.00	3.125	3.25	2.75	3.375	3.875
	4.00	4.125	4.375	2.00	2.25	2.25	3.00	3.25	4.25	2.875	3.25	2.50	3.50	2.75	1.75
	4.25	3.875	4.00	2.125	2.75	2.00	3.75	3.50	3.125	3.25	4.00	2.25	3.00	3.375	3.00
	4.00	3.625	4.50	1.75	2.375	2.25	4.00	3.50	4.50	3.125	3.125	1.875	3.50	3.75	2.875
	4.25	3.625	4.00	2.00	2.50	2.375	3.375	3.50	4.375	1.75	2.125	2.875	2.25	4.375	3.375
	3.25	4.375	5.25	2.00	2.75	2.00	2.875	3.375	4.00	2.00	3.00	2.625	2.50	3.50	3.25
	4.375	3.50	5.25	2.75	2.125	2.375	1.875	4.25	4.375	3.75	2.60	2.00	3.25	3.625	2.875
	4.875	3.875	3.75	2.60	2.00	2.50	3.00	3.00	3.375	2.875	2.875	3.00	3.25	3.00	3.25
	3.75	4.375	4.60	2.125	2.00	2.25	1.875	4.00	4.375	3.375	2.50	2.625	2.125	2.875	3.25
	4.375	4.60	4.00	1.75	2.50	1.875	2.25	2.625	3.50	3.25	2.60	3.00	3.875	2.875	3.50
	4.125	4.25	4.375	2.00	2.625	2.125	3.25	3.00	2.625	3.125	3.125	2.50	2.50	2.75	3.50
	3.00	3.25	4.75	2.00	2.00	2.50	2.00	3.875	3.75	3.125	3.25	1.875	2.25	4.375	2.50
	4.875	4.25	5.00	1.75	2.875	1.025	3.50	4.00	3.375	2.75	2.75	2.25	3.375	3.50	3.625
	3.60	4.375	2.875	2.125	2.50	2.00	1.625	3.75	2.75	3.375	3.625	2.50	2.50	3.875	3.150
	4.375	3.875	4.00	2.00	2.25	2.00	2.875	3.75	3.875	3.50	2.50	2.00	2.75	3.50	3.50
	4.25	5.375	3.25	2.375	2.25	2.00	1.75	3.25	5.00	2.50	2.50	2.50	2.625	2.50	3.50
	3.125	3.75	4.125	1.875	1.625	2.00	1.875	3.75	6.00	2.60	3.00	2.375	3.00	4.375	2.625
	4.75	4.875	4.00	2.875	1.75	2.60	3.00	3.00	5.375	2.625	2.25	3.875	3.375	4.00	2.875
	4.25	3.75	4.50	2.125	2.00	2.25	4.25	2.75	4.625	2.50	2.25	3.60	2.00	3.75	3.25
	3.875	4.375	2.875	2.25	2.00	2.50	5.60	2.50	4.50	3.00	3.375	3.125	3.75	3.875	2.25
	3.875	3.25	4.50	1.50	3.00	2.00	3.75	2.50	2.75	2.50	3.875	2.875	2.75	2.25	3.50
Averages.....	3.991	4.034	4.178	2.116	2.262	2.100	2.908	3.404	3.554	2.912	2.841	2.428	3.004	3.305	3.120

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.			
Maximum measurements.	B¹	5.00	1.9685	B¹	2.875	1.1318	B¹	5.50	2.1653	B¹	3.75	1.4763	B¹	3.75	1.4763
	B²	5.375	2.1161	B²	2.875	1.1318	B²	4.25	1.6732	B²	4.00	1.5748	B²	4.375	1.7224
	B³	5.25	2.0669	B³	2.50	0.9842	B³	5.375	2.1161	B³	3.25	1.2795	B³	3.875	1.6255
Highest .....		5.375	2.1161		2.875	1.1318		5.50	2.1653		4.00	1.5748		4.375	1.7224
Minimum measurements.	B¹	1.50	0.5905	B¹	1.50	0.5905	B¹	1.625	0.6397	B¹	1.75	0.6889	B¹	2.00	0.7874
	B²	3.25	1.2795	B²	1.625	0.6397	B²	2.60	0.9842	B²	2.25	0.8858	B²	2.00	0.7874
	B³	2.875	1.1318	B³	1.50	0.5905	B³	2.625	1.0394	B³	1.625	0.6397	B³	1.75	0.6889
Lowest .....		1.50	0.5905		1.50	0.5905		1.625	0.6397		1.625	0.6397		1.75	0.6889
Average measurements ..	B¹	3.991	1.5712	B¹	2.116	0.8330	B¹	2.908	1.1448	B¹	2.912	1.1464	B¹	3.004	1.1826
	B²	4.034	1.5681	B²	2.262	0.8905	B²	3.404	1.3401	B²	2.841	1.1185	B²	3.305	1.3011
	B³	4.178	1.6448	B³	2.100	0.8267	B³	3.554	1.3992	B³	2.428	0.9569	B³	3.120	1.2263
Averages.....		4.068	1.6015		2.159	0.8499		3.289	1.2948		2.727	1.0736		3.143	1.2373
Measurements above average ..		46			39			51			44			48	
Measurements below average ..		44			51			39			46			42	



TABLE XXXVIII.—Extremes and averages of fineness of Angora goat hair.

## ANGORA GOAT HAIR.

Catalogue number of samples.	HIGHEST.		LOWEST.		AVERAGE.		LENGTH.
	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In inches.
194	3.75	1.4763	1.50	0.5905	2.484	0.9779	6.00
195	10.00	3.9370	1.00	0.3937	2.752	1.0834	5.50
196	5.375	1.3287	1.50	0.5905	3.590	1.4133	9.00
197	9.625	3.7893	1.00	0.3937	2.491	0.9807	9.50
382	4.750	1.8700	1.50	0.5905	3.138	1.2354	7.50
383	5.375	2.1161	1.50	0.5905	4.068	1.6015	6.00
384	2.875	1.1318	1.50	0.5905	2.159	0.8499	4.50
385	5.500	2.1653	1.625	0.6397	3.289	1.2948	11.50
386	4.000	1.5748	1.625	0.6397	2.727	1.0736	6.25
387	4.375	1.7224	1.75	0.6889	3.143	1.2373	7.00
388	5.375	2.1161	2.25	0.8858	4.081	1.6166	5.00
389	4.875	1.9192	1.75	0.6889	3.717	1.4633	7.50
390	4.125	1.6240	1.50	0.5905	3.017	1.1877	4.50
391	5.75	2.2637	1.375	0.5413	3.544	1.3952	7.00
Averages	5.411	2.1303	1.527	0.6011	3.157	1.2429	6.91

## CASHMERE GOAT.

892	5.50	2.1653	1.50	0.5905	3.496	1.3763	5.50
893	5.75	2.2637	1.375	0.5413	3.544	1.3952	7.50
Averages	5.625	2.2145	1.4375	0.5657	3.520	1.3858	6.50



TABLE XXXIX.—Results of tests of strain and stretch of Angora goat hair.

Catalogue number of samples..	194.				195.				196.				197.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	16.00	14.00	5.00	7.00	10.50	4.50	14.50	17.00	5.50	2.00	28.50	16.00	14.00	16.00	14.50	15.60
	6.50	4.00	14.50	15.00	13.00	17.00	25.60	17.50	19.50	15.50	13.00	3.50	7.50	14.00	14.50	4.00
	13.50	15.00	5.50	3.00	27.50	16.00	10.00	6.00	27.50	15.00	30.00	13.50	15.50	15.00	8.60	12.50
	19.00	15.50	6.50	3.00	18.50	17.00	25.50	15.00	15.00	12.00	33.50	16.00	14.00	12.50	12.50	6.00
	9.00	5.00	10.50	13.00	9.50	4.00	14.50	12.50	31.50	17.00	11.00	4.00	12.00	13.00	17.00	12.50
	11.00	14.00	8.00	12.00	17.50	16.00	9.00	12.00	30.00	13.50	22.50	13.50	15.50	14.00	18.50	14.50
	10.50	15.00	13.00	14.00	11.50	8.50	16.00	0.00	20.50	15.50	23.00	14.00	8.50	4.50	17.00	13.50
	16.50	14.00	15.00	14.50	10.50	4.00	14.50	11.50	6.00	3.00	0.00	3.00	17.50	14.00	50.50	7.00
	7.50	8.00	13.00	15.00	23.00	16.50	24.50	17.00	12.00	6.50	21.00	6.00	12.50	13.00	17.00	15.00
	7.00	8.00	6.50	14.00	25.50	17.00	0.50	5.00	14.00	14.00	20.60	15.00	13.00	11.00	15.50	14.00
	5.60	3.00	9.00	13.00	19.50	17.00	19.50	17.00	7.00	2.50	10.00	3.50	10.50	14.00	12.50	11.00
	10.50	14.00	11.00	14.50	29.50	15.50	21.00	13.00	23.00	13.00	14.00	13.00	0.00	7.50	17.50	15.00
	12.00	13.00	6.60	5.00	6.50	11.00	15.50	11.50	24.00	13.50	35.00	13.50	15.00	13.00	11.60	10.50
	7.50	3.50	13.50	13.00	21.00	12.00	16.50	10.00	21.50	17.00	32.50	16.00	11.50	0.00	13.00	13.00
9.00	6.00	14.00	13.00	10.00	14.00	18.50	16.00	31.50	14.50	14.50	9.00	13.50	13.00	11.50	0.00	
Total .....	160.00	153.00	151.50	174.00	264.50	190.00	254.50	192.00	287.50	173.50	318.00	159.50	189.50	180.50	211.50	172.00
Recapitulation:																
Highest .....	19.00	293.26	15.50	33.75	29.50	454.32	17.50	43.75	35.00	540.21	17.00	42.50	18.50	285.54	16.00	40.00
Lowest .....	5.60	77.17	3.00	7.50	6.50	100.33	4.00	10.00	5.00	77.17	2.00	5.60	7.50	113.76	4.00	10.00
Average .....	10.33	160.21	10.00	27.25	17.30	267.02	12.73	31.83	20.18	311.47	11.10	27.75	13.37	206.36	11.75	29.33
Tests above average .....	15		18		10		10		17		20		15		20	
Tests below average .....	15		12		14		14		13		10		15		10	
Catalogue number of samples..																
382.				383.				384.				385.				
Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
14.25	4.50	17.75	6.50	14.75	4.50	36.25	13.60	12.75	11.00	14.25	15.00	14.25	7.50	15.50	4.50	
8.00	5.00	27.25	14.00	15.00	5.00	22.75	0.00	10.50	16.00	11.50	10.50	23.50	11.00	19.75	7.00	
9.50	4.00	8.50	4.50	20.25	6.60	17.75	3.50	14.00	13.50	11.75	11.00	17.75	7.50	17.25	0.50	
13.75	13.60	27.25	13.50	24.00	10.50	26.60	3.00	16.50	15.00	0.75	12.00	14.00	5.50	26.00	10.50	
22.25	14.50	17.00	14.00	31.75	14.50	19.75	11.50	11.00	5.50	10.00	10.00	14.25	0.00	14.50	0.00	
30.60	14.00	14.25	6.00	32.50	11.50	22.50	10.00	15.25	12.00	17.50	15.00	30.25	13.50	14.75	0.60	
28.75	14.50	17.50	9.50	17.25	4.50	26.25	10.50	13.60	4.50	18.25	14.50	24.50	10.00	10.50	13.00	
16.50	13.00	13.60	4.50	35.25	14.00	5.75	2.50	14.75	11.50	15.00	12.00	24.25	10.50	12.75	7.00	
25.75	14.00	19.00	7.50	40.25	13.50	28.75	9.00	13.00	0.50	13.25	13.00	26.50	13.00	28.75	15.00	
25.00	14.50	22.25	9.00	28.00	11.25	24.50	7.50	10.25	5.00	12.00	11.00	33.00	14.50	21.75	13.50	
16.50	4.50	23.00	14.00	19.50	4.00	22.50	6.00	11.75	12.00	11.75	9.50	19.25	7.00	12.00	8.50	
13.00	12.00	19.25	11.50	20.00	5.00	26.60	10.00	17.50	14.00	8.25	4.00	25.75	8.50	17.75	14.00	
23.50	14.00	16.75	14.00	14.75	4.50	26.00	11.00	17.75	16.00	10.50	5.50	21.25	10.50	15.50	6.00	
23.00	11.50	18.00	13.50	24.25	11.50	37.50	13.00	13.25	12.50	14.50	12.50	14.60	7.00	19.75	7.50	
10.25	3.00	24.00	12.50	23.50	13.50	28.75	7.50	10.25	11.00	11.50	13.00	23.00	13.50	15.00	0.00	
Total .....	285.50	156.50	284.75	154.50	361.00	134.25	372.00	124.50	208.00	166.00	169.70	168.50	333.00	145.50	270.50	140.50
Recapitulation:																
Highest .....	30.50	470.76	14.50	33.25	40.25	621.24	14.50	36.25	18.25	281.68	16.00	40.00	33.00	586.52	15.00	37.50
Lowest .....	8.00	123.43	3.00	7.50	5.75	83.75	2.50	6.25	8.25	127.34	4.00	10.00	12.00	185.22	4.50	11.25
Average .....	10.00	293.26	10.37	25.95	24.43	377.07	8.63	21.58	13.26	204.66	11.15	27.88	20.12	310.34	9.53	23.83
Tests above average .....	12		18		14		17		15		17		12		13	
Tests below average .....	17		12		10		13		15		13		18		17	



TABLE XXXIX.—Results of tests of strain and stretch of Angora goat hair—Continued.

Catalogue number of samples..	386.				367.				388.				389.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	11.50	11.00	14.50	10.00	18.00	10.50	14.75	7.50	35.50	9.50	15.75	13.50	25.50	8.00	23.75	2.50
	13.25	10.50	21.00	15.00	16.50	11.00	17.25	13.00	42.50	15.00	20.50	8.00	23.00	6.00	25.60	5.00
	7.50	4.00	20.50	13.50	26.25	14.00	11.75	8.00	31.25	14.60	23.00	6.50	19.25	6.50	20.75	3.50
	7.00	8.00	13.75	12.00	19.25	13.50	15.25	13.50	43.75	9.50	28.00	10.00	21.75	6.00	26.00	7.00
	10.50	5.50	17.60	13.00	19.75	12.00	18.60	13.00	44.50	14.50	34.60	0.50	19.00	4.50	21.75	5.00
	22.25	14.50	13.25	14.00	18.50	15.00	15.75	14.50	32.00	12.00	41.25	13.50	26.00	5.00	12.60	4.00
	16.00	11.00	12.75	13.00	12.00	8.75	18.00	14.00	42.25	14.00	28.00	12.00	21.50	4.00	20.75	4.50
	10.50	12.00	9.50	0.50	0.50	15.50	19.00	12.60	50.25	15.50	50.25	14.00	24.25	8.50	15.50	3.00
	9.75	6.50	7.50	14.00	27.75	14.00	22.50	13.00	38.50	13.50	34.60	11.60	20.60	3.00	29.50	10.00
	8.00	6.00	18.25	13.00	13.75	10.50	20.25	0.60	21.75	12.00	31.50	0.50	18.00	2.50	15.50	3.50
	11.25	6.50	15.50	10.00	16.25	9.50	22.50	13.00	36.75	13.50	23.25	12.00	26.00	5.00	29.75	10.50
	7.75	8.00	9.25	9.00	15.50	11.00	0.50	14.50	35.50	13.00	21.00	7.50	25.25	8.50	81.00	12.50
	14.25	9.00	10.00	14.50	11.25	4.50	16.50	2.00	24.25	13.00	44.25	16.00	26.00	6.00	20.25	11.00
	17.50	15.00	13.25	13.00	30.75	6.00	25.00	13.60	43.00	15.00	33.75	14.00	20.50	2.50	15.60	4.00
	17.00	13.50	22.00	16.50	21.00	12.90	23.75	17.50	23.00	9.00	25.00	9.00	10.25	7.60	25.00	4.60
	Total .....	184.00	140.00	227.50	190.00	276.00	167.25	275.25	169.00	544.75	193.50	453.60	106.50	326.75	71.50	336.00
	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation:	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	22.25	343.42	16.50	41.25	30.75	474.61	17.50	43.75	50.25	775.69	16.00	40.00	31.00	474.47	12.50	81.25
Lowest .....	7.00	108.04	4.00	10.00	9.50	146.63	2.00	5.00	15.75	243.10	6.50	16.25	10.25	158.21	1.50	3.75
Average .....	13.73	211.76	11.00	27.50	18.36	263.69	11.21	28.03	33.28	513.60	12.00	30.00	22.00	346.95	5.43	13.58
Tests above average.....	13		20		15		17		14		10		10		10	
Tests below average.....	17		10		15		13		10		11		14		20	
Catalogue number of samples..	390.				391.				392.				393.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	25.25	16.00	16.25	11.50	20.00	11.50	35.75	13.00	29.25	9.50	27.00	12.00	51.50	14.00	24.75	12.00
	10.00	4.50	10.00	16.50	19.75	12.50	27.50	10.50	80.50	18.00	21.50	7.50	29.75	13.00	28.75	12.50
	17.50	13.00	10.50	9.00	31.50	13.00	18.25	13.00	20.75	8.50	27.75	13.50	50.25	14.00	55.00	14.50
	14.75	11.00	15.75	15.00	17.00	0.00	29.00	13.50	22.50	7.50	31.25	14.00	51.00	3.50	48.25	5.00
	11.50	10.50	16.50	13.50	25.25	0.50	14.50	12.00	32.75	14.50	28.50	15.00	46.60	2.50	23.00	4.50
	23.25	13.00	16.50	9.00	18.75	6.00	20.00	12.50	14.25	4.00	18.00	7.50	51.00	14.50	33.00	11.50
	27.00	14.00	9.60	6.00	24.75	13.00	29.75	13.00	30.50	15.00	25.50	0.00	32.50	6.00	35.75	13.00
	14.00	61.50	14.50	11.00	24.00	6.50	28.50	11.50	14.25	4.50	21.75	7.50	34.25	5.00	38.75	15.00
	11.50	6.00	27.25	15.50	27.25	9.00	18.50	0.50	25.50	10.00	22.50	0.00	52.00	12.00	45.50	13.50
	19.75	9.50	17.00	14.50	31.50	12.50	37.00	14.00	21.00	11.00	29.75	13.00	56.25	12.50	60.50	14.50
	16.50	12.00	18.25	9.50	38.75	15.50	10.25	7.50	15.50	5.00	0.50	4.50	48.00	9.50	33.00	15.00
	18.00	11.50	20.75	17.00	19.50	12.50	23.25	12.50	24.75	9.50	21.50	13.00	49.00	13.00	26.25	11.00
	19.25	6.00	11.50	6.00	33.50	14.00	26.75	13.50	22.00	14.00	24.75	10.00	17.75	14.00	39.50	12.50
	17.00	11.50	18.00	16.60	17.00	3.50	32.00	10.00	23.75	12.50	22.25	13.50	56.50	16.00	52.00	14.00
	14.25	15.00	10.50	13.00	22.25	11.00	24.75	12.50	17.50	5.50	22.75	14.00	42.00	10.50	37.25	10.50
	Total .....	240.50	160.00	253.75	183.50	379.75	159.00	382.75	178.50	344.75	149.50	354.25	169.00	670.75	160.00	581.25
	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation:	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	27.25	420.59	17.00	42.50	33.75	508.00	15.50	38.75	35.50	547.93	18.00	45.00	60.50	833.79	16.00	40.00
Lowest .....	9.25	142.77	4.50	11.25	14.50	223.80	8.50	8.75	9.50	146.63	4.00	10.00	17.75	273.66	2.50	6.25
Average .....	16.78	258.99	11.73	29.88	25.42	392.35	11.25	28.13	23.30	359.63	10.02	26.55	41.72	614.00	11.30	28.23
Tests above average.....	13		14		14		19		14		15		10		20	
Tests below average.....	17		16		10		11		10		15		14		10	



TABLE XL.—Extremes and averages of tests of strain and stretch of Angora goat hair.

## ANGORA GOAT HAIR.

Catalogue number of samples.	STRAIN.						STRETCH.					
	Highest.		Lowest.		Average.		Highest.		Lowest.		Average.	
	grams.	grains.	grams.	grains.	grams.	grains.	mm.	per ct.	mm.	per ct.	mm.	per ct.
104.....	19.00	293.26	5.00	77.17	10.38	160.21	15.50	38.75	3.00	7.50	10.90	27.25
105.....	20.50	454.32	6.50	10.33	17.30	267.02	17.50	43.75	4.00	10.00	12.73	31.83
106.....	35.00	540.21	5.00	77.17	20.18	311.47	17.00	42.50	2.00	5.00	11.10	37.76
107.....	18.50	285.54	7.50	115.76	13.37	200.30	16.00	40.00	4.00	10.00	11.75	29.38
382.....	30.50	470.76	8.00	123.48	19.00	293.26	14.50	36.25	3.60	7.50	10.37	20.93
383.....	40.25	621.24	5.75	88.75	24.43	377.07	14.50	36.25	2.50	6.25	8.90	21.58
384.....	18.25	281.68	8.25	127.34	13.26	204.66	16.00	40.00	4.00	10.00	11.15	27.83
385.....	38.00	586.52	12.00	185.22	20.12	310.54	15.00	37.50	4.50	11.25	9.53	23.83
386.....	22.25	343.42	7.00	108.04	13.72	211.76	16.50	41.25	4.00	10.00	11.00	27.50
387.....	30.75	474.61	9.50	140.63	18.38	283.69	17.50	43.75	2.00	5.00	11.21	23.03
388.....	50.25	775.59	15.75	243.10	33.25	513.66	16.00	40.00	6.50	16.25	12.00	30.00
389.....	31.00	478.47	10.25	158.21	22.09	340.95	12.50	31.25	1.50	3.75	5.43	13.58
390.....	27.25	420.59	9.25	142.77	16.78	258.99	17.00	42.50	4.50	11.25	11.75	29.38
391.....	38.75	508.09	14.50	223.80	25.42	392.35	15.50	38.75	3.50	8.75	11.25	28.13
Averages.....	30.66	473.23	8.88	137.06	19.12	295.11	15.79	39.48	3.50	8.75	10.60	26.50

## CASHMERE GOAT.

802.....	35.50	547.93	9.50	146.63	23.30	359.63	18.00	45.00	4.00	10.00	10.62	26.55
803.....	00.50	993.79	17.75	273.96	41.73	644.09	16.00	40.00	2.50	6.25	11.30	28.25
Averages.....	48.00	740.86	13.63	210.37	32.52	501.03	17.00	42.50	3.25	8.13	10.93	27.40



TABLE XLI.—General extremes and averages for length, fineness, strain, and stretch of Angora goat hair.

## ANGORA GOAT HAIR.

Catalogue number of samples.	Length in inches.	FINENESS.		STRAIN.		STRETCH.	
		In centimillimeters.	In thousandths of inch.	In grams.	In grains.	In millimeters.	In per cent.
194 .....	6.00	2.484	0.9779	16.38	160.21	10.90	27.25
195 .....	5.50	2.752	1.0834	17.30	267.02	12.73	31.82
196 .....	9.00	3.590	1.4133	20.18	311.47	11.10	37.76
197 .....	9.50	2.491	0.9807	13.37	206.36	11.75	29.38
382 .....	7.50	3.188	1.2354	19.00	293.26	10.37	20.93
383 .....	6.00	4.068	1.6015	24.43	377.07	8.36	21.58
384 .....	4.50	2.159	0.8499	13.26	204.66	11.15	27.88
385 .....	11.50	3.289	1.2948	20.12	310.54	9.53	23.83
386 .....	6.25	2.727	1.0736	13.72	211.76	11.00	27.50
387 .....	7.00	3.143	1.2373	18.38	283.69	11.21	28.03
388 .....	5.00	4.081	1.6166	33.25	513.66	12.00	30.00
389 .....	7.50	3.717	1.4633	22.09	340.95	5.43	13.58
390 .....	4.50	3.017	1.1877	16.78	258.99	11.75	29.38
391 .....	7.00	3.544	1.3952	25.42	392.35	11.25	28.13
Averages .....	6.91	3.157	1.2429	19.12	295.11	10.60	26.50

## CASHMERE GOAT.

392 .....	5.50	3.496	1.3763	23.30	359.63	10.62	26.55
393 .....	7.50	3.544	1.3952	41.73	644.09	11.30	28.25
Averages .....	6.50	3.520	1.3858	32.52	501.93	10.96	27.40



TABLE XLII.—Measurements of fineness of raw silks.

Catalogue No. of samples ..	374.	375.	376.	377.	378.	378.	379.	380.	381.
	Yellow Japanese, mulberry.	Yellow Japanese, Osage Orange.	Riley's Yellow Japanese, Osage Orange, 11 years.	Riley's White Japanese, Osage Orange, 11 years.	Fasnach's Black Thibet (yellow).	Fasnach's Black Thibet (white).	Crozier's French from Cévennes.	Crozier's French Black, larvæ white.	Crozier's French Black, worms dark.
	3.00	2.625	3.25	2.375	2.125	2.00	2.50	3.50	2.75
	2.50	3.50	2.625	2.50	2.50	2.50	2.50	2.75	2.00
	3.50	4.625	2.75	2.00	2.50	3.00	3.125	3.00	2.00
	3.75	2.50	2.875	2.75	2.50	2.75	2.00	3.00	2.50
	2.875	2.625	2.75	2.00	2.375	2.625	3.125	3.25	2.50
	3.75	2.50	2.50	2.50	2.25	2.25	3.00	2.625	3.00
	3.75	2.875	2.75	2.75	2.375	2.50	3.00	2.50	2.50
	3.875	3.375	3.25	2.50	2.50	2.25	2.75	3.00	2.625
	3.50	3.25	2.75	2.50	2.25	3.00	2.125	3.00	2.375
	2.625	2.75	3.25	2.25	2.50	2.50	2.750	3.25	2.50
	2.875	2.75	2.50	2.75	2.50	2.50	2.125	3.50	2.375
	3.00	2.625	3.00	2.875	2.25	3.00	3.50	3.00	3.50
	3.50	3.00	3.00	3.00	1.875	2.25	2.75	2.50	2.00
	2.50	3.00	3.00	2.125	2.125	2.375	2.25	2.875	2.50
	3.50	3.25	3.00	3.375	2.75	2.00	2.875	2.75	2.50
	2.375	3.00	2.625	2.75	2.50	2.60	3.00	3.00	2.25
	3.75	3.00	2.50	3.00	2.50	2.00	2.25	3.00	2.625
	2.75	2.625	2.375	2.375	2.00	2.60	3.00	3.25	2.375
	3.00	2.875	2.625	2.75	2.75	2.60	2.75	2.50	2.75
	2.50	2.25	2.50	2.25	2.25	2.25	2.375	3.50	2.50
	3.125	2.75	2.75	2.75	2.875	2.50	2.50	3.50	2.00
	3.25	3.00	2.75	2.75	2.50	2.50	2.50	3.00	2.50
	2.50	2.75	2.75	2.50	2.375	3.00	3.25	3.00	2.50
	3.125	2.625	2.50	2.75	2.50	3.25	3.375	3.25	2.25
	2.625	2.875	3.00	2.25	2.25	2.375	3.00	2.875	2.25
	3.375	3.25	2.125	2.125	2.50	2.75	3.00	3.00	2.50
	2.875	3.00	2.375	2.375	2.50	2.50	2.625	3.00	2.50
	3.50	3.00	2.75	2.75	2.375	3.00	2.75	3.00	2.75
	2.375	2.50	2.75	2.375	2.50	2.25	3.50	2.875	2.375
	3.50	2.75	2.625	2.625	2.75	2.50	2.875	3.00	2.50
	2.75	2.50	2.50	2.50	2.50	2.50	3.25	2.75	2.50
	3.25	2.75	2.125	2.75	3.25	2.125	2.875	2.875	3.00
	2.625	2.50	3.00	2.625	3.00	2.125	2.50	2.75	3.00
	3.00	3.00	2.75	2.75	1.875	1.875	2.50	4.25	2.25
	2.625	2.875	2.50	2.50	1.75	2.75	2.875	3.25	2.00
	3.125	3.00	2.50	2.375	2.75	2.25	3.25	2.50	3.25
	2.75	2.875	2.50	2.50	2.375	2.50	2.75	3.125	2.25
	2.875	2.75	3.00	2.60	2.75	2.75	3.50	2.75	2.25
	3.00	2.625	2.25	2.25	2.625	2.375	2.875	2.25	2.75
	2.00	2.75	2.75	3.25	2.375	2.25	3.25	3.50	2.50
	3.375	2.375	3.25	2.625	2.50	2.50	3.50	2.75	2.25
	3.25	3.125	2.875	2.00	2.75	3.25	3.00	3.25	2.625
	3.50	3.25	2.50	2.50	2.875	2.75	3.50	3.00	2.75
	2.50	2.25	2.75	2.125	2.25	3.125	3.00	2.75	3.00
	2.75	3.375	3.00	2.625	3.00	3.00	3.00	3.00	2.25
	3.00	2.625	2.50	2.50	2.75	2.25	2.50	3.50	3.375
	3.25	3.25	3.00	2.75	2.625	2.25	3.00	2.75	3.00
	3.00	2.75	2.50	2.375	2.50	2.75	2.50	3.125	2.50
	2.25	2.75	2.50	2.60	2.00	3.00	2.50	3.25	2.25
	2.75	3.25	2.75	2.375	2.25	2.50	2.75	3.375	2.25
	2.75	3.25	2.75	2.375	2.25	2.50	2.75	3.375	2.25
	2.75	3.25	2.75	2.375	2.25	2.50	2.75	3.375	2.25
Averages .....	3.015	2.878	2.748	2.513	2.465	2.528	2.86	3.038	2.465

Recapitulation:	374.		375.		376.		377.		378.		378.		379.		380.		381.	
	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.
Highest .....	3.875	1.5255	4.625	1.8208	3.50	1.3779	3.25	1.2735	3.25	1.2735	3.25	1.2735	3.50	1.3779	4.25	1.6732	3.50	1.3779
Lowest .....	2.00	0.7874	2.25	0.8858	2.125	0.8366	2.00	0.7874	1.75	0.6889	1.875	0.7380	2.00	0.7874	2.25	0.8858	2.00	0.7874
Average .....	3.015	1.1870	2.878	1.1390	2.748	1.0813	2.513	0.9898	2.465	0.9704	2.528	0.9952	2.86	1.1250	3.038	1.1960	2.465	0.9783
Measurements above average .....	21		19		30		21		30		17		27		20		29	
Measurements below average .....	29		31		20		29		20		33		23		30		21	



TABLE XLII.—Results of tests of strain and stretch for raw silks.

Catalogue No. of samples ..	374. DRY.				374. WET.				375. DRY.				375. WET.				376 DRY.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.		
Actual measurement in grams and millimeters.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.
	2.75	3.25	10.50	2.50	10.25	2.00	10.00	3.25	3.00	3.75	11.75	4.50	10.75	1.50	16.00	3.50	2.50	4.00	4.00	2.75
	3.75	3.00	10.25	3.00	10.50	3.00	14.00	1.75	3.75	2.75	12.50	3.25	12.50	1.50	14.25	2.00	2.75	3.50	5.50	1.00
	3.50	3.75	11.25	3.75	10.00	2.75	11.00	1.75	2.50	3.25	11.50	4.25	15.00	2.25	12.50	1.25	2.00	3.75	6.25	2.25
	2.75	2.00	11.75	4.75	11.25	2.25	11.00	3.00	4.25	4.00	11.25	4.25	13.50	3.25	14.00	2.50	2.75	3.00	3.25	2.25
	4.50	2.25	8.75	3.25	13.50	3.75	11.75	3.50	5.00	3.00	11.00	4.00	14.25	2.75	13.75	3.75	2.50	3.25	6.25	1.50
	9.00	2.00	9.50	3.75	13.00	4.00	11.75	3.50	5.25	4.00	11.00	5.00	12.50	2.50	12.25	2.75	7.00	3.50	3.75	3.75
	11.25	1.75	8.00	3.00	10.00	2.00	10.00	2.25	10.50	2.25	11.50	4.75	10.50	1.95	14.00	4.00	9.25	5.00	4.00	3.25
	10.50	4.25	8.25	2.50	12.75	3.50	10.50	3.25	11.00	3.00	11.25	4.25	15.50	4.50	10.75	3.00	9.00	2.00	3.50	3.50
	11.25	3.75	8.00	3.00	12.25	2.00	13.50	3.50	6.25	4.75	11.50	4.50	11.00	3.75	11.75	2.00	9.75	2.50	4.50	1.75
	8.75	2.50	8.25	3.25	12.25	1.25	11.00	3.25	8.00	3.25	10.75	5.00	10.00	2.25	10.75	1.75	10.00	4.00	5.25	1.75
	13.00	2.00	0.00	1.50	11.50	3.75	12.00	4.00	11.00	3.75	4.25	4.00	12.00	3.00	11.00	3.25	10.00	2.75	3.25	3.25
	9.25	3.00	8.00	2.50	11.75	4.75	12.50	4.75	11.00	3.75	4.25	5.00	11.60	3.00	11.25	3.25	10.25	3.75	5.25	1.75
	13.00	2.25	5.50	1.75	10.00	2.25	10.00	2.25	11.25	3.00	4.00	4.25	10.60	2.00	12.75	1.25	10.50	2.00	5.00	1.75
	10.00	3.00	6.25	2.25	11.00	3.25	12.50	3.25	11.00	3.75	3.50	2.50	10.50	1.25	12.00	1.75	8.75	3.50	4.50	1.25
12.00	4.75	6.25	2.00	10.00	3.25	11.25	3.75	11.60	4.75	3.25	2.75	12.60	1.25	12.25	1.25	9.00	3.00	3.25	1.00	
Averages .....	124.25	42.50	120.50	42.75	170.00	43.75	172.75	47.00	114.25	53.00	133.25	64.25	182.50	36.00	189.25	37.25	106.00	49.50	67.50	32.75

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation:	gms.	grs.	mm.	P. ct.	gms.	grs.	mm.	P. ct.	gms.	grs.	mm.	P. ct.	gms.	grs.	mm.	P. ct.	gms.	grs.	mm.	P. ct.
Highest .....	13.00	200.65	4.75	23.75	14.00	210.08	4.75	23.75	12.50	192.93	5.25	20.25	16.00	248.95	4.50	22.50	10.50	162.08	5.00	25.00
Lowest .....	2.75	42.44	1.50	7.50	10.00	154.35	1.25	6.25	2.50	38.59	2.25	11.25	10.00	154.35	1.25	6.25	2.00	30.87	1.00	5.00
Average .....	8.36	129.03	2.84	14.21	11.43	176.42	3.03	15.15	3.25	127.34	3.91	19.55	12.39	191.23	2.44	12.20	5.78	89.21	2.74	13.76
Tests above average .....	10		15		14		13		17		17		14		15		12		17	
Tests below average .....	14		15		16		17		13		13		16		15		18		13	

Catalogue No. of samples ..	376. WET.				377. DRY.				377. WET.				378. DRY YELLOW, SPLIT FIBERS.				378. DRY WHITE, SPLIT FIBERS.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.		
Actual measurement in grams and millimeters.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.
	9.25	2.25	10.50	2.25	2.50	1.00	8.50	3.25	10.25	3.50	12.25	3.75	5.50	3.75	4.50	3.25	4.50	3.25	4.00	1.50
	12.25	1.75	10.00	3.00	3.50	2.75	8.50	2.75	8.00	1.75	11.00	3.50	5.00	3.25	4.00	3.75	4.25	2.75	3.25	1.75
	8.00	1.75	9.75	1.25	3.75	3.75	9.75	3.50	3.50	3.00	9.25	2.25	4.50	1.25	4.00	4.00	3.00	1.00	5.25	3.25
	10.75	3.00	9.75	1.00	3.25	3.00	8.00	2.50	9.75	4.00	10.25	2.25	5.50	2.75	4.50	2.73	3.00	1.00	3.50	1.25
	10.00	3.25	5.00	1.75	4.00	4.00	8.00	2.75	9.00	2.25	9.25	4.25	6.00	1.25	4.50	3.00	3.25	1.50	3.00	3.00
	7.75	1.25	5.25	2.25	3.50	3.50	7.50	2.00	8.00	2.50	8.00	2.75	4.00	3.75	4.25	5.00	4.50	4.75	6.50	2.00
	11.50	1.75	11.50	1.75	11.00	5.00	9.00	2.00	9.25	2.25	8.25	1.50	4.00	2.75	5.00	4.50	4.00	2.75	4.75	1.00
	10.75	1.50	10.25	1.25	10.00	3.75	9.00	1.50	9.75	3.25	10.75	4.75	5.00	5.25	4.00	4.50	3.25	1.50	5.50	2.00
	5.50	1.25	7.75	1.00	11.75	1.75	3.00	2.25	9.00	3.00	9.00	3.75	5.00	4.75	4.00	3.25	4.50	3.75	5.00	3.25
	10.25	2.50	10.25	2.00	9.00	3.00	8.75	3.50	6.25	3.00	10.00	3.75	4.50	5.25	4.00	3.25	3.50	2.25	5.00	1.50
	8.75	1.75	11.75	1.75	10.00	3.75	6.00	2.75	9.50	1.25	10.00	3.25	3.50	3.50	3.25	2.75	4.00	4.75	2.50	3.25
	6.75	1.00	6.25	1.25	11.25	1.25	5.00	1.75	9.00	2.25	8.25	3.00	3.50	2.75	3.75	3.25	3.25	3.00	5.25	2.50
	8.00	1.50	10.25	2.75	9.75	2.25	8.00	2.50	8.50	2.75	8.75	4.00	3.75	3.00	3.25	2.25	3.25	3.00	2.25	2.00
	10.50	2.25	10.00	2.00	10.50	2.75	5.50	2.25	11.00	4.00	7.50	2.75	5.00	5.00	2.75	3.25	4.75	3.50	2.25	2.25
12.50	2.50	10.00	1.75	10.25	3.00	6.50	3.75	10.60	3.00	8.00	2.75	4.25	3.25	3.75	3.25	3.75	3.00	2.25	3.75	
Averages .....	142.50	29.25	138.25	27.00	120.00	44.50	110.50	39.50	139.25	41.75	140.50	48.25	69.00	52.00	59.50	52.00	56.75	41.75	58.75	33.25

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation:	gms.	grs.	mm.	P. ct.	gms.	grs.	mm.	P. ct.	gms.	grs.	mm.	P. ct.	gms.	grs.	mm.	P. ct.	gms.	grs.	mm.	P. ct.
Highest .....	12.50	192.93	3.25	16.25	11.75	161.86	5.00	25.00	12.25	189.07	4.75	23.75	6.00	92.61	5.50	27.50	6.50	100.32	4.75	23.75
Lowest .....	5.00	77.17	1.00	5.00	2.50	38.59	1.00	5.00	7.50	118.76	1.25	6.25	2.75	42.44	1.25	6.25	2.25	34.73	1.00	5.00
Average .....	9.36	144.47	1.88	9.40	7.63	118.54	2.50	14.00	9.33	144.00	3.00	15.00	4.23	66.03	3.47	17.35	3.83	58.42	2.50	12.50
Tests above average .....	19		12		18		13		12		12		14		12		14		14	
Tests below average .....	11		18		12		17		18		13		16		18		16		15	



TABLE XLII.—Results of tests of strain and stretch for raw silks—Continued.

Catalogue No. of samples ..	378. DRY YELLOW.				378. WET YELLOW.				378. DRY WHITE.				378. WET WHITE.				379. DRY.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>
	5.50	2.50	10.00	3.50	6.25	1.50	8.00	3.50	4.00	2.25	9.75	3.00	11.00	2.75	6.75	2.75	10.50	4.00	15.50	5.00
	6.75	4.75	9.50	3.00	6.75	2.00	7.00	3.25	4.25	3.25	5.50	2.00	10.60	4.00	7.50	2.75	10.50	4.75	15.50	4.25
	6.00	2.75	11.00	4.25	7.00	1.50	8.00	2.00	4.00	1.75	6.75	2.25	11.75	2.00	9.00	2.00	8.00	2.50	15.00	4.25
	5.75	4.25	9.00	2.75	7.75	1.75	6.50	2.00	3.75	2.25	10.00	3.00	11.25	2.00	10.25	2.25	11.00	4.00	14.00	3.25
	6.00	2.25	10.50	4.00	6.00	2.00	8.25	3.25	3.75	2.25	6.50	1.75	11.25	3.00	9.50	1.75	8.00	1.25	15.00	4.25
	8.75	3.25	9.50	5.00	12.25	1.75	7.00	2.25	8.00	3.25	5.25	1.75	9.75	1.75	11.00	2.25	16.00	1.75	14.50	4.25
	8.75	4.75	9.00	4.50	6.25	2.50	0.60	1.75	7.75	3.00	6.00	1.25	11.25	3.50	8.00	1.75	17.25	3.25	13.00	3.75
	9.50	4.00	9.25	4.50	8.57	3.25	10.50	3.75	9.50	3.25	4.00	1.50	11.00	2.75	11.00	3.00	16.00	5.25	13.25	3.75
	9.25	2.00	6.00	1.25	8.75	3.00	8.75	3.00	9.00	3.25	4.25	1.25	11.25	2.75	9.25	1.75	15.50	4.00	12.50	2.25
	8.00	2.25	5.25	3.25	6.50	1.75	7.00	3.00	7.00	4.00	6.25	2.75	11.00	4.00	10.00	3.75	13.50	3.75	12.25	2.25
	11.00	4.75	5.00	2.00	0.25	2.75	11.00	2.00	8.50	3.50	4.00	1.50	6.75	1.75	8.00	1.75	11.00	1.75	5.50	1.25
	0.25	4.25	5.25	2.25	6.75	1.25	6.00	1.75	8.50	2.75	5.25	2.25	7.00	1.25	9.25	2.25	13.00	2.50	7.25	1.25
	12.00	1.75	5.75	2.25	7.00	1.75	7.50	1.75	8.00	2.60	4.50	1.25	8.00	1.75	10.25	1.75	11.75	2.75	5.25	1.00
	10.00	3.25	9.00	4.00	8.25	1.25	7.75	2.25	7.75	1.75	4.25	2.25	10.00	3.00	8.75	2.60	13.00	3.50	7.50	2.00
10.75	2.75	9.25	4.25	7.50	2.25	6.25	1.75	8.50	3.50	5.25	2.25	11.00	3.00	10.00	2.75	14.00	3.00	6.25	1.50	
Total .....	126.25	49.50	123.25	50.75	115.00	30.25	119.00	37.25	102.25	42.50	86.50	30.00	152.75	39.25	141.50	35.00	189.00	48.00	172.25	44.25
Recapitulation:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....	<i>gms.</i>	<i>grs.</i>	<i>mm.</i>	<i>perct.</i>	<i>gms.</i>	<i>grs.</i>	<i>mm.</i>	<i>perct.</i>	<i>gms.</i>	<i>grs.</i>	<i>mm.</i>	<i>perct.</i>	<i>gms.</i>	<i>grs.</i>	<i>mm.</i>	<i>perct.</i>	<i>gms.</i>	<i>grs.</i>	<i>mm.</i>	<i>perct.</i>
Lowest .....	5.60	77.17	1.25	0.25	6.00	92.61	1.25	0.25	3.75	57.88	1.25	6.25	6.75	104.18	1.25	6.25	5.25	81.03	1.00	5.00
Average .....	8.32	128.42	3.34	10.70	7.80	120.80	2.25	11.25	6.29	97.08	2.42	12.10	9.81	151.41	2.48	12.40	12.04	185.83	3.08	15.40
Tests above average .....	19		14		12		10		13		13		18		15		18		17	
Tests below average .....	11		16		18		17		17		17		12		13		12		13	
Catalogue No. of samples ..	379. WET.				380. DRY.				380. WET.				381. DRY.				381. WET.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>	<i>gms.</i>	<i>mm.</i>
	12.00	2.00	13.00	2.00	8.50	6.00	0.50	3.75	10.00	1.25	10.00	1.75	8.25	4.25	8.25	4.25	5.25	1.75	7.00	2.75
	11.25	2.75	12.00	3.50	8.00	4.00	9.00	3.00	11.00	2.75	10.00	2.50	7.75	3.25	7.75	2.75	6.25	1.75	7.50	2.25
	12.25	3.00	13.25	1.25	8.25	3.25	9.00	3.75	11.25	2.00	10.50	4.00	8.25	4.00	8.25	2.75	6.50	3.25	5.75	1.75
	12.00	2.25	12.25	3.25	9.25	2.75	10.00	3.00	10.25	4.00	10.50	2.50	7.75	3.50	8.25	3.25	7.50	3.50	7.25	4.00
	11.75	3.00	12.50	4.25	7.75	4.25	10.60	3.50	11.00	3.25	12.50	3.00	8.75	3.25	8.75	3.50	7.75	2.25	8.00	3.75
	10.25	2.50	10.60	2.00	13.00	4.00	6.00	3.25	12.00	2.75	12.00	2.75	9.75	2.75	9.25	2.25	6.75	3.00	6.75	2.25
	12.00	1.25	13.00	2.00	13.00	3.25	7.25	3.75	10.60	1.75	12.00	2.00	9.00	1.50	8.75	3.00	7.50	2.25	5.00	2.25
	11.00	3.00	8.00	1.75	12.25	2.75	5.60	2.25	10.75	1.50	12.25	2.25	8.50	1.25	9.25	1.50	7.00	1.25	8.60	3.50
	10.25	2.00	10.60	2.75	11.50	2.75	6.50	3.25	12.50	2.00	10.25	2.75	9.50	3.75	9.00	3.00	7.00	1.75	0.25	1.25
	11.00	3.00	8.00	2.50	12.25	3.00	7.25	4.00	11.25	2.00	10.50	1.75	9.25	3.50	10.25	2.25	8.00	3.00	7.60	1.75
	9.00	2.25	12.00	3.25	14.00	4.60	7.00	3.50	10.00	2.50	13.50	3.00	10.00	4.25	7.00	3.00	7.75	1.75	7.00	2.00
	8.00	1.75	12.00	3.75	12.25	3.50	7.75	3.50	9.00	2.00	12.25	3.25	12.00	4.25	5.25	2.00	6.25	3.00	7.00	2.00
	8.25	2.75	11.25	3.25	12.50	3.25	7.00	4.00	10.00	3.00	9.25	2.00	10.25	4.00	7.00	3.00	6.75	2.25	7.25	1.50
	10.00	2.25	13.50	3.75	15.00	5.00	6.00	3.25	10.75	2.75	11.25	2.25	10.50	4.00	6.00	2.00	7.25	1.75	7.50	4.00
11.50	3.00	13.00	3.50	14.60	3.75	6.60	3.50	14.00	4.00	10.50	3.00	10.00	3.25	6.25	3.25	7.00	1.75	6.25	2.25	
Total .....	160.60	36.75	174.75	42.75	172.00	56.00	114.75	51.25	164.25	37.50	167.25	38.75	139.50	50.75	118.25	41.75	104.50	35.25	104.50	37.25
Recapitulation:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....	<i>gms.</i>	<i>grs.</i>	<i>mm.</i>	<i>perct.</i>	<i>gms.</i>	<i>grs.</i>	<i>mm.</i>	<i>perct.</i>	<i>gms.</i>	<i>grs.</i>	<i>mm.</i>	<i>perct.</i>	<i>gms.</i>	<i>grs.</i>	<i>mm.</i>	<i>perct.</i>	<i>gms.</i>	<i>grs.</i>	<i>mm.</i>	<i>perct.</i>
Lowest .....	13.50	208.37	4.25	21.25	15.00	231.52	6.00	30.00	14.00	216.08	4.00	20.00	10.60	162.06	4.25	21.25	8.50	131.19	4.00	20.00
Average .....	11.18	172.56	2.65	13.25	9.56	147.55	3.58	17.90	11.05	170.55	2.54	12.70	8.59	132.58	3.08	15.40	6.97	107.58	2.42	12.10
Tests above average .....	18		16		12		12		12		14		16		16		19		10	
Tests below average .....	12		14		18		18		18		16		14		14		11		20	



LETTER OF TRANSMITTAL

DEPARTMENT OF COMMERCE

BUREAU OF STANDARDS

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## PART II.

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### SUPPLEMENTAL REPORT ON EXAMINATION OF WOOLS.

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## LETTER OF TRANSMITTAL.

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UNIVERSITY OF ILLINOIS,  
*Champaign, Ill., January 15, 1885.*

SIR: I have the honor herein to submit a detailed report of an investigation of wools, supplementing a report made one year ago bearing upon the same subject. The former report was based upon work with material collected at the International Exhibition of Sheep and Wool Products, held in Philadelphia in September, 1880, from animals and fleeces therein exhibited. It was expected that in such an exhibition it would be possible to secure material, not only from every portion of our own country, but from every part of the globe in which any attention is given to the art of sheep-breeding and wool production. But unfortunately these expectations were not realized. The sections of country represented were extremely limited in number, Vermont, the wool-growing section about Western Pennsylvania, Southeastern Pennsylvania, and Delaware, and a small section of Kentucky completing the list. Foreign countries failed to send exhibits, and even of our own country only a few of the prominent breeds were represented. Our investigations were therefore confined to a study and comparison of the wools of a few different breeds and different sexes and ages, as well as of different portions of the fleece. Another disadvantage resulted from the small number of animals found in each class, so that the reduction of averages became a difficult and unsatisfactory task. However, the work furnished results which, notwithstanding their deficiencies, must prove of interest and value. Primarily it was especially to supply such deficiencies that the investigation forming the principal subject-matter of this report was made. The work about to be reported has mainly consisted in the determination of the influence of the section of country upon the quality of the wool produced from the breed of sheep known as the American Merino, the origin of which is too well known to need any description or discussion here; or, rather, its object was to determine differences in the qualities of wool from the leading wool-producing centers as possibly dependent upon climatic influences or upon the food common to the section. And the wool of this breed was chosen for the investigation because of the general interest centering in it, because of its high commercial value, and because it constitutes the basis of all the best wool-production of the world.

To carry out the plan of this investigation, therefore, letters were addressed to the more prominent and reliable breeders of pure American Merino sheep, or to officers of societies, asking them to kindly furnish samples of wool representative of the quality produced from pure-bred sheep in their locality, and in order to secure the greatest uniformity it was requested that the samples be taken only from animals descended directly from Vermont stock bred and grown in the section represented. And to better fix the relations it was requested that the series from each section should consist of samples taken from 20 rams and 50 ewes over two and under three years of age. It was considered that this number would insure a fair average from the section and also afford data for comparison of the relations between the sexes. Investigation subsequent to the distribution of these letters showed that as regards the ultimate value of the staple the age of the animal is comparatively insignificant. Previous investigation had, however, shown that the age has an influence upon the fineness of the fiber, and since the highest degree of fineness was found at about the age mentioned, this was adopted as the standard for our comparison. All the conditions therefore seemed favorable to good results; but how difficult it is by correspondence to secure exactly what is desired for such work is well illustrated in the catalogue and the letters given below. In spite of the interest such an investigation must have for the experienced and progressive breeder and wool-grower, the samples obtained from some of the sections were not altogether satisfactory, and very many important wool-growing sections were not represented. Those from which we were favored with samples are Vermont, New York, Western Pennsylvania, Wisconsin, Minnesota, Illinois, Texas, and California. In most cases the samples were taken from animals bred in the section, descended from Vermont stock, while in a few cases some of the animals had been brought from Vermont. Fortunately the latter cases were very few, and the results we shall have to present herewith may be accepted as fairly representative of the production of the sections named.



In securing the material here described, we are especially indebted to Mr. Albert Chapman, Middlebury, Vt.; Mr. William G. Markham, Avon, N. Y.; Mr. John McDowell, Washington, Pa.; Mr. George E. Peck, Geneva, Ill.; Mr. Charles E. Gibbs, Whitewater, Wis.; Mr. A. Willson, Richfield, Minn.; Mr. J. D. Keraly, Cottonwood Springs, Tex.; and Messrs. Baechtel Bros., Willits, Mendocino County, California.

In addition to the pure-bred wools procured through the instrumentality of the gentlemen just named, we were further favored with a series of wools from sheep of the Negretti race, bred in Germany, and imported to this country for the purpose of establishing the race on American soil. These animals were exhibited in the Fat Stock Show of Chicago, in the fall of 1883. They were brought to this country by Mr. E. W. Perry, of Chicago, who kindly furnished the series of samples for examination. And since they represent fairly the average of the flocks of the class in Germany, they furnish interesting data for the comparison of the American Merino wools with those of other wool-producing sections. The relations involved will be developed further on.

And besides these samples from Germany we have received another series no less interesting from Herr Otto Steiger, of Leutewitz, near Meissen, Saxony, in Germany. This series may be accepted as fairly representative of the Saxon family of Merinos descended from the earlier importations from Spain. In this series it is interesting to note that the wool was produced upon animals of very large size, and that the fleeces were very heavy.

A third branch work consisted in the examination of the cross-bred wools furnished by Messrs. Baechtel Bros., of Willits, Mendocino County, California. These gentlemen have been engaged during the past ten years in a series of experiments to secure a race of hardy animals having large size, producing fairly heavy fleeces of wool of good quality and fineness. Starting with pure-bred animals they have made a series of crosses with varying proportions of Merino, Southdown, and Shropshire-down blood, and their own conclusions from the results of their experiments are embodied in the correspondence sent with the samples and given below. This correspondence will be read with the greatest interest by those concerned in the ultimate advancement of the sheep and wool industry in this country. The demand for mutton-wool sheep is strengthening, and as the necessity for the decrease of the cost of wool production advances, this question of how to combine the production of good mutton with the production of good wool, or *vice versa*, will increase in importance. And these experiments, of which such faithful record has been preserved by the Messrs. Baechtel Bros., will do much to clear up the many difficulties inherent in it. It gives us pleasure, therefore, to be able to add something to the knowledge flowing from them, and to offer the results showing the relative values of the wools they have been able to produce.

Respectfully submitted.

WM. McMURTRIE,  
*Professor of Chemistry, University of Illinois.*

To Hon. GEO. B. LOBING,  
*Commissioner of Agriculture.*



## DESCRIPTION OF THE MATERIAL AND ITS SOURCES.

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The following correspondence which accompanied some of the material examined will be of interest in connection with the study of the results we have to present. In some cases the information concerning the samples was attached thereto, and this is the case with that received through Mr. A. Chapman, of Vermont. Such information will be found in detail in the catalogue of samples given below. It is full of interest and value, and we can only express regret that the information from other sections is not equally full.

ROCHESTER, N. Y., *March 23, 1884.*

DEAR SIR: One of our most scientific breeders has an impression that there is a point in density that we have surely made. It is this: A dense fleece, which opens in blocks like the leaves of a book, only that the leaves may be  $\frac{1}{2}$  inch or more thick, protects the fibers of wool in the block from rubbing against one another when the sheep is moving, turning, &c.; that the only rubbing of fibers against one another in such fleeces is the wool on the face of the leaves, while in the loose wool sheep it occurs all through the fleece; that the friction is detrimental to the fiber in injuring the scaly seriations and weakening the fiber; that fiber taken from the center of a block or leaf of wool will show quite a difference from those taken from the face of the leaf or from a thin-wool sheep. On the samples I have sent I have marked those from dense fleeces, so that you may experiment and see whether there is anything in the theory.

Yours,

W. G. MARKHAM.

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RUSH, *March 28, 1884.*

DEAR SIR: As per request we send samples from four different ewes, all two years old this spring.

We are glad that an opportunity is offered to test our theory as to the evenness, trueness, and strength of fiber in the different parts of the same fleece.

We wish the test made on those grounds without regard to length or fineness. We are of the opinion that the thicker we can grow the wool in all parts of the fleece the more uniform will the quality be. These samples were taken, two from the very thickest fleeced sheep and two from the very thinnest, and were taken from the best and poorest parts of the fleece.

It would be interesting to know which one of these four samples would run evenest in quality and which the poorest. We deem this a very important question in the problem of sheep-breeding.

If we succeed in breeding a sheep producing one grade of wool in nearly all parts we will have accomplished a great improvement.

We wish the test made wholly on trueness, free from thick and thin places in the fiber; also the tooth-like projections or felting properties, and also to know what the opinion would be in regard to friction of fibers sliding one upon another causing weak places and unevenness in fiber.

P. AND G. F. MARTIN.

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PATTERSON'S MILLS, WASHINGTON COUNTY, PENNSYLVANIA,

*February 7, 1884.*

DEAR SIR: To-day I have taken out a number of wool samples from stock rams, breeding ewes, ewe lambs, ram lambs. I have sold most of young stock for the last five years excepting lambs of 1883.

I have given number of each one and best fleeces of one year's growth; one bunch of small samples taken out of fleeces after shearing in the spring of 1880; selected some for finest quality, others longest staple and heaviest weight. Stock ram shorn first week of April, 1883; ten months growth of wool. Ewes clipped last of April, some in May; a few days over nine months' growth of wool. It will not be a fair test to compare two-year-old ewes not bred with ewes of five to eight years that have raised lambs since two years old.

Stock rams fed a little corn and oats most of the year; were not housed much until last of August; have been on dry feed since August. Ewes were not grained or housed till October 1st; fed a little grain since that time. They were a little thin to commence winter.

None of our stock was put up in show condition last season. We had a very wet season until last of July, followed by a dry fall; rather a hard year on stock generally. Our lambs did badly up to winter.

Respectfully, yours,

ROBT. PERRINE.



GENEVA, ILL., February 6, 1884.

DEAR SIR: I send you by this mail the samples of wool you wanted. The samples sent are all from our flock, E. Peck & Sons, and are marked "Vt. R.," for Vermont register, and "Am. R.," for American register; also the age of sheep.

The samples are all from ewes except those marked "ram." We have but three rams two years old, so that the samples of rams' wool are from sheep one and under two years old, except the samples from our stock rams.

The samples marked "unhoused" have been out to the weather the whole season, except the severe winter weather, and those marked "housed" have only been partly housed; some of them were our premium sheep at the State fair.

You will find one sample of wool marked "seventeen years old." It is a Vermont bred ewe we bought in the spring of 1880. She was toothless then; has been bred every year since, and is now in lamb.

I would like to have you make a test of the fibers of the samples marked stock rams, as to its value, and report the result to me.

Yours, very respectfully,

GEO. E. PECK.

WHITEWATER, WIS., April 9, 1884.

DEAR SIR: I send you to-day by express a small box of such samples of wool as I have been able to secure. They are all from thoroughbred sheep—Merino ewes and rams registered in the register of the Wisconsin Spanish Merino Sheep-Breeders' and Wool-Growers' Association, and in the Vermont register their pedigrees trace to importations in the register. They have been fed with hay and oats or corn during the winter and sheltered from the storms since October; nothing peculiar in their treatment. They are generally sheared in the early part of May.

Very truly, yours,

CHAS. R. GIBBS.

WHITEWATER, Wis.,

The six samples of ram's fleeces and ten of ewes were all taken from the shoulders and cut out February 16. They were shorn May 7 and 8, 1883. They have been kept out the heavy rains since August. No grain until taken up for the winter, then fed one-half bushel of corn and oats to fifty sheep, and good, tame hay all they will eat. The samples are all taken from pure Spanish Merino sheep, all recorded in the Vermont and Wisconsin State registers.

O. COOK AND SONS.

RICHFIELD, MINN., February 8, 1884.

DEAR SIR: In response to your request of January 10, I send you by this mail samples of Merino wool. As stated on the papers to which they are attached one row are ewe samples and the other rams, all two and three years of age.

I kept Merino sheep in Vermont near the part of that State where the celebrated Hammond flock was kept previous to 1850, when I moved to this State.

The basis of my present flock was ten ewes and one ram brought from Vermont in 1862, I think. All the outside blood mixed or added has been pure and direct from Vermont.

At the agricultural fairs of the Northwest my sheep have repeatedly been in competition with the best sheep from this and other States, and I have never found any to equal them. From my observation and experience, I conclude that sheep are more vigorous and healthy, grow larger, and produce more wool in the Northwest than in the Eastern States.

The feed of my sheep has been, during the winter, cockle screenings, costing three to five dollars per ton at Minneapolis mills, not much corn or oats, together with wheat-straw, a little hay, and corn-fodder daily. In summer, fair pasture and a little cheap feed occasionally. I intend to always keep them in good growing condition.

The sheep were sheared the 1st of May. The samples were taken to-day.

I should have stated before that my sheep are registered in the American Merino Sheep Register.

Yours, respectfully,

Q. WILLSON.

COTTONWOOD SPRINGS, TAYLOR, TEX., March 7, 1884.

DEAR SIR: I have to acknowledge receipt of your letter of 28th, and now beg to hand you 20 samples of wool from registered Spanish Merino. Ten of the samples are from rams about two years old, and from ewes of similar age.

While I send you these samples, I wish to state that my flock has been very much abused during the past year, owing to my being unable to attend to it through absence and sickness, during which time the sheep were left to the tender mercies of hands who neglected them to such an extent that when I returned home they were pretty nearly dead, which will account for some weakness in fiber.

I do not think any comparison you can make between Texas wool and that from other States—of wool from registered animals—would be entirely fair to this State, for the reason that there are very few flocks of that character here, while in other States, as Vermont, New York, or Ohio, you have quite a number to select from.

Moreover, stud flocks here have been only recently started, and quite naturally they did not originate from the very best stock of Vermont, as breeders there would not part with their choicest ewes, and it is against the wool from the produce of these that the samples from Texas will come into competition.

I trust, however, that what samples I now send may be of some use to you, and that I may learn in due time the result of your investigations, which I am sure would be of very great interest to the wool producers of this State.

The sheep from which these samples are taken were bred and raised in Texas from stock imported by myself from Vermont.

Yours, very respectfully,

I. D. KERAHEY.



FEBRUARY 28, 1884.

DEAR SIR: Your letter of the 12th ultimo came to hand on the 19th. You wish us to send you more wool samples. We will try and comply with your request, but cannot furnish them in the amounts you desire as our flock of thoroughbred Spanish Merino is small and we are selling our bucks at yearlings. Have but 7 two-year olds—about twenty-five months old now—on hand, and have cut a sample of wool from each of them, on the left shoulder, about the same place. We have 8 ewes of the age of the bucks. Cut a sample from each. Four had no lambs this year and four are suckling lambs about five weeks old.

The samples put up in white tissue paper have lambs, and four put up in red paper have had no lambs. These two lots are about twenty five months old. I have put you up another lot of eight wool samples from thoroughbred Spanish Merino ewes thirty-seven months old. The four in white tissue paper are nursing lambs five or six weeks old, and the four in red paper have not had lambs this season. The box we send you has three lots of samples in it. After taking out the samples a paper in the bottom of each compartment describes the class. We would have cut you larger samples, but it would have made our sheep look so ragged, and the season of the year is approaching for buyers to come around, and we want our sheep to look as well as possible.

These samples are 5½ months' growth, and we could not cut them quite as close as though we were shearing. When you write let us know how large samples you desire. There are no selected samples in this lot, as we have given you all of each class.

Our sheep are bred from 9 ewes purchased in 1873 in San Francisco, bred in Missouri from stock selected from the Hammond stock in Vermont; and we have been breeding them with the utmost care to bucks selected from reliable breeders in this State. Our flock now numbers about 80 head of yearlings and upward.

We should like to comply with your request when we shear in May, with our grade samples, but cannot comply with grade buck samples between 2 and 3 years old. The same trouble stares us in the face as in our Merino family. We have so few bucks of the age you wish samples from that it will hardly be a fair test. The ewe samples of the age we can furnish you.

If you desire it we can give you samples off our yearling bucks and yearling ewes in May, but in the fall we may have disposed of all our yearling bucks.

You can advise us what to do before we shear in May. We should like to see this samples business better patronized. If we are the only patrons from California, we are taking the liberty of addressing men who are engaged in the rearing of thoroughbred sheep in this State, giving them your address, and asking them to furnish samples as we are doing, in hopes that you may get a wider field from which to draw your conclusions.

We omitted at the time making any statement of the care and treatment of those sheep from which we clipped our samples. The bucks have been running in field all winter without any shelter, except timber, and fed on no hay. The ewes without lambs received about the same treatment, with the exception of a shed to go under in stormy weather. The ewes with lambs were sheltered every night for about two months, fed hay and about one pint of oats for six weeks, then one-half pint for the other two weeks. The wool grows slow on our sheep in winter, which makes our samples short.

If you desire any other information, write us and we will cheerfully furnish it.

Very respectfully, yours,

WILLIAM McMURTRIE, Esq.,  
Champaign, Ill.

BAECHTEL BROS.

WILLITS, MENDOCINO COUNTY, CALIFORNIA, May 30, 1883.

DEAR SIR: Inclosed you will find 15 samples of wool. We could forward no earlier, as the season for shearing was later. We just finished last Saturday. We have labeled each bottle. Some of the labels might come off and we have taken the extra precaution of numbering them on the cork. Will give the grade of wool contained in each bottle:

- No. 1. Yearling ewe; fifteen-sixteenths Merino, one-sixteenth Southdown.
- No. 2. Yearling buck; seven-eighths Merino, one-eighth Southdown.
- No. 3. Yearling buck; seven-eighths Merino, one-eighth Southdown.
- No. 4. Yearling ewe; seven-eighths Merino, one-eighth Southdown.
- No. 5. Ewe, 3 years old; seven-eighths Merino, one-eighth Southdown; dam pure Merino; sire three-fourths Merino, one-fourth Southdown.
- No. 6. Ram, 2 years old; three-fourths Merino, one-fourth Southdown.
- No. 7. Ewe, 2 years old; three-fourths Merino, one-fourth Southdown.
- No. 8. Ewe, 5 years old; one-half Merino, one-half Southdown.
- No. 9. Yearling ewe; three-fourths Merino, one-half Shropshire, one-eighth Southdown.
- No. 10. Yearling buck; three-eighths Merino, one-half Shropshire, one-eighth Southdown.
- No. 11. Yearling ewe; three-fourths Merino, one-fourth Southdown.
- No. 12. Ram, 4 years old; thoroughbred Shropshire.
- No. 13. Buck, 4 years old; thoroughbred Merino.
- No. 14. Ewe, 4 years old; thoroughbred Merino.
- No. 15. Yearling buck; thoroughbred Merino.

The numbers 1, 2, 3, 4, 9, 10, 11, and 15 had an 8½ months' growth of wool; the numbers 5, 6, 7, 8, 12, 13, and 14, 8½ months' growth of wool. The ram No. 12 was bred from imported sheep, by I. B. Hoyt, in Solano County, California; sire of Nos. 9-10, Dana, three-fourths Merino, one-fourth Southdown; grade ewes. Our thoroughbred ewes, 10 in number, were selected from the Hammond & Atwood stock, in Vermont, and brought to this State by Jewett and Houghton, in 1873. We bought them in February, 1873. That forms the base of our flock. We have since infused two foreign crosses, one in 1878, one in 1880. The ram bred to them in 1878-'79 was the son of Big Leg; Gold Drop sired Clay Ram; sired Big Leg; sired Ram Beecher. Dam, Holmes Beatty Fremont; got Chief; got Beecher, sample No. 13. Ram bred by I. H. Stroteridge, Haywards, Alameda County, California. He was sired by Teaser; he by Young Victor; he by imported Victor. From this flock we selected our best rams, and made the different crops from which we obtained the samples of wool. Our Southdown flock was bred from sheep imported by I. D. Patterson and E. W. Meek, Alameda County, California. No. 13 was sired by Beecher. No. 15 was sired by Modoc. The ram bred by I. H. Stroteridge.

We live in a favored locality for wool-growing, in Little Lake Valley, 1,400 feet above sea-level; about the central part of Mendocino County, California, and about 25 miles by air line to the Pacific Ocean.

The wools grown in this county and Humboldt are considered the best product of the State. Little or no provision is made by the flock-masters for their sheep. Two or three months of our winter is rather severe on our stock. Our range is a small one, 800 acres. We give our sheep more care than our neighbors do theirs. Feed them a little hay in winter when we have a snow-fall that covers the ground for two or



three days. Our Merinos have a shed with hay to run to for three months during the winter, in which they shelter themselves when the weather is too inclement. The samples of wool are the natural growth. We shear our sheep twice a year, and aim to shear in May and September, an eight months' winter clip and four months' summer. Our annual averages of fall and spring clip have been as follows:

Southdown ewes, when we bred them to start our flock of Crossbreeds .....	4.49
First cross, one-half Southdown, one-half Merino .....	7.86
Second cross, three-fourths Merino, one-fourth Southdown .....	11.22
Third cross, seven-eighths Merino, one-eighth Southdown .....	11.06
Fourth cross, fifteen-sixteenths Merino, one-sixteenth Southdown .....	10.70
The cross from the thoroughbred Shropshire and three-fourths Merino ewe .....	9.14

After breeding the second cross with Merino bucks our wool was complained of by the buyers as being too yolky and gummy. We then selected our lightest-fleeced white-wooled Merino rams, and bred the third cross with them. Their progeny fell  $\frac{1}{100}$  below the previous one, and the fourth cross  $\frac{1}{100}$  below the second. In the first year the bucks' fleeces of the second cross averaged  $19\frac{2}{100}$  pounds. In the third cross they averaged  $16\frac{1}{100}$  pounds, and in the fourth cross 15 pounds. You will notice we went back a little each cross by materially diminishing the weight of our bucks' fleeces. As we approached the Merino, our wool shortened and became finer. We are now working with a cross of Shropshire in our flock, in order to increase the weight of the carcass of our sheep and lengthen their wool. You will notice the first cross between our Merinos and Southdowns gave us  $7\frac{8}{100}$  pounds of wool. The first cross with our Shropshire, Merino, and Southdown gave us  $9\frac{1}{100}$  pounds, with one-eighth less Merino than our first cross had, and a much larger and more vigorous sheep.

We have given you these results hoping they may aid you in the investigations you are making. We have kept a complete record of our lines in breeding in order to find out what we were doing. The three-fourths-bred sheep, in our judgment, have given us the best results thus far. We design bringing up our Shropshire cross to a three-fourths standard and see what the difference will be in length of staple, quality of wool, size of sheep, motherly qualities, &c. Our only way to obtain results is to average our different grades. The first year we secure the lamb fall clip and spring shearing, and use our judgment on quality of wool, which is rather precarious with the naked eye. We are much gratified that we shall now have an opportunity of more definitely arriving at conclusions after your investigations are made. We are in the beginning of our breeding, having taken "Yonatt's" standard of the measurements of fibers of wool to the lineal inch. In 1835 he gave the thoroughbred Merino at 750 and the Southdown 660. The patent plodding tenton ascertained that 48,000 fibers grew on a square inch of skin of their finest Merino. The Germans, in their crosses between these coarse-wooled sheep with but 5,500 fibers, increased the number of fibers 1,075 each cross. Assuming that our Southdown had 31,114 and the Merino 48,000, our one-half breed cross, 32,189; three-fourths cross, 33,264; seven-eighths cross, 34,339; fifteen-sixteenths cross, 35,414, it would take 15 crosses to bring us up to the pure Merino standard. We approach it faster in general form than we do in quality of wool. Since the time of Yonatt's writing our Merinos have greatly improved in fineness.

The late Manly Miles, president of the Agricultural College of Michigan, measured fibers of wool he obtained at the World's Fair at Philadelphia that ran up as high as 1,500 fibers, and Southdown 750 fibers, to the lineal inch.

We have sent you some samples of our thoroughbred Merinos in order to ascertain how we stand in regard to fineness with other localities.

No record of Shropshire fibers, in all the works we have read, have been given.

If there is any information you want that we have not given we could perhaps furnish it from our record of sheep-breeding of nine years' practical experience.

The samples furnished have all been taken from the shoulder of the sheep. When shearing we take samples from about the same place on each sheep.

Very respectfully, yours,

BAECHTEL BROS.

WILLITS, MENDOCINO COUNTY, CALIFORNIA, April 2, 1884.

DEAR SIR: Your letter of March 12, acknowledging the receipt of our wool samples. We were sorry we could not send you a better assortment, but they were all of each class of that age of sheep we had on hand.

In our spring shearing in May we can send you more grade samples. You stated that wool samples taken from sheep between 2 and 3 years old were the kind you desired. We can send you ewe samples of that age, but not of bucks, as we have only 5 that are 3 years old and 4 that are 2 years past. But these would not be a fair sample of the flock, as the best of the bucks have been sold, and these are only the least valuable.

If you will accept yearling bucks and ewe samples, we can furnish you with the following varieties this spring:

Three-fourths Merino, one-fourth Southdown: Bucks and ewes, twenty of each.

Nine-sixteenths Merino, four-sixteenths Shropshire, three-sixteenths Southdown: Bucks and ewes, twenty of each.

Three-eighths Merino, four-eighths Shropshire, one-eighth Southdown: Small variety of each.

One-fourth Merino, four-eighths Shropshire, two-eighths Southdown: Bucks and ewes, twenty of each.

If you want these varieties, please let us know. Are the samples last sent you large enough?

We have kept a complete record of average weight of fleece of our different grades of sheep each shearing, and have made annual averages covering a period of nine years, in order to note our progress as we approached the Merino. It approximates results, but not absolute conclusions, as seasons are not alike, and this makes the difference of weight of fleece. The nearer you approach the thoroughbred Merino, the greater the loss in fleece weight when we have a cold and backward spring.

Our table shows—

- (1) Number of days between annual shearings.
- (2) Number of sheep shorn.
- (3) Average price of wool sold at the county seat of our county.
- (4) Net returns per head.
- (5) Average weight of fleece of Merino bucks bred.
- (6) Weight of different grades.
- (7) Average per cent. of lambs.

If this would be any advantage to you, and you desire it, we will send you a copy, or any other information you desire. Are pleased to hear you are giving the grade Down families your close attention.

Yours,

BAECHTEL BROS.



WILLITS (LITTLE LAKE VALLEY), MENDOCINO COUNTY, CALIFORNIA, May 27, 1884.

SIR: We have at last been able to fulfill your request for wool samples. Inclosed you will find nine packages, of ten samples each with their respective grades marked thereon.

We could not comply with your request of twenty samples from each class, as in some of the classes furnished we did not have twenty sheep of that class, and concluded to make it uniform and send but ten of each class.

In one-half Merino and one-half Southdown ewe samples, seven years old, we did not have bucks to get samples from. Also in the ten ewe samples, three-fourths Merino and one-fourth Southdown, between three and four years old, we did not have bucks of the corresponding age to get samples from.

We bred these ewes, the last description, by two crosses of the Southdown ewe and progeny to thoroughbred Spanish Merino bucks. We carried that line of breeding two crosses higher; were not pleased with it, as it shortened the staple, reduced the size of the carcass, lessened the flow of milk, nearly entirely destroyed the motherly qualities of the Southdown, with much lighter percentage of lambs. Lambs more feeble and delicate, &c.

Last year we sold all grades above a three-fourths Merino and one-fourth Southdown. In order to hold that grade we selected our best bucks from the three-fourths grade flock and bred them to our three-fourths ewes, and the three-fourths yearling buck and ewe samples furnished you now are the result of that line of breeding.

Just as Elmore did in perfecting his Southdown flock in England. We are pleased with it as far as we have gone and can see no deterioration in carcass, rather an improvement; a little less in average weight of fleeces. We have had rather a peculiar season, very cold and late spring; no chance for the animal to get a large amount of yolk or grease in the wool. We do not consider it a fair test. Will you be kind enough to have a minute examination made with that end in view, whether you can detect any peculiarity, differing from the ten samples furnished you from the same class of ewes one year older?

Our sheep are all lambed in the month of February each year, and you will please notice on the label yearling means sheep one year old last February, &c. The samples furnished are a growth of wool of eight months and five days. We will send you our tabulated statement of ten years' experience as soon as we can prepare it. We are somewhat busy just now. Hope everything may prove satisfactory.

If anything is not clear to your mind, write and we will endeavor to explain. Please acknowledge receipt.

Respectfully, yours,

WILLIAM McMURTRIE, Champaign, Ill.

BAECHTEL BROS.

[Baechtel Brothers, breeders of thoroughbred and graded sheep, Willits, Mendocino County, California.]

JUNE 9, 1884.

DEAR SIR: You desired a statement of our wool-growing experience, which covers a period of nine years.

We commenced by crossing the thoroughbred Merino buck and Southdown ewe; we ran in that direction four crosses; endeavored to ascertain, by weighing and averaging our different grades of wool, what progress we were making, which has not given us very satisfactory results.

We are convinced that seasons have their influence on the growth of vegetation, their variance producing variable wools.

In regard to fineness, length of staple, amount of yolk (which is a very essential element to its perfection; yolk is generally considered the pabulum or base of wool); we could only ascertain by weighing each shearing of the different wools shorn and averaging the two shearings to make an annual average.

Our seasons being variable gave us variable results. By referring to our table you will notice our one-half and three-fourth averages. The first year of each made quite a departure from the Southdown family in average weight of fleeces. The other two crosses, seven-eighths and fifteen-sixteenths, did not give us such marked results.

You will have to take into consideration we were breeding lighter fleeced thoroughbred bucks since 1879. We concluded that year that our bucks had too much black top, yellow yolk, and grease. We then sought for bucks with long staple, white yolk, and as free from grease as possible (pretty hard to find in Merino), and as free from wrinkles.

In the buck column you will notice a gradual reduction. From that time until in 1882 we fell to 14 pounds average. The next year we bred grades as well as thoroughbred buck, an average of 13 pounds; and the present year, ending in the spring, we bred grades and one thoroughbred buck, averaging a little above 14 pounds.

We will give you the whole table and you can use just such parts as you wish.

The following is the table above referred to:

Fall and spring.	Number of days between fall shearings.	Number of sheep shorn.	Annual average of wool per head.	Annual average price sold for in Ukiah City.	Net returns per head.	Average of Merino bucks' fleeces bred.	Number of wethers shorn each year.	Southdown, annual average.	First cross, $\frac{1}{2}$ Merino, $\frac{1}{4}$ Southdown, annual average.	Second cross, $\frac{3}{4}$ Merino, $\frac{1}{4}$ Southdown, annual average.	Third cross, $\frac{1}{2}$ Merino, $\frac{1}{4}$ Southdown, annual average.	Fourth cross, $\frac{3}{4}$ Merino, $\frac{1}{4}$ Southdown, annual average.	Three-eighths Merino, $\frac{1}{8}$ Shropshire, $\frac{1}{4}$ Southdown, annual average.	Nine-sixteenths Merino, $\frac{1}{16}$ Shropshire, $\frac{1}{4}$ Southdown, annual average.	One-fourth Merino, $\frac{3}{4}$ Shropshire, $\frac{1}{4}$ Southdown, annual average.	Annual per cent. of lambs.
			Pounds.	\$				Pounds.	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.	
1874, 1875	367	245	4.60	\$0 23 $\frac{1}{2}$	\$1 22	16 $\frac{1}{2}$	.....	4.60	.....	.....	.....	.....	.....	.....	.....	60
1875, 1876	357	409	5.40	16.2	78	16.4	20	4.48	7.80	.....	.....	.....	.....	.....	.....	84
1876, 1877	366	519	6.19	23.0	128	17.4	76	4.40	7.57	.....	.....	.....	.....	.....	.....	97
1877, 1878	365	628	7.11	20.0	122	17.0	112	4.50	7.81	11.22	.....	.....	.....	.....	.....	70
1878, 1879	366	514	8.07	21.4	173	19.2	168	.....	7.86	10.36	.....	.....	.....	.....	.....	86
1879, 1880	366	637	7.99	25.6	186	18.5	223	.....	6.61	8.78	11.06	.....	.....	.....	.....	83
1880, 1881	373	551	8.74	28.4	204	15.0	115	.....	6.31	8.12	8.75	.....	.....	.....	.....	75
1881, 1882	355	550	8.14	21.1	138	14.0	53	.....	8.81	8.52	9.44	10.70	.....	.....	.....	90
1882, 1883	375	584	8.92	19 $\frac{1}{2}$	148	*13.0	.....	.....	6.75	8.88	10.05	10.97	9.14	.....	.....	95
1883, 1884	356	711	8.02	17 $\frac{1}{2}$	140	*14.0	.....	.....	5.12	8.22	.....	.....	8.27	9.44	8.63	80



Our market for wool during that time was Ukiah City, Mendocino County, California, 21 miles south of us. A column shows the annual amount sold for. Another, net returns per head after deducting shearings, sacks, sacking, twine, salt, hauling to Ukiah City, all expenses deducted except grass and care. You will notice the influence on the price of the last year, being nearly what the tariff took off, and would be fully so if we had not made a lucky sale this spring.

We felt our inability to arrive at correct conclusions by this method, as the fineness of the fiber, and its felting properties cannot be determined in that way, or any close distinctions made, except by carrying qualities in your eye. The length of staple can be determined.

We were much pleased when you so willingly accepted our offer of sending you samples, and hope after they are examined and reported upon to have more definite data to guide us in our future breeding.

In 1881 we commenced infusing Shropshire blood in our flock and are gradually working it through. We found the one-half and three-fourths cross between the Merino and Southdown, gave us very satisfactory results. It improved the length of staple of either parent variety, and largely increased weight of fleece. From the Southdown ewe we had large robust sheep. The other two crosses, seven-eighths and fifteen-sixteenths, did not give us much increase of fleece, diminished size, precocity, motherly qualities, and effeminacy. We found we had gone too far in that direction and last year sold off all the ewes we had above a three-fourths grade.

In the infusion of Shropshire blood, as far as we have gone, the result has been very satisfactory. It is giving us a large framed and somewhat compact sheep, with quite an increase of length of staple and motherly qualities, unsurpassed by the Southdown.

Good milkers we have considerable to contend with, as most of our flock-masters around us have quite a prejudice against the Down families. They consider they lose the wool on their bellies earlier in life than many other varieties. We rebut it by saying nature never intended a good flock-master to keep sheep beyond their prime. We are gradually wearing out the prejudice by their personal observation, and using some of our grade bucks in their flock. All we ask is to give them a fair trial. We are satisfied that if the Down families are not run too far into the Merino, they are the most desirable for our locality as large sheep.

Our system of rearing and care of sheep is different from older settled States. A large portion of our State is mountainous and adapted to no other class of stock as well as sheep. In fact large portions of it would be entirely useless if not used for sheep.

Our original stock of sheep were procured from Mexico, and they were a sorry lot. Early stock-masters in this State tried to improve them, or rather their progeny, by using grade Merino bucks. Their progress was slow, as there was no certainty the direction this progeny would take, as there were as many varieties almost as there were sheep, and being bred so long in that haphazard way, many became discouraged and quit the business. With grade bucks, unless they are pretty highly bred, their progress is slow. The improvement of the wool is taken on by degrees, and does not keep pace with the blood crosses—which deceives many persons.

At the commencement of our sheep business we bought all the standard authors on sheep; read them; applied as many of their suggestions as we could make practicable. Most sheep authors are theorists, in a measure. We started with Youatt who, in 1835, made measurements of wool fiber from an English thoroughbred Spanish Merino buck. He measured 750 fibers to the lineal inch. The Germans counted from 40,000 to 43,000 fibers on a square inch of skin from the same class of sheep. Youatt also counted the number of fibers to the lineal inch in the Southdown, making it 660. By calculation we find one-fourteenth of the space of the square inch occupied by the fiber.

According to German experiments, by crossing the thoroughbred Merino ram on their coarse sheep, upon which they counted 5,500 fibers to the square inch, by repeated crossings of these two varieties and their progeny on thoroughbred Merino rams, they found the increase of fibers to the square inch was 1,075.

Assuming when we commenced our cross-breeds each cross increased the number of fibers 1,075, it would take 15 crosses to breed up to the Merino standard.

The late Manly Miles, in his work entitled "The Art of Stock Breeding," made measurements of Spanish Merino wool fibers in 1876 from different parts of the world, and found they varied from 1,150 to 1,500 fibers to the square inch. He also counted upon the Southdown 850 fibers to the square inch. Our climate, good judgment in crossing the pure varieties of Spain, have made a marked difference in the improvement of their wool and carcass, but not the difference shown. We reluctantly come to the conclusion that Youatt must have been mistaken in his measurements. We are located in a favored locality for the production of sheep and wool unsurpassed by any other in the State, at least so wool buyers say.

As we said before, we expect to be aided by your examination. The wool interest in the United States is a large one, and to think that our State produces about one-eighth of the wool grown in it, we regret very much that more interest is not taken in the industry by practical men.

If we could have furnished weights of carcass with our wool samples, it would have been more satisfactory. Some three-year old three-fourths bucks we sold. At yearlings, parties took the pains to weigh them; they weighed from 168 to 198 after they were shorn, and their spring fleeces of 8 months' growth gave us an average of 9 pounds.

We could write more, as you will perceive from the pains we have taken. It is our favorite theme.

We have an ear-mark for each grade; just before shearing they are separated, shorn, and their wool weighed and averaged in their class, which is the reason why we could not attend to weighing the carcass. We are coming along with a few sheep that we expect much from as wool yielders; they are lambs of last February. They are one-half Shropshire, one-half thoroughbred Merino. The father Shropshire and the ewe Merino—but one remove from the Merino family. We propose to cross them with thoroughbred Merino buck, which will give us three-fourths Merino, one-fourth Shropshire; and cross the Merino ewe with the one-half Merino and one-half Shropshire lambs, and make a three-fourths Merino, one-fourth Shropshire. If we have not explained anything you desire, please let us know, and we will try and do so.

We hope you have received our last batch of wool samples.

Very respectfully, yours,

BAECHTEL BROS.

In addition to these letters, each series of samples was as a rule accompanied by a statement with regard to the conditions governing the production of the wool. The information contained in the statements thus furnished is collated in the catalogue of samples given below. We have arranged the catalogue somewhat according to the geographical distribution of the sections represented; beginning with Vermont and proceeding westward, the States are named in the order in which they are met, nearly.

A great many facts and conditions are set forth in this catalogue concerning the samples we have examined that we cannot undertake in this report to discuss. The relations of these facts to the results we present in our tables will furnish material for profitable study in many ways, and we can only express regret that they must be passed without further notice at the present time.



## CATALOGUE OF SAMPLES.

## VERMONT.

## RAMS.

- No. 525.—Bred by H. S. Brookins, Shoreham, Vt. Age, 22 months. Fleece, 10 months' growth. Vermont register H. S. B. 223. Sire, Rip Van Winkle, Vermont register 535; dam H. S. B. 32, Vermont register 534; grand-dam, a Robinson ewe.
- No. 526.—Bred by E. A. Birchard, Shoreham, Vt. Owned by C. H. & J. A. James, Middlebury, Vt. Age, 34 months. Fleece, 10 months' growth. Vermont register E. A. B. 202. Sire, Rip Van Winkle, Vermont register 535; dam, a Robinson ewe bred by E. A. Birchard.
- No. 530.—Bred by T. Stickney & Son, East Shoreham, Vt. Age, 34 months. Fleece, 10 months' growth. Vermont register T. S. & Son 611. Sire, T. S. & Son 441, Vermont register 1120; dam, an ewe of the old Stickney flock.
- No. 533.—Bred by H. S. Brookin, Richville, Vt. Age, 34 months. Fleece, 10 months' growth. Vermont register H. S. B. 206. Sire, Rip Van Winkle, Vermont register 535. Dam bred by H. S. Brookin. Sire, H. S. B. 32, Vermont register 534. 2d dam, a Robinson ewe bred by S. C. Remele, Richville, Vt.
- No. 534.—Bred by V. Rich, Richville, Vt. Age, 22 months. Fleece, 9½ months' growth. Vermont register J. T. & V. Rich 475. Sire, Broker, Vermont register 839; dam, by Banker, Vermont register 471; grand-dam, an ewe of the old Rich flock.
- No. 535.—Bred by T. Stickney & Son, East Shoreham, Vt. Age, 34 months. Fleece, 10 months' growth. Vermont register T. S. & Son 601. Sire, Hopeful (346), Vermont register 640. Dam, one of the old Stickney flock of old ewes bred by T. S. & Son.
- No. 537.—Bred by T. Stickney & Son, East Shoreham, Vt. Age, 34 months. Fleece, 10 months' growth. Vermont register T. S. & Son 606. Sire, Hopeful, Vermont register 1120. Dam bred by T. S. & Son.
- No. 540.—Bred by A. H. Hubbard, Whitney, Vt. Age, 33 months. Fleece, 10 months' growth. Vermont register A. H. Hubbard 200, or Atwood ram Leader. Sire, Jason, Vermont register 201. Dam bred by A. H. Hubbard; sire, Hooker's Wrinkley, Vermont register 252. Grand-dam, an Atwood ewe, bred by A. H. Hubbard. (This ram sheared 34½ pounds from 94 pounds carcass, second fleece. First and second fleeces shorn in public. Last fleece, 365 days' growth.)
- No. 543.—Bred by H. S. Brookin, Richville, Vt. Age, 22 months. Fleece, 10 months' growth. Vermont register H. S. Brookin 223. Sire, Banker, Vermont register 471; dam bred by H. S. Brookin. Sire, H. S. Brookins 32, Vermont register 534; grand-dam, a Robinson ewe.
- No. 545.—Bred by L. S. Burwell, Bridport, Vt. Age, 35 months. Fleece, 11 months' growth. Vermont register (1058) L. S. Burwell 84; Atwood and Robinson blood.
- No. 554.—Bred by H. C. Burwell. Age, 35 months. Fleece, 11 months' growth. Vermont register H. C. Burwell 195; (second Vermont register 1027). Sire, H. C. Burwell, 157; Vermont register 1022; dam, Atwood and Robinson blood.
- No. 555.—Bred by Lyman Clark, Addison, Vt. Age, 35 months. Fleece, 10½ months' growth. Vermont register Lyman Clark 70. Sire, Moses, Vermont register 495; dam bred by L. Clark; sire, L. P. Clark's Black Top, Vermont register 463. This ram is a pure Atwood, and sheared 29 pounds last fleece, or second fleece.
- No. 563.—Bred by L. P. Clark, Addison, Vt. Age, 2½ years. Fleece, 11 months. Vermont register L. P. Clark 192. Sire, Moses, Vermont register 405; dam, L. C. C., Vermont register 5. Sired by C. K. Head, Vermont register 189; a pure Atwood ram.
- No. 423.—Bred by Albert Chapman, Middlebury, Vt. Age, 21 months. Fleece, 9½ months' growth.

## EWES.

- No. 522.—Bred by H. S. Brookins, Shoreham, Vt. Age, 34 months. Fleece, 10 months' growth. Vermont register H. S. B. 188. Sire, Rip Van Winkle, Vermont register 535; dam, a Robinson ewe.
- No. 523.—Bred by H. S. Brookins, Shoreham, Vt. Age, 34 months. Fleece, 10 months' growth. Vermont register H. S. Brookins 184. Sire, Banker, Vermont register 471; dam bred by H. S. B. Sire, H. S. Brookins 32, Vermont register 534; grand-dam, Robinson ewe. (This ewe raised lamb last season.)
- No. 524.—Bred by J. Stickney, East Shoreham, Vt. Age, 34 months. Fleece, 10 months' growth. Vermont register T. S. & Son. Sire, Hopeful, Vermont register 1120; dam bred by T. S. & Son.
- No. 527.—Bred by E. Stickney & Son, East Shoreham, Vt. Age, 34 months. Fleece, 10 months' growth. Vermont register T. S. & Son 523. Sire, Hopeful, Vermont register 1120; dam bred by T. S. & Son.
- No. 528.—Bred by E. Stickney & Son, East Shoreham, Vt. Age, 34 months. Fleece, 10 months' growth.
- No. 529.—Bred by H. S. Brookins, Richville, Vt. Age, 34 months. Fleece, 10 months' growth. Vermont register H. S. Brookins 190. Sire, Rip Van Winkle, Vermont register 535; dam, a Robinson ewe. (Raised a lamb last season.)
- No. 531.—Bred by H. S. Brookins, Richville, Vt. Age, 34 months. Fleece, 10 months' growth. Vermont register H. S. Brookins 189. Sire, Rip Van Winkle, Vermont register 535; dam, a Robinson ewe. (Raised a lamb last season.)
- No. 532.—Bred by Stickney & Son, East Shoreham, Vt. Age, 34 months. Fleece, 10 months' growth. Vermont register T. S. & Son 556. Sire, Hopeful, Vermont register 1120; dam bred by T. S. & Son.
- No. 536.—Bred by A. Chapman, Middlebury, Vt. Age, 33 months. Fleece, 10 months' growth. Sire, O. and E. S. Hall 162, Vermont register 1029; dam, one of old Atwood flock, owned by George S. Atwood, son of Steven Atwood, who gave the Atwood name to the family.
- No. 538.—Bred by A. H. Hubbard, Whitney, Vt. Age, 34 months. Fleece, 10 months' growth. Vermont register A. H. Hubbard 145. Sire, A. H. Hubbard 56, Vermont register 883; dam, an Atwood ewe, bred by A. H. Hubbard.
- No. 539.—Bred by A. H. Hubbard, Whitney, Vt. Age, 34 months. Fleece, 10 months' growth. Vermont register A. H. Hubbard 152. Sire, Jason, Vermont register 201; dam bred by A. H. H. This ewe is Atwood blood.
- No. 541.—Bred by Dean & Jennings, West Cornwall, Vt. Owned by A. H. Hubbard, Whitney, Vt. Age, 34 months. Fleece, 10 months' growth. Vermont register D. & J. 75. Sire, Jason, Vermont register 201; dam bred by E. S. Stowell (deceased), Cornwall, Vt.



- No. 542.—Bred by A. Chapman, Middlebury, Vt. Age, 21½ months. Fleece, 10 months' growth. Vermont register A. Chapman 43. Sire, Rip Van Winkle, Vermont register 535; dam bred by A. Chapman 23. Sired by Bismarck, Vermont register 221; granddam, au Atwood ewe, bred by S. W. Remele, Rip Van Winkle. Sheared (365 days' growth), 38½ pounds. Sixth fleece, Bismarck, sheared (365 days' growth), 32½ pounds. Fourth fleece received grand sweepstakes at Centennial as best merino of any age. A. C. 23 sheared 15½ pounds, second fleece.
- No. 544.—Bred by L. P. Clark, Addison, Vt. Age, 35 months. Fleece, 11 months' growth. Vermont register L. P. Clark 231. Sire, Moses, Vermont register 495; dam bred by L. P. C. Sired by Vigor, Vermont register 209. Second dam bred by L. P. C.; sired by Green Mountain, a pure Atwood, and an extra good one.
- No. 546.—Bred by L. S. Burwell, Bridport, Vt. Age, 35 months. Fleece, 11 months' growth. Vermont register L. S. Burwell 94. Sire, L. S. Burwell 22, Vermont register 525; Atwood & Robinson blood. These L. S. Burwell ewes, sheared from 16 to 20 pounds, second fleece.
- No. 547.—Bred by L. S. Burwell, Bridport, Vt. Age, 35 months. Fleece, 11 months' growth. Vermont register L. S. Burwell 98. Sire, L. S. B. 22, Vermont register 525; Atwood & Robinson blood.
- No. 548.—Bred by L. S. Burwell, Bridport, Vt. Age, 35 months. Fleece, 11 months' growth. Vermont register L. S. Burwell 96. Sire, L. S. Burwell 22, Vermont register 525; Atwood & Robinson blood.
- No. 549.—Bred by F. H. Eldridge, Bridport, Vt. Age, 34 months. Fleece, 11 months' growth. Vermont register F. H. Eldridge 33. Sire, L. S. Burwell 22, Vermont register 525. Atwood & Robinson blood.
- No. 550.—Bred by L. M. Rockwood, Bridport, Vt. Age, 34 months. Fleece, 11 months' growth. Vermont register 4. Sire, L. S. Burwell 22, Vermont register 525; Atwood & Robinson blood.
- No. 551.—Bred by L. M. Rockwood, Bridport, Vt. Age, 34 months. Fleece, 11 months' growth. Vermont register L. M. Rockwood 8. Sire, L. S. Burwell 22, Vermont register 525; Atwood & Robinson blood.
- No. 552.—Bred by L. S. Burwell, Bridport, Vt. Age, 35 months. Fleece, 11 months' growth. Vermont register L. S. Burwell 100. Sire, L. S. Burwell 22, Vermont register 525; Atwood & Robinson blood.
- No. 553.—Bred by L. M. Rockwood, Bridport, Vt. Age, 34 months. Fleece, 11 months' growth. Vermont register L. M. Rockwood, 5. Sire, L. S. Burwell 22, Vermont register, 525; Atwood & Robinson blood.
- No. 556.—Bred by Lyman Clark, Addison, Vt. Age, 33 months. Fleece, 11 months' growth. Vermont register Lyman Clark 76. Sire, L. P. Clark's 165; dam bred by Lyman Clark, sired by general Vermont register 210. 2d dam bred by L. C., sired by Kilpatrick, Vermont register 71; pure Atwood.
- No. 557.—Bred by H. C. Burwell, Bridport, Vt. Age, 38 months. Fleece, 11 months' growth. Vermont register H. C. Burwell 212. Sire, H. C. Burwell 157, Vermont register 1022; Atwood & Robinson blood. (NOTE.—This ewe's 2d fleece weighed 20½ pounds. Her sire is No. 7 in list of measurements, 2d volume, Vermont register.)
- No. 558.—Bred by H. C. Burwell, Bridport, Vt. Age, 33 months. Fleece, 11 months' growth. Vermont register H. C. Burwell 204. Sire, H. C. B. 157, Vermont register 1022; Atwood and Robinson blood. Sire is No. 7 in table of measurements in second volume, Vermont register.
- No. 559.—Bred by C. P. Morison & Son, Addison, Vt. Age, 34 months. Fleece, 11 months' growth. Vermont register C. P. Morison & Son 157. Sire, H. C. B. 157, Vermont register 2022; Atwood & Robinson blood.
- No. 560.—Bred by C. P. Morison & Son, Addison, Vt. Age, 35 months. Fleece, 11 months' growth. Vermont register C. P. Morison & Son 158. Sire, H. C. Burwell 157, Vermont register 1022; Atwood & Robinson blood. (NOTE.—This ewe sheared 20½ pounds second fleece. Her sire is ram 7 in table of measurements in Vermont register, second volume.)
- No. 561.—Bred by L. P. Clark, Addison, Vt. Age, 35 months. Fleece, 11 months' growth. Vermont register L. P. Clark 224. Sire, Moses, Vermont register 495; dam, L. P. C. 24. Sired by general Vermont register 210. Second dam L. P. Clark 12. Sired by Kilpatrick, Vermont register 71. (NOTE.—This ewe is pure Atwood.)
- No. 562.—Bred by Lyman Clark, Addison, Vt. Age, nearly 3 years. Fleece, 10 months' growth. Vermont register Lyman Clark 82. Sire, Moses, Vermont register, volume 1st, 495. Dam bred by L. C. Sired by L. P. Clark, Black Top, Vermont register 463. (NOTE.—This ewe is pure Atwood.)
- No. 424.—Bred by Albert Chapman, Middlebury, Vt. Age, 21 months. Fleece, 9½ months' growth.

## NEW YORK.

## RAMS.

- No. 669 to 678 inclusive.—Bred by William G. Markham, Avon, N. Y., and No. 32 Powers Block, Rochester, N. Y. Age, 2 years. Fleeces of loose and medium density.
- No. 691.—Bred by William G. Markham, Avon, N. Y. Age, 2 years. Vermont register D. & J. 220. Dense fleece.
- No. 692.—Bred by William G. Markham, Avon, N. Y. Age, 2 years. Vermont register 377. Loose fleece.
- No. 693.—Bred by William G. Markham, Avon, N. Y. Age, 2 years. Vermont register 469. Dense fleece.

## EWES.

- No. 679 to 684 inclusive.—Bred by William G. Markham, Avon, N. Y. Age, 2 years. Loose fleeces.
- No. 685.—Bred by William G. Markham, Avon, N. Y. Age, 2 years. Vermont register 237.
- No. 686.—Bred by William G. Markham, Avon, N. Y. Age, 2 years. Dense fleece. Vermont register 236.
- No. 687.—Bred by William G. Markham, Avon, N. Y. Age, 2 years. Dense fleece. Vermont register 254.
- No. 688.—Bred by William G. Markham, Avon, N. Y. Age, 2 years. Dense fleece. Vermont register 234.
- No. 689.—Bred by William G. Markham, Avon, N. Y. Age, 2 years. Dense fleece. Vermont register 244.
- No. 690.—Bred by William G. Markham, Avon, N. Y. Age, 2 years. Dense fleece. Vermont register 239.
- No. 694.—Bred by P. and G. F. Martin, Rush, N. Y. Age, 2 years. Vermont register 313. Thin, light fleece. (a) shoulder; (b) arm; (c) belly.
- No. 695.—Bred by P. and G. F. Martin, Rush, N. Y. Age, 2 years. Vermont register 311. Very thick fleece. (a) shoulder; (b) arm; (c) belly.
- No. 696.—Bred by P. and G. F. Martin, Rush, N. Y. Age, 2 years. Vermont register 282. Very thick fleece. (a) shoulder; (b) arm; (c) belly.
- No. 697.—Bred by P. and G. F. Martin, Rush, N. Y. Age, 2 years. Thin, light fleece. (a) shoulder; (b) arm; (c) belly.



## PENNSYLVANIA.

## RAMS.

- No. 564.—Bred by Robert Perrine, Patterson's Mills, Washington County, Pa. Age, 3 years. Weight of fleece, 23 pounds. Vermont register 502. Aries. Atwood Merino.
- No. 569.—Bred by Robert Perrine, Patterson's Mills, Washington County, Pa. Age, 3 years. Vermont register 654.
- No. 570.—Bred by Robert Perrine, Patterson's Mills, Pa. Age, 8 months. Vermont register 765.
- No. 573.—Bred by Robert Perrine, Patterson's Mills, Pa. Age, 4 years. Vermont register Leo 714. Weight of fleece, 33 pounds.
- No. 574.—Bred by Robert Perrine, Patterson's Mills, Pa. Age, 8 months. Vermont register 777.
- No. 577.—Bred by Robert Perrine, Patterson's Mills, Pa. Age, 1 year. Vermont register 694.
- No. 578.—Bred by Robert Perrine, Patterson's Mills, Pa. Age, 1 year. Weight of first fleece, 19 pounds. Vermont register 801.
- No. 579.—Bred by Robert Perrine, Patterson's Mills, Pa. Vermont register Comet 35. (Sample taken out after he died, in March; 10 month's wool. Three best fleeces, 37½, 36, 35 pounds.)
- No. 580.—Bred by Robert Perrine, Patterson's Mills, Pa. Age, 10 months. Vermont register 700.
- No. 582-587, inclusive.—Bred by John G. Clark, Toledo, Washington County, Pennsylvania. Age, between 2 and 3 years. (Shorn 25th of May, 1883; and samples cut February 9, 1884. Saxon Morino samples.)
- No. 779.—Bred by J. C. McNary. Lamb, Delaine Merino. (Sent by J. McDowell, Washington, Pa.)

## EWES.

- No. 565.—Bred by Robert Perrine, Patterson's Mills, Pa. Age, 8 years. Weight of fleece, 14 pounds. Vermont register 400.
- No. 566.—Bred by Robert Perrine, Patterson's Mills, Pa. Age, 4 years. Fleece, 1 year's growth. Weight of fleece, 21 pounds. Vermont register 706.
- No. 567.—Bred by Robert Perrine, Patterson's Mills, Pa. Age, 8 years. Weight of fleece, 16 pounds. Vermont register 416.
- No. 568.—Bred by Robert Perrine, Patterson's Mills, Pa. Age, 6 years. Weight of fleece, 21 pounds. Vermont register 761.
- No. 571.—Bred by Robert Perrine, Patterson's Mills, Pa. Age, 5 years. Weight of fleece, 13 pounds. Vermont register 367.
- No. 575.—Bred by Robert Perrine, Patterson's Mills, Pa. Lamb. Vermont register 906.
- No. 576.—Bred by Robert Perrine, Patterson's Mills, Pa. Age, 1 year. Vermont register 688.
- No. 581.—Bred by Robert Perrine, Patterson's Mills, Pa. Age, 3 years. Weight of fleece, 17 pounds. Vermont register 701.
- No. 588-597, inclusive.—Bred by J. G. Clark, Toledo, Washington County, Pennsylvania. Age, uncertain. Fleece, 8½ months' growth.
- No. 772-778, inclusive.—Bred by J. C. McNary. Age, 2 years. Delaine Merino. Sent by J. McDowell, Washington County, Pa.

## WISCONSIN.

## RAMS.

- No. 724.—Bred by C. M. Clark, Whitewater, Wis. Age, 2 years. 1st fleece, 15½ pounds.
- No. 725.—Bred by C. M. Clark, Whitewater, Wis. Weights of fleeces: 1st, 16 pounds; 2d, 25½ pounds; 3d, 26½ pounds.
- No. 726-733, inclusive.—Bred by S. Brooks, Whitewater, Wis. Thoroughbred Spanish Merino. Sheared June 1, 1883.
- No. 726.—Age, 4 years.
- No. 727.—Age, 3 years.
- No. 728.—Age, 2 years.
- No. 729.—Age, 2 years.
- No. 730.—Age, 3 years.
- No. 731.—Age, 4 years.
- No. 732.—Age, 3 years.
- No. 733.—Age, 2 years.
- No. 734.—Age, 2 years.
- No. 735.—Age, 2 years.
- No. 736-740, inclusive.—Bred by F. W. Fratt, Whitewater, Wis. Registered in Wisconsin, Spanish Merino registry.
- No. 736.—Age, 1 year.
- No. 737.—Age, 1 year.
- No. 738.—Age, 1 year.
- No. 739.—Age, 2 years.
- No. 740.—Age, 3 years.
- No. 747-751, inclusive.—Bred by H. H. Cobb, Whitewater, Wis. Age, 1 year.
- No. 752-755, inclusive.—Bred by Charles R. Gibbs, Whitewater, Wis. Age, 2 years. Sheared May 10, 1883.
- No. 756-761, inclusive.—Bred by A. Cook & Sons, Whitewater, Wis. Age, 2 years. Samples cut from the shoulder. Puro Spanish Merino. Vermont and Wisconsin State register.

## EWES.

- No. 698.—Bred by Charles R. Gibbs. Age, 2 years. Sheared May 12, 1883.
- No. 699.—Bred by Charles R. Gibbs. Age, 2 years. Sheared May 12, 1883.
- No. 700.—Bred by Charles R. Gibbs. Age, 3 years.
- No. 701.—Bred by Charles R. Gibbs. Age, 3 years.
- No. 702-715, inclusive.—Bred by S. Brooks. Thoroughbred Spanish Merino. Sheared June 30, 1883.
- No. 702.—Age, 3 years.
- No. 703.—Age, 3 years.
- No. 704.—Age, 2 years.
- No. 705.—Age, 3 years.



No. 706.—Age, 3 years.

No. 707.—Age, 3 years.

No. 708.—Age, 2 years.

No. 709.—Age, 2 years.

No. 710.—Age, 2 years.

No. 711.—Age, 3 years.

No. 712.—Age, 4 years.

No. 713.—Age, 3 years.

No. 714.—Old.

No. 715.—Old.

No. 716-723, inclusive.—Bred by C. M. Clark. Age, from 3 to 5 years. Weight of fleece, from 12 to 19½ pounds.

No. 741.—Bred by F. W. Fratt, Whitewater, Wis. Age, 1 year. Registered in Wisconsin Spanish Merino registry.

No. 742.—Bred by F. W. Fratt, Whitewater, Wis. Age, 1 year. Registered in Wisconsin Spanish Merino registry.

No. 743.—Bred by F. W. Fratt, Whitewater, Wis. Age, 1 year. Registered in Wisconsin Spanish Merino registry.

No. 644-746, inclusive.—Bred by F. W. Fratt, Whitewater, Wis. Age, 2 years. Registered in Wisconsin Spanish Merino registry.

No. 762-769, inclusive.—Bred by O. Cook & Sons, Whitewater, Wis. Age, 2 years. Samples cut from the shoulder. Pure Spanish Merino, Vermont and Wisconsin State register.

No. 770, 771, inclusive.—Bred by O. Cook & Sons, Whitewater, Wis. Age, 3 years. Samples cut from the shoulder. Pure Spanish Merino, Vermont and Wisconsin State register.

No. 782-787, inclusive.—Bred by H. H. Cobb.

No. 782.—Age, 2 years.

No. 783.—Age, 2 years.

No. 784.—Age, 4 years.

No. 785.—Age, 4 years.

No. 786.—Age, 4 years.

No. 787.—Age, 2 years.

## MINNESOTA.

### RAMS.

No. 502-520, inclusive.—Bred by A. Willson, Richfield, Minn. The animals represented in this series were all 2 years old, and are registered in the American register.

### EWES.

No. 432-501, inclusive.—Bred by A. Willson, Richfield, Minn. The animals represented in this series were all 2 years old, and are registered in the American register.

## ILLINOIS.

### RAMS.

No. 440.—Owned by George E. Peck & Sons, Geneva, Ill. Age, 3 years. Vermont register 315.

No. 441.—Owned by George E. Peck & Sons, Geneva, Ill. Age, 3 years. Vermont register 1.

No. 442.—Bred by George E. Peck & Sons, Geneva, Ill. Age, 2 years. Vermont register 405.

No. 445.—Bred by George E. Peck & Sons, Geneva, Ill. Age, 2 years. American register.

No. 446.—Bred by George E. Peck & Sons, Geneva, Ill. Age, 2 years. American register.

No. 447.—Bred by George E. Peck & Sons, Geneva, Ill. Age, 1 year. Vermont register.

No. 448.—Bred by George E. Peck & Sons, Geneva, Ill. Age, 1 year. Vermont register.

No. 449.—Bred by George E. Peck & Sons, Geneva, Ill. Age, 1 year. American register.

No. 450.—Bred by George E. Peck & Sons, Geneva, Ill. Age, 1 year. American register.

No. 451.—Bred by George E. Peck & Sons, Geneva, Ill. Age, 1 year. American register.

No. 452.—Bred by George E. Peck & Sons, Geneva, Ill. Age, 1 year. Vermont register.

No. 453.—Bred by George E. Peck & Sons, Geneva, Ill. Age, 1 year. American register.

No. 454.—Bred by George E. Peck & Sons, Geneva, Ill. Age, 1 year. Vermont register.

No. 455.—Bred by George E. Peck & Sons, Geneva, Ill. Age, 1 year. American register.

No. 456.—Bred by George E. Peck & Sons, Geneva, Ill. Age, 1 year. Vermont register.

No. 457.—Bred by George E. Peck & Sons, Geneva, Ill. Age, 1 year. American register.

No. 458.—Bred by George E. Peck & Sons, Geneva, Ill. Age, 1 year. American register.

No. 459.—Bred by George E. Peck & Sons, Geneva, Ill. Age, 1 year. Vermont register.

No. 460.—Bred by George E. Peck & Sons, Geneva, Ill. Age, 1 year. Vermont register.

No. 461.—Bred by George E. Peck & Sons, Geneva, Ill. Age, 1 year. American register.

No. 462.—Bred by George E. Peck & Sons, Geneva, Ill. Age, 1 year. American register.

### EWES.

No. 443.—Bred by George E. Peck & Sons, Geneva, Ill. Age, 17 years. Vermont register.

No. 444.—Bred by George E. Peck & Sons, Geneva, Ill. Age, ———. Vermont register.

No. 463-469, inclusive. Bred by George E. Peck, Geneva, Ill. Age, 2 years. Vermont register.

No. 470-474, inclusive. Bred by George E. Peck, Geneva, Ill. Age, 2 years. American register.

No. 475.—Bred by George E. Peck, Geneva, Ill. Age, 3 years. Vermont register.

No. 476.—Bred by George E. Peck, Geneva, Ill. Age, 3 years. American register.

No. 477-480, inclusive.—Bred by George E. Peck, Geneva, Ill. Age, 1 year. Vermont register.

No. 481.—Bred by George E. Peck & Son, Geneva, Ill. Lamb. Vermont register.



## TEXAS.

## RAMS

Nos. 616-625, inclusive.—Bred by J. D. Keracy, Cottonwood Springs, Taylor, Texas. Age, 2 years.—Spanish Merino.

## EWES.

Nos. 605-615, inclusive.—Bred by J. D. Keracy, Cottonwood Springs, Taylor, Texas. Age, 2 years. Spanish Merino.

## CALIFORNIA.

## RAMS.

Nos. 634-640, inclusive.—Bred by Baechtel Brothers, Willits, Mendocino County, California. Age, 25 months. Spanish Merino.

## EWES.

No. 438.—Bred by Baechtel Brothers, Willits, Mendocino County, California. Age, 4 years. Merino.

Nos. 626-629, inclusive.—Bred by Baechtel Brothers, Willits, Mendocino County, California. Age, 25 months. Spanish Merino. Have lambs sucking.

Nos. 630-633, inclusive.—Bred by Baechtel Brothers, Willits, Mendocino County, California. No lambs.

Nos. 641-644, inclusive.—Bred by Baechtel Brothers, Willits, Mendocino County, California. Age, 2 years. Spanish Merino. No lambs.

Nos. 645-648, inclusive.—Bred by Baechtel Brothers, Willits, Mendocino County, California. Age, 37 months. Lambs sucking, aged 5 weeks.

Nos. 649-663, inclusive.—Bred by E. W. Woolsley & Son, 418 California street, San Francisco, Cal. Fleece, 6 to 10 months' growth. Cut from fore shoulder. Spanish Merino.

## GERMANY.

## RAMS.

No. 879.—Bred by Otto Steiger, Leutwitz, near Meissen, Saxony, Germany. Weight of fleece, 21½ pounds. Weight of carcass, 209 pounds.

No. 880.—Bred by Otto Steiger, Leutwitz, near Meissen, Saxony, Germany. Weight of fleece, 21.56 pounds. Weight of carcass, 209 pounds.

No. 881.—Bred by Otto Steiger, Leutwitz, near Meissen, Saxony, Germany. Weight of fleece, 21.45 pounds. Weight of carcass, 126.5 pounds.

No. 882.—Bred by Otto Steiger, Leutwitz, near Meissen, Saxony, Germany. Weight of fleece, 24.75 pounds. Weight of carcass, 242 pounds.

No. 883.—Bred by Otto Steiger, Leutwitz, near Meissen, Saxony, Germany. Weight of fleece, 25.3 pounds. Weight of carcass, 202.4 pounds.

No. 884.—Bred by Otto Steiger, Leutwitz, near Meissen, Saxony, Germany. Weight of fleece, 23.1 pounds. Weight of carcass, 231 pounds.

No. 885.—Bred by Otto Steiger, Leutwitz, near Meissen, Saxony, Germany. Weight of fleece, 25.3 pounds. Weight of carcass, 231 pounds.

No. 886.—Bred by Otto Steiger, Leutwitz, near Meissen, Saxony, Germany. Weight of fleece, 25.52 pounds. Weight of carcass, 243.1 pounds.

No. 887.—Bred by Otto Steiger, Leutwitz, near Meissen, Saxony, Germany. Weight of fleece, 22.55 pounds. Weight of carcass, 234.4 pounds.

## EWE.

No. 873.—Bred by Otto Steiger, Leutwitz, near Meissen, Saxony, Germany. Weight of fleece, 17.6 pounds. Weight of carcass, 149.6 pounds.

## NEGRETTI WOOLS FROM GERMANY SUBMITTED FOR EXAMINATION BY MR. E. W. PERRY, CHICAGO, ILL.

Nos. 400-422, inclusive.

## CALIFORNIA.

## WOOLS PRODUCED IN EXPERIMENTS IN CROSS-BREEDING.

## RAMS.

No. 426.—Bred by Baechtel Brothers, Willits, Mendocino County, California. Age, 1 year. Buck, ¼ Merino, ¾ Southdown.

No. 427.—Bred by Baechtel Brothers, Willits, Mendocino County, California. Age, 1 year. Buck, ½ Merino, ½ Southdown.

No. 430.—Bred by Baechtel Brothers, Willits, Mendocino County, California. Age, 2 years. Buck, ¼ Merino, ¾ Southdown.

No. 434.—Bred by Baechtel Brothers, Willits, Mendocino County, California. Age, 1 year. Buck, ¾ Merino, ¼ Shropshire, ¼ Southdown.

Nos. 818-827, inclusive.—Bred by Baechtel Brothers, Willits, Mendocino County, California. ⅞ Merino, ⅛ Shropshire, ⅞ Southdown. Yearling bucks.

Nos. 828-837, inclusive.—Bred by Baechtel Brothers, Willits, Mendocino County, California. Age, 2 years. ¾ Merino, ¼ Southdown.

Nos. 838-847, inclusive.—Bred by Baechtel Brothers, Willits, Mendocino County, California. Age, 1 year. Buck, ¾ Merino, ¼ Southdown.

Nos. 848-857, inclusive.—Bred by Baechtel Brothers, Willits, Mendocino County, California. Age, 1 year. Buck, ¼ Merino, ¾ Shropshire, ¼ Southdown.

No. 436.—Bred by Baechtel Brothers, Willits, Mendocino County, California. Age, 4 years. Thoroughbred Shropshire buck.

No. 437.—Bred by Baechtel Brothers, Willits, Mendocino County, California. Age, 4 years. Thoroughbred Merino buck.

No. 439.—Bred by Baechtel Brothers, Willits, Mendocino County, California. Age, 1 year. Thoroughbred Merino buck.



## EWES.

- No. 425.—Bred by Baechtel Brothers, Willits, Mendocino County, California. Age, 1 year.  $\frac{1}{2}$  Merino,  $\frac{1}{8}$  Southdown (No. 1).  
 No. 428.—Bred by Baechtel Brothers, Willits, Mendocino County, California. Age, 1 year.  $\frac{3}{4}$  Merino,  $\frac{1}{8}$  Southdown (No. 4).  
 No. 429.—Bred by Baechtel Brothers, Willits, Mendocino County, California. Age, 3 years.  $\frac{3}{4}$  Merino,  $\frac{1}{8}$  Southdown. Dam, pure Merino. Sire,  $\frac{3}{4}$  Merino,  $\frac{1}{8}$  Southdown (No. 5).  
 No. 431.—Bred by Baechtel Brothers, Willits, Mendocino County, California.  $\frac{3}{4}$  Merino,  $\frac{1}{8}$  Southdown. 2 years old (No. 7).  
 No. 432.—Bred by Baechtel Brothers, Willits, Mendocino County, California. Age, 5 years.  $\frac{1}{2}$  Merino,  $\frac{1}{2}$  Southdown (No. 8).  
 No. 433.—Bred by Baechtel Brothers, Willits, Mendocino County, California. Age, 1 year.  $\frac{3}{4}$  Merino,  $\frac{1}{4}$  Shropshire,  $\frac{1}{8}$  Southdown (No. 9).  
 No. 435.—Bred by Baechtel Brothers, Willits, Mendocino County, California. Age, 1 year.  $\frac{3}{4}$  Merino,  $\frac{1}{8}$  Southdown (No. 11).  
 No. 788-797, inclusive.—Bred by Baechtel Brothers, Willits, Mendocino County, California. Age, 1 year.  $\frac{1}{2}$  Merino,  $\frac{1}{8}$  Shropshire,  $\frac{3}{8}$  Southdown.  
 No. 798-806, inclusive.—Bred by Baechtel Brothers, Willits, Mendocino County, California. Age, 2 years.  $\frac{3}{4}$  Merino,  $\frac{1}{8}$  Shropshire,  $\frac{1}{8}$  Southdown.  
 No. 808-817, inclusive.—Bred by Baechtel Brothers, Willits, Mendocino County, California. Age, 1 year.  $\frac{3}{4}$  Merino,  $\frac{1}{8}$  Shropshire,  $\frac{1}{8}$  Southdown.  
 No. 858-867, inclusive.—Bred by Baechtel Brothers, Willits, Mendocino County, California. Age, 7 years.  $\frac{1}{2}$  Merino,  $\frac{1}{2}$  Southdown.  
 No. 868-877, inclusive.—Bred by Baechtel Brothers, Willits, Mendocino County, California. Age, 1 year.  $\frac{3}{4}$  Merino,  $\frac{1}{8}$  Southdown.

## EXAMINATION OF THE MATERIAL AND TABULATION OF RESULTS.

The material described in the catalogue was examined in exactly the same way as that represented and described in the previous report. The object was the determination of all properties that might be affected by the conditions to which the animals had been subject, but more especially the relations of the fineness, strength, and elasticity of the fiber corresponding to all conditions. These are the principal qualities upon which the ultimate value of wool for manufacturing purposes and for ordinary consumption depends, and we have therefore confined ourselves to them. The methods employed have already been described, but a brief review of them may not be superfluous. In making the measurements of fineness the sample under examination was taken from its case, a small lock separated from it and cut into three sections of about equal length, each of which was mounted upon a glass slide. Each slide was labeled to correspond with the number of the sample and the portion of the lock. Then with a microscope with a magnifying power of about 200 diameters and an eye-piece micrometer that was standardized by means of a stage micrometer the width of the image of each of 50 fibers on each plate was carefully measured. Each measurement was recorded and the average of the 50 measurements determined. In this way 150 measurements were taken for each sample.

The results thus secured were recorded in a table in which three columns were provided for each sample. Each of these columns was headed with the inscription of the slide represented, and in it were entered the data secured for the appropriate section of the lock examined. At the foot of each column was entered the sum of all the measurements recorded in it, and from this the average for the column was calculated. Then at the bottom of the table was arranged a sub-table in which were collected in one part the highest measurements found in each column, in another part the lowest measurements, and in a third the average measurements. Then from each of these series of three were determined the extreme maximum, the extreme minimum, and the general average for the sample. All of these figures were reduced from the centimillimeters of the French standard in which they were taken to thousandths of an inch and fractions of an inch of the English standard that would make them more readily intelligible to the average breeder and manufacturer.

In this table it is possible to compare the several samples with regard to what is generally understood as trueness or evenness of the fiber throughout its length. We have here the figures for three parts of the fiber in the direction of its length. In the true or even fiber we should have nearly the same average in all. In uneven fibers the average for each will vary, and the differences are sometimes so marked that when several sections for any given lock are thus made and measured it is almost possible to determine the condition of health of the animal producing it at a given time. We have not undertaken to trace these variations in our work, but have made the data a matter of record, so that any one desiring to do so can take them up and make a detailed comparison. As an instance of these differences we may take at random the figures for samples 525, 534, 543, and 423, expressed in centimillimeters, thus:

Sample.	B <sup>1</sup> .	B <sup>2</sup> .	B <sup>3</sup> .
525	2.36	2.43	2.49
534	1.58	1.81	1.975
543	1.923	1.795	1.855
423	2.22	2.05	2.203

We see here variations ranging from 5 to 15 per cent. of the total diameter of the fiber. In many cases the variations are much wider than this.



The same variations are found in the extremes for each sample; so that all the figures given in these tables are of value in the study of their relations. The extremes serve also to show the evenness of the sample as regards the several fibers constituting it; and this is also indicated in the figures given at the bottom of the table showing the number of measurements for the sample found above the average and below it. Since these variations are frequently due to exposure or neglect, or even to defective constitution, rendering the animal more subject to the effect of these influences, results of the kind just mentioned will furnish data for profitable study.

The strain and stretch the fibers were capable of sustaining previous to rupture were taken with the dynamometer described in the former report. To prepare the fibers for being tested, a small lock was taken from each sample and carefully washed with ether to remove the grease and dirt and cleanse it. It was then placed upon the table in front of the instrument, and fibers drawn from it at random. In placing the fiber in the instrument for the test, that end nearest the root of the fiber was inserted to the upper clamp. Strain was gradually applied until rupture occurred; and the power required to effect it, and the stretch suffered, were recorded. In this way the number of fibers tested for each sample was 50, this number having been found necessary, but, at the same time, all-sufficient for the determination of the true average for the sample. The result of each test was entered in a column in the table provided for it; the extremes and averages, as well as the number of tests above and below the average, entered at the bottom of the table. So also, to render the results more intelligible, the strains were reduced from grams to grains, and the stretch from millimeters in a length of 20 millimeters to percentage of the length. In all cases a length of 20 millimeters was subjected to test, since, all things considered, this was found to be the most desirable. A greater or less length would have given a different result; but that obtained for the length chosen had been found to give results that were very nearly averages for the results for the different lengths; that is to say, reference to the former report will show that with a length of 10 millimeters the percentage of stretch was greater than with a length of 20 millimeters, and that as the length of fiber tested increased there was a decrease of the percentage of stretch. The strain remained about the same. So then the stretch for 20 millimeters, being about the average of the stretch for the different lengths, and because of its convenience, that length was chosen for the length to be used in all tests; so that the latter are fairly comparable.

The tables of measurements of fineness and of strain and stretch, giving the results thus in detail, furnish the data for the construction of the subsequent tables. In the first place the extremes and averages for each sample are collected in single tables, one for fineness and another for strain and stretch. And in these tables are entered the number of crimps per inch in each sample showing the relation of closeness of crimp to the quality of fineness. In the tables thus prepared the variations in the fibers constituting the sample and the variations in the samples constituting a group are fully shown. From these tables the averages for each sample, both for fineness and for strain and stretch, are brought together in a single table in which all the relations of general importance are brought out.

The value of Merino wools as related to each other manifestly depends upon first the fineness, which determines the class of goods into which they may enter, and second upon their ultimate strength and tenacity. All these qualities are of capital importance, and one is of no value, or at least is of little value, without the other. In the present work, therefore, we have made the relation between all these qualities the basis of the comparison.

We have, then, as the basis of value: (1) Fineness; (2) Ultimate tenacity or resistance; (3) The relation between the ultimate resistance and elasticity.

(1) *Fineness*.—This is a simple matter. It is represented in the diameter measured as already described, and is set forth in the final table in the general average for that quality.

(2) *Ultimate tenacity or resistance*.—This determines the strength of the staple, and in the results secured in each test with the dynamometer it seems to vary widely from fiber to fiber and from sample to sample, and a comparison between them becomes possible only when the fibers compared happen to be of the same diameter. It becomes necessary to reduce the results of the specific tests to figures which correspond to strains for samples having a common diameter, and this diameter we have arbitrarily assumed to be 4 centimillimeters, because this was chosen in previous experiments with coarser wools. This diameter is considerably greater than is ever found in good Merino wools, but it will serve our purpose in the comparisons we shall have to make, and will make it possible to compare the present results with those already reported. The formula for this reduction is made as follows:

Let 4 centimillimeters =  $D'$  the assumed common diameter.

Let  $D$  = the average diameter of fiber for the sample.

Let  $S$  = the average actual tensile strain necessary to rupture.

Let  $S'$  = equal the tensile strains necessary to rupture of a similar fiber with a diameter  $D'$  or 4 centimillimeters.

Then since the strains will be to each other as the squares of the diameters of the corresponding fibers, we have the proportion

$$D^2 : (D')^2 :: S : S'$$

and

$$S' = \frac{(D')^2 S}{D^2} \text{ or } \frac{16 S}{D^2}$$



Now if we substitute for D and S in the formula we may obtain the corresponding theoretical strain required to produce rupture of a fiber having the common diameter, 4 centimillimeters. Take as an example the averages for sample No. 555; D=2.237, S=5.63. Substituting these values in the formula we have

$$\frac{16 \times 5.63}{(2.237)^2} = 18.001 \text{ grams.}$$

This affords a means for the direct comparison of each sample as regards the ultimate resistance to rupture. It is expressed in grams for an area having a diameter of 4 centimillimeters, but to very many it will be more acceptable and more readily comprehended if expressed in corresponding pounds per square inch of section, and we have made the calculations necessary to this end. This value is obtained as follows:

Let S=the average ultimate tensile resistance of the fibers tested and belonging to a single sample in grams.

Let D=the average diameter of fiber for that sample in centimillimeters.

Then  $\frac{\pi D^2}{4}$  = the sectional area of fiber in square centimillimeters.

In a square millimeter there are  $100 \times 100 = 10,000$  square centimillimeters.

Hence, 1 gram per square centimillimeter = 10,000 grams = 10 kilograms per square millimeter.

And since 1 kilogram per square millimeter = 1422.30786 pounds per square inch, 1 gram per square centimillimeter = 14223.0786 pounds per square inch of section of fiber.

The general formula for the reduction will therefore be as follows:

$$\frac{4 S}{\pi D^2} \times 14223. = 18109 \frac{S}{D^2} = R =$$

the ultimate resistance of the sample per square inch.

As an example of the application of the formula we may take the figures for sample No. 555, as before. Here D=2.237 centimillimeters, S=5.58 grams. And substituting these values in the formula we have  $18109 \times \frac{5.58}{(2.237)^2} = 20372$  = the ultimate resistance of the sample in pounds per square inch of cross-section.

The results obtained by this formula may be usefully employed in making comparisons of a certain class in which the elasticity of the fiber need not be taken into account. But in a material, the value of which depends so largely upon this quality, it cannot be ignored. This relation is expressed in the modulus of elasticity or the ratio between the ultimate resistance and the stretch suffered under the corresponding strain. This may be found as follows:

Let E=the modulus of elasticity for the sample.

Let R=the average tensile resistance of fibers in pounds per square inch  $\left( = 18109 \frac{S}{D^2} \right)$

Let P=the per cent. of stretch expressed in decimal form.

Then the general formula becomes

$$E = \frac{R}{P}$$

Applying this formula to sample 555, as before, we have

$$R = 20372; P = .2790$$

Then

$$E = \frac{20372}{.2790} = 73720$$

If with a given percentage of stretch we have a higher strain there must be an increase in the modulus of elasticity, or with a given strain and a higher percentage of stretch there must be a decrease in the modulus of elasticity. It is plain, therefore, that the ultimate value of wool for manufacturing purposes must depend upon this modulus, and vary directly with it. The higher the modulus of elasticity the higher the value of the wool for all purposes, fineness left out of consideration. That is to say, the wool which requires the high strain to produce a given stretch must be ultimately stronger than that which requires a lower strain for the same purpose. This factor, therefore, we have made especial use of in our comparison of values of the wools from the different sections.

With these formulæ computations of value have been made for each sample tested, and the results have been entered in the table of general results of all measurements. In all these calculations it has been assumed that the fibers have a cylindrical form, which from the system of measurement of fineness is practically true. The averages of these computations represent the ultimate values of the fiber for each class and each section, and constitute the final table of the series.



The tables of results obtained both in measurement and computation in this investigation have been arranged in the following order:

*THOROUGHbred AMERICAN MERINO WOOLS.*

TABLE I.—Detailed results of measurements of fineness:

- A.—Wools of Vermont.
- B.—Wools of New York.
- C.—Wools of Pennsylvania.
- D.—Wools of Wisconsin.
- E.—Wools of Minnesota.
- F.—Wools of Illinois.
- G.—Wools of Texas.
- H.—Wools of California.

TABLE II.—Detailed measurements of strain and stretch:

- A.—Wools of Vermont.
- B.—Wools of New York.
- C.—Wools of Pennsylvania.
- D.—Wools of Wisconsin.
- E.—Wools of Minnesota.
- F.—Wools of Illinois.
- G.—Wools of Texas.
- H.—Wools of California.

TABLE III.—Extremes and average of fineness:

- A.—Wools of Vermont.
- B.—Wools of New York.
- C.—Wools of Pennsylvania.
- D.—Wools of Wisconsin.
- E.—Wools of Minnesota.
- F.—Wools of Illinois.
- G.—Wools of Texas.
- H.—Wools of California.

TABLE IV.—Extremes and averages of strain and stretch:

- A.—Wools of Vermont.
- B.—Wools of New York.
- C.—Wools of Pennsylvania.
- D.—Wools of Wisconsin.
- E.—Wools of Minnesota.
- F.—Wools of Illinois.
- G.—Wools of Texas.
- H.—Wools of California.

*THOROUGHbred AMERICAN MERINO WOOLS—Continued.*

TABLE V.—General results of all measurements, fineness, strain and stretch, and of corresponding computations for ultimate tensile resistance and moduli of elasticity:

- A.—Wools of Vermont.
- B.—Wools of New York.
- C.—Wools of Pennsylvania.
- D.—Wools of Wisconsin.
- E.—Wools of Minnesota.
- F.—Wools of Illinois.
- G.—Wools of Texas.
- H.—Wools of California.
- I.—Collected averages of the general results of all measurements and computations for each section.

*GERMAN MERINO WOOLS.*

TABLE VI.—Detailed measurements of fineness:

- A.—Negrette wools. E. W. Perry.
- B.—Saxony wools. E. Steiger.

TABLE VII.—Detailed measurements of strain and stretch:

- A.—Negrette wools. E. W. Perry.
- B.—Saxony wools. E. Steiger.

- C.—Extremes and averages of fineness of German wools.

- D.—Extremes and averages of strain and stretch for German wools.

TABLE VIII.—General results of all measurements and computations:

- A.—Negretti wools.
- B.—Saxony wools.

*CROSS-BRED WOOLS FROM CALIFORNIA.*

TABLE IX.—Detailed measurements of fineness.

TABLE X.—Detailed measurements of strain and stretch.

TABLE XI.—Extremes and averages of fineness.

TABLE XII.—Extremes and averages of strain and stretch.

TABLE XIII.—General results of all measurements and computations.

TABLE XIV.—General averages of all measurements and computations.



AMERICAN MERINO WOOLS.

TABLE I.—Measurements of fineness of wools.

		VERMONT.																		
		RAMS, 2 YEARS OLD.						RAMS, 3 YEARS OLD.												
Catalogue number of samples..		428.			525.			594.			543.			525.			530.			
Number of section.....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	
		2.375	2.00	2.25	2.50	2.50	2.125	1.50	2.00	3.00	2.00	2.00	2.00	2.125	2.50	3.00	2.00	2.125	2.25	2.375
		1.875	1.875	2.50	2.00	2.50	2.25	1.875	1.75	1.75	1.75	1.75	1.75	2.00	2.50	3.00	2.00	2.125	2.25	2.50
		2.375	2.00	2.125	1.50	2.50	2.125	2.375	2.00	1.625	1.50	1.50	1.50	2.00	3.00	2.25	2.00	2.00	2.00	2.00
		2.25	2.375	2.25	2.25	2.625	2.50	1.50	1.75	2.125	2.25	2.50	2.25	2.00	2.00	2.50	2.625	1.50	1.875	1.875
		2.50	2.00	2.25	2.00	2.25	2.50	1.625	1.625	1.875	1.625	1.875	1.875	2.125	2.125	2.00	2.00	2.25	2.50	2.50
		2.375	2.00	2.50	2.00	3.125	2.25	1.25	2.00	1.625	2.00	2.125	1.625	2.00	3.75	2.00	2.00	2.375	2.00	2.00
		2.00	1.75	2.50	2.00	2.625	2.50	1.875	1.50	2.125	1.75	1.25	2.25	2.00	2.375	2.25	2.00	1.875	2.00	2.00
		2.375	2.00	2.25	2.25	3.00	2.50	1.125	1.625	2.125	2.00	1.50	1.50	3.00	2.00	3.375	2.25	1.875	3.00	3.00
		1.875	2.50	2.50	2.60	2.75	3.00	2.125	2.00	1.25	2.25	1.75	1.75	1.875	2.00	3.00	2.00	2.50	2.50	2.50
		2.375	2.00	2.00	2.25	2.50	2.25	1.625	1.75	1.75	2.375	2.00	2.00	1.75	1.875	2.00	1.50	2.25	1.50	1.50
		2.00	2.375	2.60	2.50	2.875	2.00	1.375	1.75	2.00	1.625	2.00	2.00	2.00	2.50	3.125	3.00	1.50	1.625	1.625
		2.50	1.75	2.625	2.25	3.00	2.50	2.00	2.00	3.125	1.50	1.75	1.75	2.00	2.125	2.00	2.125	2.50	2.00	2.00
		3.00	1.00	2.25	3.00	2.50	1.875	2.50	2.00	2.50	2.00	1.50	1.50	2.50	2.50	2.50	2.00	2.00	1.75	1.75
		2.75	2.60	2.00	2.00	2.00	2.50	2.00	1.625	2.00	1.75	1.875	2.50	2.25	2.50	2.25	2.25	2.25	2.00	2.00
		2.00	2.125	1.75	2.50	2.50	2.00	1.50	2.00	2.00	2.00	1.875	1.875	2.00	2.50	1.875	2.50	2.00	2.00	2.00
		2.00	2.375	1.75	2.50	2.00	2.00	1.25	1.875	1.75	2.00	1.875	1.875	2.25	2.75	2.75	2.125	1.875	1.875	1.875
		2.375	2.375	2.375	3.50	2.00	2.00	1.25	1.75	1.875	1.75	1.50	2.25	2.00	2.50	2.25	2.00	2.00	1.625	1.625
		2.00	2.00	2.125	2.00	2.50	2.00	1.50	1.875	1.50	2.00	1.50	1.50	2.125	3.25	2.125	1.50	2.00	3.00	3.00
		2.50	2.125	2.00	2.625	2.00	2.60	1.625	1.60	2.25	1.50	1.75	1.75	3.00	2.25	1.60	2.25	2.00	1.75	1.75
		2.00	2.00	2.25	3.00	2.00	3.00	1.25	1.75	2.00	1.875	2.00	2.00	3.50	2.375	2.75	2.50	1.625	2.00	2.00
		2.50	2.00	2.375	2.375	2.125	2.50	1.625	2.75	1.75	2.125	2.60	2.00	3.00	2.25	3.50	2.125	2.00	2.125	2.125
		1.875	2.00	2.125	3.00	2.75	3.125	1.875	1.75	2.00	1.50	1.75	1.75	1.875	2.375	1.625	1.75	1.75	2.375	2.375
		2.00	1.875	2.25	2.126	2.00	3.25	1.50	2.25	2.60	1.50	1.50	2.00	1.50	2.00	2.50	2.875	1.50	2.50	2.50
		2.00	1.50	1.625	2.00	2.00	2.875	1.50	1.625	1.75	1.75	1.50	1.50	2.00	2.50	2.375	2.625	2.00	2.50	2.50
		2.00	2.00	2.50	1.50	2.50	3.00	1.50	1.625	1.50	2.00	1.625	1.875	1.75	2.25	2.50	1.75	2.00	3.00	3.00
		1.875	1.875	2.50	2.25	3.375	2.50	1.125	1.50	3.00	2.00	2.375	1.875	2.00	2.25	2.50	1.875	2.00	3.50	3.50
		2.375	2.375	2.25	2.50	2.125	2.75	1.50	1.875	1.75	1.75	1.50	2.00	2.125	2.875	1.875	1.25	1.875	2.60	2.60
		2.00	2.00	2.375	2.25	2.75	2.00	1.75	2.625	1.625	2.00	1.50	2.00	2.375	2.00	2.625	3.125	1.625	2.00	2.00
		2.50	2.375	2.125	2.125	2.00	3.50	1.375	1.75	1.75	1.75	1.75	1.75	3.00	2.25	1.75	2.25	2.50	2.25	2.25
		2.00	2.25	2.00	2.50	3.00	3.00	1.875	2.00	1.50	3.625	2.00	2.00	2.50	2.00	2.00	2.00	1.50	2.25	2.25
		2.00	1.625	2.00	2.00	2.50	2.00	1.875	2.125	3.00	1.625	2.00	2.00	2.00	2.50	2.25	2.00	2.00	2.00	2.125
		2.50	2.50	2.125	1.75	2.50	3.00	1.875	1.75	1.75	1.875	1.75	1.75	2.00	2.50	2.50	1.50	2.125	1.75	1.75
		2.00	1.75	2.50	2.50	2.25	2.00	1.50	1.75	1.625	2.00	1.50	1.50	2.00	2.00	2.875	2.00	2.00	1.875	1.875
		2.50	1.875	2.125	2.25	2.50	2.50	1.375	1.625	1.625	1.75	1.875	1.625	1.875	1.75	2.00	1.875	2.00	2.125	2.125
		2.00	2.00	2.25	2.25	2.25	2.25	1.50	1.50	2.50	2.00	1.875	1.625	1.875	2.00	2.50	2.25	2.25	3.25	3.25
		2.50	2.50	2.00	2.50	3.125	2.125	1.50	1.75	1.625	2.00	1.875	1.625	2.00	2.25	2.125	2.25	1.625	2.625	2.625
		3.25	2.375	1.875	2.25	2.625	3.00	1.375	1.75	2.50	2.50	1.50	2.00	2.00	2.25	2.00	1.50	1.75	2.00	2.00
		2.75	1.875	2.00	1.625	2.125	3.00	1.00	1.50	1.875	2.00	1.75	1.75	2.125	2.50	3.50	2.00	2.00	2.625	2.625
		2.50	2.50	1.875	2.50	2.75	2.25	2.375	1.625	2.00	2.375	2.00	2.00	2.00	2.125	2.00	2.00	1.50	2.00	2.00
		2.00	2.125	1.875	2.25	2.25	2.75	1.375	2.00	2.00	1.625	2.00	2.00	2.00	2.125	2.375	2.125	2.00	2.00	2.00
		2.00	2.00	2.625	2.25	3.00	2.875	1.375	1.75	1.875	2.00	1.75	1.75	2.50	2.875	2.00	2.00	1.50	2.00	2.00
		2.00	2.00	2.625	3.00	2.50	3.00	1.875	2.00	2.50	2.00	1.50	1.50	2.25	2.25	1.60	1.625	2.50	2.50	2.50
		2.25	1.875	2.50	2.75	3.00	2.875	1.375	1.50	3.00	1.75	1.60	2.00	2.00	2.125	1.875	2.00	1.625	1.50	1.50
		1.50	2.25	1.625	2.00	4.00	2.375	2.50	1.75	1.875	2.00	2.375	2.00	2.00	1.875	2.50	3.375	2.125	1.75	2.00
		1.75	1.875	2.50	2.125	2.625	2.60	1.50	1.75	2.375	2.00	1.625	2.50	3.00	2.50	1.625	1.75	1.875	2.375	2.375
		1.875	2.25	2.25	2.50	2.00	2.25	1.50	2.00	1.75	1.75	1.50	2.00	1.125	2.125	2.125	2.25	1.75	1.75	1.75
		2.00	1.875	2.375	2.50	2.375	2.25	1.625	2.125	2.00	2.00	1.50	2.00	2.125	2.50	2.75	1.50	1.75	2.625	2.625
		2.125	2.00	2.75	2.50	1.75	2.25	1.25	1.50	2.00	1.75	2.00	1.75	2.50	3.50	2.00	2.00	2.00	1.75	1.75
		2.375	2.125	1.50	3.00	2.00	2.25	1.375	1.50	1.50	1.875	2.00	2.00	5.75	2.00	2.00	2.00	2.25	2.375	2.375
Totals .....		110.875	102.500	110.125	117.875	123.875	124.50	79.00	90.875	98.75	96.125	80.75	93.25	111.50	118.875	119.875	102.50	97.025	108.875	108.875

		No. of section.			In centimillimeters.			In thousandths of inch.			No. of section.			In centimillimeters.			In thousandths of inch.		
Recapitulation and reduction:		B'	3.25	1.2795	B'	3.50	1.3779	B'	2.50	0.9842	B'	3.625	1.4271	B'	3.75	1.4763	B'	3.125	1.2303
Maximum measurements.		B''	2.50	1.0642	B''	4.00	1.5748	B''	2.75	1.0620	B''	2.50	0.9842	B''	3.75	1.4763	B''	2.75	1.0625
		B'''	2.75	1.0620	B'''	3.50	1.3779	B'''	3.125	1.2303	B'''	2.50	0.9842	B'''	3.50	1.3779	B'''	3.50	1.3779
Highest.....			3.25	1.2795		4.00	1.5748		3.125	1.2303		3.625	1.4271		3.75	1.4763		3.50	1.3779
Minimum measurements.		B'	1.00	0.5905	B'	1.50	0.5905	B'	1.00	0.3937	B'	1.50	0.5905	B'	1.50	0.5905	B'	1.50	0.5905
		B''	1.00	0.3937	B''	1.625	0.5939	B''	1.60	0.5905	B''	1.25	0.4921	B''	1.75	0.6889	B''	1.50	0.5905
		B'''	1.50	0.5905	B'''	1.75	0.6889	B'''	1.25	0.4921	B'''	1.50	0.5905	B'''	1.375	0.5413	B'''	1.50	0.5905
Lowest.....			1.00	0.3937		1.50	0.5905		1.00	0.3937		1.25	0.4921		1.375	0.5413		1.50	0.5905
Average measurements..		B'	2.22	0.8740	B'	2.36	0.9291	B'	1.58	0.6220	B'	1.923	0.7570	B'	2.23	0.8779	B'	2.05	0.8070
		B''	2.05	0.8070	B''	2.48	0.9763	B''	1.81	0.7125	B''	1.795	0.7666	B''	2.38	0.9370	B''	1.95	0.7677
		B'''	2.203	0.8673	B'''	2.49	0.9803	B'''	1.075	0.7775	B'''	1.865	0.7342	B'''	2.395	0.9420	B'''	2.17	0.8543
Average.....			2.157	0.8492		2.443	0.9618		1.788	0.703									



TABLE I.—Measurements of fineness of wools—Continued.

		VERMONT.																		
		RAMS, 3 YEARS OLD.																		
Catalogue number of samples..		533.			535.			537.			540.			545.			554.			
Number of section.....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	
Actual measurement in centimillimeters.	1.50	2.125	2.00	2.125	3.25	2.125	1.75	2.50	1.75	2.00	2.00	2.00	1.75	2.25	1.75	2.25	2.00	2.00	2.00	
	2.00	2.75	2.125	1.875	1.75	2.00	1.50	2.50	1.75	1.75	3.00	2.25	1.625	2.50	1.60	2.00	1.75	2.00	1.75	
	1.75	2.00	2.375	3.125	2.50	3.00	1.875	2.375	2.00	2.75	1.75	1.75	2.25	2.75	1.75	2.25	1.75	1.625	2.50	1.60
	1.50	1.50	2.125	2.25	2.50	2.50	1.875	1.75	2.00	1.50	1.50	2.50	2.125	2.125	2.125	2.00	1.75	2.00	1.75	2.00
	1.125	1.875	2.125	1.50	2.25	2.25	2.00	2.00	2.25	1.875	1.875	1.875	2.625	1.75	2.50	2.875	1.75	2.00	2.00	2.00
	2.00	2.125	2.25	1.875	1.50	1.75	1.75	1.875	1.875	2.00	2.00	2.00	2.00	1.75	2.625	2.25	2.125	2.00	2.00	1.75
	1.00	2.875	2.375	2.50	2.25	2.25	1.875	2.375	1.875	2.50	1.75	2.50	1.60	1.60	2.625	2.125	1.875	1.75	2.50	2.50
	1.625	1.625	1.75	2.375	2.00	2.00	1.50	2.00	1.875	2.60	3.50	2.25	1.875	2.625	2.00	2.875	1.60	2.00	2.00	2.00
	1.50	1.875	2.75	2.25	2.25	2.75	1.875	1.875	1.50	3.50	1.60	2.50	1.60	2.25	1.75	2.50	2.00	2.00	2.00	2.00
	2.00	2.00	2.375	2.75	1.75	2.25	1.375	2.00	1.50	1.875	1.875	2.375	1.875	2.375	1.875	2.375	3.00	2.125	1.75	2.00
	1.50	2.25	2.375	1.75	2.25	2.25	1.875	2.00	2.00	2.00	2.00	2.00	2.00	1.875	2.25	2.00	1.875	1.875	2.00	2.00
	1.25	2.25	1.875	2.00	2.00	1.875	2.00	1.50	2.00	1.50	2.00	2.50	2.00	1.625	3.00	1.75	2.60	2.25	2.00	2.00
	2.875	2.00	2.625	1.625	2.875	3.125	1.75	2.00	2.125	1.50	1.75	2.25	1.75	1.50	2.125	2.125	2.125	2.00	2.00	2.00
	2.00	1.50	2.125	2.00	2.50	2.50	2.00	1.75	1.75	2.50	2.00	2.00	2.00	1.875	2.00	2.25	1.875	1.50	1.625	2.25
	1.625	1.875	2.125	2.00	1.75	3.00	2.00	1.625	2.00	2.125	2.125	1.625	2.00	2.50	3.00	1.75	1.625	1.60	1.50	1.50
	1.25	1.625	1.875	1.875	1.875	2.25	1.75	1.875	2.00	2.00	2.00	2.00	2.00	2.125	2.00	1.25	1.625	2.25	2.25	2.125
	2.50	1.875	2.75	2.50	3.00	2.375	2.25	1.50	1.75	1.75	1.50	2.50	1.875	2.50	1.125	1.875	1.875	2.50	1.625	1.625
	1.625	2.00	2.125	2.125	3.50	2.50	1.50	1.75	2.00	1.75	2.00	1.75	3.25	1.50	1.875	1.875	2.25	2.75	2.50	2.75
	3.00	1.875	2.25	2.00	2.50	2.25	1.75	2.00	2.125	2.50	2.00	3.00	2.00	1.50	1.50	2.50	2.50	2.00	2.00	2.00
	2.00	1.875	2.00	3.00	1.50	2.00	2.25	2.00	2.00	1.375	1.625	1.875	2.00	2.00	1.875	2.50	2.00	2.00	1.625	2.25
	1.75	1.75	2.00	2.00	1.75	2.25	2.00	2.375	2.00	2.00	2.00	2.00	2.00	2.125	3.25	2.75	2.125	2.25	2.25	2.25
	2.00	2.875	2.875	2.50	2.125	3.00	1.75	2.875	2.00	1.60	2.25	1.50	2.00	2.00	2.25	1.875	2.50	2.60	2.875	2.875
	1.50	2.00	2.75	1.625	2.375	2.675	2.60	1.75	1.50	1.875	1.75	2.25	2.50	1.125	1.00	2.00	1.75	2.50	2.75	2.75
	2.00	1.00	2.375	2.50	2.50	2.00	1.75	1.875	1.75	2.00	2.50	3.00	1.875	2.00	2.00	2.625	1.875	2.00	1.875	2.375
	1.625	3.75	2.625	2.25	2.00	2.00	2.25	1.75	1.875	1.625	1.625	2.375	2.625	2.25	1.625	2.25	2.00	2.00	2.00	2.00
	1.875	2.325	1.625	1.50	2.25	2.00	2.00	1.625	2.00	2.00	2.00	2.00	2.00	2.125	2.125	1.875	1.75	2.125	1.75	1.125
	1.00	1.875	2.25	2.125	2.50	2.25	2.25	2.00	2.00	2.00	2.00	1.50	2.50	1.25	2.625	2.00	2.60	2.00	2.00	2.00
	2.50	1.75	2.875	2.125	1.75	3.00	1.875	2.00	2.00	1.875	1.875	1.875	2.00	1.75	2.00	2.125	2.25	2.375	2.375	2.375
	1.25	1.50	2.75	1.75	2.00	2.00	2.00	2.50	1.875	2.00	2.00	3.125	1.75	2.125	1.75	2.00	2.60	2.50	2.50	2.50
	1.625	2.875	2.00	2.375	2.50	2.00	2.00	1.75	1.50	1.875	2.00	1.875	2.00	1.875	2.00	1.75	1.625	1.625	1.875	1.875
1.50	1.625	2.00	2.50	2.00	2.00	2.00	2.50	1.875	2.00	2.00	2.125	2.00	2.00	2.125	2.125	2.75	1.50	1.50	1.50	
1.50	1.875	2.00	2.50	2.00	2.50	1.75	2.125	2.00	1.60	1.60	3.00	1.875	2.125	2.25	2.50	2.25	1.875	1.875	1.875	
1.875	1.50	2.50	1.75	2.00	2.00	1.50	1.60	2.00	2.00	1.75	2.50	1.625	2.25	1.625	2.00	2.50	2.50	2.50	2.50	
2.25	2.875	3.125	2.00	2.50	2.50	2.00	1.75	2.00	2.00	2.25	1.875	1.60	2.25	1.875	2.00	2.00	2.60	2.60	2.60	
1.625	2.50	2.25	1.875	2.375	2.50	2.25	2.00	1.75	1.875	1.625	2.00	1.60	2.25	2.25	2.00	2.00	2.00	2.00	2.00	
2.00	2.375	2.125	2.00	2.50	3.00	1.75	1.75	1.875	2.00	2.00	2.125	1.625	2.00	1.625	2.00	1.875	1.875	1.875	1.875	
2.00	1.25	2.50	2.375	2.50	2.60	1.75	2.25	1.50	2.75	2.50	2.00	1.75	2.00	1.25	2.25	1.75	2.00	2.00	2.00	
1.25	1.025	2.625	1.875	2.50	1.75	2.00	2.25	1.50	1.75	1.875	2.50	2.125	2.00	1.75	2.25	2.00	2.00	2.00	2.00	
1.75	2.25	2.25	3.00	2.00	1.625	1.75	2.00	2.00	1.50	1.875	1.75	1.625	2.125	1.25	1.75	2.25	2.25	2.25	2.25	
1.875	1.50	1.875	1.875	2.50	2.00	2.25	2.00	2.25	1.875	1.625	1.50	1.625	2.00	2.25	2.25	2.125	2.00	2.00	2.00	
1.50	1.50	2.375	2.00	3.25	2.25	1.50	2.00	1.625	2.00	2.00	1.875	2.25	2.50	1.50	1.50	1.50	2.75	2.75	2.75	
2.00	1.875	2.875	1.75	2.50	1.75	2.00	2.00	2.125	1.50	2.50	2.00	2.50	2.125	2.00	2.125	1.625	2.875	2.875	2.875	
1.875	2.25	2.125	2.50	3.25	2.50	2.00	1.75	1.50	1.75	2.375	2.50	2.25	2.50	1.50	1.625	1.50	2.00	2.00	2.00	
1.875	1.50	2.375	2.625	2.50	1.75	1.875	1.50	1.50	2.00	1.75	1.875	2.50	1.625	1.50	2.00	1.625	2.50	2.50	2.50	
1.60	1.875	2.375	1.875	2.625	2.50	1.75	2.00	2.00	2.625	2.00	1.875	2.00	2.125	2.00	2.875	2.00	2.00	1.25	1.25	
1.75	2.00	1.125	2.00	2.50	1.875	2.00	1.75	1.50	2.00	2.00	1.875	1.60	2.50	1.00	2.25	2.125	2.50	2.50	2.50	
1.625	1.875	2.125	2.125	2.25	2.50	2.00	2.25	2.50	2.50	2.25	2.00	2.00	2.00	2.00	2.00	2.00	2.75	2.75	2.75	
1.875	1.75	2.25	2.125	3.00	2.25	2.00	2.125	1.875	1.75	1.75	2.50	2.25	2.25	2.00	2.00	2.00	2.25	2.125	2.125	
1.75	1.50	2.125	1.75	2.00	2.00	2.00	1.50	2.00	1.50	1.75	1.60	2.25	2.75	1.25	1.125	1.875	2.50	2.50	2.50	
2.00	1.625	1.875	2.00	1.50	2.25	2.00	1.50	1.75	1.875	1.875	2.00	1.50	2.00	1.625	1.75	2.00	1.875	2.375	2.375	
Totals.....	87.75	97.00	112.875	105.625	115.75	115.875	95.125	97.50	93.375	97.50	99.50	108.875	94.75	113.375	93.625	103.125	101.375	107.37		

Recapitulation and reduction:		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.		
Maximum measurements.	B'	3.00	1.1811	B'	3.265	1.2303	B'	2.50	0.9842	B'	3.50	1.3779	B'	3.00	1.1811	B'	2.75	1.0826
	B''	3.75	1.4793	B''	3.50	1.3779	B''	2.875	1.1318	B''	3.50	1.3779	B''	3.00	1.1811	B''	2.75	1.0826
	B'''	3.125	1.2303	B'''	2.125	1.2303	B'''	2.875	1.1318	B'''	3.25	1.2795	B'''	3.25	1.2795	B'''	2.875	1.1318
Highest.....		3.75	1.4793		3.50	1.3779		2.875	1.1318		3.50	1.3779		3.25	1.2795		2.875	1.1318
Minimum measurements.	B'	1.00	0.3937	B'	1.50	0.5905	B'	1.375	0.5413	B								



TABLE I.—Measurements of fineness of wools—Continued.

		VERMONT.																		
		RAMS, 3 YEARS OLD.						EWES, 2 YEARS OLD.						EWES, 3 YEARS OLD.						
Catalogue number of samples..		555.			563.			424.			512.			522.			523.			
Number of section.....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	
Actual measurement in centimillimeters.	2.00	2.25	1.875	1.50	2.125	2.125	1.625	1.50	2.00	1.375	1.875	1.25	1.25	1.875	1.875	2.00	2.25	2.00		
	2.50	2.00	1.75	1.625	2.50	1.75	2.00	1.75	2.50	1.875	2.00	1.875	1.875	2.00	2.00	1.625	1.875	1.50		
	2.25	2.50	2.25	1.00	2.50	1.00	2.00	1.75	2.25	1.625	1.75	2.00	3.875	1.50	2.00	2.00	2.00	2.25		
	1.75	2.00	2.00	2.125	1.625	2.00	2.00	2.00	1.50	1.75	1.50	1.875	2.125	2.00	2.50	1.60	2.00	1.75	2.50	
	2.00	1.625	2.25	2.00	2.125	2.00	2.00	1.75	1.75	2.00	1.875	1.50	2.875	1.75	2.50	1.50	2.00	1.875	1.875	
	2.25	2.50	2.50	2.50	1.75	3.00	2.375	2.50	2.25	2.00	1.625	1.75	2.125	2.00	2.00	1.625	2.00	2.00	1.625	2.00
	3.00	2.125	2.25	1.25	1.75	1.50	1.625	2.50	1.50	2.00	1.625	1.875	1.625	2.25	2.00	2.00	2.00	1.875	2.50	2.00
	3.50	2.00	2.25	1.50	1.875	2.25	2.00	2.50	2.00	2.25	2.00	1.875	1.375	1.25	2.00	2.00	1.625	1.75	2.00	2.00
	2.00	1.25	2.25	1.375	2.00	2.00	2.00	2.25	2.00	2.00	2.125	1.875	1.625	2.25	2.00	2.00	2.00	1.875	2.25	2.00
	2.25	2.50	2.375	1.375	2.00	2.00	2.875	1.875	2.00	2.00	1.625	2.125	1.50	2.00	1.75	1.625	2.00	1.625	2.125	2.00
	3.00	1.125	2.125	1.625	2.00	2.00	2.50	2.00	2.00	2.00	1.125	2.50	1.625	2.125	2.00	2.00	2.00	2.00	2.00	2.00
	2.50	1.50	2.00	2.00	2.125	2.125	2.125	2.00	2.00	2.25	1.625	2.125	1.625	2.00	2.375	1.375	1.75	1.75	1.75	1.75
	2.25	2.00	2.00	2.75	1.75	2.25	2.00	2.00	2.00	2.00	1.125	2.125	1.75	1.50	2.00	1.50	1.75	2.25	2.50	2.50
	2.00	2.00	2.00	2.25	2.00	2.00	2.00	1.625	2.00	2.00	1.875	2.00	2.00	2.00	2.00	1.50	2.50	2.00	2.00	2.00
	2.50	2.50	2.00	3.00	1.75	2.375	2.125	2.125	2.00	2.00	1.625	1.875	1.375	1.60	1.875	2.125	2.00	1.875	1.875	1.875
	2.50	1.50	2.125	3.25	2.25	2.25	2.25	1.875	2.00	2.00	2.00	2.125	1.125	2.00	1.75	2.50	1.875	2.00	1.875	2.00
	2.50	2.00	1.75	2.50	3.00	1.75	2.375	2.125	2.00	2.00	1.00	1.625	1.625	1.50	2.00	1.75	2.00	1.875	2.00	2.00
	2.50	2.00	3.00	3.00	3.00	3.00	3.50	1.875	2.25	2.00	1.50	1.625	1.625	2.00	1.875	2.00	1.75	2.125	1.625	1.625
	2.625	2.50	3.00	1.50	3.00	3.50	1.875	2.25	2.00	2.00	1.00	1.375	1.50	2.00	1.875	2.00	1.75	2.125	1.625	1.625
	3.75	2.125	2.50	1.625	2.125	3.00	2.25	2.25	2.00	2.50	1.50	1.625	1.625	2.50	2.50	1.75	2.00	2.00	2.00	2.00
	2.25	1.875	2.25	2.00	2.00	2.00	2.875	1.875	2.25	2.00	1.625	2.50	1.375	2.00	2.625	2.375	1.75	1.625	2.125	2.125
	2.00	3.50	1.75	1.50	2.125	2.375	2.00	2.00	2.50	2.50	1.50	1.875	1.75	2.00	1.125	1.75	3.00	3.00	2.625	2.625
	3.25	2.50	2.125	1.75	2.125	1.875	2.00	2.00	2.50	2.00	1.625	1.625	1.75	2.00	1.50	1.75	2.25	2.00	2.00	2.00
	1.75	2.125	2.25	1.625	1.875	2.00	2.125	2.00	2.60	2.50	1.375	2.00	2.125	1.875	2.00	2.00	2.00	2.00	2.00	2.00
	3.50	2.00	2.00	1.75	1.875	2.50	1.50	1.50	1.75	1.75	1.25	2.25	2.625	2.00	1.60	1.875	1.875	2.25	2.125	2.125
	2.25	2.50	1.875	3.00	1.75	3.00	1.75	2.00	2.00	2.00	1.375	1.375	1.625	3.00	1.875	2.50	2.25	1.75	1.75	1.75
	1.75	1.50	1.75	2.00	3.50	1.75	1.875	2.25	2.00	2.00	1.875	1.625	1.25	1.875	2.00	2.00	2.00	2.125	2.125	2.125
	2.00	3.00	1.875	2.25	2.50	2.75	1.875	2.25	2.00	2.00	1.25	1.625	1.50	1.375	2.50	1.75	1.75	1.50	2.25	2.25
	2.00	2.00	2.00	2.50	2.375	2.875	2.125	2.50	2.00	2.00	1.75	1.625	1.25	1.875	1.375	1.50	1.50	2.125	2.375	2.50
	2.25	2.75	2.00	2.625	2.125	2.60	2.00	2.50	2.00	2.00	1.50	1.875	1.75	1.50	3.00	2.375	1.75	2.25	2.00	2.00
	2.25	2.125	2.00	2.75	2.50	3.00	1.625	1.75	2.00	2.00	1.75	2.50	1.125	1.625	1.75	2.00	2.125	1.375	2.375	2.00
	2.75	2.00	2.50	3.25	2.50	2.50	1.50	1.75	2.375	1.625	2.50	1.875	2.00	1.625	2.50	1.75	2.00	2.25	2.00	2.25
	1.875	2.00	2.575	3.50	2.50	3.875	1.50	2.50	1.75	1.75	1.25	1.625	1.50	2.00	2.125	3.50	1.625	2.50	2.50	2.50
	2.50	2.125	2.25	2.125	2.125	2.375	2.25	1.75	1.50	1.50	1.00	1.75	1.50	1.50	2.00	2.25	2.25	1.75	2.00	2.00
	3.00	2.375	3.00	2.125	2.50	3.00	1.50	1.50	2.00	2.00	1.25	2.50	1.375	2.00	1.025	2.25	1.50	1.75	2.00	2.00
	3.00	2.125	2.875	2.75	1.625	2.50	1.625	2.00	1.125	1.125	1.375	1.50	2.00	1.875	1.60	1.875	2.00	2.00	2.00	2.00
	2.50	2.50	2.75	2.375	1.50	2.50	2.25	2.25	2.50	2.50	1.625	1.625	2.125	2.00	1.75	1.75	1.50	1.75	1.50	1.75
	2.00	2.00	2.50	2.00	2.50	1.50	1.75	2.00	2.50	2.50	1.125	1.50	1.75	1.75	1.50	1.75	1.875	1.75	2.50	2.50
	3.00	2.50	2.625	1.75	2.50	2.375	2.00	2.25	2.00	2.00	1.125	1.75	1.625	1.625	2.00	1.75	2.50	1.375	1.875	1.875
	2.25	2.00	2.875	2.60	2.625	2.25	1.75	2.00	1.60	1.60	1.125	2.25	1.75	2.00	2.25	2.75	1.875	1.625	2.00	2.00
2.00	1.75	2.50	3.00	1.625	2.75	2.00	2.25	2.50	2.50	1.125	1.75	2.00	2.00	1.875	1.75	2.00	1.50	2.00	2.00	
2.125	2.00	2.00	2.00	1.625	1.50	2.00	2.00	1.75	1.75	1.25	2.00	1.75	1.875	2.00	1.625	1.625	1.50	1.50	1.50	
1.875	2.125	2.875	2.125	2.00	1.75	2.00	2.25	2.00	2.00	1.25	2.125	1.75	2.125	2.00	1.75	1.75	2.375	2.00	2.00	
2.00	2.25	2.50	2.25	2.125	2.00	2.00	2.875	2.50	1.75	1.625	2.00	1.625	1.625	2.375	1.875	1.625	2.00	1.50	1.50	
2.00	2.50	2.375	1.75	2.25	2.125	2.125	2.125	1.50	2.00	1.25	1.875	1.75	1.75	2.50	2.25	1.75	1.875	1.75	1.75	
2.125	1.75	2.00	1.75	2.25	2.25	2.25	1.025	2.00	2.00	1.50	2.00	2.50	1.875	1.125	2.00	2.00	1.875	2.00	2.00	
1.875	2.125	1.50	2.28	2.25	2.375	1.625	2.00	2.50	2.00	1.875	1.75	2.00	2.00	2.50	2.50	3.00	1.75	1.625	1.625	
1.25	2.25	2.25	2.75	2.875	3.125	2.25	2.00	2.00	2.00	1.75	2.125	2.875	2.00	1.75	1.625	2.00	1.75	1.75	1.75	
1.625	2.00	2.00	1.75	2.00	3.50	2.00	1.75	2.00	2.00	1.25	2.00	1.625	2.00	2.25	2.125	2.125	2.00	1.50	1.50	
1.50	2.50	2.125	2.125	2.125	2.00	2.00	2.00	1.75	3.00	1.50	2.25	1.50	2.125	2.00	2.00	1.625	2.50	1.75	1.75	
Totals.....	116.25	107.375	112.125	107.00	110.50	117.50	07.00	101.75	103.50	72.50	96.25	86.50	04.50	101.75	99.625	98.00	95.625	100.75		

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:															
Maximum measurements.	B' 3.75 B'' 3.50 B''' 3.00	1.4703 1.8779 1.1811	B' 3.50 B'' 3.50 B''' 3.875	1.3770 1.5770 1.6255	B' 2.50 B'' 2.50 B''' 3.00	0.9842 0.9842 1.1811	B' 2.125 B'' 2.50 B''' 2.625	0.8306 0.9842 1.0334	B' 3.00 B'' 3.875 B''' 3.50	1.1811 1.5255 1.3770	B' 3.00 B'' 3.875 B''' 3.50	1.1811 1.5255 1.3770	B' 3.00 B'' 3.875 B''' 3.50	1.1811 1.5255 1.3770	1.1811 1.5255 1.3770
Highest.....	3.75	1.4703	3.875	1.5255	3.00	1.1811	2.625	1.0334	3.875	1.5255	3.00	1.1811	3.00	1.1811	1.1811
Minimum measurements.	B' 1.25 B'' 1.125 B''' 1.50	0.4921 0.4429 0.5906	B' 1.00 B'' 1.50 B''' 1.00	0.3937 0.5905 0.3937	B' 1.50 B'' 1.50 B'''										



TABLE I.—Measurements of fineness of wools—Continued.

		VERMONT.																	
		EWES, 3 YEARS OLD.																	
Catalogue number of samples..		524.			527.			528.			529.			531.			532.		
Number of section .....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
Actual measurement in centimillimeters.		2.25	2.00	1.50	1.50	2.50	1.50	2.125	1.875	2.125	2.125	2.00	1.625	1.625	2.25	1.375	2.375	2.50	1.50
		2.00	2.50	1.75	2.00	1.625	2.75	2.50	1.875	2.50	1.625	2.50	2.00	2.00	2.875	1.675	2.00	2.25	1.875
		1.50	1.75	2.00	2.00	2.25	2.00	1.025	1.25	1.75	2.25	2.00	2.00	1.50	1.75	2.00	1.75	2.50	2.125
		2.00	2.50	2.50	2.50	3.125	1.675	2.00	2.50	2.00	2.50	2.00	1.975	2.50	2.00	1.975	2.50	1.75	3.00
		2.50	1.50	1.50	1.875	1.50	2.00	2.00	2.00	2.25	2.975	2.00	2.00	1.50	1.875	1.50	2.50	2.25	2.00
		1.625	2.00	1.75	2.875	1.875	2.125	2.25	2.00	1.875	1.75	1.75	1.50	1.625	1.75	1.625	2.25	1.625	1.875
		1.50	1.75	2.50	1.875	1.50	2.50	2.00	3.25	2.625	1.75	2.125	2.125	1.60	1.625	1.625	2.25	2.00	1.75
		2.00	1.75	2.00	1.75	1.75	1.625	1.75	1.875	1.75	2.00	1.50	2.00	2.00	2.00	3.375	2.50	2.00	2.00
		2.50	1.50	2.125	2.75	1.25	2.125	2.00	2.375	3.375	2.00	2.00	2.75	1.25	1.75	1.625	2.00	2.50	2.00
		3.00	2.25	2.25	1.625	2.00	2.75	2.75	1.50	2.00	2.50	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.625
		2.25	2.00	1.875	1.75	2.00	2.25	2.125	2.375	1.50	1.75	2.00	2.50	1.75	1.75	1.875	2.50	2.00	2.375
		2.00	2.25	2.00	1.875	2.00	2.125	1.50	1.875	1.50	2.50	2.00	2.00	1.75	2.00	2.00	2.00	2.00	1.625
		2.00	1.875	1.75	3.00	1.375	2.375	1.50	1.00	2.00	1.50	2.75	1.875	2.25	1.625	1.50	3.125	1.875	2.50
		2.50	3.00	1.625	1.50	1.50	1.875	3.00	1.875	2.00	2.00	1.75	2.25	1.50	2.50	2.25	2.125	2.25	2.50
		2.50	1.75	2.50	1.50	2.625	1.625	1.50	2.50	1.50	2.00	2.25	2.25	1.625	1.75	1.875	2.25	2.25	2.00
		1.875	2.00	2.50	2.75	2.625	2.875	1.025	2.625	2.00	1.75	1.75	2.25	1.75	2.50	2.00	1.75	2.125	3.125
		2.125	2.50	2.25	1.875	2.75	2.25	1.50	1.75	2.50	1.75	1.75	1.625	2.50	1.60	2.50	2.125	1.875	2.625
		2.50	3.00	2.00	2.25	1.875	2.125	1.75	1.50	2.00	2.50	2.00	2.00	2.00	1.75	3.00	2.125	1.50	2.625
		2.00	2.50	1.50	3.00	1.75	2.375	1.75	1.50	1.50	1.875	2.00	2.00	2.00	2.375	1.375	2.50	2.00	2.875
		2.125	2.875	1.50	1.875	1.875	2.375	1.625	1.75	2.50	1.875	1.75	2.75	2.50	2.00	1.25	2.50	2.00	1.50
	3.50	2.625	1.75	1.75	1.625	2.25	3.00	1.75	1.625	2.625	2.125	1.50	2.50	2.00	1.25	2.875	2.25	2.375	
	2.50	2.50	2.00	1.50	1.875	1.875	1.50	1.75	3.50	1.625	1.75	2.00	2.00	2.00	3.00	1.875	2.50	2.50	
	2.00	1.625	2.00	2.125	2.00	1.75	2.00	2.125	1.75	2.00	1.75	3.00	2.125	2.00	2.50	2.375	2.00	3.00	
	2.125	2.25	2.00	1.625	1.375	1.625	2.25	2.00	2.00	2.875	2.00	1.50	1.60	1.50	2.25	2.125	1.75	1.75	
	1.875	2.75	1.875	3.00	1.875	2.25	1.875	2.00	1.625	2.00	2.00	1.50	1.75	1.75	2.625	3.25	2.00	2.00	
	1.625	2.00	2.375	1.75	2.875	1.875	1.75	2.60	1.625	2.00	1.50	2.00	1.50	1.75	1.50	2.025	1.875	2.25	
	2.00	2.25	2.50	2.375	1.25	2.375	2.375	2.00	1.875	1.875	2.00	1.75	1.50	1.75	2.00	2.50	1.75	2.00	
	2.625	1.625	1.50	2.375	2.00	1.375	1.50	2.125	3.25	2.25	2.25	2.00	2.50	2.00	2.50	2.50	2.50	1.50	
	2.75	1.50	2.00	1.60	1.375	1.75	2.00	2.00	2.125	2.25	2.00	1.75	2.00	2.25	2.00	2.125	2.00	2.125	
	2.50	2.00	2.00	1.375	1.50	2.375	2.00	2.25	2.00	1.625	2.375	2.125	1.75	2.625	2.00	2.50	2.50	2.625	
	2.50	2.75	2.50	2.00	2.00	2.375	2.00	2.125	1.50	2.00	1.75	2.00	1.50	2.00	1.75	2.00	1.75	2.625	
	2.00	1.875	3.00	2.625	2.125	2.625	1.50	2.00	1.875	1.875	2.00	2.25	2.00	2.875	2.00	2.625	1.75	2.125	
	2.00	1.75	1.75	2.00	2.375	1.75	1.50	2.00	2.75	1.625	1.875	2.00	2.00	1.625	1.875	2.00	2.50	2.50	
	2.00	2.00	1.50	2.00	2.75	1.625	2.00	2.00	2.00	2.00	2.375	2.50	2.00	2.00	1.375	2.125	2.125	2.875	
	2.50	2.00	2.00	2.00	2.375	1.50	1.75	2.50	2.125	2.25	1.75	2.00	2.125	2.875	1.50	2.625	2.50	2.50	
	1.50	2.25	1.50	1.875	2.00	2.125	1.50	1.75	1.875	2.25	2.125	2.00	1.50	2.00	1.025	3.50	2.375	2.875	
	1.50	2.00	2.75	2.25	2.125	1.875	2.125	1.75	2.125	2.00	2.00	2.00	2.00	2.00	1.50	2.50	2.125	2.625	
	2.00	1.50	1.75	1.50	1.75	1.625	1.025	1.50	3.875	1.875	1.625	2.00	2.50	2.00	2.60	2.625	2.875	2.50	
	2.50	2.00	1.875	1.625	1.50	1.50	1.065	1.625	2.375	2.00	1.875	2.00	1.50	2.00	1.60	2.00	2.50	2.50	
	2.375	2.00	2.25	1.75	2.00	1.625	1.50	2.50	2.125	1.75	1.75	2.00	1.875	1.50	2.25	2.00	3.50	2.125	
	2.875	1.875	2.00	1.875	2.175	1.875	1.875	3.00	1.625	2.125	1.375	2.00	2.00	1.50	2.25	2.25	2.375	2.25	
	2.00	1.75	1.50	1.50	1.875	2.50	2.00	1.375	2.00	2.00	2.00	2.25	1.50	2.375	1.625	2.00	2.50	2.50	
	1.75	2.00	1.875	1.50	1.75	1.50	1.375	2.00	1.50	2.125	2.00	2.00	1.875	1.50	2.00	2.50	2.00	2.50	
	1.75	2.50	2.75	2.50	1.50	2.50	1.50	1.625	1.75	2.00	2.00	2.00	1.25	2.50	1.625	2.75	2.00	2.25	
	2.00	2.375	2.00	1.875	2.875	2.125	2.25	2.125	2.50	1.75	2.00	2.00	1.50	1.75	1.625	1.50	1.75	1.875	
	2.00	2.00	2.50	1.875	1.50	1.50	1.625	1.875	2.25	2.25	2.00	2.00	1.50	1.60	2.125	1.75	2.00	3.00	
	1.75	2.00	3.00	2.75	3.75	1.625	1.75	2.00	2.25	2.50	1.625	1.75	2.50	1.875	1.625	2.50	2.50	2.50	
	2.125	1.50	1.625	2.00	2.125	1.875	2.25	2.00	2.00	2.00	1.875	1.75	1.75	2.00	1.625	2.125	2.50	3.00	
	2.125	2.00	3.00	2.00	1.50	2.875	1.75	2.00	1.625	2.50	1.75	2.125	2.875	1.50	1.625	2.25	2.25	2.25	
	2.00	1.50	2.25	1.375	1.625	2.125	3.00	2.00	1.875	2.00	2.00	1.50	1.50	2.375	1.125	2.625	2.50	1.25	
Totals .....	105.50	102.875	101.75	98.875	97.625	101.125	05.625	99.00	108.625	104.00	96.625	99.875	92.125	90.00	98.75	120.375	109.875	110.50	

Recapitulation and reductions:		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.		
Maximum measurements.	B'	3.50	1.3779	B'	3.00	1.1811	B'	3.00	1.1811	B'	2.625	1.0334	B'	2.875	1.1318	B'	3.50	1.3779
	B''	3.00	1.1811	B''	3.75	1.4703	B''	3.25	1.2795	B''	2.75	1.0626	B''	2.875	1.1318	B''	3.50	1.3779
	B'''	3.00	1.1811	B'''	3.75	1.4703	B'''	3.875	1.5295	B'''	2.75	1.0626	B'''	3.00	1.1811	B'''	3.125	1.2303
Highest.....		3.50	1.3779		3.75	1.4703		3.675	1.5285		2.75	1.0626		3.00	1.1811		3.50	1.3779
Minimum measurements.	B'	1.50	0.5905	B'	1.375	0.5413	B'	1.375	0.5413	B'	1.50	0.5905	B'	1.25	0.4921	B'	1.75	0.6889
	B''	1.50	0.5902	B''	1.25	0.4921	B''	1.25	0.4921	B''	1.375	0.6113	B''	1.50	0.5905	B''	1.875	0.5413
	B'''	1.50	0.5905	B'''	1.375	0.5413	B'''	1.375	0.5413	B'''	1.50	0.5905	B'''	1.125	0.4429	B'''	1.25	0.4921
Lowest.....		1.50	0.5905		1.25	0.4921		1.25	0.4921		1.375	0.5413		1.125	0.4429		1.25	0.4921
Average measurements..	B'	2.11	0.8307	B'	1.98	0.7795	B'	1.91	0.7510	B'	2.08	0.8188	B'	1.84	0.7244	B'	2.40	0.9448
	B''	2.09	0.8110	B''	1.95	0.7677	B''	1.98	0.7795	B''	1.938	0.7610	B''	1.98	0.7795	B''	2.19	0.8582
	B'''	2.04	0.8031	B'''	2.03	0.7992	B'''	2.07	0.8140	B'''	1.99	0.7834	B'''	1.97	0.7755	B'''	2.21	0.8700
Average.....		2.07	0.8149		1.983	0.7808		1.982	0.7803		2.00	0.7374		1.93</				



TABLE I.—Measurements of fineness of wools—Continued.

		VERMONT.																	
		EWES, 3 YEARS OLD.																	
Catalogue number of samples..		536.			538.			539.			541.			544.			546.		
Number of section.....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
		3.00	2.50	2.00	2.00	2.00	2.00	1.75	2.00	1.50	1.50	1.875	1.375	1.625	2.25	1.75	1.625	2.00	1.625
		2.00	1.50	2.00	2.25	1.75	2.125	1.625	1.875	1.625	1.50	2.75	1.375	1.25	2.25	1.75	1.25	1.75	1.50
		2.50	2.125	1.50	1.875	1.875	2.50	1.75	2.00	2.75	1.50	1.75	1.625	1.625	2.00	1.625	1.50	1.75	1.50
		2.00	2.00	1.75	2.00	1.75	1.75	2.00	1.75	2.00	1.625	2.25	1.75	1.625	2.00	1.75	1.625	2.00	1.625
		2.50	1.875	1.75	2.25	3.00	2.00	1.25	2.50	2.25	1.60	1.625	1.50	2.50	2.00	2.00	1.75	2.50	1.50
		2.25	2.00	2.00	2.00	2.00	2.00	2.00	2.375	2.50	1.375	1.875	1.375	1.125	1.75	2.125	1.75	2.375	1.375
		1.625	2.25	2.50	2.25	2.25	2.375	2.25	1.875	1.875	2.00	2.25	1.625	1.25	1.625	1.75	1.625	2.25	1.375
		2.00	2.00	2.00	1.875	1.875	2.50	1.875	2.125	1.60	1.00	1.875	1.625	2.00	1.75	1.50	2.00	2.10	1.50
		2.75	2.125	2.50	2.00	1.75	1.625	1.75	2.125	2.50	1.25	1.625	1.75	1.375	2.25	2.50	1.625	2.00	1.75
		1.50	1.75	1.50	1.75	2.50	2.00	1.50	1.50	2.75	1.25	1.625	1.75	1.375	2.25	2.50	1.625	2.00	1.75
		1.75	1.50	1.75	2.00	2.00	2.00	1.625	1.50	1.50	2.00	1.75	1.375	1.25	1.75	1.50	2.125	2.00	1.75
		2.25	2.00	1.25	2.25	2.50	1.875	2.50	2.00	2.00	2.00	1.625	1.50	1.25	1.625	1.625	1.625	2.125	2.125
		1.75	1.75	1.50	1.875	1.625	2.50	1.50	1.875	1.50	1.75	2.375	1.375	1.375	1.50	1.75	1.625	2.00	2.125
		1.50	2.25	2.00	2.00	1.75	1.75	1.625	2.125	1.00	1.50	1.50	1.50	1.50	1.50	1.50	1.625	2.125	2.125
		1.00	3.00	2.25	1.75	2.00	2.00	1.50	2.25	3.00	1.50	1.25	1.625	1.625	1.75	1.625	2.00	2.125	2.125
		2.00	2.75	2.50	2.00	2.00	2.125	1.375	2.00	1.50	1.625	1.625	2.125	1.25	1.25	1.50	1.25	2.00	2.25
		2.25	2.25	2.50	2.50	2.25	2.125	2.00	2.50	1.50	1.50	1.75	1.375	1.875	1.625	1.625	1.625	2.00	1.50
		1.75	1.75	2.75	1.625	2.375	2.25	2.00	2.00	2.50	1.50	2.00	2.50	1.50	2.00	1.75	1.50	2.25	1.50
		2.75	2.00	2.00	2.00	2.125	2.125	1.50	2.00	2.00	1.75	2.60	1.875	1.25	1.75	1.50	1.60	2.00	1.50
		1.875	1.75	1.75	2.50	2.00	2.00	1.875	2.00	1.50	1.50	1.50	1.75	1.625	1.625	1.75	1.375	2.25	1.625
		1.75	1.50	2.00	1.75	2.00	2.00	1.50	1.875	2.00	1.25	1.75	2.25	1.50	2.00	2.125	1.50	2.00	1.625
		1.875	2.00	1.75	1.75	2.50	2.375	1.75	1.875	2.00	1.50	1.875	1.25	1.625	1.50	2.00	1.625	2.125	1.75
		2.125	1.75	1.875	1.50	1.875	1.875	2.50	1.875	1.625	1.625	1.875	1.25	1.625	2.00	1.50	1.375	1.75	2.00
		1.75	1.75	2.125	1.625	2.375	1.875	2.50	2.125	1.50	2.00	1.625	1.50	1.625	2.00	3.00	1.875	1.60	1.50
		1.75	2.00	3.00	2.50	2.00	2.00	2.00	1.50	1.875	1.625	1.75	1.625	1.75	1.75	3.00	1.50	2.00	1.75
		2.00	2.60	2.00	2.00	2.00	2.00	1.00	2.125	1.375	1.50	2.375	1.25	1.75	2.25	2.50	1.75	1.875	1.875
		2.50	1.75	2.00	2.75	1.60	2.375	2.00	2.60	1.50	1.25	2.00	1.75	2.25	2.00	2.625	2.00	2.00	1.875
		2.50	2.25	2.25	1.625	1.875	2.50	1.50	1.875	1.25	1.50	1.75	1.75	1.125	2.00	2.375	1.875	2.00	1.25
		2.00	2.00	3.00	2.00	1.875	1.625	1.50	1.75	1.60	2.00	1.625	1.375	1.25	2.25	1.00	2.25	1.75	2.00
		1.50	2.50	1.50	1.75	2.50	2.00	2.00	2.00	1.625	2.125	1.50	1.625	1.25	2.00	1.125	1.625	2.59	1.75
		2.00	2.375	2.125	2.00	2.00	2.00	2.50	1.50	2.00	2.375	2.60	1.75	1.375	2.00	1.625	1.625	2.00	1.75
		2.25	2.375	2.00	1.50	2.60	2.125	1.75	2.00	1.625	2.50	2.25	1.875	1.625	1.75	1.625	1.50	2.25	2.00
		3.00	2.25	1.875	2.375	2.375	2.50	1.25	1.625	1.50	1.375	2.00	1.25	1.75	2.00	2.00	1.50	2.375	1.75
		2.625	2.60	2.75	2.00	2.60	1.875	1.50	2.75	1.50	1.875	1.75	1.25	1.125	2.125	1.75	1.75	2.125	2.00
		2.50	1.875	2.125	1.75	2.00	2.00	2.00	1.875	2.50	1.375	1.875	1.00	1.625	2.00	1.75	2.00	1.875	1.00
		1.25	2.25	2.50	2.00	2.00	2.00	1.25	2.00	2.00	1.125	1.875	1.50	1.50	2.00	1.75	1.625	1.875	1.25
		2.125	2.50	2.00	2.25	1.50	2.125	2.50	1.625	1.75	1.375	1.875	1.875	1.50	1.60	2.00	1.625	2.00	2.00
		2.00	2.25	2.50	1.875	2.125	2.60	1.75	2.00	1.875	1.625	2.00	1.75	1.875	2.00	1.625	1.375	1.625	2.00
		2.25	1.50	2.60	2.00	2.00	1.75	1.50	2.00	2.00	1.75	2.50	1.25	1.125	2.00	2.00	1.25	1.75	2.125
		1.50	1.50	1.75	2.25	2.50	2.00	1.50	1.75	2.00	1.50	1.73	1.625	1.875	2.25	2.125	1.75	1.875	1.50
		2.25	1.50	2.00	2.00	2.00	2.00	1.625	2.125	1.50	1.125	2.00	1.60	1.125	1.50	1.75	1.75	2.75	2.00
		1.75	2.00	2.50	2.25	2.25	1.875	1.75	1.875	1.50	1.375	1.625	1.50	1.125	2.25	1.50	1.625	2.40	1.625
		2.125	2.75	2.00	1.875	1.875	2.50	1.50	1.50	2.125	0.875	2.00	1.50	1.75	2.00	1.375	1.125	2.25	1.75
		1.50	3.00	2.25	2.00	2.00	1.75	2.00	1.60	1.00	1.625	2.125	2.125	1.375	2.00	1.75	2.50	2.25	1.875
		1.75	2.00	1.875	1.75	2.50	2.00	1.75	2.00	2.00	1.375	2.00	1.50	1.50	2.125	1.625	1.625	2.00	1.50
		2.125	1.625	2.00	2.00	2.00	2.00	2.50	2.00	2.00	1.625	1.625	1.50	1.50	2.25	1.625	2.00	1.875	1.50
		2.00	2.50	1.75	2.25	3.00	2.125	1.50	2.75	2.00	1.875	2.00	1.375	2.375	2.00	2.00	1.75	1.50	2.00
		2.00	2.50	2.00	1.625	1.625	2.00	2.00	2.00	1.75	1.60	1.50	1.60	1.625	2.125	1.75	1.125	1.75	2.00
		1.75	2.50	2.25	2.00	1.75	1.875	1.50	1.625	1.75	2.00	2.00	1.75	1.75	2.125	1.375	1.75	1.75	2.00
		2.00	1.875	2.25	1.60	2.00	2.00	2.00	2.25	1.50	2.00	1.25	1.625	1.75	1.75	1.50	2.00	2.00	2.50
Totals .....		103.250	104.25	104.75	99.50	104.375	104.50	87.875	99.375	92.00	73.50	94.25	79.50	77.00	89.125	92.375	83.625	99.00	79.875

		No. of section.			In centimillimeters.			In thousandths of inch.			No. of section.			In centimillimeters.			In thousandths of inch.		
Recapitulation and reduction:		B'	B''	B'''	B'	B''	B'''	B'	B''	B'''	B'	B''	B'''	B'	B''	B'''	B'	B''	B'''
Maximum measurements.		3.00	1.8111	1.8111	2.75	1.0826	1.1811	2.50	0.9842	1.0826	2.50	0.9842	1.0826	2.375	0.9350	1.1811	2.50	0.9842	1.0826
Highest.....		3.00	1.8111	1.8111	3.00	1.1811	1.1811	3.00	1.1811	1.1811	2.75	1.0826	1.0826	3.00	1.1811	1.1811	2.75	1.0826	1.0826
Minimum measurements.		1.25	0.4921	0.4921	1.50	0.5905	0.6397	1.00	1.3937	0.875	0.3448	0.875	0.3448	1.125	0.4429	0.3937	1.125	0.4429	0.3937
Lowest.....		1.25	0.4921	0.4921	1.60	0.5905	0.5905	1.00	0.3937	0.3937	0.875	0.3448	0.3448	1.00	0.3937	0.3937	1.00	0.3937	0.3937
Average measurements..		2.065	0.8129	0.8208	1.99	0.7884	0.8220	1.7575	0.6017	0.7826	1.47	0.5787	0.5787	1.54	0.6262	0.7807	1.672	0.6582	0.7795
Average.....		2.081	0.3192	0.3192	2.055	0.8090	0.8090	1.863	0.7334	0.7334	1.651	0.6499	0.6499	1.740	0.7047	0.7047	1.740	0.6885	0.6885
Measurements above average..		05			49			81			67			51			97		
Measurements below average..		85			101			69			83			90			53		



TABLE I.—Measurements of fineness of wools—Continued.

		VERMONT.																	
		EWES, 3 YEARS OLD.																	
Catalogue number of samples..	Number of section.....	547.			548.			549.			550.			551.			552.		
		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
		1.00	2.00	1.75	1.50	1.50	1.875	2.50	2.00	2.00	1.75	1.875	3.00	2.00	3.00	2.50	2.125	2.50	2.50
		1.50	1.75	2.00	1.75	2.50	2.25	1.75	2.00	2.00	2.00	1.875	2.00	1.75	2.00	1.50	2.50	2.50	3.00
		1.50	1.75	2.00	1.625	1.75	2.00	1.875	2.00	2.25	2.25	2.00	2.00	2.50	2.25	1.875	2.25	2.25	1.50
		1.50	1.50	1.875	1.75	1.625	2.00	2.00	2.00	1.25	1.50	3.025	1.75	1.875	2.25	2.00	2.00	2.375	1.75
		1.50	1.625	2.00	2.00	1.75	2.00	1.875	1.875	2.25	1.75	1.75	1.875	2.00	1.75	2.00	2.00	1.50	2.25
		1.75	2.375	2.125	1.50	1.50	1.875	2.125	2.00	2.375	2.00	1.50	2.25	1.75	1.875	1.875	2.50	2.00	2.125
		1.75	2.00	2.25	1.75	1.25	1.625	1.75	2.00	2.00	2.00	1.025	1.875	1.75	2.125	9.25	1.75	1.875	2.00
		2.00	1.875	1.625	2.25	1.375	1.75	2.25	1.875	1.75	2.25	2.00	1.50	2.00	2.25	2.00	2.25	2.25	2.25
		1.625	1.75	2.00	1.50	2.125	2.00	2.375	1.75	1.875	2.375	2.25	2.00	1.875	3.00	2.25	2.50	2.125	2.375
		2.25	2.00	1.75	1.625	2.25	1.625	2.125	2.00	1.50	2.00	1.125	3.00	2.00	1.625	2.00	3.00	1.50	2.00
		2.375	1.75	2.25	2.00	2.00	1.50	1.75	1.625	1.625	2.00	2.125	2.00	1.75	1.60	1.50	2.60	1.875	2.125
		1.75	2.375	2.00	2.25	1.75	1.50	1.675	1.75	2.00	1.75	3.60	1.75	1.625	1.50	2.00	2.25	2.50	2.00
		1.50	2.00	1.75	1.75	2.50	1.375	1.60	2.00	2.25	2.50	2.50	1.875	2.125	1.625	2.75	2.25	1.875	2.25
		1.625	2.00	1.50	1.625	2.00	2.00	1.625	1.75	2.50	1.875	2.25	2.25	2.00	3.00	2.60	1.75	2.00	2.50
		1.75	2.375	2.00	2.00	2.00	2.00	2.00	2.00	2.375	2.00	2.25	2.50	2.00	2.125	2.00	2.00	2.125	2.50
		2.875	2.25	1.875	2.00	1.50	1.25	1.75	1.50	2.00	2.00	1.75	1.75	1.75	2.00	2.875	1.875	2.00	2.25
		1.625	1.75	2.00	1.625	1.50	1.75	2.50	1.50	2.125	2.25	1.875	1.75	2.00	2.25	1.75	2.625	2.125	
		1.375	1.875	1.875	1.75	2.00	1.875	2.25	1.625	2.00	2.00	2.25	2.25	1.75	2.25	2.00	2.875	2.375	2.25
		1.50	2.00	2.00	1.625	2.50	1.875	1.50	1.50	2.00	1.50	2.00	1.875	2.00	2.125	1.25	2.125	2.25	
		2.00	1.125	1.75	2.00	2.00	2.375	2.50	1.875	1.25	1.875	1.25	2.00	1.875	2.125	2.75	1.875	2.00	
		2.125	1.25	1.625	1.75	2.50	3.25	1.75	1.50	1.125	2.25	2.00	2.00	2.00	2.25	2.375	2.25	1.75	
		1.00	2.25	2.00	1.50	1.75	2.50	2.25	1.625	2.00	1.50	1.75	1.50	1.75	2.00	1.125	1.75	2.625	
		1.25	1.75	2.00	1.50	1.875	3.00	2.625	2.00	1.50	1.75	1.875	2.00	1.75	1.00	1.75	1.625	2.00	
		2.25	1.625	1.75	1.75	2.00	1.50	2.375	1.875	1.75	2.00	1.50	1.75	1.625	2.125	1.625	1.75	1.75	
		1.875	2.00	1.50	1.50	2.375	1.75	1.875	1.875	2.00	2.125	1.625	2.125	1.50	2.125	2.00	2.375	1.75	
		2.00	1.75	1.50	1.625	3.25	2.00	2.125	1.75	1.75	2.00	2.00	2.60	1.60	2.125	1.50	2.50	2.25	
		2.00	2.25	1.375	1.625	1.50	2.25	2.50	1.75	2.50	2.00	1.50	2.00	2.00	2.25	1.25	2.375	1.50	
		2.125	2.00	1.75	2.125	2.50	2.125	2.25	1.875	2.50	2.00	1.875	2.50	2.00	2.25	2.125	2.00	2.50	
		1.00	1.25	2.00	1.75	2.75	2.00	2.00	2.00	2.125	2.25	2.25	2.00	1.75	2.25	1.125	2.00	1.75	
		1.50	1.75	1.50	1.50	2.60	1.60	2.375	1.75	2.25	2.125	1.25	1.75	1.75	1.75	2.00	2.00	2.25	
		1.625	2.50	1.60	1.50	3.00	2.50	3.00	1.50	1.60	2.50	1.125	2.50	2.25	1.875	2.00	1.875	1.75	
		1.50	2.875	2.25	1.75	1.50	2.00	2.50	2.75	1.75	2.00	2.25	2.00	2.00	2.25	1.75	1.875	2.50	
		2.00	2.50	2.375	1.50	2.00	2.00	2.00	1.50	2.25	1.50	1.75	2.25	2.00	3.125	2.25	2.00	1.50	
		1.00	2.00	2.50	1.50	1.625	2.375	1.875	1.875	2.00	1.75	1.875	2.00	1.75	2.25	2.25	2.25	2.375	
		1.75	2.00	1.75	1.625	1.50	2.25	2.25	1.50	2.25	1.50	1.75	2.00	2.00	2.00	2.375	1.75	2.00	
		1.50	1.875	1.25	1.875	1.375	1.625	2.00	2.50	2.00	2.00	2.625	1.875	1.75	2.00	1.50	1.25	2.25	
		1.625	2.00	1.125	1.125	1.50	2.375	1.50	2.00	1.50	1.75	2.00	2.00	2.00	2.50	2.125	2.125	2.125	
		2.00	1.625	1.50	1.25	1.75	1.625	2.00	2.00	2.75	2.00	2.00	2.00	1.125	2.125	2.00	2.00	2.00	
		1.625	1.50	1.875	1.875	1.75	2.00	1.875	1.75	2.00	2.00	1.875	1.50	1.50	2.75	2.50	2.00	2.125	
		2.125	2.00	1.50	1.50	2.00	2.00	2.25	1.50	2.00	2.00	1.75	1.75	2.00	2.25	2.25	1.75	1.75	
		2.00	2.50	1.50	1.875	2.25	2.375	1.50	2.50	2.875	1.75	1.75	2.25	2.00	1.75	2.25	2.50	1.50	
		1.50	2.25	1.75	1.60	2.125	1.50	1.625	3.00	2.50	1.625	2.00	2.375	1.625	1.875	1.875	1.75	2.00	
		2.375	1.75	1.75	1.375	1.125	1.025	1.50	2.25	2.50	2.25	1.75	2.00	2.00	2.125	1.75	1.75	2.50	
		1.25	2.00	1.50	1.375	1.50	2.125	2.75	2.125	2.25	1.50	2.25	1.50	1.75	3.00	1.75	2.25	2.00	
		1.50	2.00	2.00	2.00	2.00	2.60	1.75	2.375	1.50	2.75	2.00	1.75	1.75	2.00	2.00	1.675	1.75	
		2.00	1.875	1.75	2.00	1.125	2.25	2.125	2.125	2.25	2.50	1.375	1.50	1.875	2.00	2.50	2.375	2.00	
		1.25	1.75	1.625	1.75	1.25	1.50	3.50	3.50	2.00	2.75	2.00	2.125	1.75	1.50	2.00	1.75	2.50	
		1.25	1.625	1.875	1.75	2.00	1.75	3.25	2.25	1.875	2.00	2.00	2.00	1.375	1.75	1.625	2.25	1.50	
		1.50	1.75	1.50	1.50	1.75	2.00	3.00	3.00	1.75	1.50	1.75	2.25	1.50	2.00	1.875	2.25	2.00	
		1.50	2.25	2.00	1.75	1.50	2.00	1.75	1.50	2.125	2.00	1.50	1.75	1.50	2.00	2.00	2.00	2.00	
Totals.....		82.125	97.375	89.625	81.375	93.875	99.625	104.25	94.875	102.500	99.50	97.00	100.875	92.500	111.50	101.375	107.375	101.375	106.750

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:																		
Maximum measurements.	B'	2.375	0.9350	B'	2.25	0.8858	B'	3.25	1.2705	B'	2.75	1.0826	B'	2.50	0.9842	B'	3.00	1.1811
	B''	2.75	1.0826	B''	3.25	1.2705	B''	3.50	1.3779	B''	3.025	1.4271	B''	3.00	1.1811	B''	2.50	0.9842
	B'''	2.875	0.9350	B'''	3.25	1.2705	B'''	2.875	1.1378	B'''	3.00	1.1811	B'''	2.75	1.0826	B'''	3.00	1.1811
Highest.....		2.75	1.0826		3.25	1.2705		3.50	1.3779		3.025	1.4271		3.00	1.1811		3.00	1.1811
Minimum measurements.	B'	1.00	0.3937	B'	1.125	0.4429	B'	1.50	0.5905	B'	1.50	0.5905	B'	1.50	0.5905	B'	1.25	0.4921
	B''	1.25	0.4921	B''	1.125	0.4429	B''	1.25	0.4921	B''	1.125	0.4429	B''	1.00	0.3937	B''	1.50	0.5905
	B'''	1.25	0.4921	B'''	1.25	0.4921	B'''	1.125	0.4429	B'''	1.50	0.5905	B'''	1.125	0.4429	B'''	1.375	0.5413
Lowest.....		1.00	0.3937		1.125	0.4429		1.125	0.4429		1.125	0.4429		1.00	0.3937		1.25	0.4921
Average measurements..	B'	1.042	0.6464	B'	1.687	0.6641	B'	2.083	0.8200	B'	1.989	0.7830	B'	1.85	0.7283	B'	2.147	0.8152
	B''	1.018	0.7609	B''	1.878	0.7393	B''	1.898	0.7472	B''	1.94	0.7937	B''	2.228	0.8763	B''	2.027	0.7989
	B'''	1.792	0.7055	B'''	1.99	0.7820	B'''	2.05	0.8070									



TABLE I.—Measurements of fineness of wools—Continued.

		VERMONT.																	
		EWES, 3 YEARS OLD.																	
Catalogue number of samples..		553.			556.			557.			558.			559.			560.		
Number of section.....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
		2.25	1.50	2.25	1.875	2.50	2.25	1.875	2.00	1.75	1.875	2.00	2.00	1.50	1.50	1.50	2.375	1.75	2.00
		1.75	1.75	2.00	2.00	1.875	2.00	2.00	2.00	1.75	2.50	2.125	1.75	1.75	1.50	1.50	2.25	1.50	2.25
		1.625	1.50	1.875	1.75	2.125	2.25	2.00	2.00	1.50	2.00	2.00	2.00	1.50	2.00	2.00	1.75	2.00	1.75
		1.75	1.75	1.625	2.00	2.00	2.00	1.50	2.50	1.75	1.50	1.50	1.50	1.50	1.50	1.50	2.00	2.00	2.00
		1.75	1.75	1.75	2.375	2.00	1.875	2.50	2.125	1.625	1.875	2.00	2.25	1.625	2.00	1.625	1.625	1.50	2.125
		1.625	2.00	2.00	2.25	2.00	2.25	1.75	2.25	1.75	2.00	1.75	1.875	1.75	2.00	2.00	2.00	1.75	1.625
		1.50	1.625	2.25	1.625	2.00	2.00	2.25	1.50	1.50	2.50	1.50	1.75	1.625	2.50	2.00	2.25	1.625	1.875
		2.00	2.00	1.875	1.625	2.00	2.50	2.00	1.75	1.625	2.00	1.50	2.50	2.00	2.125	1.75	2.25	1.625	1.75
		1.875	1.75	2.00	2.75	2.625	2.375	1.75	1.375	2.00	2.25	1.75	1.75	1.75	2.00	1.50	1.75	2.00	2.00
		1.625	1.625	1.875	2.125	1.875	2.125	2.00	2.00	1.50	2.00	1.50	2.00	1.50	1.625	1.875	2.125	1.75	1.75
		1.875	2.00	2.125	2.25	2.375	2.00	2.25	2.00	1.75	1.875	1.75	1.75	1.75	2.375	1.75	2.25	1.50	1.75
		2.125	2.00	1.625	1.75	2.125	2.50	1.75	1.875	1.875	1.875	1.875	1.875	2.04	2.125	2.00	1.75	1.625	1.625
		2.00	1.75	2.00	1.875	2.00	2.375	2.50	2.125	2.50	2.00	1.25	3.00	2.00	2.00	2.00	1.875	1.50	1.75
		1.50	1.875	2.875	2.00	1.50	1.75	2.25	2.25	1.875	2.375	1.875	1.875	2.00	1.50	2.25	1.50	2.25	1.625
		1.75	1.375	1.875	1.75	2.50	1.875	2.25	1.875	2.25	2.00	2.00	2.125	1.75	2.00	1.75	1.75	2.00	2.125
		1.50	1.50	2.60	1.50	2.50	2.25	2.00	2.00	1.625	2.00	1.75	2.00	1.875	1.75	2.00	2.25	2.00	2.00
		2.25	2.00	1.875	1.50	2.00	2.25	2.00	2.00	2.00	2.75	2.00	1.875	1.625	2.00	2.25	2.00	2.25	1.50
		2.75	1.815	2.00	1.625	2.50	2.375	1.75	2.00	1.875	2.50	2.00	1.875	1.625	2.00	1.75	2.125	2.00	1.25
		1.625	1.625	2.00	1.75	2.75	2.50	2.25	2.125	1.875	2.125	2.625	1.875	2.50	1.50	2.50	1.75	1.50	2.00
		1.75	2.25	2.25	1.875	2.125	2.50	2.125	1.75	2.25	2.25	1.75	2.50	2.00	2.00	1.375	2.125	1.625	2.00
		1.625	2.25	1.75	2.00	2.00	2.25	2.25	2.50	1.875	2.25	2.25	1.625	1.75	1.50	2.375	2.00	1.75	2.25
		2.00	1.75	1.875	2.00	2.00	2.50	1.875	1.50	1.75	2.50	2.00	1.50	1.50	1.50	2.00	2.00	2.00	1.875
		1.50	1.50	1.50	2.00	2.50	2.25	2.00	2.125	2.00	3.25	1.875	1.75	1.75	2.25	2.125	1.75	2.00	1.75
		1.75	1.625	2.00	1.625	2.125	2.375	1.50	2.00	2.00	1.50	1.625	1.75	2.25	2.50	1.875	1.50	1.875	2.25
		2.125	1.375	1.75	2.00	1.875	1.875	2.00	1.875	2.125	1.875	1.75	2.25	1.875	1.625	2.00	1.625	2.00	2.00
		2.50	2.00	1.75	1.75	1.875	1.875	2.125	1.75	1.50	2.50	1.75	2.50	1.50	2.125	1.50	2.00	1.75	1.125
		2.125	2.00	1.875	1.50	1.75	1.50	2.00	2.00	1.625	2.25	2.00	2.375	2.25	1.375	1.75	1.875	2.25	1.75
		2.00	1.875	1.50	1.875	2.125	2.00	2.50	2.75	1.875	2.25	2.00	2.00	1.75	2.00	3.00	2.00	1.625	1.50
		2.125	1.625	2.25	2.00	2.125	1.75	2.25	2.625	1.50	1.75	2.375	2.00	1.75	2.00	1.75	1.75	1.125	2.375
		2.00	2.00	2.00	1.75	1.875	2.00	2.00	2.00	2.50	2.00	2.00	2.00	1.625	2.00	1.50	1.625	1.50	2.25
		1.25	1.75	2.125	2.00	2.125	1.50	1.75	1.75	2.00	2.125	2.50	1.875	1.75	1.875	2.00	1.50	2.125	3.25
		2.50	1.75	2.90	2.125	2.125	1.75	1.875	1.875	2.375	2.25	1.75	1.75	1.25	1.75	1.75	1.75	2.00	1.25
		2.00	1.50	2.00	1.75	2.00	2.00	1.50	1.875	1.75	2.75	2.125	1.75	1.50	1.75	2.00	1.75	2.125	1.875
		1.625	2.00	2.50	1.50	2.00	3.00	1.50	1.75	2.25	2.875	2.00	2.00	1.75	1.75	2.125	2.00	1.75	1.375
		1.875	2.00	2.00	1.75	2.00	1.75	1.75	1.75	2.125	1.50	1.75	1.875	2.00	2.125	2.00	2.25	2.00	1.25
		1.875	1.75	1.625	1.75	1.50	1.875	1.875	2.00	1.50	1.25	2.625	2.125	2.00	2.125	2.00	2.25	2.50	2.00
		1.75	1.625	2.00	1.50	1.50	1.625	2.00	1.875	1.50	2.00	1.75	2.50	1.50	1.75	1.75	2.00	1.625	1.50
		1.50	1.50	1.875	2.00	1.75	2.00	2.125	2.125	2.125	1.625	2.00	2.125	2.00	1.625	1.50	1.625	2.00	2.50
		2.00	2.00	2.00	2.375	2.00	1.50	2.00	2.00	2.25	2.25	1.875	2.00	2.25	2.00	2.125	2.00	2.875	2.25
		2.50	1.50	1.00	2.50	2.125	2.125	1.875	1.875	2.125	1.50	1.625	3.50	2.00	2.00	2.00	1.875	1.875	2.00
		2.00	1.50	1.625	2.00	2.00	2.25	2.25	1.75	1.875	2.00	1.875	2.00	2.00	2.125	1.875	1.75	2.25	1.875
		1.875	1.625	2.00	2.25	2.00	2.375	1.875	2.00	1.50	2.125	1.875	2.25	2.125	1.875	2.00	1.50	2.125	1.75
		1.75	1.50	1.625	2.375	1.375	2.00	2.00	2.00	1.75	2.25	2.50	1.75	1.75	1.875	2.00	2.125	2.25	2.125
		2.00	1.25	1.875	1.50	2.00	2.25	1.75	2.00	2.25	1.50	2.50	1.625	1.50	1.875	1.75	1.50	2.50	2.00
		1.875	1.75	1.625	1.875	2.00	2.00	1.50	1.75	2.00	1.75	2.375	1.75	1.50	1.25	1.875	1.75	1.50	1.50
		1.25	2.00	1.50	2.00	2.375	2.50	1.50	2.00	1.875	2.00	2.375	2.00	2.50	1.75	1.875	1.75	2.00	2.00
		1.375	1.75	1.625	1.875	2.00	2.00	2.00	2.00	1.75	2.25	2.125	1.875	2.00	1.625	1.625	2.50	2.00	1.75
		1.625	1.50	1.50	2.125	2.50	1.875	2.25	1.625	2.50	1.625	1.75	1.75	1.50	2.00	2.00	2.25	2.00	1.875
		2.25	2.00	2.50	2.25	2.125	1.875	2.50	1.75	1.50	1.75	2.00	2.00	1.50	1.875	2.25	2.125	2.00	2.125
Totals.....		83.375	87.125	84.875	95.00	101.875	106.00	99.00	96.125	96.125	105.125	96.00	102.125	98.25	100.375	94.875	98.625	95.00	96.625

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:																		
Maximum measurements.	B'	2.75	1.0826	B'	2.75	1.0826	B'	2.625	1.0334	B'	3.25	1.2795	B'	2.50	0.9842	B'	2.50	0.9842
	B''	2.25	0.8858	B''	2.75	1.0826	B''	2.75	1.0826	B''	2.625	1.0334	B''	2.50	0.9842	B''	2.50	0.9842
	B'''	2.50	0.9642	B'''	3.00	1.1611	B'''	2.50	0.9842	B'''	3.50	1.3779	B'''	3.00	1.1811	B'''	3.25	1.2795
Highest.....		2.75	1.0826		3.00	1.1611		2.75	1.0826		3.50	1.3779		3.00	1.1811		3.25	1.2795
Minimum measurements.	B'	1.25	0.4921	B'	1.50	0.5905	B'	1.375	0.5413	B'	1.25	0.4921	B'	1.25	0.4921	B'	1.25	0.4921
	B''	1.25	0.4921	B''	1.375	0.5413	B''	1.375	0.5413	B''	1.25	0.4921	B''	1.50	0.5905	B''	1.50	0.5905
	B'''	1.00	0.3997	B'''	1.50	0.5905	B'''	1.50	0.5905	B'''	1.50	0.5905	B'''	1.375	0.5413	B'''	1.25	0.4921
Lowest.....		1.00	0.3997		1.375	0.5413		1.375	0.5413		1.25	0.4921		1.25	0.4921		1.25	0.4921
Average measurements..	B'	1.867	0.7350	B'	1.90	0.7480	B'	1.98	0.7795	B'	2.162	0.8275	B'	1.965	0.7736	B'	1.972	0.7703
	B''	1.743	0.6862	B''	2.038	0.8023	B''	1.923	0.7570	B''	1.92	0.7559	B''	2.008	0.7905	B''	1.90	0.7480
	B'''	1.697	0.6661	B'''	2.12	0.8346	B'''	1.922	0.7566	B'''	2.042	0.8039	B'''	1.897	0.7408	B'''	1.932	0.7600
Average.....		1.769	0.6964		2.019	0.7948		1.941	0.7641		2.021	0.7956		1.956	0.7700		1.934	0.7614
Measurements																		



TABLE I.—Measurements of fineness of wools—Continued.

Catalogue number of samples.	VERMONT.									NEW YORK.								
	EWES, 3 YEARS OLD.									RAMS, 2 YEARS OLD.								
	561.			562.			569.			670.			671.			672.		
Number of section.....	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
	2.00	1.75	2.25	1.50	2.00	1.75	2.00	1.50	2.00	2.00	2.50	1.625	3.125	2.75	2.25	0.73	2.00	1.50
	2.25	2.00	2.00	1.25	1.375	1.50	2.50	1.375	2.00	2.25	1.75	1.50	1.50	2.00	2.25	1.50	1.50	2.125
	2.00	2.00	2.00	2.50	1.75	1.50	2.625	2.25	2.50	2.25	2.25	1.75	1.50	1.875	1.25	1.50	2.00	2.50
	2.00	1.875	2.50	2.75	2.00	2.00	1.50	2.00	1.75	2.00	1.875	1.75	2.00	1.75	2.50	1.875	1.875	2.00
	1.50	2.50	2.25	2.25	2.00	1.875	1.50	2.00	1.875	2.00	1.50	1.60	1.875	1.875	2.00	2.00	2.25	2.00
	2.125	2.125	1.75	2.25	1.50	2.50	1.625	2.00	1.75	2.125	1.625	1.375	2.25	2.60	1.875	2.50	2.25	1.75
	1.75	2.375	1.875	1.25	2.50	1.375	2.50	2.375	1.875	1.875	1.875	1.875	2.00	2.00	2.375	3.00	3.00	1.50
	1.675	2.00	2.00	2.125	2.00	1.25	2.25	1.75	2.00	2.00	2.00	2.00	3.00	3.00	2.25	2.50	1.50	1.50
	2.50	2.00	2.00	2.50	2.125	2.25	2.25	2.00	1.875	1.875	2.00	1.75	2.25	2.00	2.875	2.00	1.50	1.375
	2.00	2.00	2.50	2.75	3.00	2.50	1.50	1.875	1.625	1.75	1.50	1.825	1.75	2.50	2.50	2.00	1.50	2.25
	1.875	2.00	1.75	1.675	1.75	2.375	1.625	2.125	2.00	1.50	1.75	1.875	1.875	3.00	2.60	2.00	1.75	2.00
	1.50	2.00	1.625	1.00	1.50	2.00	1.75	1.50	1.75	1.025	2.00	1.75	2.25	2.25	1.75	1.75	2.25	1.625
	2.00	3.00	2.50	2.50	3.00	2.00	1.625	2.25	1.875	1.75	1.75	1.75	2.125	2.25	1.875	2.375	2.00	1.875
	1.375	2.25	2.25	2.125	1.75	2.125	1.50	2.50	1.50	2.50	2.00	1.50	2.00	2.50	3.25	1.50	2.125	2.50
	2.00	2.125	2.375	2.00	2.125	2.25	1.75	1.50	1.60	2.00	1.60	1.75	2.60	2.625	3.00	2.00	1.75	2.625
	2.125	2.125	2.25	1.75	1.875	1.75	1.75	2.25	1.875	2.50	1.75	1.625	2.25	2.125	2.50	1.75	1.50	2.125
	2.125	2.50	1.75	1.875	1.125	2.25	2.50	1.50	1.50	2.25	1.625	2.00	2.00	1.875	2.00	2.00	2.00	1.50
	1.60	2.25	2.625	1.75	1.375	2.125	2.00	2.50	2.00	2.00	2.25	1.875	2.125	2.00	3.00	1.75	1.75	1.375
	1.625	2.00	1.875	2.25	1.375	2.25	2.50	2.25	1.875	2.125	1.75	2.00	2.25	2.25	2.00	2.00	2.25	4.50
	2.125	2.375	1.75	1.75	1.75	1.50	2.00	1.375	1.875	1.50	2.00	2.00	1.875	2.25	2.00	2.125	1.375	2.00
	1.75	2.50	1.625	1.75	2.375	2.00	1.875	1.25	1.75	1.875	1.50	1.50	1.75	1.75	1.875	2.50	2.00	2.00
	2.25	2.00	2.00	2.25	1.50	2.00	2.00	2.00	2.00	2.25	1.75	2.00	2.60	1.875	1.75	2.50	2.00	1.25
	2.50	2.00	1.75	2.50	2.00	1.50	2.25	2.50	1.50	2.50	1.875	2.00	2.25	1.875	1.025	2.375	1.75	1.50
	2.50	2.125	2.25	1.50	2.125	1.50	2.375	2.125	1.60	2.00	2.00	2.25	2.125	1.75	1.75	3.75	1.625	1.625
Actual measurement in centimillimeters.	1.875	1.875	1.75	2.00	2.125	1.625	1.75	1.75	2.00	2.00	2.00	2.125	1.75	2.375	2.00	2.00	2.25	1.875
	1.75	2.375	1.75	2.00	2.125	2.00	1.75	2.50	2.125	1.75	2.125	1.50	2.50	2.125	1.75	1.875	2.375	1.75
	1.75	2.75	2.25	2.125	2.00	2.50	1.875	1.50	1.50	2.00	2.25	1.75	1.625	1.875	2.00	2.00	2.00	1.875
	2.25	2.25	2.375	1.625	3.00	1.75	2.00	2.125	2.125	2.125	1.875	1.625	2.00	1.50	2.00	2.375	1.75	2.00
	2.00	2.125	3.25	1.50	2.00	2.00	2.125	2.00	2.00	1.625	1.75	2.00	1.50	2.00	2.25	2.25	1.875	2.25
	1.875	1.50	3.00	2.25	2.00	2.25	2.00	2.125	1.50	1.75	2.125	1.50	3.50	2.60	2.60	1.75	1.75	3.00
	1.75	2.75	3.25	2.00	1.75	2.50	1.50	2.25	2.25	1.50	2.50	1.875	2.25	1.75	2.25	2.00	1.75	2.00
	2.25	2.875	1.75	2.125	2.50	2.50	1.50	2.25	1.75	2.00	2.375	2.25	2.375	2.25	3.75	2.60	1.75	2.25
	1.75	2.00	1.875	2.50	1.75	1.50	2.00	2.25	2.00	1.50	2.25	1.75	2.375	2.50	1.25	1.50	2.25	2.25
	2.25	2.25	1.50	2.00	1.75	1.625	1.75	1.50	2.00	1.75	2.00	2.00	1.875	2.25	2.25	1.50	2.00	2.00
	1.875	2.25	1.625	2.125	2.375	1.75	2.025	1.625	2.25	2.00	1.625	2.00	1.73	2.50	2.125	2.00	1.75	2.50
	1.875	3.00	1.875	3.00	1.625	2.00	2.125	1.75	2.00	1.75	2.75	1.75	2.375	2.00	2.60	2.125	2.375	1.50
	2.00	2.00	1.625	2.50	2.125	2.00	2.00	1.875	2.00	1.75	2.25	1.375	2.00	2.00	1.50	2.00	1.75	1.125
	2.125	2.50	2.60	2.75	2.375	1.75	2.25	2.50	2.75	1.75	1.75	1.75	2.00	1.875	2.25	1.50	2.00	1.375
	2.25	2.50	2.25	2.00	2.125	1.625	1.75	1.625	2.125	1.75	1.75	1.875	2.125	2.375	3.125	2.50	1.75	1.60
	2.125	1.50	2.875	2.25	2.125	2.00	1.875	2.125	1.50	1.75	1.625	2.00	2.25	2.60	2.25	2.125	2.00	2.00
	2.25	2.00	1.50	1.50	2.875	2.50	2.00	2.00	1.75	1.875	2.00	1.625	1.875	2.50	2.00	1.875	1.75	1.625
	1.75	2.00	2.00	1.625	1.625	2.625	1.875	1.75	1.875	1.875	2.125	1.75	2.00	2.00	2.00	2.50	2.25	1.25
	2.00	2.50	2.95	2.60	2.00	2.25	1.75	1.875	1.75	1.125	1.75	1.625	1.875	2.125	2.25	2.25	2.25	1.50
	2.25	2.00	2.25	2.625	2.50	1.375	2.50	2.00	2.00	2.25	1.875	1.025	2.50	1.875	3.00	1.75	1.875	2.00
	2.00	1.75	2.50	2.75	1.50	1.50	2.75	1.75	1.625	1.75	2.125	1.375	2.25	1.75	1.75	1.875	2.00	2.00
	2.00	2.00	1.875	2.00	1.875	1.25	2.75	1.75	2.00	1.875	2.00	2.00	2.375	1.50	2.00	2.00	1.875	1.875
	1.875	2.00	2.00	2.25	3.00	2.00	1.75	1.625	1.75	2.50	1.50	1.375	2.25	2.50	1.625	1.875	1.50	2.50
	1.75	2.25	2.50	1.875	1.75	2.25	2.00	1.875	2.125	1.75	1.50	1.625	1.875	2.00	1.50	2.25	1.625	2.625
	2.00	2.00	2.75	2.00	2.00	2.00	2.00	2.00	2.25	1.875	1.625	1.75	2.00	2.50	2.125	2.375	2.00	2.00
	2.00	2.125	3.25	2.00	2.125	2.00	2.875	3.00	2.00	2.00	1.75	1.50	2.00	2.00	1.60	2.00	2.25	1.25
Totals.....	96.875	107.00	116.875	104.375	101.00	97.75	100.375	99.875	95.00	98.50	94.25	86.75	106.25	95.875	108.875	102.625	96.50	94.875

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:																		
Maximum measurements:	B'	3.50	0.9842	B'	3.00	1.1811	B'	2.75	1.0826	B'	2.50	0.9942	B'	3.125	1.2303	B'	3.00	1.1811
	B''	3.00	1.1811	B''	3.125	1.2303	B''	3.00	1.1811	B''	2.75	1.0826	B''	3.00	1.1811	B''	3.00	1.1811
	B'''	3.25	1.2795	B'''	2.625	1.0394	B'''	2.75	1.0826	B'''	2.25	0.8853	B'''	3.25	1.2795	B'''	3.25	1.2795
Highest.....		3.25	1.2795		3.125	1.2303		3.00	1.1811		2.75	1.0826		3.25	1.2795		4.50	1.7710
Minimum measurements:	B'	1.375	0.5413	B'	1.00	0.3937	B'	1.50	0.5005	B'	1.50	0.5005	B'	1.60	0.5905	B'	1.25	0.4921
	B''	1.50	0.5905	B''	1.125	0.4429	B''	1.25	0.4921	B''	1.50	0.5005	B''	1.25	0.4921	B''	1.25	0.5113
	B'''	1.50	0.5905	B'''	1.25	0.4921	B'''	1.375	0.5413	B'''	1.375	0.5413	B'''	1.50	0.5905	B'''	1.125	0.4429
Lowest.....		1.375	0.5413		1.00	0.3937		1.25	0.4921		1.375	0.5413		1.25	0.4921		1.125	0.4429
Average measurements:	B'	1.977	0.7783	B'	2.087	0.8210	B'	1.808	0.7118	B'	1.07	0.7755	B'	2.105	0.8287	B'	2.053	0.8083
	B''	2.14	0.8425	B''	2.02	0.7952	B''	1.99	0.7834	B''	1.88	0.7401	B''	1.918	0.7551	B''	1.93*	0.7593
	B'''	2.337	0.9200	B'''	1.955	0.7696	B'''	1.00	0.7430	B'''	1.735	0.6830	B'''	2.1				



TABLE I.—Measurements of fineness of wools—Continued.

		NEW YORK.																	
		RAMS, 2 YEARS OLD.																	
Catalogue number of samples—		673.			674.			675.			676.			677.			678.		
Number of section .....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
Actual measurement in centimillimeters.	2.25	2.00	1.50	2.00	2.50	2.00	1.50	1.875	2.125	2.00	2.00	1.50	2.00	2.00	2.50	2.00	1.50	2.75	
	1.75	2.00	2.00	2.00	2.00	2.00	1.875	1.875	2.50	2.00	2.00	2.125	1.75	1.875	2.25	2.50	2.00	2.75	
	2.00	1.875	2.00	1.75	2.125	2.00	1.625	1.50	1.875	1.75	1.875	1.875	2.25	2.125	1.875	2.00	1.75	2.00	
	1.875	1.50	1.75	2.125	1.75	1.75	1.50	1.75	2.00	2.00	2.00	1.75	2.00	1.875	2.00	2.00	1.50	1.50	
	2.00	1.75	2.25	2.125	2.00	2.00	2.00	1.75	2.00	1.50	2.00	1.50	2.00	1.875	2.125	2.00	2.25	2.125	
	1.75	1.75	1.875	2.125	2.00	1.75	2.00	1.75	2.00	1.50	1.875	1.75	2.25	2.00	2.375	1.875	1.75	1.875	
	1.625	2.00	1.75	2.00	2.05	1.75	2.50	1.50	1.75	1.625	2.00	1.75	2.00	1.75	2.00	2.00	2.125	2.00	
	1.50	2.50	1.75	1.75	1.50	1.875	1.75	2.00	1.50	2.125	1.75	1.75	1.875	1.625	2.50	2.00	2.125	2.00	
	1.75	1.625	2.00	1.50	1.75	1.625	1.50	2.25	1.625	1.625	1.75	1.625	1.75	1.75	1.75	1.50	2.25	1.875	
	2.00	1.50	1.375	2.00	1.625	2.00	1.375	2.00	1.875	2.00	1.875	2.00	2.125	2.25	2.25	2.00	2.00	2.00	
	1.75	2.375	2.125	2.00	1.875	2.00	1.50	1.50	1.75	1.75	1.50	2.00	1.875	2.00	2.125	2.00	2.00	1.50	
	1.625	1.75	1.50	1.875	1.50	1.75	1.75	1.875	1.75	1.50	2.00	1.875	1.75	2.00	2.125	2.00	1.25	1.50	
	1.50	1.75	1.50	2.00	1.50	1.50	2.00	2.00	2.00	1.25	2.25	1.875	1.50	2.00	2.00	1.625	1.50	1.50	
	1.375	1.50	2.50	2.00	2.00	1.375	2.25	2.25	1.625	2.25	1.75	2.00	2.25	2.00	2.25	2.25	2.125	2.00	
	1.25	2.00	2.00	1.75	1.75	1.25	2.125	1.50	2.25	2.50	2.00	2.00	1.875	2.125	1.75	2.00	2.00	1.75	
	1.00	1.75	2.125	1.75	1.625	2.00	2.00	1.75	1.50	2.125	2.00	1.50	2.50	2.00	1.50	2.375	1.75	2.50	
	0.75	2.00	2.00	2.00	1.50	1.625	2.25	1.875	1.75	1.75	1.75	1.625	1.75	2.00	2.375	2.00	2.25	1.875	
	0.50	1.75	2.25	2.00	1.875	1.875	1.875	1.75	1.75	1.75	1.625	1.75	2.00	2.375	2.00	2.00	2.25	1.875	
	0.25	1.50	1.75	1.75	2.25	1.25	1.625	1.875	2.00	2.125	2.00	1.625	1.75	2.00	2.00	2.00	2.125	1.875	
	0.00	1.25	1.50	2.00	1.25	1.50	1.875	1.875	2.00	2.00	2.00	2.50	2.00	2.50	2.00	2.50	2.00	2.00	
0.00	1.00	1.50	1.375	1.375	1.875	1.875	2.50	1.50	2.25	2.00	2.25	2.00	2.00	2.00	2.00	2.125	1.875		
0.00	0.75	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.25	1.50	1.60	2.25	2.25	2.00	1.875		
0.00	0.50	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.25	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875		
0.00	0.00	1.50	1.50	1.50	1.50	1.625	2.00	2.00	2.00	2.00									



TABLE I.—Measurements of fineness of wools—Continued.

Catalogue number of samples..		NEW YORK.																	
		RAMS, 2 YEARS OLD.									EWES, 2 YEARS OLD.								
		691.			692.			693.			670.			690.			681.		
Number of section.....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
Actual measurement in centimillimeters.		2.125	2.625	2.50	2.25	2.00	1.50	2.00	1.50	2.00	2.50	2.00	1.75	2.125	2.00	2.125	1.875	1.125	1.625
		3.00	2.75	2.50	2.00	1.75	1.75	2.00	1.75	2.50	2.125	2.00	2.00	1.905	2.00	2.875	2.00	1.25	1.875
		2.00	2.25	2.625	2.50	1.50	1.875	2.25	2.00	1.75	2.25	2.00	1.875	2.25	1.75	2.00	2.00	1.75	2.00
		2.25	2.00	2.75	1.625	2.25	1.625	2.00	1.75	2.375	2.00	1.75	1.50	1.635	2.50	1.625	2.50	1.625	2.125
		2.75	2.375	2.625	2.50	2.25	1.625	2.25	2.25	1.625	2.25	1.75	1.625	1.625	1.50	2.00	2.875	2.25	2.025
		1.875	1.50	2.75	2.25	2.00	2.00	2.125	1.875	1.875	2.125	2.00	1.625	2.625	2.00	1.875	1.875	1.625	1.50
		2.00	2.25	3.00	1.625	1.75	1.025	2.50	2.25	1.875	1.875	1.75	2.50	2.00	2.125	2.375	2.125	2.00	1.875
		2.375	2.00	1.675	2.375	1.875	1.875	1.50	2.00	2.375	2.00	1.75	2.00	2.875	2.125	2.375	2.00	2.25	2.00
		2.875	2.00	2.00	2.00	2.00	1.625	2.00	2.00	1.875	2.00	1.875	1.75	2.125	2.00	2.50	1.625	2.125	1.875
		2.75	2.125	2.125	2.00	2.25	2.00	1.50	1.75	1.875	1.875	1.75	1.75	1.875	2.25	2.125	2.50	2.00	2.125
		3.00	1.75	2.00	1.875	1.75	1.50	2.375	1.50	2.00	2.25	1.50	1.875	2.50	2.00	1.875	1.625	2.375	2.00
		2.75	3.25	2.50	1.875	2.50	2.00	2.25	1.50	1.875	2.50	1.375	2.125	3.00	2.50	2.125	2.00	2.00	1.625
		2.50	2.50	2.00	1.875	2.50	2.125	2.50	1.75	2.00	2.60	1.625	1.50	1.875	2.00	2.125	1.875	2.575	1.875
		2.25	2.625	2.375	2.00	2.50	1.875	2.50	2.00	1.50	2.00	1.75	1.625	2.375	1.25	1.875	2.00	2.00	2.25
		2.375	2.75	2.125	2.125	1.50	2.00	1.50	2.00	2.50	2.60	1.75	1.875	2.125	1.625	2.125	2.00	2.50	2.00
		2.00	1.75	3.75	2.25	1.625	1.75	1.50	1.50	1.625	2.00	1.75	2.00	2.00	2.375	2.125	2.375	2.75	2.125
		1.875	2.60	2.375	2.00	1.75	2.00	2.00	1.50	2.375	1.75	2.375	2.50	2.50	2.375	2.25	1.875	2.25	2.50
		1.875	2.00	2.625	2.00	2.00	2.00	1.50	1.50	2.50	1.50	1.375	2.00	1.75	2.25	2.875	1.875	2.25	2.00
		3.00	2.125	1.875	2.125	2.375	2.00	2.50	1.75	1.50	2.125	1.375	1.875	2.50	2.25	1.60	2.00	2.00	1.625
		2.00	1.50	2.375	1.875	1.50	1.00	1.625	1.375	1.875	2.00	1.25	1.625	2.75	2.25	2.875	2.125	2.00	2.375
2.50	1.50	1.875	2.125	1.875	1.50	1.875	1.25	2.50	2.00	2.00	2.50	2.00	2.00	2.50	2.00	2.00	2.00		
2.75	1.875	1.625	2.25	1.50	1.75	1.75	2.50	2.375	1.625	2.00	1.875	2.125	2.125	2.00	2.00	2.00	1.625		
2.125	2.75	2.75	1.75	1.875	1.50	1.625	2.50	1.875	2.50	1.50	1.625	2.125	2.25	2.75	2.125	2.25	2.00		
2.25	1.625	2.10	2.125	2.00	2.125	2.50	2.25	2.875	2.25	1.75	1.75	2.25	2.00	2.60	2.625	1.25	2.375		
3.00	2.75	2.375	1.75	2.125	1.875	1.875	2.00	2.00	1.875	2.00	1.625	2.875	2.50	2.125	2.50	2.00	2.00		
2.00	2.125	2.00	1.875	1.875	1.875	2.375	1.50	1.875	1.625	1.50	2.00	2.50	2.25	2.375	1.875	2.00	2.00		
2.875	2.00	2.125	2.125	1.75	1.625	1.50	2.00	2.125	1.75	1.50	1.75	2.50	2.00	2.00	1.75	2.25	2.125		
2.50	1.75	2.50	2.00	2.00	2.50	1.75	2.25	1.875	2.00	2.25	2.25	2.625	1.875	2.00	2.375	2.00	2.00		
2.625	2.50	3.00	2.00	1.75	1.625	2.125	1.75	2.125	1.75	1.875	2.00	2.60	1.75	1.75	1.50	1.75	2.875		
2.00	2.50	2.50	2.00	1.50	2.50	2.00	1.875	1.75	2.00	1.625	2.125	2.625	2.00	2.00	2.125	1.625	2.00		
2.875	2.00	2.50	1.875	1.875	1.75	2.00	1.875	1.875	2.125	2.00	2.00	2.375	2.50	2.25	2.00	2.00	1.875		
2.375	2.125	1.875	2.00	1.75	2.125	2.50	2.00	2.00	2.125	1.50	1.875	2.625	2.25	1.875	2.375	3.00	2.375		
2.50	2.00	2.25	1.875	1.50	1.625	2.00	2.00	2.50	2.125	1.75	1.875	2.125	2.75	2.125	2.125	2.00	2.00		
2.25	2.00	2.00	2.00	1.875	1.375	2.375	2.25	1.875	2.00	2.00	2.00	3.00	2.00	1.875	2.875	2.50	2.00		
2.50	2.25	2.375	1.75	2.25	1.875	2.00	1.75	2.50	2.375	2.00	2.03	2.60	1.875	1.875	2.50	3.00	1.875		
4.125	2.375	2.50	2.50	1.50	1.625	2.125	2.00	2.60	1.875	2.00	2.00	1.875	2.00	1.75	2.375	2.50	2.125		
3.25	2.50	2.125	1.875	2.00	2.25	2.25	2.00	2.125	1.75	1.875	2.125	1.75	2.50	3.125	2.375	1.875	1.875		
2.00	1.375	2.25	2.00	1.75	2.00	2.00	1.75	2.50	2.50	2.00	1.875	1.875	1.625	1.875	1.50	2.00	1.625		
2.50	1.50	1.875	2.125	2.00	1.625	2.00	2.125	2.00	1.625	1.50	2.375	1.50	2.00	2.625	2.75	2.00	1.875		
2.625	2.50	2.375	2.375	1.75	1.875	1.875	2.25	2.00	1.75	2.125	1.375	1.375	2.25	2.375	1.875	2.00	2.00		
1.75	2.50	2.25	1.50	2.125	1.875	1.625	1.875	2.00	2.25	1.875	1.625	2.125	2.00	2.125	2.125	2.50	2.375		
2.125	2.375	3.875	2.00	1.50	2.125	2.25	1.75	2.00	1.75	2.00	1.875	1.875	1.75	1.875	2.75	2.60	1.875		
2.875	2.25	3.50	1.625	1.625	1.025	1.75	1.75	2.00	1.875	1.50	2.125	1.875	2.25	2.125	1.875	1.60	2.125		
2.25	1.75	3.25	1.875	1.625	1.625	2.00	1.75	1.75	1.875	1.625	1.375	2.00	1.75	2.00	1.875	2.00	2.375		
2.125	1.375	2.50	2.50	2.25	1.50	2.125	2.00	1.875	2.00	1.875	1.625	3.25	2.00	2.125	1.625	1.75	2.00		
3.50	2.25	3.00	1.625	1.875	1.50	1.875	1.75	2.00	1.25	2.00	1.875	2.00	2.25	1.875	1.75	2.125	1.875		
2.375	2.00	2.75	2.125	2.375	1.50	1.875	1.50	1.75	1.75	2.00	1.875	1.875	2.125	1.50	2.50	1.625	1.875		
2.625	2.25	2.625	2.25	1.875	2.375	2.50	1.50	2.00	2.75	1.50	2.125	2.50	2.25	1.875	1.875	2.50	1.875		
2.125	1.50	3.50	2.125	2.125	2.50	1.375	2.00	2.375	2.00	1.75	2.00	2.25	2.00	1.875	1.625	1.75	2.125		
Totals.....	124.625	104.375	122.875	100.75	92.25	90.75	91.75	101.675	99.375	87.25	94.875	109.25	109.25	107.00	103.625	102.50	90.375		

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousands of inch.	In thousands of inch.		In thousands of inch.	In thousands of inch.		In thousands of inch.	In thousands of inch.						
Maximum measurements.	B'	4.125	1.6240	B'	2.50	0.9842	B'	2.50	0.9842	B'	2.75	1.0820	B'	3.50	1.3770
	B''	3.25	1.2705	B''	2.50	0.9842	B''	2.50	0.9842	B''	2.875	0.9350	B''	3.00	1.1811
	B'''	3.75	1.4763	B'''	2.50	0.9842	B'''	2.875	1.1318	B'''	2.50	0.9842	B'''	3.125	1.2303
Highest.....		4.125	1.6240		2.50	0.9842		2.875	1.1318		2.75	1.0820		3.50	1.3770
Minimum measurements.	B'	1.875	0.7380	B'	1.50	0.5905	B'	1.375	0.5413	B'	1.25	0.4921	B'	1.375	0.5413
	B''	1.875	0.5413	B''	1.875	0.5413	B''	1.25	0.4921	B''	1.125	0.4429	B''	1.25	0.4921
	B'''	1.625	0.6397	B'''	1.875	0.5413	B'''	1.50	0.5905	B'''	1.375	0.5413	B'''	1.50	0.5905
Lowest.....		1.875	0.5413		1.375	0.5413		1.25	0.4921		1.125	0.4429		1.25	0.4921
Average measurements..	B'	2.403	0.9814	B'	2.015	0.7983	B'	1.995	0.7854	B'	1.987	0.7822	B'	2.185	0.8602
	B''	2.088	0.8220	B''	1.888	0.7433	B''	1.835	0.7224	B''	1.745	0.6870	B''	2.125	0.8368
	B'''	2.458	0.9677	B'''	1.845	0.7263	B'''	2.038	0.8023	B'''	1.897	0.7163	B'''	2.14	0.8425
Average.....		2.346	0.9236		1.916	0.7513		1.956	0.7700		1.876	0.7385		2.15	0.8564
Measurements above average..		76			71			80			71			60	
Measurements below average..		74			70			70			70			90	



TABLE I.—Measurements of fineness of wools—Continued.

		NEW YORK.																	
		EWES, 2 YEARS OLD.																	
Catalogue number of samples..		682.			683.			684.			685.			686.			687.		
Number of section.....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
1.375	1.625	1.375	1.875	2.00	1.625	3.00	2.00	3.50	2.125	2.00	2.125	2.125	1.50	1.625	2.00	1.75	2.00	1.75	2.50
1.50	1.75	2.50	2.50	1.50	1.625	2.00	2.25	1.50	2.375	1.75	2.50	1.625	1.625	1.625	1.375	2.00	2.00	2.00	2.00
1.625	1.75	1.625	1.75	2.50	2.25	2.25	2.375	1.75	2.125	1.75	2.375	1.625	1.625	1.625	1.625	2.00	2.00	2.00	2.00
1.625	1.50	1.375	2.50	1.75	2.375	2.00	3.00	1.625	2.25	2.00	1.625	2.25	2.00	1.625	1.625	1.625	1.625	1.625	1.625
1.75	1.00	1.75	1.625	2.25	1.625	2.625	1.75	1.625	2.00	2.00	2.125	2.00	1.75	2.00	1.625	1.625	1.625	1.625	1.625
1.375	1.625	1.375	2.375	2.25	2.375	2.25	2.00	2.00	1.50	1.75	2.00	1.50	1.75	2.00	1.625	1.625	1.625	1.625	1.625
2.00	1.875	1.625	2.125	1.50	2.125	1.75	2.25	2.125	2.00	1.75	2.25	2.125	2.00	1.75	2.00	1.625	1.625	1.625	1.625
1.50	2.50	1.375	1.875	1.125	1.75	2.00	1.875	2.375	1.375	2.375	3.00	1.875	1.875	1.875	1.875	1.875	1.875	1.875	1.875
1.625	2.00	1.75	2.00	1.50	1.875	1.875	2.50	2.625	1.625	1.50	1.875	1.625	1.625	1.625	1.625	1.625	1.625	1.625	1.625
1.875	2.50	1.875	1.875	2.00	2.625	1.75	2.875	1.875	1.875	2.00	2.00	1.875	1.875	2.00	2.00	2.00	2.00	2.00	2.00
1.625	1.75	1.75	2.00	1.75	2.125	2.50	2.25	2.00	2.00	1.875	2.375	2.00	2.00	1.875	2.375	2.00	2.00	2.00	2.00
1.75	1.25	1.875	1.75	1.50	2.25	2.625	2.75	2.00	1.50	1.75	1.875	2.125	2.00	1.875	2.125	2.00	2.00	2.00	2.00
1.50	2.00	1.625	2.00	2.25	1.875	3.75	1.50	2.00	1.75	1.875	2.00	1.875	1.875	2.00	2.00	2.00	2.00	2.00	2.00
2.00	1.50	1.25	2.00	1.75	1.625	2.125	1.75	2.375	2.875	2.00	1.875	2.00	1.875	1.875	1.875	1.875	1.875	1.875	1.875
1.375	1.75	2.125	2.00	1.50	2.00	2.00	2.00	2.125	2.25	1.50	2.00	2.125	2.25	1.50	2.00	1.875	1.875	1.875	1.875
1.875	2.00	1.625	2.25	2.50	1.875	1.875	2.00	1.875	1.875	2.00	2.375	1.875	2.00	2.375	1.875	1.875	1.875	1.875	1.875
1.125	1.875	1.875	2.00	2.00	1.875	2.00	2.50	2.50	1.75	1.75	2.00	2.00	1.75	1.75	2.00	1.625	1.625	1.625	1.625
1.50	2.00	1.625	1.625	2.25	2.00	2.60	2.50	2.00	1.75	1.50	2.25	1.875	3.00	2.375	1.875	1.875	1.875	1.875	1.875
1.625	1.875	2.125	1.875	1.25	1.875	2.125	2.375	2.125	2.00	1.50	1.625	2.125	3.125	2.50	1.50	1.50	1.50	1.50	1.50
1.875	2.375	1.50	1.75	1.75	1.75	2.25	2.625	2.00	2.375	2.25	2.00	1.875	1.50	2.125	1.50	1.50	1.50	1.50	1.50
1.375	1.875	1.625	2.00	2.50	1.875	1.875	2.50	3.125	2.00	2.00	2.00	2.125	1.75	2.625	2.00	1.625	1.625	1.625	1.625
1.625	2.00	2.00	2.50	2.00	2.50	1.75	2.25	1.75	2.375	2.00	1.875	2.50	2.00	1.875	2.00	1.875	2.00	2.25	2.50
1.50	2.75	1.875	3.00	1.50	2.00	2.00	2.375	2.00	2.00	1.625	1.875	1.875	1.875	1.625	1.875	1.875	1.875	2.00	2.125
1.875	2.00	1.625	2.625	1.50	2.00	2.125	2.125	2.625	1.875	1.75	1.875	1.75	1.875	2.00	1.50	2.375	2.00	1.625	2.50
1.50	2.00	1.50	1.875	1.75	1.75	2.00	1.875	2.00	1.75	2.25	2.00	1.625	2.50	2.00	2.00	2.00	2.00	2.375	2.50
1.375	2.75	2.375	1.875	1.75	2.00	3.00	3.00	1.50	2.50	1.875	2.375	2.125	2.375	2.625	2.00	2.25	2.00	2.25	2.375
1.375	2.00	1.875	2.375	1.50	1.875	1.875	2.00	2.00	1.875	1.50	1.625	1.875	1.875	1.875	1.875	1.875	1.875	1.875	1.875
1.25	1.25	2.125	2.25	1.875	1.875	1.50	1.875	1.75	2.375	1.50	1.875	1.25	1.50	1.75	3.25	1.50	2.50	1.50	2.50
1.875	1.50	1.50	2.875	1.875	2.125	1.75	2.50	2.125	1.625	1.50	1.50	1.875	1.25	2.375	2.50	1.50	1.875	1.50	1.875
1.375	2.625	1.50	2.00	1.625	2.125	2.375	1.75	1.875	2.25	1.25	1.625	1.625	1.50	2.50	1.875	2.25	1.375	2.25	1.375
2.50	1.50	1.875	2.00	1.50	1.75	1.875	2.00	1.875	2.00	1.75	2.00	1.875	2.00	1.875	2.00	1.875	2.00	2.375	1.50
1.50	2.00	1.375	2.25	1.875	2.125	2.00	2.375	2.125	1.875	1.875	2.125	1.875	2.125	2.00	1.75	2.50	1.875	1.25	2.25
1.875	2.50	1.75	1.875	2.25	2.25	2.125	3.00	2.00	2.125	2.00	2.00	2.00	1.75	2.25	1.625	1.625	1.625	1.625	1.625
1.625	1.75	2.125	1.875	2.00	2.00	2.375	2.25	2.125	1.875	1.375	2.375	2.375	2.375	1.375	1.875	1.875	1.875	1.875	1.875
2.50	1.50	1.375	2.125	1.875	1.875	1.875	1.875	2.375	1.375	1.50	2.00	1.875	3.25	2.00	1.75	3.00	1.50	2.125	2.125
1.25	2.00	1.25	2.50	2.00	2.25	2.125	1.875	2.125	2.00	1.50	2.375	1.625	2.50	1.75	1.75	2.50	1.50	1.75	1.75
1.50	2.125	2.50	2.00	2.00	1.875	2.00	2.00	2.125	2.00	2.00	1.875	2.00	1.25	2.50	1.50	2.75	2.25	2.25	2.25
1.875	1.375	1.50	2.25	2.00	2.00	2.00	2.375	2.00	1.625	1.625	2.00	1.375	2.00	1.875	1.875	2.50	2.00	2.00	2.00
1.50	1.875	1.875	1.875	2.50	1.75	2.00	2.00	1.875	1.75	1.625	2.00	1.875	1.25	2.00	2.125	2.50	2.00	2.375	2.375
1.625	1.50	1.75	1.875	1.50	2.125	2.125	2.00	1.875	2.125	1.50	1.875	1.875	1.875	2.50	2.00	1.875	1.875	1.875	1.875
1.375	1.625	2.125	1.875	1.50	2.125	2.125	3.25	2.00	2.375	2.00	2.00	2.375	2.00	2.00	1.875	2.00	2.00	1.625	1.625
1.50	1.875	1.625	2.00	1.375	1.75	2.25	2.25	1.625	1.875	1.625	2.125	3.00	1.50	1.875	1.875	2.00	1.875	2.00	1.875
1.625	1.50	1.50	2.125	1.625	2.00	2.625	2.125	2.00	1.50	2.25	2.00	2.375	2.50	1.875	1.875	2.50	1.50	1.75	1.75
1.875	1.75	2.375	2.125	1.00	1.875	2.50	2.50	2.00	1.875	2.375	2.125	1.875	1.50	2.375	2.50	1.875	2.50	2.50	2.50
1.375	1.50	1.50	2.375	2.00	2.75	2.125	2.00	2.375	2.125	2.00	1.875	1.875	2.75	1.875	2.00	1.75	1.875	1.875	1.875
1.625	2.00	1.625	2.00	1.625	1.875	1.50	2.25	1.875	1.875	1.625	2.00	1.50	1.50	2.00	1.875	1.50	1.625	1.625	1.625
1.75	1.625	2.125	2.125	2.00	2.00	2.125	3.50	2.00	1.875	1.75	1.875	1.875	1.625	1.875	2.00	1.875	2.00	2.00	2.00
1.875	2.125	1.875	2.00	2.75	1.875	2.00	2.00	1.625	1.875	1.50	2.375	1.375	1.75	2.50	1.875	2.00	2.00	2.125	2.125
1.625	1.625	2.00	1.875	3.50	1.625	2.50	2.25	1.00	1.875	1.50	1.875	1.625	2.00	2.125	2.00	1.75	2.50	2.00	2.00
1.625	1.50	1.875	2.125	2.25	2.375	2.00	1.75	2.50	1.75	2.00	1.875	1.75	2.00	1.875	1.75	2.125	1.50	2.125	1.50
Totals .....	82.125	92.875	88.125	104.375	93.375	99.75	107.625	112.25	102.25	97.75	90.50	100.875	94.625	92.625	106.625	99.625	96.25	102.50	102.50

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:																		
Maximum measurements.	B'	2.50	0.9842	B'	3.00	1.1811	B'	3.00	1.1811	B'	2.875	1.1318	B'	3.00	1.1811	B'	3.25	1.2795
	B''	2.875	1.1378	B''	3.50	1.3779	B''	3.50	1.3779	B''	2.375	0.9350	B''	3.25	1.2795	B''	3.00	1.1811
	B'''	2.50	0.9842	B'''	2.75	1.0826	B'''	3.50	1.3779	B'''	3.00	1.1811	B'''	3.50	1.3779	B'''	2.50	0.9842
Highest.....		2.875	1.1378		3.50	1.3779		3.50	1.3779		3.00	1.1811		3.50	1.3779		3.25	1.2795
Minimum measurements.	B'	1.125	0.4429	B'	1.625	0.6307	B'	1.50	0.5905	B'	1.375	0.5413	B'	1.375	0.5413	B'	1.50	0.5905
	B''	1.00	0.3937	B''	1.00	0.3937	B''	1.50	0.5905	B''	1.25	0.4921	B''	1.25	0.4921	B''	1.125	0.4429
	B'''	1.25	0.4921	B'''	1.625	0.6307	B'''	1.00	0.3937	B'''	1.875	0.5413	B'''	1.875	0.5413	B'''	1.375	0.5413
Lowest.....		1.00	0.3937		1.00	0.3937		1.00	0.3937		1.25	0.4921		1.25	0.4921		1.125	0.4429
Average measurements..	B'	1.642	0.6161	B'	2.087	0.8216	B'	2.152	0.8472	B'	1.955	0.7696	B					



TABLE I.—Measurements of fineness of wools—Continued.

		NEW YORK.																	
		EWES, 2 YEARS OLD.																	
Catalogue number of samples..		688.			689.			690.			691b.			695b.			698b.		
Number of section .....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
		1.75	2.75	2.50	2.50	3.25	2.50	2.00	3.00	2.125	2.125	1.875	2.25	2.50	2.125	3.00	2.00	2.125	2.50
		2.375	2.25	2.00	2.125	2.00	2.00	2.00	2.00	2.00	1.875	2.00	2.00	2.125	2.875	2.75	2.60	2.75	2.60
		3.00	2.50	2.00	2.00	2.50	2.50	2.50	2.50	1.625	1.875	2.00	2.00	2.375	2.60	3.00	2.60	3.00	2.125
		2.375	2.00	1.60	2.125	2.00	2.50	1.875	2.375	1.75	1.75	1.75	2.00	2.50	2.75	1.875	2.00	2.00	2.00
		2.25	2.375	2.50	2.00	2.75	2.60	2.25	2.75	1.50	2.00	1.875	2.00	2.00	2.375	2.50	2.00	2.00	1.875
		2.00	2.50	1.875	2.50	1.50	2.625	3.00	2.75	1.875	2.125	1.875	2.00	2.125	2.25	2.025	1.875	2.50	2.50
		2.50	2.25	2.75	2.00	3.25	3.00	2.00	1.60	2.00	1.625	2.00	2.125	2.00	2.00	2.50	2.25	2.50	2.60
		2.25	2.00	2.00	2.375	3.50	3.00	2.60	2.125	2.875	2.00	2.25	2.25	2.625	1.75	2.50	2.00	3.00	2.00
		2.00	2.25	2.00	1.875	2.00	2.00	1.875	2.50	2.00	2.125	2.375	2.50	2.375	3.25	2.625	2.00	1.60	2.75
		1.75	1.75	2.00	1.75	3.00	2.50	2.00	1.50	2.875	2.00	1.75	2.00	2.50	3.00	2.50	1.875	3.125	2.00
		1.75	1.875	2.00	1.875	2.25	2.75	2.50	1.50	2.00	1.875	2.00	2.375	1.625	1.75	3.00	1.875	2.60	2.00
		2.375	1.75	2.00	2.50	2.375	3.00	1.75	1.75	2.00	1.875	2.25	2.00	2.25	3.00	2.00	3.00	2.00	2.00
		2.375	2.125	2.50	1.625	2.60	2.75	2.025	2.00	2.50	2.125	2.25	2.125	2.375	2.75	1.875	2.75	3.50	2.50
		3.00	1.875	2.00	2.50	2.75	2.375	2.25	3.00	2.50	2.00	2.50	2.125	2.00	2.00	3.00	2.50	2.60	2.60
		2.375	3.00	2.50	1.625	3.00	2.375	1.50	1.60	2.50	1.875	2.50	2.125	2.625	2.25	2.25	2.00	2.50	2.25
		2.50	2.25	2.25	2.375	3.25	3.75	3.60	3.00	2.00	2.50	2.00	2.375	2.00	1.60	2.375	2.00	2.00	2.375
		2.00	2.50	2.50	2.375	2.375	1.50	1.875	2.25	2.50	1.75	1.75	2.60	2.025	2.25	2.00	1.875	2.125	2.375
		2.00	1.25	2.00	2.125	2.25	2.60	2.60	2.00	2.625	2.00	2.00	2.125	2.50	1.625	2.625	4.125	4.25	2.25
		2.00	2.375	2.00	2.00	2.50	3.50	1.60	1.50	1.75	1.875	2.125	2.00	2.50	2.00	2.75	2.25	2.50	2.50
		1.875	1.50	2.00	2.50	2.875	2.75	2.00	2.00	2.00	1.875	2.25	2.125	2.00	2.00	3.00	1.75	2.25	2.375
		1.875	1.375	2.00	2.00	2.25	2.625	2.60	2.125	2.50	1.875	2.375	3.50	2.60	2.00	2.25	2.00	2.00	2.00
		2.375	1.50	2.00	2.375	1.50	3.00	2.375	2.25	2.00	1.60	2.25	2.50	2.00	2.25	2.375	2.00	2.00	2.375
		2.625	2.00	2.00	2.375	2.25	3.00	2.00	2.00	2.00	2.00	2.25	2.50	2.00	2.125	3.875	2.375	3.00	2.50
		2.125	1.875	2.50	2.50	2.00	2.00	2.50	1.875	1.125	1.625	2.375	2.75	1.875	2.00	2.75	2.00	2.00	2.625
		2.00	1.25	2.00	1.625	2.00	1.75	2.00	2.25	1.75	1.875	1.875	2.50	2.25	2.75	2.50	2.375	2.875	2.875
		1.875	1.25	1.50	1.375	2.50	1.875	2.375	2.25	2.50	2.60	2.00	2.00	3.00	3.00	1.75	1.75	1.875	2.875
		1.75	2.50	2.00	1.875	3.375	3.25	2.25	2.125	1.75	2.625	2.75	2.00	2.00	2.25	3.50	1.50	2.00	2.00
		1.875	2.375	2.75	1.875	2.00	2.375	2.125	2.25	2.00	1.625	2.625	2.00	2.00	2.00	2.625	1.75	2.25	2.375
		1.875	2.00	1.675	1.625	2.25	2.75	2.60	1.50	2.50	1.875	2.50	2.00	2.125	2.25	2.625	3.125	3.50	2.50
		2.375	1.625	2.00	2.50	1.50	2.125	2.125	1.75	2.50	2.50	2.60	2.50	2.00	2.00	2.25	2.50	2.60	2.875
		2.00	1.875	2.00	2.75	2.50	4.00	2.00	1.875	2.50	2.00	2.00	2.25	3.00	3.00	2.00	2.50	2.375	2.875
		1.75	2.00	1.675	2.375	2.00	2.50	2.00	2.00	1.875	1.75	1.50	2.125	1.875	2.375	3.50	2.125	3.00	3.00
		2.00	1.75	2.125	1.675	1.50	2.00	2.00	1.875	2.50	2.125	1.625	2.25	2.125	2.25	2.875	2.125	2.50	2.50
		2.125	1.875	2.50	2.50	3.375	1.75	2.125	2.00	2.00	1.75	2.00	2.60	3.25	1.875	3.00	2.75	3.00	3.50
		1.875	1.50	2.50	2.00	2.75	1.875	2.375	2.50	2.25	2.60	2.50	2.50	2.25	1.875	3.00	3.00	3.00	3.375
		2.125	2.00	2.125	1.875	2.00	3.00	2.75	2.50	2.375	2.00	2.25	2.75	2.50	1.75	1.50	2.00	2.00	2.375
		2.50	2.125	2.375	2.00	1.75	2.00	2.375	2.00	2.50	1.875	2.125	3.00	2.00	2.00	2.75	2.50	2.50	2.50
		1.675	1.75	2.50	1.875	1.75	3.25	2.00	2.00	1.75	1.875	2.00	2.00	2.75	2.50	2.50	2.00	2.00	2.00
		2.375	1.60	1.875	3.25	2.25	3.00	2.50	2.00	3.00	2.00	2.00	2.00	2.375	2.00	2.50	2.125	2.125	3.125
		2.00	2.125	1.625	2.375	3.00	2.50	2.25	2.00	2.375	2.00	2.50	2.125	2.875	1.25	2.50	2.125	2.50	2.50
		2.00	2.00	3.00	2.00	2.00	3.75	1.875	1.75	2.00	1.50	2.025	2.50	2.75	2.00	3.50	2.50	3.00	2.50
		2.50	2.125	2.25	2.00	2.125	2.375	1.75	1.875	2.00	1.75	1.875	1.50	2.50	2.50	2.50	3.50	3.00	3.00
		2.00	2.00	2.50	2.25	3.50	2.75	2.75	1.75	1.625	2.00	1.875	2.00	3.00	3.00	2.125	1.50	3.00	3.00
		2.375	3.00	2.00	2.00	1.75	2.00	2.00	2.125	1.75	1.375	2.60	2.375	1.875	2.00	3.00	1.50	3.00	3.00
		1.875	2.125	1.625	2.375	2.50	2.75	2.50	2.50	2.125	2.25	1.375	3.00	2.375	2.00	2.75	2.00	1.75	2.375
		2.00	2.25	2.875	2.00	2.50	2.375	2.375	2.25	2.00	1.625	2.60	2.00	2.00	1.875	3.00	2.50	2.00	2.50
		1.50	1.875	1.75	2.125	2.00	2.375	1.50	2.50	3.00	2.00	1.50	2.00	2.50	1.50	2.00	2.00	1.75	2.625
		2.125	2.00	2.375	1.60	2.625	3.00	2.50	2.125	3.00	1.875	2.00	3.00	1.75	1.75	2.00	2.00	2.00	2.875
		2.00	2.00	2.00	1.75	3.00	1.75	1.50	1.75	2.125	2.00	2.00	1.875	2.00	2.00	1.875	2.00	2.375	2.50
		2.00	2.00	2.50	2.50	1.75	2.50	2.00	1.75	2.50	1.75	2.00	1.675	1.25	2.375	2.625	2.125	3.00	3.00
	Totals .....	168.125	100.875	108.50	108.375	118.625	127.625	110.875	104.50	109.625	97.75	103.50	112.125	114.625	106.25	126.625	114.125	113.875	125.75

Recapitulation and reduction:		No. of section.		In centimillimeters.		In thousandths of inch.												
Maximum measurements.	B'	3.00	1.1811	B'	3.25	1.2705	B'	3.50	1.3770	B'	3.00	1.1811	B'	3.25	1.2705	B'	3.625	1.4271
	B''	3.00	1.1811	B''	3.50	1.3770	B''	3.00	1.1811	B''	3.00	1.1811	B''	3.25	1.2705	B''	4.125	1.6240
	B'''	3.00	1.1811	B'''	4.00	1.5748	B'''	3.00	1.1811	B'''	3.00	1.1811	B'''	3.50	1.3770	B'''	3.75	1.4763
Highest .....		3.00	1.1811		4.00	1.5748		3.50	1.3770		3.50	1.3770		3.50	1.3770		4.125	1.6240
Minimum measurements.	B'	1.50	0.5905	B'	1.50	0.5905	B'	1.50	0.5905	B'	1.375	0.5413	B'	1.25	0.4921	B'	1.375	0.5413
	B''	1.125	0.4429	B''	1.50	0.5905	B''	1.50	0.5905	B''	1.375	0.5413	B''	1.125	0.4429	B''	1.50	0.5905
	B'''	1.875	0.5413	B'''	1.50	0.5905	B'''	1.50	0.5905	B'''	1.875	0.7380	B'''	1.50	0.5905	B'''	1.875	0.7380
Lowest .....		1.125	0.4429		1.50	0.5905		1.50	0.5905		1.375	0.5413		1.125	0.4429		1.875	0.5413
Average measurements..	B'	2.163	0.8515	B'	2.163	0.8535	B'	2.208	0.8692	B'	1.955	0.7606	B'	2.203	0.9027	B'	2.283	0.8988
	B''	2.018	0.7944	B''	2.373	0.9342	B''	2.00	0.8228	B''	2.07	0.8140	B''	2.183	0.8902	B''	2.278	0.8968
	B'''	2.17	0.8543	B'''	2.553	1.0951	B'''	2.193	0.8663	B'''	2.243	0.8930	B'''	2.533	0.9972	B'''	2.515	0.9901
Average .....		2.11																



TABLE I.—Measurements of fineness of wools—Continued.

Catalogue number of samples..	NEW YORK.						PENNSYLVANIA.											
	EWES, 2 YEARS OLD.						RAM-LAMBS.											
	097b.			570.			574.			577.			578.			580.		
Number of section.....	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
2.375	2.50	2.375	2.00	1.50	1.625	2.00	1.75	1.75	2.125	2.00	2.09	2.125	1.75	2.00	1.75	2.00	2.00	2.00
2.25	2.50	2.125	1.50	1.75	1.75	2.00	2.00	1.50	2.00	2.00	2.125	1.875	2.00	2.00	2.25	2.00	2.25	1.00
2.375	2.75	2.375	1.50	1.625	1.50	2.00	1.625	2.00	1.875	1.75	2.125	2.625	1.375	2.00	2.00	1.875	2.00	1.125
1.50	1.375	1.875	2.00	2.00	2.00	2.00	2.50	1.50	1.625	1.75	2.00	2.00	2.625	2.25	2.50	1.50	1.25	1.25
1.625	2.00	2.00	1.50	1.00	1.75	1.75	2.00	2.00	2.325	2.125	2.25	3.00	1.875	2.75	2.25	3.00	1.50	1.50
2.375	3.00	2.00	1.50	1.50	2.50	2.00	1.50	2.25	2.00	2.00	2.25	2.125	2.25	2.50	2.00	3.50	2.60	2.60
2.25	2.25	1.875	1.50	1.50	1.75	1.75	1.625	1.50	2.00	2.50	2.00	2.00	2.00	2.50	2.25	2.25	2.00	2.50
1.875	3.00	2.50	1.75	2.00	2.00	1.75	2.00	2.375	2.25	1.75	2.375	2.125	1.25	3.00	2.00	2.50	1.875	1.875
2.625	2.625	2.125	1.875	1.75	1.75	1.50	1.75	1.50	1.75	3.125	2.00	2.50	1.625	2.75	2.00	2.50	2.25	2.00
2.50	2.00	2.25	2.00	1.25	2.00	2.50	1.75	2.00	1.50	1.50	1.875	2.25	2.625	1.50	2.50	1.75	2.50	2.50
3.00	2.00	1.875	1.375	1.75	1.50	2.25	1.75	1.50	2.125	1.875	2.00	3.375	1.125	2.00	1.75	1.875	2.25	2.25
1.875	3.00	2.00	2.50	1.50	1.50	1.25	2.00	1.75	2.00	1.75	2.00	2.375	1.875	2.25	1.50	3.50	3.25	2.25
2.375	2.00	2.50	2.00	1.50	2.00	2.00	1.50	2.00	1.375	1.375	2.00	2.00	1.625	2.00	2.00	2.00	3.25	2.25
2.375	2.375	1.875	1.75	1.25	1.50	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.625	2.00	1.50	2.25	2.00	1.875
2.375	1.75	2.00	1.625	1.75	1.75	2.00	2.25	2.125	2.00	2.00	1.625	2.00	2.25	2.00	1.50	2.25	2.00	2.00
2.375	2.125	2.125	1.50	1.625	1.50	1.75	1.50	1.75	1.50	2.375	2.00	1.75	1.50	1.875	2.50	2.00	2.25	2.00
2.00	3.00	1.875	2.00	1.625	2.00	2.50	2.00	2.25	2.00	2.125	2.00	2.00	1.75	1.625	2.25	2.375	1.50	1.00
2.50	2.50	2.50	2.625	1.625	1.75	2.00	2.25	1.50	2.375	2.00	2.00	1.75	1.875	2.25	2.50	2.375	1.50	1.00
2.00	3.00	2.25	1.125	1.50	1.875	1.50	2.50	2.00	2.125	1.875	2.25	1.375	1.875	2.50	1.75	1.50	3.00	3.00
2.375	1.875	1.875	2.00	1.75	1.50	1.50	1.50	2.50	2.125	1.875	1.75	2.375	1.875	2.50	1.75	1.50	2.00	2.00
2.375	2.50	3.375	1.50	1.75	2.25	2.125	1.875	1.50	1.50	2.00	2.625	1.625	1.75	2.25	2.50	3.50	3.00	3.00
1.875	2.125	2.625	1.00	1.75	2.50	2.50	2.00	2.00	1.50	2.625	2.00	2.875	2.00	2.50	2.00	1.875	2.00	1.875
2.125	2.00	2.75	1.25	1.75	1.75	1.875	2.00	1.625	2.375	2.025	2.00	2.875	2.00	2.50	3.00	3.00	3.00	3.00
2.875	2.00	1.875	1.25	2.00	2.00	2.125	1.00	1.50	2.125	2.25	2.00	2.875	1.625	1.50	1.75	1.50	2.00	1.875
2.875	3.25	2.50	1.50	1.00	1.75	1.50	2.25	2.125	1.625	2.75	1.75	1.75	1.875	2.625	1.50	1.75	2.50	2.00
2.00	2.125	2.75	2.00	1.25	1.50	1.25	1.50	2.50	1.875	1.125	2.00	2.25	1.75	2.50	2.00	2.50	2.50	2.50
2.00	3.00	2.50	1.625	1.25	1.75	2.00	1.50	2.25	1.50	2.00	2.75	2.00	1.50	2.00	1.75	2.00	1.75	2.00
2.50	2.50	1.875	1.625	1.125	1.75	1.50	2.00	1.75	2.00	1.875	2.375	2.50	1.50	3.00	1.875	2.25	2.00	2.00
1.75	2.00	1.875	1.75	1.50	2.00	1.25	1.50	1.625	1.875	2.375	2.60	2.00	2.50	3.00	2.00	1.625	3.25	3.25
2.125	3.00	1.875	2.00	1.50	1.75	1.75	1.50	1.25	2.125	2.50	1.625	2.25	1.75	2.00	2.25	3.00	3.00	3.00
2.00	2.625	2.50	1.75	2.00	1.875	2.00	2.00	1.75	2.025	2.375	1.875	1.125	2.625	2.50	2.00	2.00	2.00	2.00
2.125	2.50	2.00	2.00	1.875	1.50	2.50	1.75	2.00	2.50	2.375	1.625	1.50	2.50	2.75	2.25	3.50	3.00	3.00
2.50	3.00	2.50	1.50	1.50	1.375	1.00	2.25	2.125	1.50	2.375	2.875	2.50	2.00	2.50	2.50	3.00	1.50	1.50
2.50	2.50	2.00	1.625	1.625	1.50	1.75	2.00	2.50	2.00	1.75	2.125	2.50	1.625	2.50	1.875	2.00	2.00	2.00
2.00	3.00	2.125	1.375	2.00	1.75	1.50	1.25	1.50	1.875	2.00	2.00	2.00	1.50	2.00	2.00	2.875	1.50	1.50
2.00	1.875	2.00	1.50	1.50	1.75	2.00	1.50	1.75	2.125	2.00	2.25	2.125	1.75	1.75	2.00	2.25	2.00	2.00
2.00	2.00	2.00	2.00	1.50	1.50	2.00	1.375	2.00	1.625	2.00	2.125	1.625	2.25	2.75	2.125	1.75	1.25	1.25
2.125	2.00	2.75	1.75	1.50	1.75	1.50	2.50	1.50	2.625	2.375	2.25	2.00	1.875	2.50	2.25	2.50	1.50	1.50
2.50	2.00	2.50	1.50	1.25	2.00	1.625	2.00	1.00	1.875	1.75	2.125	2.00	1.875	1.75	2.50	2.75	2.00	2.00
2.00	2.50	2.375	2.00	1.50	1.875	2.75	1.75	2.00	2.125	2.25	2.25	2.375	2.00	2.00	1.75	2.00	2.50	2.50
3.50	2.00	2.75	2.50	2.00	1.50	2.00	1.50	2.125	2.75	3.00	2.50	2.375	2.375	2.25	1.875	2.00	2.25	2.25
1.875	2.25	2.625	1.50	1.375	2.125	1.625	1.375	2.00	2.625	3.50	1.875	2.00	2.125	2.50	1.375	2.50	1.50	1.875
2.125	3.50	2.50	1.75	1.75	2.00	1.75	2.00	1.75	2.625	3.00	2.00	2.375	2.375	2.00	2.00	1.50	2.50	2.125
1.50	3.50	2.00	1.625	1.625	1.75	2.00	2.00	2.25	2.125	2.00	1.625	2.00	2.00	1.50	2.25	2.00	1.50	1.50
2.75	2.25	2.375	1.75	1.50	1.50	1.50	1.75	1.50	1.75	1.75	1.625	2.00	1.50	1.50	2.125	2.25	2.125	1.50
2.125	2.375	2.375	1.875	1.75	1.75	2.50	2.00	2.125	1.75	2.375	2.00	2.00	1.875	1.50	2.00	2.50	1.50	1.50
1.625	2.50	2.60	1.50	1.50	1.75	2.50	1.50	1.00	2.125	2.125	1.75	2.125	2.75	2.00	1.50	2.75	1.50	1.50
2.875	2.25	2.50	1.75	1.25	1.75	2.25	1.625	1.125	2.00	2.50	2.375	1.875	1.50	2.50	1.75	2.00	1.375	2.00
2.875	2.50	2.50	1.00	1.50	2.125	2.25	1.875	1.25	2.00	1.625	2.625	3.00	2.125	2.25	1.875	2.50	2.00	1.375
Totals.....	112.50	120.75	113.25	85.375	78.875	89.875	94.00	90.50	90.75	104.375	107.00	107.75	107.875	96.00	111.50	102.50	114.375	96.125

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.						
Maximum measurements.	B'	3.50	1.3779	B'	2.625	1.0934	B'	2.75	1.0826	B'	3.125	1.2303	B'	3.375	1.3287	B'	3.50	1.3779
	B''	3.50	1.3779	B''	2.00	0.7874	B''	2.50	0.9842	B''	3.50	1.3779	B''	2.75	1.0826	B''	3.50	1.3779
	B'''	3.375	1.3287	B'''	2.50	0.9842	B'''	2.50	0.9842	B'''	3.00	1.1811	B'''	3.00	1.1811	B'''	3.25	1.2796
Highest.....		3.50	1.3779		2.625	1.0934		2.75	1.0826		3.50	1.3779		3.375	1.3287		3.50	1.3795
Minimum measurements.	B'	1.50	0.5905	B'	1.00	0.3937	B'	1.00	0.3937	B'	1.50	0.5905	B'	1.375	0.5413	B'	1.375	0.5413
	B''	1.875	0.5413	B''	1.60	0.3937	B''	1.00	0.3937	B''	1.50	0.5905	B''	1.125	0.4429	B''	1.50	0.5905
	B'''	1.875	0.7380	B'''	1.375	0.5413	B'''	1.00	0.3937	B'''	1.625	0.6937	B'''	1.50	0.5905	B'''	1.00	0.3937
Lowest.....		1.875	0.5413		1.00	0.3937		1.00	0.3937		1.50	0.5905		1.125	0.4429		1.00	0.3937



TABLE I.—Measurements of fineness of wools—Continued.

		PENNSYLVANIA.																			
		RAM-LANDS.						RAMS, 2 YEARS OLD.													
Catalogue number of samples..		779.			582.			583.			584.			585.			580.				
Number of section.....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.		
Actual measurement in centimillimeters.		2.025	2.50	2.00	1.25	1.75	1.50	1.50	1.75	1.50	1.50	1.50	1.50	1.75	1.25	1.25	1.375	1.75	1.50		
		1.875	2.00	2.125	1.25	1.50	1.25	1.25	1.75	1.75	1.625	1.25	1.25	1.50	1.375	1.50	1.50	1.25	1.50	1.50	
		1.50	2.50	1.75	1.25	1.75	1.25	1.50	1.50	1.50	1.50	1.50	1.50	1.375	1.50	1.50	1.625	1.125	1.125	1.75	1.75
		1.625	2.125	2.25	1.125	1.50	1.50	1.50	1.50	1.25	1.25	1.25	1.375	1.25	1.25	1.50	1.25	1.50	2.00	1.50	1.75
		1.875	2.00	2.00	1.50	1.00	1.50	1.50	1.25	1.375	1.50	1.50	1.50	1.25	1.375	1.50	1.625	1.75	1.50	1.875	1.50
		1.75	1.875	1.625	1.25	1.25	1.25	1.50	1.375	1.25	1.875	1.25	1.50	1.875	1.25	1.50	1.125	1.50	1.50	1.75	1.875
		2.50	2.50	2.625	1.50	1.25	1.25	1.25	1.50	1.50	1.50	1.25	1.25	1.125	1.50	1.60	2.00	1.125	1.625	1.50	1.50
		1.75	2.50	2.50	1.25	1.25	1.25	1.25	1.50	1.50	1.25	1.50	1.50	1.50	1.625	1.50	1.625	1.50	1.50	1.50	1.25
		2.50	1.875	2.00	1.25	1.75	1.50	1.50	1.50	1.25	1.25	1.25	1.625	1.25	1.25	1.50	1.375	2.00	2.00	1.50	1.25
		1.75	1.50	2.00	1.25	1.50	1.625	1.25	1.25	1.25	1.375	1.50	1.50	1.25	1.375	1.75	2.00	2.00	1.75	2.00	1.50
		2.375	1.75	2.00	1.125	1.50	1.125	1.50	1.50	1.375	2.00	1.00	1.375	1.375	1.50	2.00	1.75	1.875	1.875	1.50	1.50
		3.00	2.25	1.50	1.00	1.50	1.25	1.25	1.50	1.50	1.25	1.25	1.375	1.25	1.375	1.25	1.375	1.25	2.00	1.75	2.00
		1.75	2.00	2.50	1.00	1.00	1.50	1.50	1.50	1.75	1.50	1.875	1.25	1.50	1.50	1.625	1.50	1.75	1.75	1.75	1.875
		2.00	1.75	2.00	1.50	1.25	1.50	1.50	1.50	1.50	1.25	1.50	1.00	1.125	1.125	1.375	1.75	2.00	2.25	0.75	2.00
		2.00	1.625	2.25	1.375	1.25	1.50	1.50	1.625	1.50	1.75	1.25	1.25	1.25	1.25	1.625	1.50	1.50	1.50	1.50	1.75
		2.00	2.00	1.75	1.375	1.375	1.25	1.25	1.00	1.25	1.50	1.50	1.50	1.125	1.25	1.625	1.75	1.375	1.375	1.375	1.50
		2.00	1.625	1.625	1.25	1.25	1.75	1.50	1.25	1.00	1.25	1.50	1.75	1.375	1.625	1.50	2.00	1.75	1.50	1.50	1.375
		1.875	2.375	1.75	1.25	1.375	1.50	1.50	2.00	1.00	1.375	1.50	1.50	1.375	1.50	1.25	1.75	1.75	1.75	1.75	2.00
		1.625	1.875	2.125	1.75	1.375	1.50	1.50	1.50	1.25	1.50	1.50	1.50	1.625	1.625	1.00	1.75	2.00	1.625	1.50	2.125
		2.125	2.00	2.50	1.50	1.25	1.375	1.50	1.75	1.125	1.50	1.50	1.50	1.25	1.50	1.25	1.50	1.75	1.75	1.75	1.75
1.75	2.125	1.875	1.25	1.25	1.00	1.00	1.375	1.625	1.25	1.00	1.375	1.125	1.125	1.50	1.50	1.75	2.00	1.25	1.50		
2.375	1.50	1.50	1.50	1.25	1.25	1.25	1.50	1.50	1.50	1.625	1.50	1.00	1.75	1.25	1.75	1.025	1.50	1.50	1.50		
2.00	1.875	1.875	1.50	1.25	1.25	1.25	1.00	1.25	1.50	1.75	1.75	1.00	1.50	1.25	2.00	1.75	0.75	1.75	1.75		
2.00	2.025	2.50	1.25	1.50	1.875	1.50	1.50	1.50	1.375	1.25	1.25	1.25	1.625	1.25	2.00	1.50	1.50	1.50	1.50		
2.50	1.875	2.125	1.125	1.50	2.00	2.00	1.75	1.75	1.625	1.50	1.50	1.50	1.50	1.25	1.50	2.00	1.50	1.50	1.50		
1.875	1.75	1.875	1.00	1.25	1.75	1.75	1.625	1.375	1.50	1.50	1.375	1.25	1.50	1.00	1.75	1.50	2.00	1.50	1.50		
2.00	2.25	2.00	2.00	1.50	1.50	1.50	1.25	1.25	1.75	1.25	1.25	1.375	1.50	1.75	1.375	1.75	1.50	1.75	1.75		
2.00	2.25	1.75	1.50	1.50	1.50	1.50	1.50	1.25	1.50	1.50	1.125	1.25	1.50	1.50	1.50	1.75	1.75	1.75	1.50		
1.875	1.625	2.375	1.50	1.75	1.50	1.50	1.75	1.25	1.50	1.50	1.50	1.50	1.25	1.375	1.625	2.25	1.50	1.50	2.00		
1.875	2.50	2.50	1.00	1.25	1.75	1.50	1.25	1.375	1.50	1.50	1.375	1.25	1.50	1.50	1.00	1.75	1.50	2.00	1.50		
2.50	2.00	2.375	1.50	1.75	1.125	1.125	1.00	1.50	1.50	1.50	1.50	1.25	1.25	1.25	1.875	2.00	1.50	2.50	2.50		
2.50	2.25	2.00	1.75	1.75	1.50	1.50	1.25	1.50	1.625	1.25	1.50	1.625	1.375	1.25	2.00	1.125	2.25	1.50	1.50		
1.75	2.00	2.50	2.00	1.50	1.25	1.25	1.125	1.375	1.375	1.875	2.00	1.75	1.25	1.625	1.625	1.50	2.00	1.75	1.75		
1.75	1.875	2.25	2.25	1.50	1.50	1.50	1.25	1.50	1.875	1.75	1.00	1.50	1.50	2.00	1.375	1.50	1.75	1.75	1.875		
1.875	2.00	1.50	2.00	1.50	1.75	1.75	1.25	1.50	1.50	1.50	1.25	1.75	1.25	1.75	1.25	1.50	2.00	1.50	1.75		
2.00	1.50	1.75	1.50	1.50	1.75	1.75	1.50	1.50	1.75	1.50	1.25	1.25	1.625	1.50	1.50	1.75	2.00	1.75	1.75		
2.50	1.75	2.50	1.50	1.25	1.50	1.50	1.625	1.25	1.25	1.50	2.00	1.50	1.50	1.50	1.625	1.75	1.75	1.50	1.50		
2.625	2.00	1.50	1.375	1.25	1.25	1.25	1.50	1.375	2.00	1.375	1.75	1.125	2.00	1.875	1.25	1.50	1.50	1.50	1.75		
2.00	1.875	3.00	1.375	1.25	1.25	1.25	1.50	1.50	1.25	1.375	1.50	1.125	1.375	1.00	1.25	2.00	1.50	1.50	1.50		
2.375	1.75	2.50	1.375	1.00	1.50	1.50	1.50	1.50	1.125	1.75	1.50	1.25	1.125	1.50	1.25	1.75	1.375	1.375	1.50		
2.00	2.25	2.00	1.50	0.875	2.00	2.00	1.75	1.50	1.25	1.50	1.75	1.50	1.50	1.625	1.50	1.50	1.25	2.00	1.50		
2.50	1.50	1.875	1.375	1.25	1.50	1.50	1.25	1.50	2.00	1.75	1.25	1.50	1.50	1.50	1.25	1.125	1.50	1.50	1.75		
2.125	1.75	2.125	1.25	1.50	1.625	1.625	1.25	1.75	1.625	1.00	1.50	1.125	1.125	1.25	1.50	1.50	2.00	1.00	1.00		
1.875	2.00	2.00	1.50	1.25	1.25	1.25	1.25	1.375	1.75	1.25	1.125	1.625	1.25	1.50	1.75	1.25	1.75	1.75	1.125		
2.50	1.875	2.50	1.25	1.50	1.125	1.125	1.50	2.00	1.25	1.75	1.625	1.50	1.00	1.50	1.875	1.50	1.50	1.50	1.75		
1.875	2.125	2.50	1.00	1.50	1.75	1.75	1.50	1.75	1.25	1.625	1.125	1.375	1.50	1.75	2.00	1.75	1.375	1.375	1.50		
2.00	2.875	1.625	1.25	1.625	1.50	1.50	1.50	1.50	1.25	1.25	1.75	1.25	1.625	1.50	2.00	1.75	1.25	1.625	1.625		
2.125	2.00	1.875	1.25	1.25	1.50	1.50	1.25	1.50	1.375	1.25	1.50	1.125	1.25	1.25	1.25	2.00	1.50	1.50	1.50		
2.125	2.50	2.75	1.25	1.25	1.375	1.375	1.50	1.375	1.50	1.875	1.25	1.25	1.375	1.875	1.25	2.00	2.00	1.50	1.50		
2.00	2.00	2.00	1.25	1.50	1.50	1.50	1.50	1.25	1.50	1.625	1.25	1.50	1.25	1.50	1.50	1.50	1.875	1.875	2.00		
Totals.....	103.75	100.375	103.875	67.50	69.125	72.25	73.75	72.25	77.50	72.125	70.625	69.75	72.875	73.000	82.375	85.00	82.25	82.25	82.25		

		No. of section.			In centimillimeters.			In thousandths of inch.											
Recapitulation and reductions:																			
Maximum measurements.		B'	3.00	1.1811	B'	2.25	0.8858	B'	2.00	0.7874	B'	1.875	0.7387	B'	2.125	0.8366	B'	2.25	0.8653
		B''	2.625	1.0334	B''	2.00	0.7874	B''	2.00	0.7874	B''	2.00	0.7874	B''	2.00	0.7874	B''	2.50	0.9842
		B'''	2.00	1.1811	B'''	2.00	0.7874	B'''	2.00	0.7874	B'''	2.00	0.7874	B'''	2.00	0.7874	B'''	2.50	0.9842
Highest.....		3.00 1.1811			2.25 0.8858			2.00 0.7874			2.00 0.7874			2.125 0.8366			2.50 0.9842		
Minimum measurements.		B'	1.50	0.5905	B'	1.00	0.3937	B'	1.00	0.3937	B'	1.00	0.3937	B'	1.00	0.3937	B'	1.125	0.4129
		B''	1.50	0.5803	B''	0.875	0.3448	B''	1.00	0.3937	B''	1.125	0.4429	B''	1.00	0.3937	B''	0.75	0.2953
		B'''	1.50	0.5905	B'''	1.00	0.3937	B'''	1.125	0.4429	B'''	1.00	0.3937	B'''	1.00	0.3937	B'''	1.00	0.3987
Lowest.....		1.50 0.5905			0.875 0.3448			1.00 0.3937			1.00 0.3937			1.00 0.3937			0.75 0.2953		
Average measurements.		B'	2.075	0.8160	B'	1.35	0.5311	B'	1.47	0.5787	B'	1.44	0.5609	B'	1.45	0.5706	B'	1.70	0.6692
		B''	2.008	0.7963	B''	1.33	0.5436	B''	1.44	0.5669	B''	1.41	0.5551	B''	1.40	0.5747	B''	1.64	0.6156
		B'''	2.078	0.8181	B'''	1.44	0.5669	B'''	1.35	0.6132	B'''	1.33	0.5236</						



TABLE I.—Measurements of fineness of wools—Continued.

		PENNSYLVANIA.																		
		RAMS, 2 YEARS OLD.			WETHERS, 2 YEARS OLD.						EWE LAMB.			EWES, 2 YEARS OLD.						
Catalogue number of samples..		587.			780.		781.			575.			576.			772.				
Number of section.....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	
		1.625	1.25	1.125	1.75	1.625	2.00	1.75	1.25	3.00	1.75	2.00	3.00	2.00	1.50	1.50	2.00	2.00	1.625	
		1.25	1.75	1.50	2.00	2.125	1.75	2.00	1.50	2.00	1.75	2.00	3.50	1.50	1.75	1.75	1.75	1.75	2.00	2.00
		1.125	1.50	1.25	2.00	1.50	2.00	1.75	1.375	2.625	2.875	1.25	1.50	1.50	1.75	2.25	2.375	2.375	2.00	2.00
		1.50	1.125	1.25	1.50	2.375	2.50	2.375	2.00	1.50	1.25	1.50	2.00	1.25	2.50	1.875	2.125	1.875	2.00	2.00
		1.50	1.25	1.625	1.625	2.50	2.00	2.875	1.75	2.625	1.00	1.625	1.50	2.00	2.50	1.625	2.375	2.375	2.00	2.00
		1.75	1.50	1.125	1.75	2.25	2.50	2.00	2.50	2.00	2.00	1.75	1.75	1.25	2.00	1.625	1.875	2.00	2.00	2.125
		1.50	1.625	1.25	1.50	2.00	2.00	2.125	1.25	3.00	1.25	1.50	2.00	1.50	2.00	1.75	1.25	1.875	2.00	1.875
		1.375	1.25	1.125	1.75	2.375	2.125	2.00	1.625	2.00	1.50	1.875	1.75	1.125	1.25	2.25	2.375	2.125	2.125	2.125
		1.75	1.25	1.125	2.00	2.00	2.00	2.00	2.00	2.125	1.25	2.125	3.75	2.00	2.00	2.00	2.00	1.625	1.875	1.75
		1.50	1.375	1.50	1.75	2.00	2.00	2.125	1.75	2.375	2.25	1.125	3.75	2.00	2.00	2.00	1.50	2.125	1.875	1.75
		1.50	1.50	1.50	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
		1.50	1.50	1.625	2.125	1.50	1.50	1.75	2.00	1.75	1.875	1.75	2.00	1.75	1.50	1.625	2.00	2.00	2.00	1.875
		1.25	1.50	1.25	1.625	1.50	2.00	1.75	2.00	1.75	1.875	1.75	2.00	1.75	1.50	1.625	2.00	2.00	2.00	2.125
		1.50	1.50	1.50	1.625	1.50	2.00	1.75	2.00	1.75	1.875	1.75	2.00	1.75	1.50	1.625	2.00	2.00	2.00	2.125
		1.625	1.50	1.50	1.75	1.875	2.50	2.00	2.25	2.125	1.875	2.00	2.25	3.00	1.50	2.25	1.375	1.875	2.25	2.375
		1.50	1.25	1.75	1.75	1.875	2.00	2.00	1.50	2.50	1.75	2.00	1.875	2.00	1.875	2.00	1.25	1.875	1.875	2.375
		1.75	1.125	1.75	1.50	2.00	1.625	1.875	1.375	2.125	3.00	1.50	2.00	1.50	2.00	2.25	1.75	1.875	1.75	1.75
		1.60	1.00	1.025	1.75	2.50	2.00	2.50	1.25	2.50	2.25	1.375	2.125	2.00	1.50	1.875	2.25	1.875	2.25	2.25
		1.375	1.625	1.50	1.50	1.75	1.75	1.75	1.375	2.625	1.75	1.025	2.25	1.625	1.75	2.00	2.00	2.00	1.625	2.00
		1.25	1.50	1.50	2.00	1.875	2.00	3.00	2.375	2.75	2.00	1.50	1.75	2.00	2.00	1.75	2.00	2.00	1.625	2.00
		1.50	1.125	1.25	2.00	1.50	2.50	2.50	2.00	1.875	1.25	2.00	1.75	1.875	2.00	1.75	2.00	2.00	2.00	2.00
		1.50	1.50	1.50	1.50	2.00	2.00	2.00	2.00	2.00	1.875	1.25	1.75	1.875	1.125	1.50	1.50	1.50	1.875	2.00
		1.50	1.50	1.625	1.75	2.00	2.00	1.875	1.50	2.50	1.625	2.00	1.875	2.25	2.00	1.625	2.00	2.00	2.00	2.00
		1.50	1.75	1.625	1.75	2.00	2.00	1.875	1.50	2.50	2.00	2.00	1.875	2.00	2.00	1.50	2.00	2.00	2.00	2.00
		1.125	1.50	1.25	2.00	2.00	1.625	2.00	1.50	2.50	2.00	2.00	3.75	1.375	2.00	1.75	1.625	1.625	1.625	1.875
		1.50	1.625	1.125	1.50	2.625	2.00	1.625	2.75	3.00	1.25	1.00	2.00	1.75	2.125	1.875	1.75	1.875	2.00	2.00
		1.375	1.75	1.25	2.00	2.00	2.00	2.50	1.625	2.00	1.125	1.75	2.50	2.00	1.50	1.50	2.00	2.00	2.00	2.00
		1.50	1.50	1.50	1.50	1.025	1.50	2.25	1.50	1.75	1.125	1.50	2.25	1.875	2.00	1.875	1.75	2.00	2.00	2.00
		1.25	1.25	1.25	1.75	2.25	2.00	1.875	2.00	2.75	1.25	1.25	2.75	2.00	2.50	1.50	2.125	1.875	1.875	1.875
		1.50	1.375	1.75	1.50	2.00	1.875	2.00	2.60	2.50	1.50	1.50	1.50	1.50	1.375	1.625	2.125	1.50	2.00	2.00
		1.25	1.00	1.50	2.00	1.50	1.75	2.50	1.75	2.50	1.25	2.00	1.75	1.50	2.25	2.625	2.00	2.00	2.00	2.00
		1.25	1.25	1.625	1.375	2.00	1.50	2.125	2.50	2.125	1.50	1.625	1.25	2.00	1.75	1.625	1.75	2.50	2.00	2.00
		1.50	1.125	1.25	1.75	1.50	2.00	2.50	2.00	2.75	1.50	1.75	1.50	1.50	1.50	1.625	1.75	1.875	1.875	1.50
		1.25	1.375	1.50	1.025	1.75	2.25	2.25	2.25	1.75	1.25	1.875	1.75	2.25	2.00	1.875	2.00	1.875	2.00	2.00
		1.50	1.50	1.50	1.50	2.50	2.00	2.00	1.25	1.875	2.00	1.875	2.00	1.75	1.875	1.75	2.00	2.00	2.25	2.25
		1.625	2.00	1.125	1.50	1.025	1.625	1.025	1.50	1.50	2.50	1.75	2.50	1.50	3.00	1.875	1.625	1.625	1.625	1.875
		1.75	1.50	1.25	1.625	1.75	2.25	2.00	2.875	2.75	1.375	2.00	2.625	1.25	2.00	2.125	2.50	1.625	1.75	1.75
		1.375	1.60	1.50	1.375	2.50	2.125	2.25	3.00	2.125	1.50	2.50	2.00	1.125	2.25	2.00	2.50	2.125	1.50	1.50
		1.75	1.25	1.50	2.00	2.00	1.75	2.375	2.00	2.375	2.00	1.50	1.50	2.00	2.375	1.50	2.125	2.00	2.375	2.375
		1.75	1.60	1.375	2.00	2.00	2.125	2.00	1.75	2.75	2.25	1.375	1.625	2.00	1.875	2.00	2.00	1.75	2.50	2.50
		1.75	1.375	1.60	2.00	2.00	2.00	2.25	2.25	2.50	1.125	8.50	2.00	1.75	1.75	1.875	2.00	1.875	1.625	1.625
		1.50	1.75	1.375	2.50	1.625	2.375	2.00	2.375	2.00	1.25	1.50	1.625	1.875	1.50	1.625	2.125	1.625	2.625	2.625
		1.75	1.25	1.25	2.00	2.125	1.50	2.125	2.25	1.625	1.50	1.25	2.00	2.00	1.50	2.00	2.00	2.15	1.625	1.625
		1.50	1.50	1.50	2.00	2.00	2.625	1.875	2.25	1.125	1.75	2.00	2.00	1.75	1.375	2.125	2.425	2.00	2.00	2.00
		1.875	1.50	1.60	1.375	2.50	2.50	1.75	2.375	1.875	1.25	1.50	1.75	2.00	1.50	1.375	2.125	2.00	2.00	2.00
		1.75	1.60	1.875	1.625	1.75	2.00	1.975	1.50	1.875	1.50	1.375	2.50	1.25	1.75	2.375	2.00	2.125	2.00	1.625
		1.50	1.125	1.875	2.00	1.625	2.50	2.125	3.00	1.75	2.00	2.00	2.25	2.50	2.00	2.00	1.75	2.00	2.00	2.00
		1.50	1.125	1.375	2.00	1.75	2.375	2.00	3.00	1.875	1.25	1.375	2.00	1.50	2.25	2.375	1.875	1.625	2.375	2.375
		1.375	1.25	1.60	2.125	1.875	1.75	2.00	2.25	2.125	2.00	1.75	1.875	2.375	1.125	1.625	1.75	2.00	2.125	2.125
		1.50	1.25	1.60	2.25	2.00	2.00	2.50	1.25	1.875	1.50	1.125	1.125	1.875	1.125	1.60	1.50	2.125	2.50	2.50
Totals.....		75.00	70.00	71.75	80.875	98.375	101.625	104.875	90.00	110.25	83.125	91.875	104.125	88.125	94.50	89.00	07.875	97.75	99.75	

		RAMS, 2 YEARS OLD.			WETHERS, 2 YEARS OLD.						EWE LAMB.			EWES, 2 YEARS OLD.					
Recapitulation and reduction:		No. of section.	In centimillime-ters.	In thousandths of inch.	No. of section.	In centimillime-ters.	In thousandths of inch.	No. of section.	In centimillime-ters.	In thousandths of inch.	No. of section.	In centimillime-ters.	In thousandths of inch.	No. of section.	In centimillime-ters.	In thousandths of inch.	No. of section.	In centimillime-ters.	In thousandths of inch.
Maximum measurements.	B'	1.875	0.7380	B''	2.50	0.9842	B'	3.00	1.1811	B''	3.00	1.1811	B'	2.75	1.0826	B'	2.375	0.9350	
	B''	2.00	0.7874	B'''	2.625	1.0334	B''	3.00	1.1811	B'''	3.125	1.2308	B''	3.00	1.1811	B''	2.50	0.8642	
	B'''	1.875	0.7380	B''''	2.625	1.0334	B'''	3.125	1.2308	B''''	3.125	1.2308	B'''	2.625	1.0334	B'''	2.625	1.0334	
Highest.....		2.00	0.7874		2.625	1.0334		3.125	1.2308		3.75	1.4763							



TABLE I.—Measurements of fineness of wools—Continued.

		PENNSYLVANIA.																	
		EWES, 2 YEARS OLD.																	
Catalogue number of samples..		773.			774.			775.			776.			777.			778.		
Number of section .....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
		1.625	2.125	2.00	2.50	2.50	1.375	1.75	2.375	2.875	1.50	1.50	1.75	1.75	1.75	1.50	2.00	1.375	1.025
		1.00	1.875	2.00	1.75	1.75	1.25	1.875	2.25	2.00	1.50	1.50	2.00	2.125	1.75	1.625	1.875	1.50	2.00
		1.00	1.375	2.50	2.375	2.25	1.50	1.75	3.25	2.00	1.50	1.50	1.875	2.00	1.625	1.50	1.025	3.00	1.375
		1.50	2.125	3.00	1.875	1.75	1.50	1.50	1.875	2.50	1.75	1.50	2.00	1.75	2.00	1.625	1.50	2.00	2.125
		2.00	2.375	2.875	2.00	1.75	1.875	1.50	1.875	2.125	1.625	1.50	2.50	2.00	2.00	1.75	1.75	2.00	2.00
		3.00	1.50	1.125	2.00	1.50	1.50	2.00	1.675	2.625	1.75	2.00	2.00	2.00	2.00	2.00	2.00	1.625	2.00
		1.625	1.50	1.50	1.625	2.00	2.00	2.00	2.125	2.375	1.50	1.50	2.00	2.00	1.50	1.625	2.50	1.375	1.625
		1.875	2.125	2.00	2.50	1.625	2.00	2.375	1.75	1.875	1.69	1.75	2.00	1.50	2.00	1.875	1.25	1.50	1.50
		1.025	1.75	1.875	2.50	1.875	1.75	2.00	2.00	2.50	1.625	1.50	1.75	1.875	1.875	1.50	1.875	1.50	1.625
		2.00	2.375	1.50	3.00	2.00	1.00	2.125	2.50	1.625	1.625	2.00	1.50	1.875	2.125	1.875	1.50	1.50	1.50
		2.125	1.50	1.75	2.50	1.625	1.50	2.25	2.00	2.75	1.75	2.125	2.00	1.75	2.125	1.50	1.50	1.50	1.75
		2.125	1.875	2.375	3.00	1.50	1.50	2.75	2.125	1.25	1.75	2.125	2.00	2.00	1.75	1.875	1.625	2.375	1.50
		1.875	1.50	2.00	1.625	2.00	1.50	1.50	2.00	2.00	1.375	1.875	2.125	2.00	2.50	2.00	1.625	1.875	1.50
		2.00	2.00	1.75	2.50	1.75	1.625	3.00	2.25	1.875	1.50	1.50	2.00	1.625	1.50	1.875	1.875	1.50	1.50
		2.375	1.625	2.00	3.00	1.625	2.00	2.00	2.00	2.50	1.75	1.25	1.875	2.125	1.50	1.75	2.00	1.875	2.00
		1.625	1.625	1.75	1.875	1.875	1.25	1.50	2.125	2.50	1.60	1.50	1.50	1.875	2.25	2.00	1.50	2.00	1.625
		1.875	1.875	2.50	1.75	1.75	1.375	1.875	2.50	2.50	1.625	1.75	2.125	1.875	2.125	1.875	1.75	1.375	1.875
		2.25	1.875	2.00	3.00	1.625	1.50	2.125	1.75	2.50	1.50	2.25	1.125	1.875	2.25	1.75	1.00	2.00	2.00
		2.00	1.875	1.50	2.00	1.75	2.00	2.00	2.50	1.50	1.625	2.125	2.00	1.875	2.00	2.50	2.00	1.50	1.50
		2.00	2.25	2.50	1.50	1.875	1.25	2.50	2.25	1.875	1.625	1.75	1.875	2.00	1.875	1.50	1.50	1.50	2.00
		2.00	1.50	1.75	2.00	1.625	1.00	2.00	2.675	2.50	1.75	2.00	2.00	2.00	2.25	1.50	1.50	2.125	2.50
		2.00	2.375	2.00	2.25	2.50	1.625	1.625	2.125	2.125	1.75	1.50	2.00	1.50	1.75	1.75	2.50	1.625	1.50
		2.50	2.00	2.25	1.875	1.875	2.375	2.50	2.125	2.50	1.50	1.625	2.00	2.50	2.125	1.875	1.75	1.875	1.50
		1.375	1.875	2.00	2.00	2.50	1.50	2.00	3.875	1.75	1.50	1.50	1.625	1.625	1.625	1.75	1.50	2.125	2.00
		2.25	1.875	2.00	2.25	2.125	2.00	2.00	2.50	2.625	2.00	2.50	1.875	2.00	2.125	1.60	1.50	1.75	1.50
		2.375	1.50	2.50	2.00	1.875	2.00	2.00	2.125	2.00	1.60	1.50	1.875	2.25	2.50	1.50	2.00	1.50	2.00
		2.25	2.00	2.00	1.50	2.00	1.50	1.50	2.00	2.25	2.125	2.75	2.25	1.625	2.00	2.00	2.00	2.00	1.625
		1.50	1.50	2.50	2.00	2.00	1.50	1.625	2.00	3.00	1.50	1.025	1.875	1.75	1.50	1.625	1.50	1.625	1.75
		2.25	2.875	2.00	2.00	1.25	1.875	2.50	2.25	2.00	2.25	1.875	1.875	2.125	2.00	1.50	2.125	1.50	1.50
		2.00	2.00	1.75	2.00	1.75	1.50	2.25	2.50	2.25	1.875	1.875	1.375	2.00	1.875	1.875	1.625	1.625	1.375
		2.00	1.50	2.75	2.00	1.875	2.50	1.75	2.25	2.50	1.50	1.875	1.625	1.75	2.00	1.60	1.50	1.50	1.625
		2.00	1.875	2.25	2.00	1.75	2.00	2.125	2.00	1.875	1.50	1.875	2.25	2.00	1.875	2.125	2.00	1.50	1.625
		2.50	2.00	1.625	1.625	1.875	1.875	1.875	2.00	1.875	1.75	2.00	2.00	2.00	1.75	1.50	2.00	1.00	1.875
		2.25	2.00	2.00	2.00	1.875	2.50	2.00	2.125	2.00	2.375	1.875	1.625	1.875	1.50	1.75	1.50	1.25	1.625
		2.00	1.875	2.00	2.00	2.375	1.50	2.50	2.125	1.875	1.025	1.625	1.75	1.875	2.25	1.25	1.50	1.625	2.00
		2.25	1.50	1.75	2.375	2.00	1.50	1.625	2.25	2.00	1.25	2.00	1.25	2.00	1.50	2.125	1.75	2.125	2.75
		2.00	2.125	2.25	2.00	2.00	1.50	2.375	2.00	2.00	2.00	1.50	2.125	2.00	2.00	1.025	1.875	1.375	2.50
		1.50	1.50	1.75	2.00	2.00	1.875	3.00	2.25	1.875	1.50	1.75	2.00	2.00	2.00	1.625	2.00	1.875	2.00
		2.00	1.625	1.625	1.75	1.75	1.75	2.40	2.875	1.625	1.60	1.875	2.375	1.875	1.75	2.00	2.375	2.125	2.00
		1.875	1.875	1.625	2.00	1.50	1.50	1.875	2.25	2.00	1.50	1.50	1.875	2.00	1.50	1.75	1.50	1.625	1.625
		2.50	2.375	1.625	2.00	1.50	2.125	1.875	1.625	1.625	1.50	1.625	1.875	2.00	2.125	1.50	1.75	1.50	1.875
		2.375	2.50	1.25	2.50	1.875	2.25	2.00	3.50	1.875	1.60	1.75	1.375	2.25	1.625	1.875	1.75	1.75	1.75
		2.25	2.50	2.125	1.875	2.00	1.625	2.00	2.00	2.00	1.625	1.875	1.75	1.375	1.625	1.875	2.00	2.00	1.875
		1.50	2.125	1.50	2.25	2.25	1.875	2.125	2.00	2.00	1.75	2.50	1.025	2.25	2.00	1.50	2.125	1.75	1.875
		2.50	2.375	1.50	2.125	1.75	1.50	1.50	2.00	2.50	2.00	1.50	2.00	2.125	1.50	1.60	1.625	1.75	2.50
		2.00	2.50	1.50	1.875	1.50	1.875	1.50	2.00	1.50	1.625	1.025	1.50	2.125	1.875	1.625	2.00	2.50	1.50
		2.25	1.75	1.875	2.50	2.125	1.375	2.00	2.875	1.875	1.50	1.75	2.50	1.875	1.50	1.375	2.00	1.375	1.875
		1.875	1.50	2.00	2.50	1.50	2.00	2.50	2.875	2.60	1.50	1.50	2.00	2.125	1.375	1.875	2.00	2.00	2.00
		2.00	1.75	1.875	1.50	1.50	1.25	1.875	3.50	1.875	2.025	1.875	1.625	2.00	2.00	1.50	1.75	1.50	1.875
Totals.....		102.375	94.625	99.25	106.75	92.60	83.375	100.375	112.25	100.875	82.625	88.625	91.50	100.375	94.375	83.125	90.50	87.25	91.25

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reductions:																		
Maximum measurements.	B'	2.00	1.1811	B'	3.00	1.1811	B'	3.00	1.1811	B'	2.375	0.9350	B'	2.50	0.9842	B'	2.50	0.9842
	B''	2.50	0.9842	B''	2.50	0.9842	B''	3.50	1.3779	B''	2.75	1.0826	B''	2.25	0.8858	B''	3.00	1.1811
	B'''	2.875	1.1316	B'''	2.50	0.9842	B'''	3.00	1.1811	B'''	2.50	0.9842	B'''	2.25	0.8858	B'''	2.50	0.9842
Highest.....		3.00	1.1811		3.00	1.1811		3.60	1.3779		2.75	1.0826		2.50	0.9842		3.00	1.1811
Minimum measurements.	B'	1.875	0.5413	B'	1.50	0.5905	B'	1.50	0.5905	B'	1.25	0.4921	B'	1.375	0.5413	B'	1.25	0.4921
	B''	1.375	0.5413	B''	1.25	0.4921	B''	1.50	0.5905	B''	1.25	0.4921	B''	1.25	0.4921	B''	1.00	0.3937
	B'''	1.25	0.4921	B'''	1.00	0.3937	B'''	1.50	0.5905	B'''	1.125	0.4429	B'''	1.375	0.5413	B'''	1.375	0.5413
Lowest.....		1.25	0.4921		1.00	0.3937		1.50	0.5905		1.125	0.4429		1.25	0.4921		1.00	0.3937
Average measurements.	B'	2.048	0.8062	B'	2.135	0.8405	B'	2.008	0.7905	B'	1.953	0.6507	B'	2.003	0.7905	B'	1.81	0.7125
	B''	1.893	0.7452	B''	1.85	0.7283	B''	2.245	0.8838	B''	1.773	0.6060	B''	1.888	0.7493	B''	1.745	0.6870
	B'''	1.965	0.7814	B'''	1.698	0.6566	B'''	2.138	0.8417	B'''	1.89							











TABLE I.—Measurements of fineness of wools—Continued.

		PENNSYLVANIA.																	
		RAMS—MISCELLANEOUS SAMPLES.												EWES—MISCELLANEOUS SAMPLES.					
Catalogue number of samples..		569.			572.			573.			579.			585.			590.		
Number of section.....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
	2.50	1.50	2.00	1.50	1.875	1.75	3.00	1.625	2.50	2.00	1.50	2.00	2.00	2.00	2.50	1.50	1.625	1.375	1.375
	2.00	1.50	1.75	2.00	2.375	2.00	2.75	2.00	2.50	2.00	2.00	1.75	1.75	2.50	2.00	1.625	1.25	1.75	1.50
	2.00	1.625	1.50	2.00	2.00	1.50	2.00	2.00	2.00	2.25	1.75	1.75	2.00	2.50	2.25	2.375	1.50	2.375	2.375
	1.50	1.50	2.00	1.50	2.00	2.00	1.875	2.25	2.25	1.75	1.50	2.50	2.00	2.00	2.00	2.00	2.00	2.00	1.50
	1.75	2.00	2.00	1.75	1.875	1.75	2.875	2.00	2.00	1.75	2.625	2.25	2.00	1.625	1.50	2.625	1.75	1.50	2.00
	1.625	1.655	2.50	2.00	1.625	1.50	2.125	2.00	2.125	2.00	2.00	2.25	2.00	2.00	2.25	1.75	1.50	2.50	2.875
	1.50	2.00	1.75	1.875	1.75	2.00	2.375	1.875	1.25	2.25	2.00	2.375	2.00	3.00	2.00	3.00	2.125	1.50	1.625
	1.25	1.50	1.50	1.75	1.625	2.00	3.25	2.625	2.50	2.00	2.25	2.00	2.00	1.25	1.50	2.50	2.00	2.75	2.50
	1.50	1.50	1.50	1.75	1.75	2.00	1.75	3.75	3.75	2.25	2.50	2.00	2.00	2.00	2.50	2.375	1.50	2.00	1.375
	2.00	2.50	1.50	1.875	2.00	1.375	2.50	2.50	2.75	2.00	1.75	2.50	1.50	1.50	2.00	2.50	1.75	1.50	1.75
	1.50	1.50	2.00	2.00	1.75	2.50	2.625	2.50	2.00	2.00	2.25	2.50	2.25	2.25	1.50	2.50	1.625	1.50	2.00
	2.00	2.00	1.50	2.00	2.50	1.625	1.625	2.50	2.50	1.75	2.50	2.25	2.25	2.00	2.00	2.125	2.625	1.375	2.00
	2.00	2.50	2.00	2.125	2.00	1.75	2.875	1.75	2.125	1.50	2.50	2.00	2.00	2.25	2.00	2.00	1.25	2.00	2.00
	1.25	1.75	2.00	1.75	1.875	1.50	2.125	2.125	3.50	2.50	2.625	2.50	1.50	2.00	2.00	1.50	1.75	1.875	2.00
	1.25	1.50	1.75	1.50	2.00	2.00	2.125	2.00	1.875	2.00	2.00	2.00	2.00	1.50	1.50	2.375	1.50	1.50	2.875
	1.875	1.50	2.75	2.00	2.00	1.875	1.75	1.50	1.50	1.75	2.50	1.25	2.00	2.00	1.875	1.50	2.125	2.00	2.00
	1.50	1.50	1.50	1.875	2.125	1.625	2.25	4.50	2.00	1.75	2.50	3.25	2.00	2.00	2.00	2.375	1.50	1.875	1.875
	1.60	2.00	1.75	1.625	1.75	1.50	3.00	3.00	2.25	1.50	1.75	2.00	2.50	1.50	2.00	1.875	1.50	1.625	1.625
	1.75	1.75	2.00	1.50	1.50	1.50	1.50	1.50	2.50	1.50	2.00	2.00	2.00	2.50	2.50	1.75	2.00	1.625	1.625
	2.00	1.655	2.00	1.50	1.50	3.625	2.00	2.50	2.125	2.00	2.25	2.00	2.25	2.50	1.50	3.125	1.50	1.25	2.125
	2.00	1.75	2.00	1.625	2.375	1.50	2.25	2.50	2.375	2.25	2.25	2.625	1.75	3.00	2.125	2.875	2.875	1.875	1.875
	1.75	1.25	1.50	1.75	2.00	2.125	2.00	1.125	2.00	2.00	1.875	1.75	2.00	2.00	2.25	2.00	2.00	2.00	2.00
	1.25	1.50	2.00	2.00	1.50	1.875	2.50	1.50	2.00	3.00	2.50	1.75	2.00	2.00	3.50	1.25	2.00	1.50	1.50
	2.00	2.00	1.75	2.00	1.625	1.75	1.75	2.00	2.375	2.25	2.50	2.75	2.00	2.00	1.50	1.875	1.50	2.00	2.00
	2.50	1.50	2.00	1.75	2.50	1.625	3.00	1.75	2.50	2.50	1.875	2.75	2.00	1.50	3.00	1.875	1.00	1.875	1.875
	2.00	1.25	1.625	2.25	1.625	1.50	2.50	2.00	2.00	2.50	2.25	2.625	2.00	2.00	2.125	1.625	1.875	2.50	2.50
	1.50	2.00	2.00	1.50	2.00	1.625	1.875	1.875	1.875	2.00	2.50	1.75	2.00	2.00	2.75	1.875	1.25	1.50	1.50
	2.00	1.75	2.125	1.625	1.75	1.75	3.125	2.00	2.00	2.00	2.625	2.00	2.00	2.00	2.00	1.50	1.375	1.50	1.50
	1.25	1.75	1.875	1.875	2.00	2.25	2.50	2.25	2.50	3.25	2.375	1.50	2.00	2.00	1.875	1.50	1.125	1.625	1.625
	1.625	2.00	1.50	1.625	2.00	2.00	1.75	1.75	2.125	2.00	2.50	2.125	1.50	1.50	2.00	2.50	1.875	1.875	1.875
	2.00	1.50	2.00	2.00	1.75	2.00	2.625	2.125	3.00	2.50	2.50	2.00	3.50	2.00	1.625	2.00	2.00	1.50	1.50
	2.50	1.625	2.00	1.75	2.25	1.50	2.50	1.75	2.375	2.50	2.00	2.50	2.00	2.00	2.375	2.00	1.625	2.00	2.00
	1.75	1.50	1.875	1.75	2.00	2.125	2.00	2.00	2.00	2.25	1.75	2.50	1.50	1.50	2.00	2.25	1.50	2.50	1.75
	1.00	1.75	1.25	1.50	1.50	1.75	3.00	2.00	2.125	2.50	2.125	1.875	2.00	2.00	2.50	1.875	2.50	1.00	1.125
	1.25	1.50	1.375	1.50	1.75	1.875	2.25	2.375	2.00	2.50	2.00	1.50	2.00	1.50	2.00	1.00	2.00	2.00	1.25
	2.00	2.50	1.50	2.00	2.00	2.375	2.75	2.00	2.00	2.25	1.50	2.125	1.75	2.25	2.125	1.125	1.25	2.125	2.125
	2.00	1.75	1.50	1.875	2.00	2.375	2.25	1.75	2.125	3.00	2.00	2.00	2.25	2.00	2.50	2.375	1.50	2.00	2.125
	2.50	2.50	3.00	2.00	1.625	1.75	1.75	1.75	2.00	2.00	2.50	1.00	3.00	2.00	1.75	1.625	1.625	1.625	1.625
	1.50	1.50	2.60	1.25	2.125	2.00	2.00	2.125	2.00	1.75	3.00	1.75	2.00	2.00	1.875	2.875	2.00	2.00	2.00
	1.625	1.75	2.00	2.00	2.00	1.75	2.75	1.50	2.125	2.25	1.50	1.75	1.50	1.50	2.75	2.625	1.50	2.375	3.50
	2.00	1.50	2.00	1.75	2.00	1.75	2.50	1.625	1.75	1.875	2.00	2.50	1.75	2.00	2.00	1.875	1.50	1.875	2.75
	1.375	2.00	1.50	2.00	1.625	1.75	2.00	3.00	3.875	1.875	2.25	2.625	1.50	1.50	1.875	1.625	2.00	1.75	1.625
	1.50	1.00	1.25	1.875	2.00	1.75	2.00	1.75	3.75	2.125	8.00	2.00	2.00	2.00	2.375	1.50	1.50	1.50	1.625
	1.50	1.25	2.00	1.75	2.75	2.50	2.125	1.75	2.50	1.625	2.50	2.25	1.50	2.00	2.00	1.50	1.50	1.625	2.75
	1.50	1.50	2.00	2.00	2.50	1.50	1.625	1.60	2.50	1.625	2.50	1.75	2.00	1.50	1.875	2.375	2.00	2.00	2.75
	1.625	2.00	1.50	2.00	2.50	1.75	2.625	2.00	2.50	2.375	2.25	1.875	2.00	1.75	1.625	1.625	1.375	2.00	2.00
	1.75	1.625	2.00	2.50	1.625	1.875	2.50	3.50	1.625	2.375	2.00	2.00	3.50	1.50	2.00	2.625	1.50	2.00	2.625
	2.00	1.25	1.00	1.76	1.50	2.00	2.50	2.50	2.625	2.00	1.75	1.75	2.00	1.50	2.25	1.375	1.75	2.25	2.25
	1.50	1.625	1.75	1.75	2.00	1.875	3.50	1.625	4.375	1.75	2.00	2.00	1.50	1.50	1.75	1.75	1.875	2.125	2.125
	1.75	2.50	2.00	1.875	1.875	2.50	2.625	1.50	3.625	1.50	2.125	2.125	3.00	1.75	1.875	2.00	1.50	2.125	2.125
Totals .....	86.25	85.25	92.125	91.25	96.625	92.125	118.00	103.375	115.75	106.125	108.50	105.375	101.375	97.50	110.125	89.75	86.875	90.75	90.75

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:																		
Maximum measurements.	B'	2.50	0.9842	B'	2.25	0.8858	B'	3.50	1.3779	B'	3.25	1.2795	B'	3.50	1.3779	B'	2.875	1.1318
	B''	2.50	0.9842	B''	2.75	1.0826	B''	4.50	1.7716	B''	3.00	1.1811	B''	3.00	1.1811	B''	2.875	1.1318
	B'''	3.00	1.1811	B'''	2.50	0.9842	B'''	4.375	1.7224	B'''	3.25	1.2795	B'''	3.50	1.3779	B'''	3.50	1.3779
Highest .....		3.00	1.1811		2.75	1.0826		4.50	1.7716		3.25	1.2795		3.50	1.3779		3.50	1.3779
Minimum measurements.	B'	1.00	0.3937	B'	1.50	0.5905	B'	1.50	0.5905	B'	1.50	0.5905	B'	1.25	0.4921	B'	1.00	0.3937
	B''	1.00	0.3937	B''	1.50	0.5905	B''											



TABLE I.—Measurements of fineness of wools—Continued.

Catalogue number of samples..	PENNSYLVANIA.									WISCONSIN.								
	EWES—MISCELLANEOUS SAMPLES.									RAMS, 1 YEAR OLD.								
	567.			568.			571.			736.			737.			738.		
	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
	1.50	1.875	1.60	1.50	2.375	1.00	2.125	1.75	1.625	1.00	2.50	1.625	2.00	2.50	3.00	2.00	2.50	2.50
	1.75	2.00	1.50	2.25	2.00	1.50	1.875	1.50	1.625	1.25	1.75	2.00	2.125	2.25	2.375	2.25	1.75	2.375
	1.875	2.00	1.375	2.25	4.00	2.25	1.25	1.50	1.75	2.125	1.675	2.25	2.25	2.25	2.125	2.25	2.25	2.00
	1.625	2.25	1.375	2.875	2.60	1.75	1.375	1.375	1.75	1.75	2.00	2.75	1.875	1.625	1.875	2.125	2.625	1.75
	1.625	2.25	1.50	1.625	2.125	2.50	2.125	1.50	2.25	2.60	2.25	2.50	2.125	2.125	1.75	2.00	3.00	1.50
	1.25	1.50	1.50	2.50	2.50	1.125	2.00	1.25	1.50	2.625	2.00	2.125	2.50	2.00	2.00	1.25	2.00	1.625
	2.00	2.50	1.375	1.50	2.00	2.50	2.125	1.25	1.50	2.00	2.00	2.25	2.25	2.00	1.625	1.375	2.50	2.00
	1.50	1.025	1.50	1.50	2.125	2.00	1.25	1.50	2.00	2.25	2.875	1.675	2.125	2.125	1.125	1.875	2.00	2.25
	1.75	2.00	1.875	1.50	2.50	1.50	1.375	1.375	1.75	1.50	2.50	1.625	2.00	2.00	1.50	2.00	2.25	2.50
	1.75	1.625	1.625	2.25	2.50	2.375	1.50	1.25	1.75	1.75	2.125	2.00	1.625	2.375	1.50	2.125	2.875	
	1.875	1.50	1.60	3.00	2.00	2.00	1.25	1.75	1.50	1.875	2.00	1.75	2.50	2.25	2.00	2.00	1.75	1.60
	1.50	1.625	2.00	1.50	2.25	2.25	1.875	1.50	1.625	2.00	2.00	1.625	2.50	2.875	2.00	1.875	2.00	
	1.75	1.75	1.625	1.50	2.00	2.25	1.125	1.25	2.50	2.25	2.25	2.50	2.25	2.00	1.625	1.625	1.75	
	1.625	1.50	1.50	1.50	2.25	1.75	1.375	1.50	2.00	1.50	2.875	1.875	1.75	2.25	1.625	2.00	2.25	
	1.75	1.50	1.375	2.50	1.75	1.875	1.375	1.50	1.75	1.625	2.50	1.75	2.00	2.75	2.00	1.875	2.00	2.00
	1.50	2.00	1.25	2.00	2.00	2.00	1.25	1.50	1.75	2.50	2.125	2.00	1.60	1.875	1.75	2.125	1.75	
	2.50	2.00	1.125	1.50	2.50	2.00	1.50	1.50	1.625	2.00	2.25	1.625	1.25	2.00	2.125	1.75	1.50	
	1.625	1.875	1.625	1.50	2.00	2.00	1.375	1.375	2.00	2.00	2.50	1.75	1.875	1.75	2.375	1.60	2.25	
	1.625	2.00	2.00	2.00	2.00	1.75	1.875	1.50	1.60	2.125	1.50	1.625	1.875	2.125	1.50	2.50	2.50	
	1.50	2.00	1.50	1.50	2.50	2.75	1.25	1.125	2.00	1.875	2.25	2.00	2.00	2.00	1.625	1.50	2.25	
	2.00	1.75	1.50	1.375	2.25	1.50	1.625	1.25	1.75	1.75	1.875	2.375	1.625	1.50	2.00	2.125	1.875	
	1.875	2.00	2.125	2.75	1.75	1.875	1.25	1.50	2.00	1.00	2.50	2.125	1.75	1.75	1.50	1.75	1.25	
	1.875	1.75	1.75	2.00	1.50	2.50	1.25	2.00	1.625	1.50	2.00	1.75	1.50	1.50	2.125	1.625	2.125	
	1.625	1.75	1.75	2.25	2.25	1.875	1.25	1.50	2.625	1.625	2.25	1.625	2.75	1.625	2.00	1.75	2.00	
	1.50	2.00	1.50	2.25	2.375	2.50	1.50	1.50	2.60	2.00	2.375	2.00	2.00	2.25	2.00	2.25	1.875	
	1.50	1.75	1.75	1.875	3.00	2.125	1.75	1.75	1.625	1.50	2.00	2.25	1.875	1.60	2.00	1.875	1.625	
	2.00	1.50	1.50	1.25	2.875	2.50	1.25	1.50	1.375	1.75	2.25	2.125	1.375	2.575	1.50	2.125	2.375	
	1.25	2.00	1.625	1.625	2.00	2.625	1.375	1.75	1.50	2.125	2.25	1.875	2.125	1.50	2.375	2.25	2.00	
	1.875	2.875	2.00	1.625	1.75	2.00	1.50	1.25	1.50	2.00	1.875	2.00	1.75	2.00	2.00	1.50	1.00	
	1.625	1.375	1.125	2.375	2.00	3.25	1.125	1.75	1.75	1.75	2.00	1.50	1.625	1.25	2.00	1.625	2.125	
	1.75	2.00	1.625	2.125	2.25	2.50	1.25	1.50	1.75	1.875	2.375	2.125	1.50	1.75	2.00	2.00	2.00	
	1.875	1.875	1.625	1.50	1.50	1.75	1.875	2.00	1.75	1.625	2.25	2.00	1.75	1.625	2.00	1.25	2.25	
	1.625	1.75	1.50	2.53	2.50	2.00	1.375	1.375	1.625	2.00	2.25	2.50	1.125	1.50	1.875	2.00	2.00	
	1.50	1.50	1.50	1.875	3.25	1.625	1.875	1.875	1.625	2.25	2.00	1.625	2.25	1.75	2.00	2.125	1.625	
	2.00	1.625	1.625	1.75	2.00	1.75	1.375	1.125	1.375	2.00	2.125	1.875	2.00	1.50	1.75	2.25	2.25	
	2.60	1.75	1.375	2.00	1.875	3.875	1.625	1.375	1.25	1.875	3.00	2.25	1.50	1.875	2.00	2.125	1.33	
	1.50	2.00	1.50	2.00	2.00	2.00	1.75	1.75	2.00	2.00	2.00	1.25	1.625	1.50	2.25	2.50	1.125	
	2.125	1.50	2.125	1.875	2.00	2.50	1.375	1.875	1.625	2.00	2.00	2.125	1.875	1.75	1.875	1.875	2.00	
	2.00	2.00	1.75	2.00	2.00	2.25	1.75	1.375	1.75	1.50	2.00	2.50	2.00	2.125	1.875	1.50	1.125	
	2.125	1.50	1.75	2.50	2.00	2.00	1.625	1.25	1.375	1.625	2.00	2.00	1.50	2.00	2.25	1.75	2.00	
	2.25	1.75	1.25	2.00	2.125	1.875	1.25	1.125	1.625	1.75	1.875	1.75	1.50	1.50	2.25	1.875	2.125	
	1.875	1.75	1.375	1.875	2.125	2.00	1.875	1.00	1.25	2.00	2.00	1.875	1.625	2.125	2.00	2.125	1.75	
	2.00	1.75	1.625	2.125	2.50	2.00	1.125	1.00	2.125	1.25	2.00	1.375	1.25	2.00	2.00	2.00	1.625	
	1.50	1.75	1.50	2.50	1.75	1.875	1.875	1.375	1.875	2.125	1.875	2.125	1.75	1.00	2.125	1.50	1.625	
	2.125	2.125	1.625	2.125	2.50	1.875	1.50	1.50	2.00	1.75	2.25	1.125	2.00	2.00	2.00	2.00	1.50	
	2.00	1.50	2.00	1.875	2.75	1.875	1.875	1.125	1.50	1.875	2.25	2.125	2.00	2.25	1.625	1.875	1.50	
	1.625	2.00	1.625	1.50	2.00	2.00	1.00	1.50	1.75	2.00	2.00	1.875	2.125	1.75	2.00	1.75	2.00	
	1.75	1.50	2.00	2.00	1.50	2.00	1.50	1.50	2.125	2.125	1.875	2.00	1.125	1.50	1.875	2.25	2.25	
	1.875	1.75	2.00	2.00	1.75	2.00	1.125	1.50	1.50	1.875	2.25	2.00	1.625	2.25	1.75	2.00	2.00	
	1.25	1.75	1.625	1.25	2.25	1.875	1.375	1.375	2.00	1.75	2.00	1.875	1.50	2.00	2.00	1.50	2.125	
Totals .....	87.75	90.75	79.75	97.00	108.50	104.625	72.875	72.50	87.875	93.50	106.875	98.875	87.625	96.25	96.50	94.50	101.875	84.00

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.						
Maximum measurements.	B' 2.50 B'' 2.50 B''' 2.125	0.9842 0.9812 0.8366	B' 2.00 B'' 4.00 B''' 3.375	1.1811 1.5748 1.3287	B' 2.125 B'' 2.00 B''' 2.625	0.8366 0.7674 1.0894	B' 2.625 B'' 2.00 B''' 2.75	1.0331 1.1811 1.0620	B' 2.50 B'' 2.75 B''' 3.00	0.9842 1.0826 1.1811	B' 2.75 B'' 3.00 B''' 2.50	2.75 3.00 2.50	1.0820 1.1811 0.9842		
Highest .....	2.50	0.9842	4.00	1.5748	2.625	1.0894	3.00	1.1811	3.00	1.1811	3.00	3.00	1.1811		
Minimum measurements.	B' 1.25 B'' 1.875 B''' 1.00	0.4921 0.5413 0.3937	B' 1.25 B'' 1.50 B''' 1.50	0.4921 0.5905 0.5905	B' 1.00 B'' 1.00 B''' 1.25	0.3937 0.3937 0.4921	B' 1.00 B'' 1.75 B''' 1.25	0.3937 0.6889 0.4921	B' 1.125 B'' 1.00 B''' 1.50	0.4429 0.3937 0.5905	B' 1.25 B'' 1.00 B''' 1.125	1.25 1.00 1.125	0.4921 0.3937 0.4429		
Lowest .....	1.00	0.3937	1.25	0.4921	1.25	0.3937	1.00	0.3937	1.00	0.3937	1.00	0.3937	1.00		
Average measurements..	B' 1.735 B'' 1.813 B''' 1.595	0.6909 0.7145 0.6279	B' 1.94 B'' 2.17 B''' 2.092	0.7637 0.8543 0.8236	B' 1.40 B'' 1.45 B''' 1.75	0.5747 0.5703 0.6880	B' 1.87 B'' 2.137 B''' 1.076	0.7362 0.8113 0.7787	B' 1.753 B'' 1.625 B''' 1.03	0.6905 0.7578 0.7598	B' 1.80 B'' 2.038 B''' 1.08	0.7419 0.8023 0.6614			
Average .....	1.721	0.6775	2.00	0.8110	1.55	0.6102	1.995	0.7834	1.57	0.7362	1.87	0.7362			
Measurements above average..	75		61		58		94		86		90				
Measurements below average..	75		89		92		56		64		51				



TABLE I.—Measurements of fineness of wools—Continued.

		WISCONSIN.																	
		RAMS, 1 YEAR OLD.												RAMS, 2 YEARS OLD.					
Catalogue number of samples.	Number of section .....	747.			748.			749.			750.			751.			752.		
		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
		1.875	1.875	1.75	2.50	2.25	3.25	2.25	1.75	2.00	1.75	1.50	1.875	2.00	1.50	1.50	2.25	2.25	1.625
		1.75	2.00	1.50	2.375	2.50	2.25	2.75	2.00	1.50	1.75	1.50	2.125	1.75	1.50	1.75	2.75	2.75	2.375
		1.75	1.75	1.875	2.50	2.375	1.50	2.25	3.00	1.75	2.25	1.625	2.25	2.00	1.25	2.00	2.25	2.25	2.875
		1.75	2.50	2.00	1.625	1.875	2.375	2.25	2.25	1.625	2.00	1.00	1.50	1.50	2.00	1.50	2.00	1.50	2.00
		1.50	2.375	1.625	1.25	2.50	2.25	1.875	2.00	3.125	2.00	2.125	1.875	1.625	1.75	1.625	2.00	2.00	1.625
		1.875	2.25	1.875	2.00	2.00	2.00	1.625	1.25	2.50	1.75	1.50	1.375	2.00	1.50	1.75	2.125	1.50	1.75
		2.00	2.00	1.50	2.00	1.875	2.25	1.75	1.75	1.625	1.50	2.00	1.75	1.625	2.00	1.25	2.25	2.25	3.00
		2.00	2.125	1.50	2.125	1.875	2.375	1.625	1.625	2.00	1.75	2.25	2.00	2.00	2.00	1.25	2.00	2.50	2.00
		1.75	1.875	1.625	2.00	2.375	1.75	2.125	1.625	1.25	1.50	1.50	1.50	1.50	1.75	1.625	2.50	2.25	1.625
		3.125	2.00	1.50	1.75	2.00	1.50	2.50	1.625	1.75	2.375	1.25	2.00	1.625	1.50	1.50	2.875	2.00	2.25
		1.50	2.25	1.75	1.875	1.875	2.00	2.125	1.25	2.00	2.50	2.00	2.00	1.50	1.50	1.50	1.50	1.50	2.25
		1.25	2.00	1.875	1.75	1.75	2.50	2.25	2.00	1.50	1.50	2.50	2.00	1.25	2.00	1.625	2.00	1.625	2.00
		1.25	2.125	1.875	2.00	1.50	2.625	2.25	2.50	1.00	1.50	2.375	1.75	1.50	1.125	1.625	2.00	1.50	1.625
		1.375	1.875	1.50	2.50	1.625	3.25	2.50	1.50	1.50	1.00	2.125	1.625	2.00	1.75	1.875	2.25	2.25	2.125
		1.875	1.75	1.50	2.50	3.00	1.75	2.25	1.50	2.00	1.375	2.00	2.25	1.25	1.50	1.50	2.125	2.125	1.875
		1.50	2.00	1.75	1.625	2.375	1.75	2.00	1.625	1.25	1.50	1.875	2.00	1.375	1.625	2.50	2.25	2.125	2.00
		2.00	2.25	2.00	2.00	1.00	2.125	2.50	1.75	1.75	1.625	2.125	1.50	1.50	2.125	2.00	2.00	2.00	2.00
		1.75	1.875	1.50	2.125	2.25	2.00	2.375	1.50	2.25	1.75	1.625	1.50	2.00	1.125	2.125	3.375	1.875	1.75
		2.25	2.00	1.875	1.75	2.50	1.75	1.50	1.50	1.50	1.00	1.50	2.00	1.625	1.50	2.50	3.75	2.75	2.25
		2.25	2.00	1.875	2.00	2.875	1.875	2.00	1.625	1.50	1.25	2.50	1.75	2.00	2.00	2.00	2.00	1.875	2.00
		2.125	2.00	1.75	1.875	1.50	1.75	2.25	1.625	2.50	1.75	1.50	2.00	1.50	2.50	2.00	2.00	2.00	2.50
		1.25	1.75	1.75	2.125	2.00	1.75	2.50	2.00	2.00	2.00	2.00	2.25	1.50	1.50	1.50	2.00	2.125	1.875
		1.725	1.625	2.00	2.00	2.25	1.625	2.00	1.50	2.00	1.25	1.25	1.50	1.25	1.50	2.00	2.00	1.75	1.625
		1.75	1.75	2.25	1.25	2.375	1.875	1.875	1.25	1.50	1.00	1.50	1.50	2.00	2.00	1.25	2.25	1.875	1.75
		1.25	1.625	1.75	2.50	2.25	2.00	1.75	1.50	1.50	1.625	2.00	1.25	1.125	1.50	2.25	2.375	2.125	2.50
		2.00	1.625	2.375	2.00	2.00	1.75	1.50	1.50	2.25	1.50	2.00	2.125	1.625	1.625	1.50	2.50	2.125	2.00
		1.50	1.50	2.25	1.375	2.125	2.00	2.325	1.50	1.75	1.00	1.875	1.75	2.00	1.025	1.50	1.75	1.50	1.625
		1.625	1.75	2.25	2.125	1.875	2.125	2.00	2.50	1.50	1.25	2.00	2.125	1.50	1.25	2.00	1.625	1.625	1.75
		1.75	2.375	2.00	2.00	2.00	2.375	2.125	2.00	1.50	1.125	2.50	1.75	2.00	2.00	3.00	1.875	1.50	1.50
		1.875	2.375	1.75	1.75	2.00	2.00	1.75	2.00	1.75	1.125	1.25	2.00	2.125	2.625	2.75	2.50	2.00	
		2.25	2.00	2.125	1.875	1.75	2.25	2.75	1.625	1.375	1.25	1.375	1.50	1.25	1.00	1.50	2.00	2.00	
		1.75	1.50	1.50	1.125	1.625	2.375	1.375	1.50	1.375	1.625	1.50	2.00	1.50	2.50	2.50	2.125	2.00	
		1.75	1.875	1.75	1.75	1.75	2.25	1.25	1.50	2.00	2.125	1.00	1.50	1.25	1.875	2.00	2.125	2.00	
		1.625	1.875	1.625	1.875	1.50	2.00	2.875	1.75	1.50	1.50	1.25	2.00	1.50	1.75	2.00	2.125	2.00	
		1.375	2.00	1.625	1.50	2.25	1.375	2.375	2.50	2.00	1.00	1.25	2.00	1.50	1.625	1.75	2.50	1.625	
		1.875	1.75	1.50	2.00	1.75	2.25	2.00	3.00	2.125	2.00	2.50	1.625	1.25	1.25	1.75	2.50	2.00	
		1.25	2.00	2.00	2.625	1.625	2.125	2.00	0.75	1.50	1.50	1.50	1.50	1.00	1.125	1.75	1.25	2.375	
		1.50	2.00	1.875	2.125	1.75	2.00	2.375	1.50	1.625	1.375	1.625	2.00	1.00	2.00	1.50	2.125	1.75	
		1.625	2.375	2.375	1.50	1.75	2.125	3.00	1.50	1.025	1.375	1.625	2.00	1.50	2.50	2.00	2.125	2.375	
		1.75	2.00	1.50	1.50	2.00	2.00	1.25	1.25	1.50	1.75	1.50	1.625	1.75	1.50	2.00	2.125	2.125	
		2.125	2.00	1.625	2.00	2.75	1.75	1.875	1.75	1.625	1.00	1.625	1.75	1.75	1.50	2.00	2.125	2.00	
		2.00	1.75	1.75	1.75	2.375	1.75	2.00	1.00	1.75	1.25	2.25	2.00	1.25	2.00	1.875	2.25	1.50	
		2.00	1.625	2.125	2.25	1.50	2.00	2.00	1.00	1.50	1.75	2.00	1.125	1.625	2.00	1.375	2.25	1.50	
		2.00	1.50	1.875	2.00	1.50	1.875	1.875	1.625	2.00	1.50	1.75	1.00	1.25	2.00	2.50	2.00	1.375	
		1.875	1.75	1.75	3.25	2.00	2.125	2.50	1.50	1.625	1.50	2.50	2.00	2.50	2.00	2.50	2.00	1.50	
		1.50	2.00	1.875	2.25	2.125	2.00	2.75	2.00	1.50	2.00	1.50	1.50	2.375	1.50	1.50	2.25	1.75	
		1.375	1.875	1.75	1.25	2.25	1.75	3.00	1.625	1.50	2.25	2.00	1.50	1.75	1.50	1.025	2.25	2.00	
		1.25	1.75	1.75	1.875	2.00	2.00	1.00	1.50	1.375	1.75	1.50	2.00	2.00	2.00	1.75	1.875	2.00	
		2.00	2.00	2.00	2.00	2.50	1.50	1.50	1.50	2.00	1.25	1.25	1.00	1.75	1.75	1.50	2.00	1.875	
	Totals .....	87.875	95.50	90.125	07.50	101.50	100.375	106.00	85.25	86.00	78.025	83.25	88.00	81.375	85.625	91.125	105.25	99.50	94.875

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.						
Maximum measurements.	B'	3.125	1.2903	B'	3.25	1.2795	B'	3.00	1.1811	B'	2.50	0.9842	B'	2.50	0.9842	B'	3.375	1.3287
	B''	2.50	0.9842	B''	3.00	1.1811	B''	3.00	1.1811	B''	2.50	0.9842	B''	2.50	0.9842	B''	3.00	1.1811
	B'''	2.375	0.9350	B'''	3.25	1.2795	B'''	2.50	0.9842	B'''	2.25	0.8858	B'''	2.625	1.0394	B'''	2.50	0.9842
Highest .....		3.125	1.2903		3.25	1.2795		3.00	1.1811		2.50	0.9842		2.625	1.0394		3.375	1.3287
Minimum measurements.	B'	1.25	0.4921	B'	1.125	0.4429	B'	1.25	0.4921	B'	1.00	0.3937	B'	1.00	0.3937	B'	1.375	0.5413
	B''	1.50	0.5905	B''	1.00	0.3937	B''	0.75	0.2953	B''	1.00	0.3937	B''	1.00	0.3937	B''	1.00	0.3937
	B'''	1.375	0.5413	B'''	1.375	0.5413	B'''	1.00	0.3937	B'''	1.00	0.3937	B'''	1.25	0.4921	B'''	1.375	0.5413
Lowest .....		1.25	0.4921		1.00	0.3937		0.75	0.2953		1.00	0.3937		1.00	0.3937		1.00	0.3937
Average measurements.	B'	1.657	0.6523	B'	1.95	0.7677	B'	2.12	0.8346	B'	1.574	0.6196	B'	1.627	0.6405	B'	2.105	0.8207
	B''	1.01	0.7519	B''	2.08	0.7992	B''	1.705	0.6712	B''	1.665	0.6555	B''	1.712	0.6740	B''	1.99	0.7834
	B'''	1.802	0.7094	B'''	2.007	0.7901	B'''	1.72	0.6771	B'''	1.77	0.6968	B'''	1.822	0.7173	B'''	1.898	0.7472
Average .....		1.789	0.7143		1.995	0.7854		1.848	0.7275		1.669	0.6570		1.717	0.6759		1.998	0.78



TABLE I.—Measurements of fineness of wools—Continued.

WISCONSIN.																		
RAMS, 2 YEARS OLD.																		
Catalogue number of samples..	728.			729.			733.			734.			735.			739.		
	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
2.125	2.50	2.00	1.625	2.50	2.50	2.00	1.50	2.00	2.00	2.25	2.50	1.50	1.75	2.50	1.875	2.50	2.125	
1.125	2.00	2.25	2.50	2.50	2.25	1.875	2.00	2.50	1.375	1.50	2.50	1.75	2.375	2.50	2.00	1.25	1.875	
2.00	1.50	2.125	1.50	1.875	2.375	2.00	2.25	2.00	1.625	2.25	2.00	2.00	1.875	2.00	2.25	2.00	2.00	
1.75	2.00	1.875	3.125	2.00	1.875	2.50	2.50	2.00	1.25	2.125	2.125	2.125	1.875	2.00	2.125	1.625	1.875	
2.375	2.25	2.375	1.375	3.00	1.25	1.875	3.25	2.00	2.125	3.50	1.875	2.375	1.875	1.75	1.875	2.00	2.875	
2.00	1.875	1.625	2.50	2.00	2.00	2.50	2.50	2.00	1.50	2.00	2.50	2.00	2.00	2.00	2.00	2.25	2.50	
2.25	2.00	1.75	3.00	2.125	2.00	1.875	1.25	2.375	1.875	2.00	2.50	2.00	2.00	2.00	2.00	2.00	2.00	
2.50	2.125	1.375	2.125	2.00	2.875	2.125	2.375	2.125	1.25	2.875	2.125	1.25	2.875	2.00	2.00	2.00	1.75	
1.875	2.50	2.00	2.50	2.125	1.875	1.625	2.00	2.00	1.50	1.875	2.00	1.875	2.00	2.00	2.00	2.00	2.00	
1.25	2.25	2.125	2.50	2.125	2.50	1.75	2.00	2.125	1.625	1.50	1.75	2.125	1.50	2.125	4.125	2.50	2.00	
2.00	2.25	2.00	2.00	2.25	2.00	2.25	2.375	2.25	1.50	2.875	1.50	2.875	1.50	2.125	2.25	2.50	2.75	
2.25	3.25	1.125	2.00	2.50	3.25	1.875	2.375	2.375	2.375	2.00	2.875	2.125	1.60	2.25	2.125	2.25	3.00	
2.875	1.50	2.25	1.75	2.50	2.875	1.75	2.00	2.00	2.00	1.875	2.00	1.875	2.25	2.00	2.00	2.00	2.00	
2.25	1.625	4.00	2.00	2.125	2.50	1.025	2.00	1.875	1.125	2.00	1.875	1.25	2.00	1.625	2.00	2.00	2.00	
2.00	1.50	1.675	2.00	2.00	3.50	2.00	2.50	1.875	2.50	2.50	2.00	2.50	2.50	2.125	2.50	2.125	2.50	
2.375	1.50	2.25	2.25	2.50	2.00	1.50	2.50	2.125	2.00	2.00	2.00	2.00	2.50	2.50	2.00	2.00	2.00	
2.50	2.50	1.50	2.50	2.125	2.50	1.75	1.50	1.875	2.00	2.25	1.875	2.25	2.00	2.00	2.25	1.875	1.50	
2.00	2.375	1.375	3.50	3.00	2.00	2.00	2.00	2.875	2.125	1.625	1.625	1.625	3.00	2.375	2.375	2.00	2.00	
2.00	1.75	2.25	2.50	2.50	2.25	1.625	2.00	2.00	2.00	2.60	1.75	2.00	1.625	2.00	2.00	2.25	2.125	
1.75	1.75	2.00	2.00	2.125	1.025	1.875	2.50	2.50	1.375	1.875	2.25	2.00	1.875	2.50	2.50	2.375	2.875	
3.00	2.00	2.75	2.25	2.125	2.375	2.00	2.00	2.00	1.625	3.00	2.125	2.125	2.00	2.00	3.00	2.00	2.25	
2.125	2.00	2.25	2.125	3.25	2.50	2.00	2.00	2.00	1.875	2.50	2.00	2.00	2.75	1.50	3.00	1.625	2.00	
2.00	1.50	1.875	2.00	2.00	3.00	2.00	2.00	2.00	1.50	2.25	2.00	2.00	2.00	2.50	1.50	3.75	2.50	
Actual measurement in centimillimeters.	2.50	2.50	1.75	3.00	2.125	2.50	2.50	2.125	1.875	1.375	2.00	2.00	2.00	2.00	2.00	2.50	3.00	
	2.25	1.75	1.625	3.00	2.625	2.50	2.00	2.00	2.375	1.25	2.00	2.00	2.625	2.00	2.00	2.50	2.00	
	2.125	1.625	2.00	2.25	2.75	1.75	2.50	2.00	2.125	1.50	2.50	2.00	2.00	2.25	2.00	2.50	3.00	
	2.50	3.00	1.75	3.25	2.25	3.00	2.00	2.50	1.875	2.00	1.75	1.875	2.00	1.50	2.00	2.125	2.00	
	1.625	3.25	2.125	2.375	2.625	2.50	1.875	2.125	2.00	2.875	2.00	2.00	2.625	2.00	2.00	2.00	2.125	
	1.50	2.50	2.25	1.875	3.50	1.00	3.00	1.875	2.375	1.50	2.00	2.00	2.00	2.00	2.00	1.875	3.00	
	2.875	2.00	2.375	2.75	2.25	2.125	2.00	2.00	2.00	1.875	1.75	1.875	2.00	2.00	2.00	2.00	2.25	
	2.00	2.00	2.50	2.50	2.00	2.00	2.125	1.675	2.125	2.00	1.875	2.00	2.00	2.00	2.00	2.00	2.00	
	1.75	1.75	2.25	2.125	2.00	2.00	2.375	1.875	2.50	1.625	2.00	1.875	1.50	2.00	2.00	2.125	2.50	
	2.25	2.125	2.00	2.00	2.625	2.50	2.00	2.00	2.25	1.50	2.00	2.00	2.625	2.375	2.00	2.00	2.00	
	2.00	1.75	2.00	2.00	2.375	3.50	1.75	2.50	2.00	1.50	2.00	2.00	2.375	2.00	2.00	2.00	2.00	
	1.60	1.625	1.25	2.00	2.50	3.25	2.00	2.00	2.50	1.375	1.625	2.00	2.00	2.00	2.00	2.00	2.00	
	3.125	1.50	2.00	2.125	2.125	2.875	1.75	2.375	2.00	1.875	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
	2.875	1.625	2.50	2.25	3.00	2.375	2.00	1.875	2.00	1.75	1.875	2.00	2.00	2.00	2.00	2.00	2.00	
	1.75	2.00	2.00	2.00	2.375	2.50	2.375	2.00	1.75	1.60	2.00	2.00	2.125	2.00	2.00	2.00	2.00	
	1.625	2.50	2.125	1.75	1.625	3.00	1.875	2.375	2.50	1.50	2.00	2.00	2.125	2.00	2.00	1.625	1.875	
	2.50	2.00	2.25	1.625	4.00	3.25	1.875	2.00	2.00	1.50	2.00	2.00	2.00	2.00	2.00	2.50	1.75	
	2.00	2.125	2.375	1.625	3.00	3.125	1.875	2.00	2.375	1.50	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
	2.25	2.375	2.50	2.25	2.50	2.375	2.125	1.75	2.00	1.50	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
	2.125	1.60	2.125	1.875	2.375	2.75	2.60	1.50	2.125	1.375	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
	2.75	2.50	2.125	1.625	3.50	2.375	1.75	2.50	2.00	1.75	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
	2.50	2.00	2.50	1.625	2.50	2.875	1.375	2.125	1.875	1.375	2.00	2.00	2.00	1.875	2.00	2.00	2.00	
	2.00	2.50	2.125	2.50	3.125	4.00	2.125	2.00	2.00	1.25	2.00	2.00	2.00	1.875	2.00	2.00	2.00	
	3.00	2.25	2.50	2.375	2.125	4.125	2.125	1.60	2.125	1.75	2.00	2.00	2.375	1.75	2.00	2.00	2.00	
	2.00	2.00	3.00	2.00	2.00	2.375	2.60	1.625	2.00	1.75	2.00	1.625	2.00	2.00	2.00	2.00	2.00	
Totals .....	107.00	104.625	102.875	108.50	121.00	131.75	100.375	106.625	106.75	83.875	107.875	109.50	100.875	105.125	114.00	100.50	109.065	116.125

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.		No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.		No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.	
		Maximum measurements.	Highest.		Minimum measurements.	Lowest.		Average measurements.	Average.		Measurements above average.	Measurements below average.						
Maximum measurements.	B'	3.125	1.2303	B'	3.50	1.3779	B'	3.60	1.1811	B'	2.60	0.9842	B'	2.75	1.0826	B'	2.50	0.9842
	B''	3.00	1.1811	B''	4.00	1.5748	B''	3.25	1.2705	B''	3.50	1.3779	B''	3.00	1.1811	B''	3.75	1.4703
	B'''	3.00	1.1811	B'''	5.00	1.9683	B'''	2.875	1.1318	B'''	3.00	1.1811	B'''	3.00	1.1811	B'''	4.00	1.5748
Highest .....		3.125	1.2303		5.00	1.9683		3.25	1.2705		3.50	1.3779		3.00	1.1811		4.00	1.5748
Minimum measurements.	B'	1.25	0.4921	B'	1.375	0.5413	B'	1.375	0.5413	B'	1.25	0.4921	B'	1.50	0.5905	B'	1.25	0.4921
	B''	1.50	0.5905	B''	1.625	0.6297	B''	1.25	0.4921	B''	1.50	0.5905	B''	1.60	0.5905	B''	1.00	0.3937
	B'''	1.125	0.4429	B'''	1.00	0.3937	B'''	1.75	0.6880	B'''	1.50	0.5905	B'''	1.50	0.5905	B'''	1.50	0.5905
Lowest .....		1.125	0.4429		1.00	0.3937		1.25	0.4921		1.25	0.4921		1.50	0.5905		1.00	0.3937
Average measurements.	B'	2.14	0.8425	B'	2.17	0.8543	B'	2.008	0.7905	B'	1.678	0.6606	B'	2.018	0.7944	B'	2.025	0.7972
	B''	2.092	0.8236	B''	2.42	0.9527	B''	1.323	0.5210	B''	2.153	0.8490	B''	2.103	0.8270	B''	2.193	0.8633
	B'''	2.057	0.8098	B'''	2.635	1.0373	B'''	2.135	0.8405	B'''	2.10	0.8622	B'''	2.28	0.8970	B'''	2.323	0.9145
Average .....		2.097	0.8255		2.408	0.9480		2.092	0.8236		2.008	0.8692		2.133	0.8397		2.17	0.8543
Measurements above average.		74			64			59			55			63			53	
Measurements below average.		76			83			91			95			87			92	



TABLE I.—Measurements of fineness of wools—Continued.

		WISCONSIN.																	
		RAMS, 2 YEARS OLD.																	
Catalogue number of samples..		752.			753.			754.			755.			756.			757.		
Number of section.....		B'.	B''.	B'''	B'.	B''.	B'''	B'.	B''.	B'''	B'.	B''.	B'''	B'.	B''.	B'''	B'.	B''.	B'''
Actual measurement in centimillimeters.		3.50	2.00	1.50	3.50	2.00	2.00	2.25	1.75	2.25	2.75	1.50	2.00	1.625	2.00	2.00	1.60	2.25	2.00
		2.00	1.75	2.00	2.25	3.50	1.50	2.375	2.375	2.00	2.00	1.75	2.50	1.875	1.50	1.75	1.50	3.00	1.75
		2.00	1.875	1.75	1.50	3.25	2.00	1.875	2.25	2.50	2.00	2.00	2.00	1.75	2.00	2.50	1.75	2.75	1.875
		2.375	2.00	1.875	3.375	2.25	2.50	1.75	1.50	2.50	1.875	2.50	2.25	1.875	2.00	2.125	1.75	2.50	2.00
		2.60	1.50	2.00	2.00	2.25	2.00	2.00	2.125	1.75	2.25	2.625	2.50	3.00	2.00	2.50	1.875	1.75	1.875
		1.875	1.50	1.875	2.50	2.50	2.00	1.875	2.60	2.25	2.625	1.50	2.00	1.75	2.50	2.125	1.50	2.00	1.875
		2.00	2.00	2.00	2.00	2.00	1.50	1.60	1.75	1.75	2.50	2.00	1.625	1.875	2.375	1.75	2.00	2.00	2.00
		2.125	1.75	2.00	2.00	2.50	1.875	2.00	1.875	2.25	2.50	1.625	2.60	2.60	2.875	1.25	2.00	1.625	2.50
		2.25	2.625	1.875	2.00	3.00	2.00	2.00	2.25	2.25	2.50	2.125	1.75	2.125	2.00	2.25	2.00	1.875	2.125
		2.60	2.25	1.75	2.375	1.75	2.375	2.125	1.75	2.75	2.125	1.50	2.125	2.00	2.125	2.125	1.50	2.125	2.00
		1.75	2.125	1.50	2.875	2.00	1.50	3.125	2.375	2.125	2.125	1.75	2.00	2.125	2.25	1.625	1.50	2.00	2.375
		2.50	2.375	1.25	3.75	2.50	2.00	1.75	1.625	2.60	2.00	1.875	2.125	2.00	1.75	2.25	2.00	2.00	1.75
		2.00	2.00	2.00	3.25	2.75	1.625	1.50	2.60	2.50	2.00	1.50	2.00	2.00	1.875	2.00	2.00	1.75	2.125
		2.75	2.00	2.125	1.625	3.00	1.625	1.875	2.60	2.00	2.25	1.50	1.875	3.00	2.125	1.625	1.875	1.75	2.375
		2.125	1.75	2.50	2.50	2.875	1.60	2.00	2.125	2.875	2.00	2.25	2.875	1.50	2.25	2.00	1.75	2.50	3.00
		1.75	1.875	2.75	2.00	3.00	1.375	1.50	1.50	2.375	2.00	2.75	2.875	2.50	2.00	1.875	1.875	2.50	2.125
		2.00	2.00	2.25	3.00	2.625	1.50	1.75	1.875	2.025	1.875	1.75	2.50	2.125	1.875	1.875	2.00	1.875	2.00
		2.50	2.00	2.25	3.125	3.25	1.75	1.75	1.875	2.00	2.125	2.625	1.75	2.00	2.00	2.125	1.75	2.00	2.60
		2.25	2.00	2.50	3.50	2.50	2.00	1.525	1.50	2.00	1.625	1.50	2.25	2.00	2.00	2.60	2.25	2.25	1.625
		1.875	2.125	1.50	3.00	3.00	1.25	1.50	2.00	2.50	2.60	1.375	2.25	2.00	2.00	1.75	2.125	2.25	2.125
		2.00	1.875	2.125	2.60	2.75	1.50	1.875	2.125	3.00	1.75	2.00	2.50	1.60	1.875	1.875	1.875	2.00	1.875
		2.125	2.375	1.75	2.25	1.50	1.75	1.875	1.50	3.00	2.00	2.25	2.75	1.875	2.60	2.00	2.00	2.125	2.125
		2.50	2.25	1.625	2.00	1.125	1.875	2.125	2.50	2.375	2.625	1.75	2.50	2.00	2.00	2.60	2.00	3.00	3.00
		2.00	2.60	1.375	2.125	2.00	2.00	2.00	2.25	2.125	2.00	1.50	2.75	2.00	1.75	1.875	2.00	2.00	2.75
		2.50	2.25	1.50	2.25	2.50	2.25	1.75	2.00	2.625	3.50	2.25	1.75	2.50	2.00	1.75	2.00	2.25	2.60
		2.375	1.875	2.50	2.125	2.75	1.50	1.875	1.75	2.625	1.875	2.00	1.50	2.00	2.00	1.875	1.625	2.00	1.875
		2.60	2.00	2.625	2.25	2.875	1.50	1.75	1.875	2.125	2.50	2.00	1.75	1.75	1.75	2.25	1.625	1.75	2.00
		2.25	2.75	1.875	2.25	2.00	1.75	2.00	2.125	2.50	2.00	1.50	1.50	1.875	1.375	2.00	1.875	1.625	2.375
		2.125	1.875	2.25	2.60	1.50	2.00	2.25	3.00	2.50	1.375	2.00	1.75	1.75	2.25	1.625	1.75	2.00	1.625
		1.875	3.00	2.60	2.00	1.75	2.25	1.50	3.00	1.75	1.625	1.875	2.00	2.50	1.25	2.125	1.875	2.25	2.00
		2.00	2.00	2.00	2.25	1.75	1.50	2.125	1.75	2.50	1.625	1.60	1.625	2.125	1.50	2.00	2.125	2.00	2.60
		2.25	2.00	1.75	2.00	2.00	1.625	1.75	2.25	1.875	1.25	2.25	1.75	2.25	1.625	2.00	1.75	1.60	2.10
		2.75	2.25	1.875	2.50	2.75	1.375	1.25	2.875	2.125	2.00	2.00	2.25	2.25	1.875	2.125	2.00	2.00	2.00
		1.75	2.125	1.75	2.50	1.875	1.00	1.125	2.375	1.875	2.00	2.00	2.00	2.125	2.00	2.375	1.75	2.25	2.125
		3.00	2.25	2.00	2.00	1.75	2.00	1.50	2.00	2.00	2.375	2.375	1.50	2.50	2.00	2.375	2.375	1.875	2.00
		2.50	1.75	2.125	3.375	3.00	1.50	2.00	2.00	1.50	2.00	2.25	1.875	1.60	1.50	2.50	1.625	2.00	1.50
		1.75	1.875	1.50	3.00	1.25	2.50	1.875	2.00	1.50	3.25	2.25	2.125	1.625	2.125	1.375	2.50	2.125	2.125
		2.60	3.00	2.50	2.75	1.75	1.00	2.25	1.75	2.50	2.375	2.00	2.25	2.125	2.00	3.50	2.00	2.60	1.625
		2.00	2.25	2.625	3.00	2.00	1.50	2.625	2.50	1.875	2.00	2.00	2.125	2.375	2.125	2.25	2.00	3.125	2.00
		1.875	2.50	1.50	2.50	2.75	1.00	1.50	1.625	2.125	2.00	1.875	2.00	1.75	1.25	2.00	2.00	1.875	2.50
	2.125	1.75	1.625	2.75	3.00	1.50	1.625	2.00	3.00	1.50	2.25	2.00	1.50	3.00	2.00	2.00	2.375	1.75	
	1.75	2.75	1.75	2.50	2.50	1.75	1.75	1.875	2.00	1.625	1.625	2.25	1.50	2.75	2.375	2.375	1.75	2.25	
	2.00	2.00	2.00	2.50	2.00	1.875	1.50	1.75	2.125	1.75	1.50	1.875	1.75	2.00	2.375	2.00	2.00	2.25	
	1.75	3.00	1.875	2.50	2.00	1.625	2.00	2.25	2.00	1.50	2.00	2.50	1.875	2.25	2.50	1.50	2.25	1.875	
	1.875	2.25	2.125	2.75	2.125	1.875	1.875	1.025	1.875	2.00	2.00	2.00	1.625	1.50	2.00	1.50	2.25	2.50	
	2.50	2.50	2.25	2.50	2.625	1.75	2.00	2.00	2.00	2.375	2.25	2.00	2.00	1.025	2.25	1.75	2.60	1.875	
	2.25	3.00	1.75	2.50	2.25	2.00	2.125	2.00	1.875	2.60	2.375	1.875	2.50	1.75	1.875	2.50	2.375	2.25	
	2.375	2.875	1.875	2.00	2.50	1.50	2.25	1.75	2.00	2.00	1.75	1.75	2.00	1.75	1.875	1.875	1.875	2.125	
	2.00	2.50	2.00	2.00	2.50	1.50	2.875	1.50	2.375	2.60	2.00	2.00	2.00	2.25	1.50	2.00	2.00	1.875	
Totals.....		100.375	118.75	107.50	122.00	121.125	81.375	06.50	96.25	114.625	103.125	95.50	104.125	103.625	96.00	101.75	93.625	102.75	105.00

		752.			753.			754.			755.			756.			757.		
No. of section.		In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	
Recapitulation and reductions:																			
Maximum measurements.		B' 3.50	1.3770	B' 3.50	1.3779	B' 3.125	1.2308	B' 2.75	1.4763	B' 3.00	1.1811	B' 2.75	1.0820	B' 3.00	1.1811	B' 2.75	1.0820	B' 3.00	1.1811
Highest.....		B'' 3.00	1.1811	B'' 2.50	0.9842	B'' 3.375	1.3287	B'' 2.75	1.2705	B'' 3.00	1.1811	B'' 2.50	0.9842	B'' 3.00	1.1811	B'' 3.00	1.1811	B'' 3.00	1.1811
Minimum measurements.		B' 1.75	0.6880	B' 1.50	0.5905	B' 1.125	0.4420	B' 1.25	0.4921	B' 1.50	0.5905	B' 1.25	0.4921	B' 1.50	0.5905	B' 1.375	0.5413	B' 1.50	0.5905
Lowest.....		B'' 1.25	0.4021	B'' 1.00	0.3937	B'' 1.125	0.4420	B'' 1.25	0.5005	B'' 1.25	0.4921	B'' 1.25	0.4921	B'' 1.25	0.4921	B'' 1.375	0.5413	B'' 1.50	0.5905
Average measurements..		B' 2.188	0.8614	B' 2.44	0.9606	B' 1.930	0.7593	B' 2.063	0.8122	B' 2.073	0.8161	B' 2.073	0.8161	B' 2.073	0.8161	B' 1.873	0.7374	B' 2.055	0.8000
Average.....		B'' 2.375	0.9350	B'' 2.423	0.9539	B'' 1.925	0.7578	B'' 2.101	0.8200	B'' 2.035	0.8011	B'' 2.035	0.8011	B'' 2.035	0.8011	B'' 2.100	0.8267	B'' 2.100	0.8267
Measurements above average..			52		69		63		63		54		54		54		50		50
Measurements below average..			08		81		87		07		96		96		96		100		100



TABLE I.—Measurements of fineness of wools—Continued.

		WISCONSIN.																	
		RAMS, 2 YEARS OLD.									RAMS, 3 YEARS OLD.								
Catalogue number of samples..	Number of section .....	758.			759.			760.			761.			725.			737.		
		3/4.	1/2.	1/4.	1/4.	1/2.	3/4.	1/2.	1/4.	1/4.	1/2.	3/4.	1/2.	1/4.	1/4.	1/2.	1/4.	1/2.	3/4.
		2.00	2.50	1.875	1.875	4.25	2.50	1.60	1.625	2.00	2.125	2.50	1.75	1.625	2.00	2.00	1.50	1.75	1.875
		2.50	2.00	2.00	2.00	2.50	2.25	1.75	2.00	1.375	2.50	1.875	1.60	1.60	1.75	2.125	1.75	2.125	2.00
		2.25	1.375	2.00	1.875	2.25	1.875	2.25	2.00	1.50	2.00	2.60	1.75	1.75	2.375	2.375	2.25	2.25	2.25
		2.50	1.50	2.60	2.00	2.375	2.00	2.50	2.25	1.50	1.75	1.875	1.025	1.875	1.025	1.875	2.375	2.375	1.75
		2.375	2.00	1.75	2.00	1.50	2.25	1.625	1.625	1.875	1.025	1.75	1.025	1.50	1.50	1.50	2.00	1.875	1.875
		2.25	2.00	2.125	2.00	1.625	2.25	2.50	1.875	1.60	2.00	1.625	1.50	1.375	2.75	1.375	2.75	1.625	2.00
		1.625	2.00	1.75	1.875	2.60	2.50	2.25	2.50	2.00	1.50	2.375	2.00	1.80	2.00	1.80	2.00	1.50	1.50
		1.375	2.00	1.75	1.75	2.125	2.00	2.00	2.00	2.00	2.125	2.125	2.125	1.75	1.60	2.125	1.60	2.25	2.50
		1.875	1.875	1.875	2.375	2.50	2.25	2.00	2.25	2.00	2.00	2.00	1.75	2.75	2.00	2.75	2.00	2.125	1.875
		1.625	2.00	1.50	2.00	2.00	2.00	1.50	2.50	1.50	2.25	2.00	2.00	2.00	2.00	1.50	2.00	2.50	2.00
		2.50	2.00	2.00	2.00	2.25	2.25	2.00	2.875	1.75	2.00	2.25	2.00	1.625	2.25	1.625	2.375	1.75	1.625
		1.675	2.50	2.00	1.875	2.125	2.50	2.00	3.00	1.50	2.00	2.50	2.00	1.50	2.00	1.50	1.50	1.875	1.875
		1.625	2.04	2.00	2.00	2.00	2.25	2.125	2.50	2.00	2.25	2.60	2.00	2.025	1.75	2.025	1.75	2.00	1.75
		1.125	2.00	1.875	2.00	1.75	2.00	1.50	2.25	2.125	2.375	1.625	1.875	2.50	2.00	2.50	2.00	2.50	2.00
		1.50	2.00	1.75	2.375	2.375	2.25	2.125	2.75	1.375	1.875	1.50	2.375	1.125	1.50	1.125	1.50	1.875	1.625
		2.00	1.025	2.00	2.00	2.50	1.875	2.25	1.875	1.75	2.125	2.125	2.125	2.125	1.75	2.125	1.75	1.75	2.25
		2.50	1.875	2.125	2.00	2.25	2.50	2.00	1.50	2.00	2.00	2.00	2.375	1.875	1.50	1.875	1.50	1.125	2.00
		2.125	1.875	2.00	1.25	2.75	2.25	1.75	3.375	2.00	1.375	2.00	2.00	2.00	1.50	2.00	1.50	1.75	2.00
		2.00	1.875	1.50	2.00	2.375	2.00	2.00	2.50	2.50	1.625	2.25	1.50	2.00	1.75	2.00	2.00	1.75	2.25
		2.375	1.875	2.25	2.025	2.50	1.875	2.25	1.50	2.25	1.625	2.00	2.25	2.00	2.25	2.25	2.00	2.25	2.50
		2.00	2.00	2.375	2.50	2.00	2.50	2.00	2.50	2.00	2.60	2.50	2.00	2.00	2.25	2.00	2.25	1.50	1.625
		2.00	2.00	1.50	2.00	2.00	3.75	2.375	2.75	3.00	2.00	2.00	2.60	2.00	2.60	1.50	2.25	1.50	2.00
		2.125	1.625	2.00	2.00	2.25	2.50	2.00	2.00	2.125	1.875	1.625	3.60	1.625	3.60	1.625	2.00	1.50	1.125
		2.00	2.00	1.75	1.50	1.50	2.25	1.75	1.375	1.875	1.875	2.00	2.50	2.75	1.50	2.75	1.50	1.50	1.875
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.25	2.125	2.00
		2.00	2.00	1.875	2.25	3.125	2.00	2.00	1.50	2.25	2.00	2.00	2.00	2.00	2.125	2.00	1.75	2.00	1.625
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2.375	2.50	2.50	2.50	1.75	2.00	1.75	2.125	2.00
		2.00	2.00	2.00	2.25	3.00	2.375	1.875	1.75	2.00	2								



TABLE I.—Measurements of fineness of wools—Continued.

		WISCONSIN.																	
		RAMS, 3 YEARS OLD.									RAMS, 4 YEARS OLD.						EWES, 1 YEAR OLD.		
Catalogue number of samples..		730.			732.			740.			726.			731.			741.		
Number of crimps per inch....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
		1.375	1.125	1.50	1.875	2.125	2.25	1.375	2.00	2.00	2.50	2.25	3.50	2.00	2.00	2.25	2.00	2.00	2.00
		1.625	1.75	1.25	1.75	2.00	2.125	2.50	2.00	2.25	2.50	2.625	2.00	1.75	2.00	2.50	1.625	2.25	2.125
		2.125	1.50	1.875	1.625	1.75	2.00	1.00	1.375	2.25	1.75	2.25	3.00	2.125	1.75	2.25	2.50	1.50	1.25
		1.25	1.375	1.25	1.50	1.50	2.25	1.375	1.25	2.00	2.50	2.50	3.25	1.875	1.50	1.50	2.00	1.625	1.50
		1.125	1.125	1.50	1.25	1.375	1.25	2.00	1.50	2.125	3.00	2.375	2.875	2.50	2.25	1.625	4.00	1.875	1.625
		1.25	1.50	1.50	1.875	2.25	1.375	1.875	2.375	2.00	2.875	2.00	2.75	2.75	2.25	2.00	2.125	2.00	1.75
		2.00	1.375	2.00	1.75	2.375	2.125	1.75	2.25	2.00	2.375	1.875	2.50	2.00	1.875	2.25	1.75	2.50	2.125
		1.00	1.00	1.375	1.25	1.50	1.75	2.50	1.75	1.75	2.125	3.00	2.875	1.875	1.375	2.375	2.50	2.50	2.75
		1.375	1.625	1.375	2.00	1.25	1.875	1.50	2.00	1.875	2.00	2.50	2.75	2.00	1.50	2.50	2.50	2.125	2.00
		1.60	1.25	2.00	2.125	1.50	2.00	1.125	2.00	1.75	2.50	1.50	2.25	1.625	2.00	2.625	2.125	2.00	1.875
		1.25	1.25	1.50	1.375	1.625	2.00	1.00	1.875	2.00	1.50	1.875	2.375	1.75	2.125	2.75	2.00	1.875	2.625
		1.125	1.375	1.75	1.25	1.75	1.50	2.00	1.50	2.125	2.75	2.25	2.75	1.625	2.125	2.50	2.50	1.75	2.125
		1.25	1.125	1.50	1.375	2.25	1.875	1.50	1.75	1.75	2.00	2.25	2.00	1.75	1.50	1.75	2.25	1.75	1.25
		1.50	1.375	1.375	1.50	2.00	1.50	1.60	1.375	1.875	1.625	1.25	2.00	2.00	2.00	1.625	2.50	2.00	2.00
		1.875	1.50	1.50	1.50	1.375	1.75	1.375	2.125	1.50	2.125	1.875	2.75	1.75	1.50	1.875	2.00	2.00	1.875
		1.25	1.50	1.75	1.25	1.25	1.875	1.60	2.00	1.50	2.50	3.00	2.25	1.75	1.375	1.75	2.25	1.50	1.25
		1.00	1.50	1.875	1.875	1.50	1.50	1.125	2.25	2.25	2.00	2.25	2.00	2.50	1.00	2.50	2.50	1.75	1.50
		1.375	1.625	1.50	1.75	1.50	1.50	2.00	2.50	2.00	2.50	2.50	2.625	2.25	1.375	1.875	3.00	1.875	2.00
		1.625	1.25	1.50	2.00	1.25	1.75	2.75	2.00	2.125	2.125	2.25	2.875	1.75	2.00	2.00	2.00	2.00	2.00
		1.60	1.625	1.625	1.25	1.25	1.50	2.25	1.75	2.25	2.00	2.375	2.50	1.875	2.00	2.25	1.875	1.875	2.25
		1.875	1.625	2.00	1.375	2.00	1.625	2.00	1.25	2.00	2.50	2.625	2.25	2.50	2.25	2.50	2.00	1.75	2.25
		1.25	1.25	1.75	1.50	1.50	2.00	1.00	1.375	1.875	2.375	2.00	2.25	2.125	2.25	1.875	1.75	2.00	2.125
		1.50	1.375	1.875	1.50	1.625	1.50	1.375	1.25	2.00	2.00	2.00	2.125	1.75	2.00	1.75	1.50	1.875	2.25
		1.125	1.75	1.75	1.625	1.625	2.25	2.25	1.50	1.50	2.00	1.75	2.00	2.25	2.00	1.875	2.00	2.00	2.00
		1.25	1.25	1.375	1.25	2.00	2.375	2.25	1.125	1.50	2.125	1.875	2.625	1.50	1.50	3.00	2.25	1.75	1.75
		1.25	1.25	2.125	2.125	1.375	2.00	1.25	2.00	1.75	2.25	2.125	2.00	1.50	1.625	2.375	1.125	3.00	1.875
		1.875	1.50	1.25	2.00	1.625	1.875	2.50	2.00	2.25	2.125	2.00	1.875	2.00	2.00	2.875	1.375	2.75	1.50
		1.375	1.625	1.625	1.375	1.50	2.00	2.25	1.75	2.00	2.00	2.60	2.25	2.25	1.75	1.75	2.375	2.25	1.50
		1.375	1.50	1.625	1.375	1.50	2.00	2.25	1.75	2.00	2.75	2.25	1.875	2.875	1.50	1.25	1.50	2.00	1.25
		2.00	1.625	1.875	1.125	2.00	2.75	2.25	2.75	2.00	3.00	2.60	2.50	1.50	1.50	2.25	2.25	2.00	1.25
		1.25	1.25	1.875	1.50	2.00	2.00	2.00	2.00	1.875	2.875	2.50	2.875	1.50	2.00	1.50	2.375	1.75	1.50
		1.875	1.75	1.75	1.50	1.625	1.50	1.125	1.75	1.50	3.00	2.75	3.00	2.25	2.125	1.60	2.00	2.00	1.75
		1.25	1.75	2.125	1.375	2.00	2.125	1.125	1.875	1.75	2.25	3.50	2.00	1.50	2.00	2.125	2.25	1.875	2.00
		1.375	1.25	1.75	1.25	2.25	1.375	2.25	2.00	1.375	2.50	2.00	2.125	1.875	1.75	1.95	2.25	1.50	2.00
		1.25	1.375	1.125	1.875	1.25	2.50	1.50	2.50	1.375	2.625	2.125	2.375	2.00	1.25	2.25	1.75	1.25	1.50
		1.50	1.50	2.00	1.25	1.60	1.60	1.375	1.50	1.50	2.25	2.00	2.50	1.50	2.00	2.375	3.00	1.50	2.00
		1.625	1.60	1.50	1.25	1.625	1.375	1.75	1.50	1.625	2.00	2.75	2.625	1.625	2.25	1.25	2.00	1.615	2.00
		1.75	1.125	1.75	1.50	1.50	1.625	1.25	1.375	2.00	2.375	2.50	2.25	2.75	1.60	2.25	1.75	2.00	1.25
		1.625	1.60	1.75	1.375	2.25	2.00	2.00	2.375	2.50	1.875	2.00	3.25	2.00	2.00	2.00	2.75	2.00	1.375
		1.375	1.50	1.50	1.125	2.00	2.125	2.25	2.00	2.00	2.00	2.25	2.25	1.375	2.00	2.00	2.375	2.50	2.00
		1.50	1.625	2.00	1.50	2.375	1.25	1.50	1.75	1.75	2.125	2.125	2.125	1.875	1.50	2.00	2.375	2.125	1.875
		2.00	1.60	1.25	1.6.5	1.375	1.50	1.50	1.875	1.50	2.00	2.125	2.00	1.25	2.25	1.875	2.25	2.125	1.875
		1.50	1.125	1.375	1.50	1.50	1.625	1.875	1.625	1.625	3.00	3.00	2.25	1.875	1.75	1.25	2.00	1.50	1.50
		1.50	1.75	1.625	1.50	1.375	1.50	2.00	2.375	2.25	2.50	2.25	2.50	2.25	1.625	2.00	2.00	1.50	1.875
		1.75	2.00	1.75	1.50	1.375	2.00	1.25	1.50	1.50	2.00	2.00	2.25	1.50	1.25	2.00	2.00	1.50	1.50
		1.75	1.75	1.50	2.00	1.50	1.375	1.375	2.00	2.25	2.25	2.375	2.00	1.625	2.00	1.875	2.00	1.75	1.50
		1.375	1.375	1.625	2.00	1.625	2.00	2.00	1.75	1.625	2.375	3.00	2.50	1.50	1.50	2.00	1.75	2.00	1.25
		1.50	1.25	1.375	1.375	1.25	2.00	2.875	2.00	2.00	2.00	2.00	2.00	1.875	2.25	2.00	2.00	2.75	1.375
		2.00	1.50	1.75	1.25	1.625	2.25	2.75	2.00	1.50	2.125	2.00	2.00	2.50	1.25	2.125	2.00	1.50	1.50
		1.25	1.125	1.625	1.50	1.50	1.50	2.00	2.00	2.125	2.125	2.25	1.75	2.00	2.00	2.25	2.25	1.75	1.50
Totals .....		74.25	72.00	81.750	7.6125	84.00	90.25	90.25	93.125	95.375	114.75	114.75	119.25	94.25	90.875	99.50	107.50	107.75	87.375

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:																		
Maximum measurements	B'.	2.00	0.7874	B'.	2.125	0.8356	B'.	2.875	1.1318	B'.	3.00	1.1811	B'.	2.875	1.1818	B'.	3.00	1.1811
	B''.	2.00	0.7874	B''.	2.375	0.9350	B''.	2.025	1.0034	B''.	3.50	1.3779	B''.	2.25	0.8858	B''.	3.00	1.1811
	B'''.	2.125	0.8360	B'''.	2.50	0.8842	B'''.	2.60	0.9842	B'''.	3.50	1.3779	B'''.	3.00	1.1811	B'''.	2.75	1.0820
Highest .....		2.125	0.8366		2.50	0.8842		2.875	1.1318		3.50	1.3779		3.00	1.1811		3.00	1.1811
Minimum measurements.	B'.	1.00	0.3937	B'.	1.125	0.4429	B'.	1.00	0.3937	B'.	1.50	0.5905	B'.	1.125	0.4429	B'.	1.375	0.5413
	B''.	1.00	0.3937	B''.	1.25	0.4921	B''.	1.125	0.4429	B''.	1.25	0.4921	B''.	1.25	0.4921	B''.	1.00	0.3937
	B'''.	1.125	0.4429	B'''.	1.25	0.4921	B'''.	1.375	0.5413	B'''.	1.50	0.5905	B'''.	1.00	0.3937	B'''.	1.125	0.4429
Lowest .....		1.00	0.3937		1.125	0.4429		1.00	0.3937		1.25	0.4921		1.00	0.3937		1.00	0.3937
Average measurements.	B'.	1.485	0.5846	B'.	1.523	0.5096	B'.	1.805	0.7106	B'.	2.295	0.9035	B'.	1.885	0.7421	B'.	2.15	0.8464
	B''.	1.450	0.5708	B''.	1.68	0.6614	B''.	1.863	0.7334	B''.	2.295	0.9035	B''.	1.818	0.7157	B''.	2.155	0.8484
	B'''.	1.635	0.6436	B'''.	1.805	0.7106	B'''.	1.908	0.7511	B'''.	2.385	0.9389	B'''.	1.99	0.7884	B'''.	1.747	0.6877
Average .....		1.524	0.5990		1.67	0.6574		1.85	0.7283		2.325	0.9153		1.898	0.7472		2.017	0.7940
Measurements above average.		5																



TABLE I.—Measurements of fineness of wools—Continued.

Catalogue number of samples. Number of section.....		WISCONSIN.																			
		EWES, 1 YEAR OLD.						EWES, 2 YEARS OLD.													
		742.			743.			698.			699.			704.			708.				
		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.		
Actual measurement in centi millimeters.		2.00	2.50	1.75	2.25	2.00	1.50	2.25	1.75	1.50	1.625	2.75	2.00	1.625	2.25	1.60	2.125	1.50	1.50		
		2.125	2.375	1.50	2.00	2.50	1.875	2.00	1.50	1.875	1.875	2.00	1.875	1.875	2.00	1.875	2.25	2.00	2.00		
		2.50	1.625	2.50	2.125	2.00	2.25	1.50	1.625	1.25	1.875	2.00	1.50	1.125	2.375	1.50	1.50	1.50	1.50		
		2.00	2.00	2.25	2.25	2.125	2.375	1.375	1.50	2.25	2.00	2.25	1.50	1.625	2.50	1.50	1.75	2.125	1.50	1.60	
		1.75	2.25	2.125	2.00	2.25	2.50	1.25	1.625	2.125	1.75	2.875	2.00	1.625	2.50	1.125	1.50	2.00	1.75	1.625	
		1.625	2.25	2.50	2.00	1.75	1.75	1.875	2.00	1.75	2.25	2.125	2.00	2.00	2.25	2.125	1.375	1.875	1.875	1.75	
		2.00	2.375	2.75	1.75	1.875	1.75	2.00	1.875	1.25	1.875	1.50	1.625	1.875	3.00	1.60	1.50	2.125	1.875	1.50	
		2.25	1.875	1.75	1.875	2.00	1.625	2.125	1.25	2.125	2.375	1.50	2.00	2.125	2.125	1.50	2.00	1.60	2.125	1.50	
		1.75	2.00	1.50	2.50	2.125	1.50	1.875	2.125	2.00	1.875	2.625	1.75	2.375	1.875	1.875	1.60	2.00	2.00	2.00	
		1.875	2.25	1.625	1.75	2.00	2.50	1.625	2.00	1.125	2.00	1.625	2.00	1.875	1.50	2.00	2.25	1.25	1.50	1.75	
		2.00	1.50	2.125	2.00	2.25	2.75	2.125	1.875	1.75	2.00	2.00	2.25	1.50	2.00	1.625	2.00	1.875	2.125	2.125	
		1.50	1.75	1.50	2.00	2.00	1.75	1.50	2.00	2.00	2.25	3.125	2.00	1.625	2.50	1.875	1.60	1.50	1.50	1.50	
		1.50	2.00	1.75	1.50	2.00	1.75	1.50	2.00	2.25	1.875	2.375	2.125	1.50	1.50	2.00	1.625	2.00	1.625	1.625	
		1.625	3.00	2.25	1.625	3.00	2.50	2.25	1.625	1.25	2.00	2.40	1.75	1.625	2.125	1.50	1.50	1.50	1.75	1.75	
		1.75	2.60	1.875	2.00	2.25	2.375	1.125	1.375	1.875	2.125	2.125	2.25	2.00	1.50	1.25	1.50	2.625	2.00	2.00	
		2.125	2.50	1.75	2.25	3.00	2.625	1.375	1.625	2.00	2.375	2.125	2.25	2.25	1.375	2.75	1.50	2.875	3.00	2.00	
		2.00	2.00	2.00	2.25	2.75	1.25	1.25	2.25	1.875	2.875	1.75	1.75	1.00	1.75	1.50	1.675	1.50	1.50	1.50	
		1.875	1.625	2.25	1.875	2.125	1.75	2.125	2.00	1.25	1.875	2.00	2.25	1.375	1.75	1.875	1.50	3.00	1.50	1.50	
		1.50	1.75	1.50	2.00	2.25	1.50	2.25	2.00	2.25	1.50	1.875	1.50	1.50	2.00	1.60	1.50	1.75	2.00	2.00	
		1.75	2.50	1.875	1.50	2.00	2.75	2.00	2.00	2.00	1.50	2.125	1.75	1.875	1.675	2.00	2.25	1.00	1.60	2.50	
1.625	1.60	1.375	1.875	2.25	2.125	1.50	1.625	1.75	1.375	1.875	2.00	2.125	2.125	1.025	2.25	1.50	2.25	1.625			
2.00	1.75	2.00	2.50	2.50	1.50	1.75	1.75	2.00	2.00	1.625	2.00	2.125	2.25	1.50	1.60	2.125	2.125	1.875			
2.00	1.75	2.00	2.00	2.75	1.75	1.875	2.00	2.00	1.75	3.50	2.25	2.00	1.50	1.60	1.625	2.00	2.00	2.00			
2.00	1.875	1.875	2.00	1.75	1.25	2.25	1.875	1.50	1.625	2.25	1.75	2.00	2.50	1.50	1.50	2.00	2.00	2.50			
2.375	2.25	1.75	1.60	1.875	1.75	2.125	2.00	1.375	1.625	2.00	1.875	2.00	1.875	2.00	1.75	1.75	1.50	1.675			
2.25	1.75	2.00	1.75	1.75	3.00	2.00	2.00	1.125	1.50	2.00	2.25	2.125	2.50	2.00	1.50	2.375	2.50	1.625			
2.50	1.625	2.00	2.50	2.00	1.75	1.625	1.875	1.75	1.50	2.00	1.75	1.625	2.50	1.75	1.50	1.875	1.50	1.50			
2.125	2.00	1.875	2.25	2.125	1.50	1.625	1.675	1.875	1.50	1.50	1.50	2.00	1.625	1.625	2.00	2.375	1.875	1.50			
2.25	2.50	1.625	1.50	1.75	2.00	1.75	2.00	1.25	1.375	1.50	2.125	2.125	2.125	2.60	1.875	2.25	2.25	2.00			
1.75	1.75	1.50	2.25	2.50	1.75	1.50	1.875	1.125	2.00	2.00	1.75	2.00	1.75	2.00	1.625	2.00	2.00	2.00			
1.875	1.60	2.00	1.75	2.25	1.875	1.75	1.75	1.625	2.375	3.75	1.50	1.875	2.50	2.00	2.00	2.00	1.875	1.875			
1.50	2.00	1.75	2.00	2.375	1.625	2.125	1.50	1.75	1.625	2.00	2.25	1.50	3.00	2.125	2.00	2.125	2.00	2.00			
1.75	2.00	1.875	1.875	3.00	2.50	2.00	1.75	1.50	1.75	2.00	2.50	2.00	2.875	2.00	2.00	2.125	2.125	1.625			
2.00	1.75	1.625	2.25	2.60	2.375	2.50	2.125	1.50	1.60	2.00	2.00	2.00	2.25	1.75	1.50	2.125	2.375	1.50			
2.25	1.625	2.125	1.75	2.625	1.625	1.75	1.625	1.50	1.50	1.875	1.875	2.50	1.875	1.60	1.875	2.25	2.25	1.50			
2.375	2.00	2.00	1.875	2.00	2.50	1.875	1.75	1.75	2.00	2.50	2.00	2.00	2.00	1.50	1.50	2.00	2.375	2.00			
1.875	2.125	1.50	1.75	2.25	2.50	1.50	1.75	1.875	1.625	2.25	2.125	1.25	1.625	1.60	1.60	1.875	1.875	1.625			
1.50	1.75	2.25	2.625	1.625	2.00	2.00	2.00	1.75	1.375	2.00	2.00	1.875	1.50	2.375	2.125	2.125	2.25	1.375			
3.00	1.625	2.125	1.50	1.75	1.50	2.125	1.50	2.00	1.50	2.375	2.00	1.60	1.875	1.60	1.50	1.50	2.125	2.50			
2.25	1.75	3.00	1.25	1.875	1.625	2.00	2.00	2.00	1.75	2.00	2.125	2.00	2.50	2.00	2.50	1.75	2.125	1.50			
2.00	2.125	2.00	1.75	2.00	2.00	2.00	2.00	2.25	1.75	2.25	1.75	1.75	2.50	1.625	1.625	2.00	2.00	1.50			
2.00	3.00	2.125	2.00	2.25	1.50	1.875	2.00	2.375	1.875	2.50	2.125	1.875	1.625	1.50	2.00	2.00	2.00	2.50			
1.375	2.75	2.25	2.50	2.75	1.50	1.50	1.875	2.00	1.50	2.50	1.625	1.50	2.00	1.50	2.00	2.00	2.00	1.50			
1.50	1.75	2.125	1.50	1.75	1.25	1.50	2.50	1.50	1.25	2.00	2.25	1.875	2.00	2.00	2.375	2.00	2.00	2.00			
1.25	2.25	1.875	2.375	1.625	1.75	1.75	1.625	1.875	1.375	2.25	2.50	1.50	1.75	1.25	1.25	1.50	2.00	2.125			
3.875	2.125	2.00	2.25	1.50	1.25	1.625	1.75	1.75	1.625	2.00	2.875	1.25	1.60	1.50	1.50	1.875	2.375	2.375			
2.00	2.25	2.25	2.00	2.50	1.80	1.75	1.75	1.75	1.75	1.875	2.25	2.50	2.25	1.50	1.50	1.50	1.50	2.00			
2.125	2.00	1.50	2.125	2.75	1.375	2.00	2.00	1.50	1.50	1.125	2.00	2.00	2.00	1.625	1.50	1.625	1.50	2.00			
2.00	2.00	1.625	1.50	3.00	1.50	1.60	1.625	1.50	1.50	2.00	2.00	1.50	2.50	1.50	1.50	1.50	1.625	1.75			
1.575	2.00	1.75	1.625	2.00	2.00	1.875	1.875	1.50	1.625	2.50	2.125	1.625	3.00	1.625	1.625	2.00	2.00	1.75			
Totals.....	96.75	101.25	96.625	97.75	109.675	92.75	91.875	92.125	86.625	87.50	108.00	92.125	86.375	106.50	87.75	87.50	99.00	90.25			
Recapitulation and reduction:		No. of section.		In centimillimeters.		In thousandths of inch.		No. of section.		In centimillimeters.		In thousandths of inch.		No. of section.		In centimillimeters.		In thousandths of inch.			
		Maximum measurements.		B'	3.00	1.1811	B''	3.00	1.1811	B'''	2.75	1.0826	B'	2.625	1.0334	B''	3.00	1.1811	B'''	2.75	1.0826
Highest.....		3.00		1.1811		3.00		1.1811		2.50		0.9842		3.75		1.4763		3.00		1.1811	
Minimum measurements.		B'		1.25	0.4921	B''		1.50	0.5905	B'''		1.375	0.5413	B'		1.25	0.4921	B''		1.50	0.5905
		B''		1.50	0.5905	B'''		1.375	0.5413	B'		1.25	0.4921	B''		1.50	0.5905	B'''		1.375	0.5413
		B'''		1.375	0.5413	B'		1.25	0.4921	B''		1.50	0.5905	B'''		1.375	0.5413	B'		1.25	0.4921
Lowest.....		1.25		0.4921		1.25		0.4921		1.125		0.4429		1.25		0.4921		1.00		0.3937	
Average measurements.		B'		1.935	0.7018	B''		2.107	0.6610	B'''		1.855	0.7308	B'		1.935	0.7018	B''		2.107	0.6610
		B''		2.023	0.7072	B'''		1.855	0.7308	B'		1.838	0.7236	B''		2.113	0.8395	B'''		1.803	0.7100
		B'''		1.802	0.7006	B'		1.855	0.7308	B''		1.733	0.6822	B'''		1.863	0.7807	B'		1.725	0.6803
Average.....		1.041		0.7641		2.002		0.7881		1.804		0.7118		1.965		0.7736		1.871		0.7366	
Measurements above average.		83		47		75		75		83		70		70		74		70		74	
Measurements below average.		67		93		75		75		67		74		74		74		74		74	



TABLE I.—Measurements of fineness of wools—Continued.

		WISCONSIN.																	
		EWES, 2 YEARS OLD.																	
Catalogue number of samples..		700.			710.			744.			745.			746.			762.		
Number of section.....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
Actual measurement in centimillimeters.	1.50	2.125	2.00	1.375	2.50	1.50	1.50	1.025	1.625	2.00	1.25	2.375	1.50	1.625	2.00	1.25	1.625	1.75	
	2.00	2.50	1.50	1.50	2.50	2.00	1.375	1.50	1.25	2.00	1.625	1.50	1.75	1.50	1.75	1.50	1.875	1.50	
	1.50	2.60	2.00	1.375	2.00	2.50	1.50	1.875	1.50	1.625	1.625	2.00	1.50	1.25	1.875	1.75	1.50	2.00	
	1.375	1.75	1.50	1.625	2.00	2.125	1.375	1.50	2.00	2.25	1.50	2.50	1.375	2.50	2.50	1.375	2.50	1.375	2.00
	1.125	1.625	2.125	1.50	2.375	2.625	1.625	1.625	2.125	2.00	1.75	2.00	2.00	1.75	2.00	2.00	1.625	2.00	2.00
	1.50	2.00	2.125	2.125	2.50	1.875	1.50	1.75	1.50	2.60	1.50	1.60	2.00	2.75	2.00	2.00	2.375	1.875	1.875
	1.625	2.375	1.875	2.25	3.00	2.00	1.625	1.25	2.125	2.50	1.50	1.50	2.125	1.50	2.125	1.875	1.50	2.00	2.00
	1.50	2.125	2.625	2.00	2.00	2.375	2.125	2.25	1.50	2.00	1.50	2.00	2.50	1.50	2.50	2.25	1.50	2.375	2.125
	2.125	2.00	1.375	1.50	2.25	1.00	2.375	2.125	2.125	1.50	2.125	1.50	2.125	1.875	2.00	2.50	2.00	2.125	2.00
	2.25	1.60	1.50	1.625	2.125	1.50	1.50	2.25	2.25	1.875	2.25	2.00	2.00	1.625	2.00	1.75	1.875	1.50	1.75
	1.50	1.625	1.625	2.00	2.50	2.00	1.375	1.00	2.00	1.50	2.00	1.50	2.00	2.50	2.00	1.50	1.875	1.625	1.875
	2.00	1.75	1.50	1.625	2.00	2.50	1.50	1.25	2.00	1.50	2.00	1.50	2.00	1.875	1.50	1.75	1.75	1.625	1.875
	1.25	1.60	2.00	1.625	2.625	2.50	2.00	1.60	2.00	1.75	2.50	2.25	1.50	1.50	2.125	2.00	1.875	1.625	1.625
	2.00	2.125	1.50	2.00	2.00	1.50	2.125	1.60	1.625	2.25	2.50	1.50	1.50	2.00	2.00	2.25	1.875	1.875	1.50
	2.50	1.375	2.00	2.25	1.875	1.50	1.00	1.50	1.75	2.50	1.50	1.50	1.50	1.50	2.50	2.625	1.50	1.50	1.60
	2.00	1.75	2.125	2.25	3.00	2.00	1.60	1.75	2.125	2.00	2.25	1.625	1.50	1.75	1.75	1.25	1.60	2.00	2.00
	2.00	2.125	2.00	1.75	2.00	1.75	1.25	1.875	1.75	1.875	2.00	2.25	1.50	2.125	1.875	1.50	1.625	1.50	1.625
	1.50	1.875	1.625	2.00	2.00	2.00	1.875	1.75	2.00	1.50	2.00	1.50	2.00	1.50	1.625	2.00	1.625	1.60	1.875
	1.50	1.75	1.50	1.625	2.00	2.00	1.875	1.75	2.00	2.00	2.00	2.00	1.25	1.50	3.00	1.50	1.625	1.875	2.00
	1.50	1.75	2.625	2.00	2.25	2.00	1.50	1.60	2.00	1.875	2.00	1.625	1.50	2.625	1.625	1.625	1.60	1.375	1.375
2.00	1.75	1.625	2.00	1.875	2.00	1.625	1.625	2.00	2.00	2.00	1.25	1.50	3.00	1.50	1.625	1.875	2.00	2.00	
1.50	2.00	1.375	1.75	2.125	2.50	1.00	1.625	1.50	1.50	1.50	1.50	1.625	2.50	2.00	1.50	1.75	1.50	1.50	
1.25	1.625	2.00	2.25	2.50	2.375	1.75	1.25	1.25	1.50	1.50	2.50	1.50	1.75	3.00	2.00	1.875	2.00	1.625	
2.00	1.625	2.25	2.00	2.25	2.375	1.75	1.25	1.625	1.375	1.75	1.50	3.50	2.125	1.75	1.625	1.875	1.60	1.60	
1.00	1.75	2.25	2.00	2.50	2.625	1.00	1.60	2.25	2.75	2.25	1.50	1.50	1.75	2.50	1.875	2.00	1.50	1.50	
1.50	2.00	1.25	2.50	2.625	1.50	1.50	1.75	2.125	2.50	1.50	1.625	3.00	3.00	2.00	1.75	1.625	1.50	1.625	
1.25	1.875	1.75	1.50	3.00	1.50	1.625	1.25	2.00	2.00	2.50	2.00	1.25	2.75	1.875	1.75	1.50	1.875	1.875	
1.50	1.875	2.875	2.00	2.60	1.125	2.00	1.50	1.50	1.50	1.50	2.00	1.375	1.50	2.50	1.50	2.00	1.875	1.875	
1.50	2.00	1.75	1.50	1.625	2.50	1.75	1.625	2.00	1.50	1.75	1.50	1.50	2.00	2.00	1.875	1.625	2.00	2.00	
1.50	1.875	1.25	1.875	2.125	2.00	1.875	2.00	1.60	1.625	1.50	1.625	1.625	1.50	2.25	1.875	2.00	1.875	2.00	
2.00	1.75	2.75	0.875	2.50	2.50	2.00	1.50	1.625	1.59	2.50	2.00	1.50	2.00	1.875	1.875	2.00	2.375	2.375	
1.00	2.00	2.25	1.625	2.50	2.50	1.60	1.75	1.375	1.75	1.50	1.60	2.125	2.50	2.25	2.00	2.375	1.875	1.875	
1.25	1.75	2.25	2.00	1.75	2.625	1.25	1.50	2.125	1.60	1.50	1.60	2.00	1.50	2.00	1.50	1.50	1.50	1.75	
1.625	2.75	1.625	1.625	2.00	1.50	1.875	1.875	2.125	1.50	1.50	1.75	2.00	1.50	1.50	1.50	2.00	2.00	2.00	
1.375	1.875	2.25	2.125	2.125	2.125	1.50	1.375	2.00	2.00	2.25	1.50	2.875	2.625	1.75	1.50	2.00	1.375	1.375	
1.50	1.25	1.25	2.125	2.25	2.25	2.00	1.50	1.75	1.50	2.50	1.50	2.00	2.00	1.75	1.50	1.375	1.625	1.625	
1.50	2.125	1.50	2.00	1.50	2.25	1.375	1.375	1.75	1.50	2.00	1.60	1.625	2.00	1.625	1.50	2.125	1.50	1.50	
1.50	1.625	3.25	2.00	2.50	1.50	1.75	1.50	1.75	2.00	1.75	1.50	1.75	2.00	1.875	1.50	1.50	1.75	1.75	
1.875	2.00	1.75	2.125	2.50	2.00	1.50	1.60	2.00	2.00	2.00	1.875	1.50	2.625	2.25	1.50	2.00	2.00	2.00	
1.75	1.75	2.00	2.00	2.125	2.50	1.625	1.50	2.00	1.625	1.75	2.00	1.50	1.50	2.625	2.00	2.00	1.875	1.875	
1.50	1.75	1.50	1.50	2.50	2.625	1.00	1.50	1.50	2.00	2.25	2.125	1.50	1.50	2.00	1.625	2.00	1.75	1.75	
1.75	1.75	2.00	1.50	8.00	2.625	1.50	1.375	1.75	1.50	1.75	2.125	2.00	1.625	1.625	1.50	2.125	2.25	2.25	
2.00	2.125	1.75	1.625	2.75	2.00	1.75	1.375	1.50	2.00	2.00	2.50	1.25	1.375	1.875	1.50	1.50	1.625	1.625	
1.50	2.00	2.50	1.375	2.00	2.00	1.625	2.00	1.50	1.25	1.75	1.50	1.25	1.50	1.75	1.625	1.75	1.75	2.25	
2.00	2.00	1.75	1.50	2.25	2.125	1.75	1.00	1.625	1.60	1.50	2.00	1.625	1.50	2.00	1.75	2.375	1.50	1.50	
1.50	1.875	1.75	1.50	3.00	1.875	2.125	1.50	1.75	1.50	2.25	1.50	1.50	1.50	1.875	2.50	1.50	1.50	2.125	
1.50	1.875	2.375	2.35	2.25	2.00	2.125	1.50	1.50	1.75	2.25	1.375	1.625	2.125	1.50	1.875	2.00	1.875	2.00	
1.50	2.00	2.00	2.00	2.50	2.125	2.60	1.50	1.50	1.60	1.625	1.00	1.50	1.75	2.00	2.00	2.125	1.75	1.75	
1.75	1.875	2.00	2.00	2.50	2.25	1.50	1.25	1.375	2.00	1.50	1.25	1.625	1.50	1.625	2.00	1.25	1.25	1.875	
2.00	2.00	2.125	2.00	2.375	2.50	1.50	1.25	2.00	1.50	2.125	2.00	1.375	2.00	1.50	1.50	1.50	2.50	2.50	
1.50	2.00	2.125	2.125	1.75	2.50	1.375	1.375	1.50	2.50	1.50	1.00	1.25	1.375	1.75	1.625	2.00	2.00	2.00	
Totals .....	82.125	95.60	95.75	91.625	118.00	105.25	80.75	66.125	90.375	90.00	93.375	88.625	84.125	98.00	98.125	84.50	90.75	93.50	

		700.			710.			744.			745.			746.			762.		
Recapitulation and reduction:		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Maximum measurements.	B'	2.50	0.9842	B'	2.50	0.9842	B'	2.275	0.9950	B'	2.75	1.0826	B'	3.50	1.3779	B'	2.50	0.9842	
	B''	2.50	0.9842	B''	3.00	1.1811	B''	2.25	0.8858	B''	2.50	0.9842	B''	3.00	1.1811	B''	2.375	0.9350	
	B'''	2.875	1.1318	B'''	3.00	1.1811	B'''	2.25	0.8858	B'''	2.50	0.9842	B'''	2.625	1.0385	B'''	2.50	0.9842	
Highest.....		2.875	1.1318		3.00	1.1811		2.375	0.9850		2.75	1.0826		3.50	1.3779		2.50	0.9842	
Minimum measurements.	B'	1.00	0.3937	B'	0.875	0.3444	B'	1.00	0.3937	B'	1.25	0.4921	B'	1.25	0.4921	B'	1.25	0.4921	
	B''	1.25	0.4921	B''	1.00	0.5905	B''	1.00	0.3937	B''	1.25	0.4921	B''	1.25	0.				



TABLE I.—Measurements of fineness of wools—Continued.

		WISCONSIN.																	
		EWES, 2 YEARS OLD.																	
Catalogue number of samples..		703.			701.			755.			700.			707.			708.		
Number of section.....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
		2.00	2.00	1.75	2.25	2.25	2.375	2.50	2.00	1.50	1.25	1.50	2.00	1.50	1.75	2.025	1.00	2.00	2.00
		1.50	2.25	2.00	2.00	2.00	1.875	2.00	2.875	1.875	1.875	1.875	2.00	2.00	2.125	1.50	1.50	1.75	1.50
		1.75	2.00	1.50	2.25	2.00	2.50	1.75	1.875	2.00	2.00	1.50	1.875	2.00	1.875	1.25	1.50	2.25	1.875
		2.25	2.125	2.00	1.25	2.25	2.00	2.00	1.625	2.50	2.00	1.875	2.375	2.00	1.625	1.025	2.375	2.00	1.875
		2.125	2.375	2.25	1.875	2.00	2.50	1.25	1.875	1.25	2.125	1.125	2.50	1.875	2.50	1.50	1.50	1.875	1.875
		2.25	2.00	2.875	2.00	2.375	1.25	1.50	1.50	1.25	1.50	1.50	2.50	1.50	2.75	1.75	2.00	1.25	1.50
		2.00	2.00	1.875	2.25	1.875	2.50	1.50	1.75	2.00	1.50	2.00	2.00	1.625	2.00	2.25	1.75	2.00	2.00
		2.125	1.75	1.50	1.875	2.25	2.00	1.625	2.125	2.00	1.75	1.50	1.875	2.50	2.00	1.50	1.875	1.75	2.125
		1.50	1.75	1.50	3.00	2.00	2.00	1.75	1.50	1.875	1.80	1.875	2.00	1.375	1.75	1.50	1.50	2.125	2.35
		1.75	2.25	1.75	2.50	2.25	2.50	2.375	1.50	1.375	1.625	1.625	2.00	1.75	1.50	1.75	1.50	1.50	1.50
		2.00	2.25	1.875	2.60	2.375	1.875	2.00	2.00	2.50	2.00	2.375	1.875	1.875	1.25	1.50	1.375	2.50	1.75
		2.00	2.25	1.75	2.75	2.25	2.50	1.60	1.50	2.125	1.75	1.75	2.00	1.50	2.00	2.50	2.00	2.00	2.00
		2.875	2.875	1.50	2.00	2.00	1.50	1.50	1.375	1.375	1.875	1.625	1.875	2.00	1.50	1.75	2.00	2.37	2.50
		1.50	1.875	2.00	1.75	2.125	1.25	1.625	2.375	3.00	1.625	2.00	2.00	2.00	2.50	1.025	2.00	2.00	1.50
		1.75	1.75	2.25	1.875	2.25	1.25	1.875	2.125	2.00	2.00	2.00	1.875	1.875	2.00	2.25	2.00	2.375	1.50
		2.00	1.75	1.50	2.50	1.875	2.50	1.875	2.00	2.00	2.00	1.875	2.875	1.75	2.125	2.50	1.50	2.00	1.625
		2.00	1.75	2.25	2.00	2.00	2.25	2.50	2.00	2.25	1.75	2.50	2.25	1.50	1.75	1.25	2.00	2.00	2.00
		2.125	2.00	1.025	2.125	2.50	1.50	1.25	2.00	1.875	1.875	1.75	2.00	1.25	1.875	2.00	1.25	2.125	2.125
		2.50	2.50	2.00	1.875	2.50	1.75	1.50	1.50	3.00	2.00	2.50	2.275	2.125	1.125	1.75	2.50	2.50	2.00
		2.00	2.50	2.00	2.00	2.50	2.00	2.00	2.00	1.875	2.00	1.50	2.875	1.75	2.00	2.375	2.00	2.25	2.25
		2.00	2.00	1.75	2.25	1.875	1.625	1.625	1.875	1.75	1.75	1.025	2.00	1.50	2.50	1.75	1.50	1.875	2.00
		1.75	2.125	1.875	1.25	2.00	2.25	1.875	1.75	1.75	2.00	2.50	3.00	2.00	1.75	1.50	1.875	2.00	2.375
		1.875	2.25	2.00	1.625	2.00	2.75	1.75	2.375	2.125	1.625	2.00	2.50	2.00	2.25	1.375	1.875	1.75	1.75
		2.00	2.00	2.50	1.60	1.75	2.50	1.50	2.00	1.50	2.125	1.50	1.50	2.00	2.00	2.375	1.375	1.75	2.25
		2.50	1.875	2.00	2.00	2.125	3.00	1.50	2.00	2.00	1.875	2.00	1.875	1.875	1.75	2.75	2.25	1.50	2.00
		2.25	2.00	1.875	3.00	1.875	2.25	1.50	2.00	1.875	2.00	2.00	2.00	1.75	2.50	2.00	1.50	1.50	2.00
		1.875	2.00	1.375	1.50	2.00	2.50	2.375	1.50	2.00	2.00	2.00	2.125	2.125	2.25	1.75	1.75	1.50	1.50
		2.375	2.00	1.50	2.50	2.25	2.125	2.50	1.50	1.75	1.75	1.875	2.25	2.00	2.25	2.125	2.00	2.00	1.875
		2.50	2.125	2.50	1.75	2.50	3.00	1.50	2.50	2.50	1.875	2.00	3.00	2.00	2.50	2.00	1.25	1.50	1.25
		2.375	2.00	2.00	1.375	2.50	2.25	2.00	2.375	2.60	1.50	1.75	1.75	1.875	1.75	1.875	1.75	1.50	1.875
		2.375	2.00	2.00	1.50	2.00	2.50	1.875	1.25	2.875	1.50	2.375	3.00	1.625	2.00	1.50	2.00	1.875	2.50
		2.25	2.50	1.75	2.25	2.25	2.375	1.875	1.875	2.875	1.625	1.625	2.00	1.50	1.75	1.50	2.00	2.00	2.00
		2.00	2.125	1.625	2.125	2.25	1.75	1.875	1.75	1.625	2.00	1.875	3.00	2.00	1.875	1.625	1.875	1.50	2.125
		1.75	1.75	1.625	1.625	1.875	2.00	2.50	2.25	2.00	1.875	2.00	2.00	3.00	1.625	1.75	2.00	1.625	1.875
		1.875	2.375	1.60	1.50	2.50	2.125	1.375	1.50	1.50	2.50	1.875	2.50	2.125	2.50	2.00	1.50	2.25	1.50
		1.50	2.00	2.125	2.00	2.25	1.75	1.75	2.00	1.875	2.125	1.875	2.125	2.25	2.375	1.60	1.50	2.375	1.50
		2.00	1.75	1.375	2.00	2.375	2.25	1.75	2.00	2.00	2.00	1.50	2.00	1.75	1.50	2.00	1.50	1.875	1.50
		2.00	1.75	1.50	2.00	2.50	2.50	2.00	2.00	2.125	2.00	2.00	1.50	1.50	1.75	1.75	2.50	2.00	2.00
		2.125	2.00	2.00	2.00	1.875	2.00	1.50	1.00	2.00	2.00	1.50	1.625	1.75	1.625	1.875	2.00	1.50	2.125
		2.25	2.60	1.025	2.125	1.50	2.00	1.50	2.00	1.875	2.60	1.75	1.875	1.75	2.00	1.625	1.50	2.75	2.00
		2.125	1.875	1.60	2.25	1.75	1.75	1.875	1.375	1.875	1.875	1.625	2.00	1.50	2.00	2.00	2.00	2.00	1.125
		2.50	2.25	2.00	2.00	1.375	1.875	1.50	2.50	2.25	2.25	1.625	2.00	1.875	1.625	1.50	1.625	2.00	2.50
		2.375	1.75	2.25	1.875	2.00	2.125	2.00	2.125	3.00	1.50	2.50	2.375	2.00	1.875	2.125	2.00	1.125	1.75
		1.75	2.125	1.625	1.875	2.25	2.25	2.50	2.60	2.00	2.00	2.25	2.25	1.50	1.75	2.25	2.25	1.75	1.50
		2.00	1.25	2.00	2.50	2.375	2.125	2.00	2.00	1.625	2.00	1.875	1.50	1.75	2.00	2.00	1.625	2.50	2.50
		2.00	1.75	2.00	2.25	2.75	2.75	1.50	1.50	1.75	1.675	2.00	2.125	1.625	1.625	1.50	2.375	1.625	2.50
		2.125	2.25	2.125	2.00	1.75	2.50	1.50	1.50	2.60	2.00	2.50	2.00	1.875	1.75	1.25	2.25	1.50	2.375
		2.375	2.00	2.00	2.75	1.875	2.125	2.50	1.75	1.875	1.50	2.00	2.125	2.00	1.50	1.375	1.625	1.50	2.50
		2.375	2.00	2.00	2.125	2.00	2.25	2.125	2.50	2.00	1.625	2.25	1.875	2.25	1.675	1.75	1.75	2.00	2.25
		1.50	2.875	1.75	2.50	2.25	2.00	1.875	2.00	1.75	1.50	2.00	2.00	1.75	2.125	1.875	2.50	2.00	2.00
Totals.....		103.375	104.125	95.25	103.625	104.75	107.125	90.375	95.00	100.00	94.625	93.75	105.875	94.00	95.00	92.375	89.875	95.00	97.25

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:															
Maximum measurements:	B'	2.50	0.0842	B'	3.00	1.1611	B'	2.50	0.0842	B'	2.50	0.0842	B'	2.50	0.0842
	B''	2.50	0.0842	B''	2.50	0.0842	B''	2.50	0.0842	B''	2.50	0.0842	B''	2.50	0.0842
	B'''	2.50	0.0842	B'''	2.125	1.2303	B'''	2.00	1.1611	B'''	2.00	1.1611	B'''	2.00	1.1611
Highest.....		2.50	0.0842		3.125	1.2303		3.00	1.1611		3.00	1.1611		2.75	1.0826
Minimum measurements:	B'	1.50	0.5005	B'	1.25	0.4921	B'	1.25	0.4921	B'	1.25	0.4921	B'	1.50	0.5005
	B''	1.25	0.4921	B''	1.375	0.5413	B''	1.00	0.3937	B''	1.125	0.4429	B''	1.125	0.4429
	B'''	1.375	0.5413	B'''	1.25	0.4921	B'''	1.25	0.4921	B'''	1.00	0.3937	B'''	1.375	0.5413
Lowest.....		1.25	0.4921		1.25	0.4921		1.00	0.3937		1.00	0.3937		1.50	0.5005
Average measurements:	B'	2.068	0.8141	B'	2.073	0.8161	B'	1.808	0.7118	B'	1.892	0.7452	B'	1.88	0.7401
	B''	2.063	0.8200	B''	2.095	0.8248	B''	1.95	0.7677	B''	1.875	0.7390	B''	1.90	0.7480
	B'''	1.905	0.7499	B'''	2.142	0.8433	B'''	2.00	0.7674	B'''	2.118	0.8338	B'''	1.848	0.7273
Average.....		2.02	0.7932		2.103	0.8270		1.902	0.7488		1.90	0.7716		1.8	



TABLE I.—Measurements of fineness of wools—Continued.

		WISCONSIN.																		
		EWES, 2 YEARS OLD.												EWES, 3 TO 5 YEARS OLD.						
Catalogue number of samples..		760.			782.			788.			787.			700.			701.			
Number of section.....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	
Actual measurement in centimillimeters.	2.50	2.00	3.50	1.75	1.50	2.375	2.50	2.125	1.875	1.625	1.875	2.00	2.50	1.75	2.00	1.625	2.50	2.00	1.50	
	1.875	3.60	2.00	1.625	1.875	1.625	2.125	2.25	2.25	2.00	1.75	2.00	1.625	1.50	1.625	1.50	1.625	1.50	2.00	
	2.00	1.875	2.125	2.00	2.00	1.875	2.25	2.50	2.00	2.00	2.00	2.00	2.00	1.625	1.50	2.50	2.00	2.25	1.75	
	2.125	2.00	1.875	1.50	1.75	2.00	1.625	2.00	2.00	1.50	1.50	2.00	2.00	1.50	1.25	1.625	2.00	2.00	2.00	2.25
	1.875	2.00	1.50	2.00	1.50	2.00	1.50	2.00	2.00	2.00	2.00	2.00	2.00	1.50	2.50	2.375	2.375	1.50	2.00	1.50
	2.00	1.75	2.00	1.75	2.50	1.875	2.00	1.75	2.00	2.125	2.00	1.875	2.00	1.875	1.625	2.50	2.00	2.00	2.125	1.625
	2.25	1.375	2.00	1.50	1.50	1.625	2.375	1.75	3.00	1.875	2.125	1.875	2.25	2.50	2.50	1.75	2.00	1.75	2.00	1.375
	2.00	1.375	2.00	2.00	2.75	1.625	2.50	2.50	2.125	1.875	1.75	1.75	1.625	2.00	1.625	2.00	1.25	1.50	1.875	1.625
	2.25	1.50	2.00	1.625	2.375	2.00	1.50	2.00	2.125	2.00	1.50	1.625	2.00	2.00	2.50	2.25	2.00	2.00	2.00	1.50
	2.25	1.875	1.60	2.375	2.25	2.25	2.00	2.00	2.00	1.875	1.50	2.125	2.00	2.00	2.50	2.625	1.625	2.00	2.00	1.625
	1.75	2.00	1.875	1.50	2.00	1.875	2.125	2.50	2.00	1.75	1.625	2.125	2.00	2.25	2.00	2.00	2.00	2.00	2.00	1.875
	2.00	2.50	2.00	1.50	2.00	2.00	2.60	1.875	2.50	2.125	2.375	1.625	2.00	1.50	1.875	2.00	1.75	1.50	2.00	1.50
	2.125	1.375	2.00	1.50	1.75	1.75	2.00	2.00	2.50	1.625	1.50	1.875	2.00	1.75	1.50	1.75	1.625	2.00	1.75	2.25
	2.25	2.00	1.50	1.50	2.00	1.375	2.125	2.00	2.125	1.875	1.625	2.125	1.875	2.00	2.00	1.75	1.875	1.875	1.875	2.00
	2.00	1.75	2.375	1.375	1.50	1.50	2.50	2.00	2.00	1.75	2.00	2.50	1.50	2.00	1.50	1.125	1.875	1.875	2.125	1.125
	1.875	2.00	2.00	2.375	1.75	2.50	1.75	2.75	1.875	2.60	1.625	1.625	2.00	2.50	2.00	1.375	2.00	2.00	2.00	2.00
	1.50	2.375	1.625	2.00	1.50	2.00	1.50	2.00	2.25	2.00	2.50	3.00	1.50	2.50	1.75	1.75	2.125	1.75	2.125	1.75
	2.00	2.25	1.875	1.50	2.50	2.00	2.00	2.375	2.00	2.25	2.00	2.50	1.75	2.50	1.75	1.625	2.00	1.50	2.00	1.50
	2.375	1.75	1.50	2.50	2.25	2.00	1.875	2.00	2.25	1.875	1.50	2.00	2.50	1.50	2.00	1.50	2.375	2.00	2.00	2.00
	2.50	1.50	1.50	2.00	2.25	2.00	2.00	2.125	2.50	1.625	1.625	1.75	1.625	2.00	2.00	1.875	1.875	1.875	1.875	1.875
	2.25	1.50	1.50	1.75	2.375	2.00	1.50	3.00	2.75	1.625	1.875	2.50	1.75	2.625	1.875	1.50	1.75	1.50	1.50	1.50
	1.875	1.75	1.875	1.75	1.50	1.875	2.125	2.00	2.50	1.375	1.75	1.125	1.875	2.00	2.125	2.00	2.00	2.00	2.00	2.00
	2.00	1.75	2.00	1.50	2.125	2.00	2.50	2.25	2.25	1.875	1.625	1.875	2.00	2.50	2.375	2.125	2.125	1.50	2.125	1.50
	2.50	3.00	2.25	1.50	2.00	2.00	2.00	2.00	2.60	1.025	2.125	1.625	1.50	2.00	2.00	1.50	2.00	1.75	2.00	1.75
	1.75	2.75	1.875	2.00	2.00	2.00	2.00	2.125	2.125	1.75	2.00	1.50	2.00	1.875	2.50	2.00	2.00	1.875	2.50	2.00
	2.00	1.875	1.50	2.25	1.50	1.50	2.125	1.875	2.50	2.00	1.75	2.50	2.75	2.00	2.50	1.50	1.75	1.875	1.75	1.875
	2.375	1.875	1.875	1.50	1.50	1.50	2.00	2.00	2.00	1.875	1.875	2.50	2.00	2.50	2.625	1.50	1.75	1.50	1.50	1.50
	2.50	2.00	2.25	2.375	2.00	1.50	1.50	1.875	2.50	2.25	2.00	1.625	1.875	2.00	2.50	2.00	1.75	1.875	2.00	1.875
	2.125	2.50	1.875	1.875	1.50	1.75	2.125	2.50	2.50	2.125	1.625	2.00	1.75	1.875	1.875	1.75	2.25	1.50	2.00	2.00
	1.875	1.875	2.375	1.50	1.50	1.875	2.00	1.50	3.00	1.50	1.875	2.50	2.00	1.75	1.50	1.50	1.50	1.50	1.50	1.50
2.00	1.625	1.375	1.875	1.625	1.875	1.75	1.625	1.625	1.75	2.00	2.00	2.25	3.00	2.00	2.00	2.00	2.00	2.00	2.00	
2.75	2.50	1.625	2.00	1.50	1.50	1.875	2.50	2.25	1.50	2.00	1.875	1.75	3.00	3.00	1.25	1.25	1.25	1.25	1.25	
1.875	1.875	1.75	2.09	1.50	1.875	2.50	1.875	2.50	1.875	1.875	2.125	1.50	1.50	1.625	1.50	1.875	1.75	1.875	1.25	
2.00	1.875	2.00	1.75	1.875	2.00	2.125	2.50	2.00	2.125	2.50	2.125	1.50	1.50	1.625	1.50	2.375	2.375	1.375	1.375	
2.50	2.00	1.75	1.875	1.50	1.50	2.00	2.00	3.00	1.625	1.625	1.875	1.25	1.75	2.00	2.00	1.75	1.75	1.75	1.75	
2.75	2.50	2.375	2.00	1.375	1.50	1.875	2.00	2.25	2.25	1.875	1.875	2.50	2.00	1.75	2.25	1.50	1.50	1.50	1.50	
2.25	3.25	2.00	2.60	1.50	2.00	2.50	2.75	2.125	2.25	1.875	1.875	2.00	2.50	2.00	1.50	2.375	2.00	2.00	2.00	
2.00	2.75	1.75	2.00	2.00	2.00	1.75	2.00	2.125	2.25	1.875	2.375	2.00	2.00	2.50	1.50	2.50	2.00	2.00	2.125	
2.125	2.50	1.875	2.125	1.50	2.00	2.00	2.00	2.375	2.00	1.625	2.00	2.00	1.625	2.00	1.875	2.50	1.50	1.50	1.50	
2.00	2.50	1.75	1.625	2.00	1.50	2.50	2.50	2.00	2.00	1.875	3.00	1.75	2.50	2.00	1.50	2.00	2.00	2.00	2.00	
2.00	2.75	1.875	1.625	1.875	1.75	2.75	2.00	2.375	2.00	1.625	2.00	2.25	2.50	1.125	1.75	1.625	2.00	1.625	1.875	
1.875	2.50	2.00	2.00	1.75	1.625	2.00	2.00	2.00	2.00	2.125	2.375	1.75	2.50	1.50	1.375	1.50	1.50	1.50	1.50	
2.25	2.00	2.00	1.75	1.25	1.50	2.375	2.50	2.00	2.00	2.00	2.125	1.75	2.50	1.125	1.75	1.50	2.00	2.00	2.00	
2.00	2.125	2.00	2.375	1.625	1.75	2.50	2.50	2.125	2.00	2.50	1.50	1.50	1.625	1.75	2.50	1.625	2.50	2.50	2.50	
1.75	1.50	2.00	2.00	1.50	1.50	2.50	2.00	2.125	2.00	2.375	2.125	2.00	1.50	2.75	1.75	2.00	2.00	2.00	1.75	
2.25	2.25	1.875	2.00	2.25	1.875	2.00	2.00	2.00	2.00	1.75	1.875	2.125	1.875	2.00	1.50	1.25	1.50	2.00	2.00	
2.00	1.875	1.50	2.00	2.00	1.75	2.00	2.00	2.50	2.50	2.50	1.875	2.50	2.50	1.875	1.375	1.375	2.25	1.75	1.75	
2.375	2.00	2.00	1.75	1.25	1.625	2.00	2.00	2.00	3.00	1.875	2.00	3.00	2.00	1.625	1.125	1.125	2.50	2.50	2.125	
2.00	2.25	2.00	2.50	2.00	1.50	2.00	2.00	1.50	1.75	2.625	1.625	1.875	1.50	2.50	1.50	1.25	2.50	2.00	2.00	
2.00	2.50	2.00	2.50	2.00	1.50	2.00	2.00	2.25	2.25	2.00	1.875	2.25	2.50	2.00	1.50	1.50	1.50	1.50	1.75	
2.00	2.25	2.125	1.625	1.50	1.625	1.75	2.00	2.50	2.00	1.625	2.125	1.75	1.50	2.375	2.00	1.375	2.00	1.375	2.00	
Totals.....	105.125	103.75	05.75	92.75	90.375	00.00	103.125	108.25	112.00	98.75	98.50	103.875	95.125	107.625	09.25	84.125	90.50	89.125		

		760.			782.			788.			787.			700.			701.		
No. of section.		In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	
Recapitulation and reduction:	Maximum measurements.	B' 2.75	1.0826	B' 2.50	0.9842	B' 2.50	0.9842	B' 2.75	1.0826	B' 3.00	1.1811	B' 3.00	1.1811	B' 3.00	1.1811	B' 2.50	0.9842	B' 2.50	0.9842
		B'' 3.25	1.2745	B'' 2.50	0.9842	B'' 3.00	1.1811	B'' 2.875	1.1318	B'' 3.75	1.4763	B'' 3.75	1.4763	B'' 3.75	1.4763	B'' 2.50	0.9842	B'' 2.50	0.9842
		B''' 3.50	1.3779	B''' 2.50															



TABLE I.—Measurements of fineness of wools—Continued.

WISCONSIN.																		
EWES, 3 to 5 YEARS OLD.																		
Catalogue number of samples..	702.			703.			705.			706.			707.			711.		
Number of section.....	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
	1.75	2.25	2.00	1.875	2.00	2.50	2.25	3.00	3.00	1.625	2.00	2.25	1.625	2.50	1.875	2.125	2.00	1.50
	2.00	2.00	2.125	2.25	2.50	2.25	2.50	1.75	2.25	3.00	3.00	2.00	1.50	2.00	1.50	2.00	1.50	2.00
	1.50	1.625	2.00	2.75	1.625	3.00	2.375	1.75	2.125	1.75	2.00	2.50	1.375	2.50	3.00	3.00	3.00	1.50
	1.50	1.50	1.875	2.625	2.50	2.00	2.00	2.75	1.75	1.75	2.125	2.375	1.00	2.00	1.50	2.75	1.50	2.00
	1.75	2.125	2.50	1.50	2.00	1.50	1.75	2.00	1.75	2.00	2.00	2.375	1.50	2.375	1.50	2.125	1.75	1.60
	2.50	2.875	2.00	2.00	1.875	2.25	1.875	3.00	1.75	2.125	2.00	2.25	1.875	2.125	1.625	2.50	1.625	1.80
	2.00	1.625	2.00	1.75	2.50	1.25	2.375	2.00	2.00	1.50	2.25	2.75	1.50	2.00	1.875	2.00	1.50	2.00
	2.00	2.25	1.50	2.25	1.50	2.375	2.00	2.00	3.25	1.625	2.00	1.50	1.625	2.375	1.75	2.00	2.125	1.50
	1.75	2.25	1.625	1.75	1.25	2.75	1.625	2.00	2.25	2.375	2.00	2.25	2.50	2.50	2.125	2.50	2.25	2.00
	1.25	2.125	2.25	1.875	1.625	2.50	1.50	2.75	2.50	1.625	2.00	1.50	1.50	1.875	2.00	1.875	2.00	1.875
	2.00	1.50	2.00	1.875	2.00	2.375	1.50	1.875	2.875	1.50	2.00	1.625	2.25	2.00	1.50	2.00	1.50	2.00
	1.75	1.50	1.75	2.00	2.00	1.25	2.60	2.125	2.00	1.875	2.00	1.50	1.625	2.00	1.25	2.00	2.00	1.75
	2.25	1.625	1.875	1.50	1.75	2.25	2.025	2.00	2.875	1.50	2.00	2.875	1.50	2.00	1.625	2.50	1.75	2.00
	2.00	2.00	2.125	1.625	1.875	2.00	1.75	2.375	2.50	1.75	2.50	1.75	1.625	2.375	1.25	2.125	1.25	2.125
	2.00	2.00	2.00	1.75	2.00	1.875	1.50	2.00	2.00	1.25	2.125	2.00	1.50	2.00	1.50	2.00	2.00	1.50
	1.75	1.875	1.875	1.875	3.00	2.375	3.00	1.75	1.875	2.00	2.375	1.375	1.50	2.00	1.50	2.125	1.25	2.00
	1.625	2.00	1.875	1.625	2.00	1.875	2.50	2.375	2.625	1.125	2.125	2.25	1.625	2.125	1.625	2.125	1.625	1.125
	2.50	1.875	1.75	1.75	2.125	1.50	2.50	2.375	2.75	1.00	2.50	1.625	1.75	2.125	1.75	2.125	1.75	2.25
	1.50	2.00	2.125	1.875	2.00	1.50	2.00	2.25	2.25	1.625	1.875	1.625	1.25	2.00	2.00	2.00	2.25	2.00
	2.00	1.50	1.75	1.625	1.625	1.50	2.25	1.625	2.00	1.50	2.00	2.375	2.375	2.00	2.375	2.75	2.50	2.00
	2.00	2.00	2.00	2.025	2.125	2.75	1.25	2.25	1.875	2.25	2.00	1.125	1.50	2.00	1.50	2.00	1.50	2.00
	1.50	2.50	2.00	2.00	2.00	2.00	2.00	2.25	2.00	2.25	1.50	2.00	1.25	2.00	1.25	2.00	2.00	1.50
	1.75	2.125	1.875	1.875	1.875	2.125	2.125	2.50	1.75	1.50	2.00	2.125	1.50	1.625	1.50	1.50	1.50	2.00
	1.25	2.00	2.375	2.00	1.75	2.50	2.50	2.375	1.625	1.625	2.00	1.50	1.75	2.00	1.50	2.00	2.00	1.625
	2.00	1.75	2.00	1.50	1.50	1.50	2.50	2.75	2.00	1.50	2.00	1.50	1.50	2.00	1.50	2.00	2.125	1.50
	1.625	1.875	1.75	1.50	2.00	2.125	2.75	2.50	2.25	1.625	2.375	1.50	1.75	2.00	1.75	2.00	2.375	2.00
	1.875	1.875	1.625	1.50	1.50	3.25	2.875	2.25	1.875	1.75	2.50	1.75	1.25	1.875	1.625	1.625	1.625	1.625
	1.75	2.375	1.50	2.125	1.50	2.25	1.75	2.50	2.00	2.00	2.25	2.25	1.625	2.00	2.00	2.00	1.875	2.00
	2.00	1.75	1.625	2.25	2.00	3.125	1.50	1.50	2.00	1.75	2.125	1.75	1.625	1.50	2.00	2.00	2.00	2.125
	1.50	2.00	1.75	1.50	2.50	2.625	1.50	1.75	2.00	1.50	2.125	1.30	1.75	1.50	1.875	2.125	2.125	1.875
	1.25	2.50	2.00	1.25	1.75	3.00	1.625	2.00	2.375	1.50	2.50	2.00	2.00	2.25	1.875	2.125	2.125	1.50
	2.00	1.875	1.875	1.125	1.50	2.50	2.375	2.00	2.25	2.00	1.875	2.00	1.50	2.00	2.00	2.00	2.125	2.00
	2.75	1.625	1.625	1.375	1.875	1.50	2.00	2.75	2.50	1.50	2.00	1.50	1.50	2.00	1.50	2.00	2.00	2.00
	1.625	2.00	2.00	1.50	2.50	1.50	2.125	2.375	2.625	1.50	2.375	1.625	1.75	2.00	1.625	2.00	1.625	2.00
	2.25	2.00	1.875	1.625	2.375	2.75	2.50	1.50	2.00	1.75	2.375	2.00	1.50	2.25	2.00	2.00	2.00	2.125
	1.75	1.50	1.625	1.25	2.00	2.625	2.875	2.00	1.50	1.50	1.875	2.00	2.00	1.875	2.00	2.00	2.00	1.625
	1.50	1.50	1.75	1.50	2.50	1.875	2.575	2.625	1.625	2.00	1.875	1.00	1.00	1.875	1.625	2.00	2.00	1.625
	2.00	1.75	1.625	1.50	3.50	2.00	2.25	1.50	1.875	2.125	1.875	1.75	1.75	2.00	2.00	2.00	2.00	2.125
	1.75	1.625	1.625	1.625	2.50	3.375	2.875	1.875	1.50	2.375	1.625	1.625	1.625	2.00	1.625	2.00	2.00	1.625
	1.50	2.00	1.50	1.25	2.00	1.75	1.50	3.50	2.00	2.50	2.25	1.50	1.50	3.00	1.875	2.00	2.00	2.00
	2.50	2.50	2.00	1.75	1.50	2.00	1.75	2.50	2.125	2.125	2.125	1.50	1.50	2.00	2.00	2.00	2.00	2.00
	1.50	2.50	1.625	1.875	1.75	2.25	1.625	3.00	2.625	2.125	2.00	1.375	1.875	2.00	2.00	2.00	2.00	2.00
	2.50	1.50	2.00	2.125	1.625	2.25	1.875	3.25	1.50	2.00	1.50	2.50	2.60	2.00	2.00	2.00	2.00	2.00
	2.00	2.00	1.75	1.50	1.875	2.125	1.875	1.75	2.00	2.50	1.375	1.50	1.50	2.00	2.00	2.00	2.00	2.00
	2.25	2.50	1.50	1.50	2.00	2.60	2.60	1.50	1.50	2.25	1.625	1.75	1.75	1.50	1.875	2.125	2.125	2.00
	2.00	2.50	1.875	1.875	2.00	2.375	1.875	2.375	1.75	2.00	1.50	1.50	1.50	2.00	2.00	2.00	2.00	2.00
	1.625	1.75	1.625	2.00	1.75	2.25	2.125	2.50	3.50	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
	1.75	2.375	2.25	2.50	2.75	1.625	2.00	1.875	2.25	2.00	2.125	1.50	1.50	2.00	2.00	2.00	2.00	2.00
	1.50	2.125	2.125	1.50	1.50	3.25	1.50	2.00	2.25	1.875	1.75	1.75	1.75	2.00	2.00	2.00	2.00	2.00
	2.25	2.00	2.00	1.625	1.75	2.00	1.625	3.00	2.375	1.75	1.50	2.00	2.00	2.00	1.50	2.00	2.00	1.75
Totals .....	92.875	98.875	94.25	88.625	98.25	100.625	112.875	112.125	107.625	88.00	107.625	00.875	80.375	107.375	91.00	112.00	102.625	97.125

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.		No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.		No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.	
		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.						
Maximum measurements.	B'	2.75	1.0626	B'	2.75	1.0626	B'	3.00	1.1811	B'	3.00	1.1811	B'	2.50	0.9642	B'	3.00	1.1811
	B''	2.875	1.1318	B''	3.00	1.1811	B''	3.50	1.3779	B''	3.00	1.1811	B''	3.00	1.1811	B''	3.00	1.1811
	B'''	2.50	0.9642	B'''	2.25	1.2795	B'''	3.50	1.3779	B'''	2.60	0.9643	B'''	2.625	1.0334	B'''	2.75	1.0826
Highest .....		2.875	1.1318		3.25	1.2795		2.60	1.3770		3.00	1.1811		3.00	1.1811		3.00	1.1811
Minimum measurements.	B'	1.25	0.4921	B'	1.125	0.4429	B'	1.25	0.4921	B'	1.00	0.3937	B'	1.00	0.3937	B'	1.50	0.5905
	B''	1.50	0.5905	B''	1.25	0.4921	B''	1.50	0.5905	B''	1.50	0.5905	B''	1.375	0.5413	B''	1.50	0.5905
	B'''	1.375	0.5413	B'''	1.25	0.4921	B'''	1.50	0.5905	B'''	1.125	0.4429	B'''	1.00	0.3937	B'''	1.50	0.5905
Lowest .....		1.25	0.4921		1.125	0.4429		1.25	0.4921		1.00	0.3937		1.00	0.3937		1.50	0.5905
Average measurements.	B'	1.858	0.7314	B'	1.773	0.6980	B'	2.258	0.8689	B'	1.78	0.6755	B'	1.608	0.6390	B'	2.24	0.8818
	B''	1.978	0.7787	B''	1.965	0.7730	B''	2.243	0.8830	B''	2.193	0.8470	B''	2.148	0.8456	B''	2.053	0.8083
	B'''	1.685	0.7421	B'''	2.133	0.8307	B'''	2.153	0.8476	B'''	1.818	0.7157	B'''	1.820	0.7165	B'''	1.943	0.7649
Average .....		1.607	0.7507		1.967													



TABLE I.—Measurements of fineness of wools—Continued.

		WISCONSIN.																	
		EWES, 3 TO 5 YEARS OLD.																	
Catalogue number of samples..		712.			713.			716.			717.			718.			719.		
Number of section.....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
		1.50	2.50	1.50	1.875	2.25	1.875	2.50	1.625	2.50	2.50	1.625	2.625	2.50	2.75	1.875	2.125	2.50	1.875
		1.50	2.25	2.00	1.50	2.375	2.25	2.125	1.875	2.375	3.75	1.50	1.75	2.125	1.75	2.25	1.675	2.50	1.675
		1.50	2.00	1.50	1.75	1.625	1.875	2.25	2.00	2.00	2.00	1.75	2.00	2.25	2.00	2.50	2.00	2.25	2.50
		2.00	1.875	1.50	1.75	1.75	1.75	2.60	2.00	2.125	2.375	1.625	2.00	2.00	1.625	2.125	1.75	2.75	2.125
		1.50	1.75	1.25	1.50	1.50	2.00	2.00	1.75	2.125	2.25	1.875	1.75	1.875	2.00	1.875	1.50	2.625	1.875
		2.25	2.25	1.50	2.25	1.50	1.75	2.25	1.875	2.75	1.875	1.75	1.875	1.625	1.75	1.75	2.50	2.50	1.625
		2.25	2.00	1.625	2.00	1.50	1.50	2.375	2.25	2.25	1.75	1.875	2.125	2.50	2.50	3.25	2.00	2.00	2.75
		2.375	2.50	2.00	2.00	1.75	3.00	2.50	2.00	2.375	2.00	1.625	2.125	1.875	1.50	3.125	1.375	2.00	2.625
		1.75	2.50	1.50	1.75	1.75	2.00	2.50	2.375	3.25	2.50	1.75	2.75	3.125	2.125	2.00	2.75	2.25	2.125
		1.625	2.50	1.625	1.50	1.50	2.25	2.00	2.00	1.75	2.75	1.75	2.00	3.00	1.50	2.50	1.75	2.125	2.50
		1.50	1.75	1.75	2.00	2.375	1.875	1.875	2.00	2.25	1.875	1.875	1.875	2.125	2.75	2.00	2.00	2.125	2.375
		1.625	2.00	1.25	1.50	2.00	2.75	2.50	1.75	2.375	2.00	1.75	2.00	3.25	3.125	1.625	2.00	1.75	2.00
		1.25	2.25	1.625	2.00	2.00	1.875	2.125	1.50	2.125	1.875	1.75	1.75	1.875	2.00	1.875	1.75	3.00	2.125
		2.125	1.75	1.75	1.875	1.50	1.875	2.00	1.50	2.375	1.875	1.75	1.875	2.00	2.50	1.75	2.00	2.625	2.50
		2.25	2.50	2.00	2.375	2.25	2.125	2.00	1.875	2.25	1.50	1.625	2.60	1.875	1.625	2.625	2.25	1.875	2.125
		1.50	2.50	1.50	1.875	1.50	2.00	2.00	1.75	2.00	2.25	1.75	2.125	1.875	2.00	3.125	2.375	2.00	2.375
		1.50	2.50	2.00	1.50	1.50	2.25	1.875	1.75	2.00	2.00	1.875	2.60	3.00	2.50	2.00	2.00	2.00	2.50
		2.00	2.00	0.50	1.50	1.75	1.75	2.00	1.875	2.50	2.00	1.75	2.00	1.875	2.00	2.60	1.875	2.375	2.375
		2.25	2.00	1.50	2.00	1.875	1.875	2.00	1.50	2.00	1.875	2.75	1.875	2.125	2.00	1.625	2.00	2.25	2.00
		2.625	2.00	1.50	1.50	1.625	2.125	1.50	1.75	2.00	1.875	2.00	2.75	2.00	1.75	2.00	2.50	3.00	1.875
		2.875	1.75	2.125	1.75	1.50	2.00	2.50	2.00	2.875	1.75	1.875	2.375	1.50	3.50	2.375	2.50	1.75	2.00
		2.00	2.25	1.50	1.75	1.875	2.00	2.00	1.50	2.75	2.00	1.625	2.375	1.875	2.25	2.625	2.00	2.60	2.00
		2.00	2.00	1.625	2.00	1.875	2.25	2.50	2.125	3.00	2.00	1.75	2.00	2.00	2.75	2.50	2.25	1.875	1.75
		1.50	1.625	1.125	1.50	1.60	2.125	1.875	2.00	2.25	1.875	1.625	2.00	2.375	2.375	2.50	1.75	2.50	1.875
		1.75	2.125	1.60	2.125	1.75	2.00	2.00	2.50	1.875	1.875	2.50	1.875	2.875	2.00	1.625	1.75	2.00	2.00
		1.00	2.25	1.50	2.125	1.875	1.875	2.50	2.50	3.25	1.75	3.00	2.125	2.50	1.875	2.50	2.00	2.75	1.875
		1.50	2.25	1.375	2.00	1.50	1.625	2.375	1.60	2.00	2.00	2.375	2.25	2.125	1.75	1.75	1.75	2.25	2.375
		1.60	2.50	2.25	1.25	2.00	1.75	2.125	1.75	1.875	1.75	2.00	2.50	2.00	1.75	2.00	1.875	2.00	1.50
		1.50	2.50	1.50	1.50	1.75	2.00	3.00	2.00	2.125	1.875	2.375	2.125	2.25	2.00	1.75	2.00	1.875	2.00
		2.00	2.00	2.125	1.50	1.60	2.50	2.50	1.875	2.25	1.75	2.00	2.00	3.00	1.875	2.00	2.50	2.125	2.375
		2.50	2.00	2.00	1.50	2.00	2.375	2.00	1.625	3.00	2.125	2.25	2.50	2.125	2.50	2.50	1.875	2.00	1.50
		2.00	3.00	1.75	1.75	2.00	2.125	2.60	2.00	2.00	2.00	1.75	2.00	2.50	1.50	1.75	1.875	2.00	2.00
		1.50	2.125	2.375	1.625	1.00	1.875	2.875	1.75	2.125	1.75	2.125	2.00	1.75	2.00	2.25	2.00	1.875	2.375
		2.125	1.75	2.625	2.00	2.00	2.50	2.25	1.875	2.00	1.50	2.00	1.50	2.125	2.00	2.25	3.00	2.00	2.375
		1.50	2.50	2.625	1.50	1.50	2.00	1.875	2.00	2.00	1.875	1.50	2.00	1.875	1.75	2.125	1.875	1.875	2.00
		1.50	2.50	1.875	1.50	1.875	2.375	2.50	2.00	1.50	2.00	2.25	2.00	2.00	1.875	2.00	2.00	2.00	2.125
		1.875	2.00	1.50	1.75	2.00	1.875	2.50	2.125	2.25	1.50	2.00	2.00	1.875	1.50	2.00	1.875	1.875	2.00
		2.00	2.125	1.75	1.75	1.50	1.50	2.375	2.50	2.375	2.00	2.375	2.00	2.00	2.00	2.00	2.00	2.00	2.125
		2.50	1.75	2.00	1.50	1.50	1.875	2.875	2.00	2.50	1.75	2.00	2.00	2.00	2.375	2.75	1.875	2.00	2.60
		1.50	2.00	2.00	1.50	2.00	1.75	2.00	2.00	2.00	2.50	2.125	1.625	2.00	2.00	2.00	1.50	1.625	2.50
		1.60	2.125	1.75	2.125	2.00	2.00	2.00	2.60	1.75	2.50	2.25	1.625	2.50	2.50	2.00	2.00	1.50	2.00
		2.125	1.875	1.75	1.50	2.25	2.00	2.375	2.00	2.00	2.00	2.00	2.00	2.00	1.85	2.00	2.375	1.875	2.00
		2.00	1.75	1.625	2.00	1.875	1.75	2.125	2.00	2.00	1.875	2.75	2.75	2.375	2.00	2.00	2.375	2.125	2.375
		2.00	1.875	2.00	2.00	1.50	2.25	2.50	2.50	2.25	2.125	1.75	2.00	2.50	2.00	1.875	2.125	2.375	2.50
		1.60	2.00	2.125	1.50	2.00	2.00	2.50	3.00	2.00	2.25	1.75	2.00	2.50	2.00	2.25	2.25	1.50	2.50
		1.50	1.75	1.50	1.75	2.00	1.75	2.50	2.00	1.875	2.00	2.50	2.50	2.00	2.25	2.25	1.75	2.50	2.00
		2.50	1.50	1.625	2.00	2.00	2.00	2.375	1.625	2.625	2.25	2.25	2.00	2.00	2.00	2.25	1.50	2.50	2.375
		1.50	2.50	2.00	2.00	2.00	2.375	3.00	1.75	2.50	3.00	2.00	2.00	3.00	1.75	2.00	1.625	2.25	2.00
		2.375	1.75	2.50	1.375	1.50	2.25	1.875	2.125	2.00	2.25	3.00	2.00	3.00	2.375	1.875	2.00	1.75	1.875
		1.75	1.75	1.625	1.00	1.875	2.00	2.00	2.00	2.60	2.00	2.00	2.75	2.375	2.125	2.00	1.50	2.50	2.00
Totals .....		92.25	105.25	08.00	87.125	89.375	101.50	113.25	94.875	113.125	101.125	101.50	106.875	107.875	104.50	108.625	08.75	107.50	107.625

	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.						
Recapitulation and reductions:	B'.	2.875	1.1818	B'.	2.50	0.9842	B'.	3.00	1.1811	B'.	3.75	1.4763	B'.	3.25	1.2795	B'.	2.50	0.9842
	B''.	3.00	1.1811	B''.	2.375	0.9850	B''.	2.50	0.9842	B''.	3.00	1.1811	B''.	3.50	1.3779	B''.	3.00	0.1811
	B'''.	2.625	1.0334	B'''.	2.50	0.9842	B'''.	3.25	1.2795	B'''.	2.75	1.0826	B'''.	3.25	1.2795	B'''.	2.625	1.0334
Highest .....		3.00	1.1811		2.50	0.9842		3.25	1.2795		3.75	1.4763		3.50	1.3779		3.00	1.1811
Minimum measurements:	B'.	1.25	0.4921	B'.	1.50	0.5905	B'.	1.50	0.5905	B'.	1.50	0.5905	B'.	1.50	0.5905	B'.	1.50	0.5905
	B''.	1.50	0.5905	B''.	1.00	0.3987	B''.	1.50	0.5905	B''.	1.50	0.5905	B''.	1.50	0.5905	B''.	1.375	0.5413
	B'''.	1.125	0.4429	B'''.	1.60	0.5905	B'''.	1.50	0.5905	B'''.	1.75	0.6899	B'''.	1.50	0.5905	B'''.	1.625	0.6397
Lowest .....		1.125	0.4429		1.00	0.3987		1.50	0.5905		1.50	0.5905		1.50	0.5905		1.375	0.5413
Average measurements:	B'.	1.845	0.7263	B'.	1.742	0.6858	B'.	2.265	0.8917	B'.	2.023	0.7960	B'.	2.157	0.8492	B'.	1.975	0.7773
	B''.	2.105	0.8287	B''.	1.783	0.7019	B''.	1.898	0.7472	B''.	2.08	0.7992	B''.	2.09	0.8228	B''.	2.19	0.8022
	B'''.	1.96	0.7716	B'''.	2.023	0.7964	B'''.	2.262	0.8905	B'''.	2.137	0.8413	B'''.	2.172	0.8551	B'''.	2.152	0.8472
Average .....		1.47	0.7755		1.849	0.7279		2.141	0.8429		2.063	0.8122		2.139	0.8381		2.106	0.8291
Measurements above average..		75			83			58			65			53				



TABLE I.—Measurements of fineness of wools—Continued.

		WISCONSIN.																			
		EWES, 3 TO 5 YEARS OLD.																			
Catalogue number of samples..		720.			721.			722.			723.			770.			771.				
Number of section.....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.		
Actual measurement in centimillimeters.	2.00	2.00	1.50	2.50	2.50	2.00	2.00	2.375	2.00	1.625	2.00	2.00	1.50	2.25	2.00	2.00	2.00	2.25	1.875	1.875	
	2.00	2.25	2.50	2.625	2.25	1.50	2.125	2.25	2.00	1.875	1.25	1.875	1.75	1.625	2.00	2.00	1.75	1.875	1.875	2.00	
	2.625	2.50	1.875	2.00	2.00	2.125	2.375	2.125	2.00	1.375	1.25	2.125	1.875	1.75	1.875	1.875	2.00	2.00	2.00	2.00	
	2.125	2.50	1.875	2.375	2.25	2.50	2.25	2.50	2.00	1.75	1.25	2.25	1.75	1.75	2.125	2.00	2.00	2.00	2.00	2.125	
	1.875	2.00	1.625	2.00	2.00	2.375	2.60	1.875	2.00	1.75	2.00	1.75	2.00	1.75	1.625	2.25	1.75	1.875	2.375	1.75	
	1.875	2.75	1.625	2.50	1.75	2.125	2.00	2.50	2.125	1.625	1.875	1.875	1.875	2.00	2.50	2.375	2.50	2.375	2.125	1.875	1.875
	2.00	2.875	2.50	2.375	1.625	2.00	2.625	2.25	2.00	2.875	2.00	2.00	2.00	1.50	2.00	2.00	2.00	1.625	2.125	2.375	2.375
	2.00	2.50	2.00	2.625	2.00	2.00	2.00	2.125	1.875	2.00	1.625	2.00	1.625	2.00	1.875	2.375	2.00	2.25	2.00	2.25	2.00
	1.375	1.50	2.625	2.625	2.125	2.50	2.00	2.375	2.00	1.75	1.875	1.50	1.75	2.00	1.75	2.00	1.875	1.75	1.875	1.875	1.875
	2.00	2.125	2.125	2.00	1.75	2.375	2.50	2.25	2.00	1.75	2.00	1.75	1.50	2.00	2.375	2.00	2.00	2.00	2.25	2.00	2.00
	2.375	1.025	2.50	2.50	1.675	3.00	2.375	2.50	2.00	2.00	1.75	2.00	1.75	2.00	1.75	2.00	1.75	2.00	1.875	2.00	2.50
	1.875	1.60	1.875	2.375	2.00	2.00	1.75	2.00	1.875	2.375	2.00	1.875	2.00	2.00	2.125	2.00	2.00	2.00	2.00	2.00	2.125
	1.625	2.00	2.50	2.60	2.25	2.125	1.875	2.00	1.875	2.125	1.50	2.125	1.50	2.125	1.50	2.125	2.25	2.125	1.875	1.875	1.875
	2.00	2.25	2.50	2.00	1.625	2.375	1.75	2.00	3.00	2.375	1.60	2.375	1.60	2.00	1.875	2.00	1.875	2.00	1.75	2.50	1.75
	2.00	1.75	1.75	1.625	2.00	2.00	2.50	2.125	2.375	2.50	1.50	1.50	2.00	1.50	1.875	2.375	1.875	1.875	1.875	2.375	2.375
	2.125	2.00	2.125	1.375	1.875	2.00	2.675	2.875	3.25	2.375	1.75	2.25	2.00	1.50	2.00	2.50	2.00	2.50	2.00	1.75	1.75
	1.50	3.00	1.875	2.00	2.25	3.00	1.75	2.00	2.875	1.875	1.875	1.875	1.875	1.875	2.50	2.00	1.625	1.875	2.00	1.875	2.00
	2.00	2.50	1.875	2.00	2.50	2.00	2.00	2.00	2.00	2.00	2.00	1.025	1.50	1.875	2.00	1.875	2.00	1.875	2.00	2.50	2.50
	2.125	2.50	2.50	2.375	2.00	2.00	1.875	2.25	2.00	2.375	1.75	1.875	1.875	1.625	2.00	1.625	2.00	1.625	2.875	1.875	1.875
	2.00	1.75	2.00	2.125	2.00	3.00	1.875	2.00	1.875	2.125	2.25	2.00	1.875	2.25	2.00	1.875	1.875	1.875	2.00	1.875	2.75
	1.75	1.75	1.875	2.625	2.125	2.00	2.25	1.75	2.00	1.875	2.00	2.00	2.00	1.75	1.75	2.375	2.00	1.875	1.875	1.875	1.875
	2.00	1.875	2.00	2.00	3.00	1.50	2.625	2.00	2.50	1.75	2.125	1.875	1.60	1.625	2.00	2.875	2.00	2.875	1.625	1.875	1.875
	2.00	2.00	2.375	2.675	3.00	2.00	2.00	2.125	2.125	1.75	1.75	2.00	1.50	2.50	2.00	1.75	2.00	1.875	2.00	1.625	1.875
	2.125	2.00	2.00	3.625	2.00	1.875	2.00	2.25	2.125	1.50	1.75	2.125	1.50	2.00	2.875	1.625	2.50	2.00	2.50	2.00	1.75
	2.00	2.25	1.875	2.50	2.25	2.50	2.375	2.00	2.00	1.50	2.00	1.875	1.875	1.875	1.875	1.60	2.00	2.00	2.00	2.50	2.50
	2.75	2.875	2.00	2.375	2.375	2.125	2.125	2.375	2.50	2.50	2.25	2.00	2.00	2.00	2.50	2.00	2.50	1.625	2.50	2.00	2.00
	2.375	1.875	2.00	2.00	2.26	2.50	2.375	2.50	2.125	1.625	2.125	2.00	1.50	1.50	1.50	1.75	2.50	2.00	2.00	2.00	2.00
	1.875	2.00	1.875	2.125	2.50	2.75	2.50	2.125	2.125	2.125	1.625	1.75	1.50	2.00	2.00	1.875	1.875	1.875	1.875	2.25	2.25
	2.00	2.40	2.125	2.00	2.50	1.75	2.50	2.00	2.00	1.50	2.00	2.00	1.50	2.125	2.00	1.50	2.625	2.00	2.00	2.00	2.00
	2.125	2.00	2.50	2.00	2.25	2.375	1.875	2.375	2.00	2.00	2.00	2.125	1.875	2.25	1.75	1.625	2.00	2.00	2.00	2.00	2.00
	2.00	2.375	2.50	2.50	2.375	1.875	2.00	2.25	2.375	1.625	2.25	2.00	1.875	2.25	1.50	2.00	1.25	2.00	2.125	2.25	2.25
	3.00	2.25	3.375	2.50	1.625	2.00	1.875	2.375	2.125	1.75	1.875	2.125	1.625	2.375	2.00	1.25	3.00	1.875	3.00	1.875	1.875
	2.50	2.125	2.875	2.875	2.00	2.00	2.125	2.25	2.00	1.50	1.75	1.75	2.00	2.125	2.50	1.875	2.50	2.00	2.00	2.00	2.00
	2.375	2.75	2.00	2.75	2.00	2.00	2.875	1.75	1.75	2.00	2.00	1.875	2.00	2.00	2.50	2.75	2.00	1.625	1.875	1.875	1.875
	2.50	1.875	1.625	2.00	2.25	2.375	2.125	2.00	2.875	1.50	1.75	2.00	1.75	1.75	2.25	2.00	2.00	2.00	2.00	2.00	2.00
	2.125	2.00	2.00	2.125	2.125	2.50	2.00	2.60	2.00	2.60	1.875	2.00	1.75	1.625	2.00	1.75	1.625	2.00	1.875	1.50	2.00
	1.375	2.125	2.00	1.875	2.00	2.50	1.50	3.00	1.875	2.00	2.125	2.50	1.50	1.50	2.875	2.00	2.375	2.00	2.375	2.50	2.50
	2.00	2.00	2.00	2.125	2.375	2.00	2.125	1.75	1.875	2.125	2.125	2.00	1.50	1.60	2.875	1.875	2.00	2.00	2.00	2.00	2.00
	2.50	2.00	3.00	2.50	2.25	1.875	2.00	1.75	2.00	1.75	2.00	2.00	1.875	2.125	1.875	2.125	2.50	2.00	2.00	2.00	2.00
	2.125	1.50	2.50	2.50	3.125	2.50	1.875	1.50	2.00	1.75	1.625	1.625	1.73	1.60	1.125	1.875	2.00	2.00	2.00	2.00	2.00
1.50	2.125	2.60	2.375	2.00	1.875	2.50	3.25	2.125	1.625	1.75	1.625	1.50	1.375	2.00	2.125	2.875	2.875	2.875	1.875	1.875	
1.625	2.25	2.00	2.00	3.125	2.00	2.00	2.25	2.50	2.00	1.875	1.75	1.625	1.75	1.75	1.625	1.75	1.75	2.00	2.125	2.125	
2.00	2.00	2.125	2.50	2.00	2.75	2.00	2.375	1.875	1.625	2.00	1.625	1.50	2.00	2.00	2.00	1.875	2.50	2.00	2.00	2.00	
2.25	1.625	2.00	2.875	2.50	2.75	2.00	2.00	2.125	2.00	2.00	2.00	2.00	2.00	1.60	2.00	1.75	2.00	2.00	2.00	2.00	
2.50	1.75	1.875	2.875	2.125	2.375	3.00	2.375	2.00	1.75	1.875	1.50	1.75	2.375	2.00	2.00	2.00	2.00	2.00	2.00	2.50	
2.375	2.25	2.125	2.125	3.00	2.50	2.00	2.375	2.00	1.875	2.125	2.00	1.50	2.375	2.50	2.50	1.625	2.00	2.00	2.00	2.00	
1.625	2.00	2.125	2.375	2.50	2.00	2.00	2.375	2.25	2.50	2.00	2.25	2.50	2.875	1.50	1.625	2.00	1.75	2.00	1.75	1.75	
2.00	2.25	1.625	2.125	2.375	2.375	2.125	2.875	1.875	1.50	2.50	2.50	1.625	1.50	2.00	1.875	1.875	1.875	1.875	2.00	2.00	
1.875	2.00	2.00	2.375	2.00	2.25	2.00	2.125	1.875	1.875	2.25	2.00	1.50	2.50	2.00	2.00	2.875	2.50	2.50	2.50	2.50	
1.50	2.00	2.375	2.875	2.25	2.00	2.00	2.50	2.25	2.00	1.875	1.375	2.00	1.625	2.00	2.00	2.875	2.50	2.875	1.875	1.875	
Totals .....	102.25	105.25	105.50	115.625	100.50	109.25	108.625	109.375	106.75	94.00	93.875	96.875	86.25	100.50	104.00	97.00	103.25	104.75			

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:																		
Maximum measurements:	B'	2.00	1.1811	B'	2.875	1.1318	B'	2.875	1.1318	B'	2.50	0.9812	B'	2				



TABLE I.—Measurements of fineness of wools—Continued.

Catalogue number of samples..	WISCONSIN.															MINNESOTA.		
	EWES, 3 TO 5 YEARS OLD.									EWES, VERY OLD.						RAMS, 2 TO 3 YEARS OLD.		
	784.			785.			786.			714.			715.			502.		
	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
1.50	1.50	1.625	2.50	2.00	1.50	1.875	1.50	1.75	1.875	1.625	2.00	2.00	2.00	2.50	1.75	1.50	2.50	
1.50	2.125	2.00	2.00	2.50	2.375	2.50	2.50	2.00	1.50	2.50	2.00	2.25	2.50	1.625	1.75	2.50	2.50	
1.625	1.875	1.75	2.00	1.875	1.625	1.50	1.875	2.50	1.625	1.75	1.50	1.875	2.25	2.375	2.125	2.375	2.00	
2.00	1.875	2.50	2.00	2.375	2.00	2.50	2.50	2.375	2.00	2.50	2.375	2.00	2.25	2.00	2.00	2.00	2.00	
1.875	1.50	2.00	2.375	1.625	1.625	2.00	2.00	2.375	2.75	2.375	2.375	2.00	2.50	2.50	2.125	1.50	1.875	
2.00	1.625	1.50	2.00	2.00	1.75	1.75	2.125	2.00	2.00	2.00	1.50	1.875	2.125	2.00	2.25	2.00	2.375	
2.00	2.00	2.00	1.625	2.00	2.00	1.50	1.50	2.25	1.50	1.75	2.125	2.125	2.00	2.375	2.00	2.25	2.00	
2.50	1.625	1.875	2.125	2.00	1.50	2.00	2.00	2.00	2.00	1.50	2.00	2.50	1.50	2.00	1.875	3.00	1.50	
2.00	2.00	2.00	2.00	2.00	1.875	1.625	1.50	1.50	1.625	1.75	2.00	1.875	2.50	3.25	2.50	2.25	2.00	
2.00	2.00	2.375	2.00	2.025	2.00	2.50	1.75	2.125	1.875	2.75	2.375	2.00	2.25	2.375	2.25	2.50	2.00	
2.50	2.125	1.75	2.125	1.625	1.625	1.875	1.875	2.00	1.625	2.625	1.625	1.75	2.00	2.50	2.00	2.00	2.00	
1.875	2.00	1.875	2.00	2.00	1.50	2.50	1.875	2.00	2.125	2.00	2.50	2.00	2.00	2.00	2.75	1.75	1.875	
1.75	2.00	1.875	2.375	1.875	2.00	1.75	2.00	1.75	1.875	2.00	1.75	1.625	2.50	3.50	2.25	2.00	2.125	
2.50	1.75	2.125	2.25	1.625	1.875	1.50	2.00	1.75	2.125	2.50	1.875	2.00	1.875	3.00	2.00	2.00	1.75	
2.00	2.00	2.00	1.875	1.025	1.625	1.025	2.00	2.875	2.25	1.875	1.025	2.00	2.125	2.375	3.00	1.875	1.875	
1.625	2.60	1.75	3.00	2.00	1.875	1.75	1.50	2.50	2.00	2.00	1.625	2.00	3.00	3.50	2.00	2.00	1.50	
1.50	1.875	1.875	1.50	2.00	1.875	1.50	2.50	2.00	1.50	2.125	2.50	2.00	2.375	2.75	2.00	1.75	2.50	
2.375	1.875	2.125	2.50	1.025	1.625	2.125	2.25	1.75	1.875	2.00	2.50	2.00	2.00	2.00	2.375	1.75	1.50	
1.875	2.125	2.375	2.00	1.75	1.50	1.875	1.76	2.50	2.00	1.875	2.00	2.375	2.50	3.50	2.26	3.00	2.00	
1.50	1.875	2.00	2.50	1.625	1.625	1.375	2.125	1.50	1.75	2.25	2.00	2.50	3.00	2.50	2.00	2.00	2.00	
2.00	1.50	1.75	2.00	1.875	1.50	2.375	2.125	2.375	2.00	2.50	2.375	1.875	2.75	4.00	1.375	2.00	1.75	
2.50	2.125	2.00	2.50	1.625	1.75	1.50	1.875	1.625	1.025	1.75	1.625	2.875	2.75	2.75	2.00	2.25	2.50	
1.875	1.875	2.125	2.00	2.875	1.875	2.00	1.875	2.00	1.875	2.00	1.625	1.875	2.00	2.50	2.00	1.50	2.25	
1.50	2.50	2.50	2.00	1.75	1.75	1.875	2.00	1.625	1.625	2.50	1.75	1.625	1.75	2.50	1.75	2.00	2.50	
2.50	2.125	1.875	3.25	2.375	2.50	1.75	2.00	3.50	1.50	1.875	1.375	1.875	1.875	3.00	2.50	1.875	2.00	
2.25	2.00	2.00	2.125	2.625	2.00	1.625	1.60	2.00	1.375	1.75	2.00	2.375	2.25	1.875	1.50	2.00	2.25	
1.875	2.50	1.875	2.25	1.625	2.00	1.025	1.50	1.75	1.50	1.75	1.625	1.875	2.00	1.875	2.00	1.75	2.25	
1.875	2.00	2.00	2.00	2.50	1.75	1.50	2.50	2.375	1.625	2.00	2.00	2.00	2.25	1.875	2.00	1.875	2.75	
1.625	1.50	2.125	2.00	1.50	1.625	2.00	1.75	1.625	1.875	2.50	1.875	2.00	2.00	1.875	2.25	2.625	1.875	
2.25	2.375	2.60	1.875	1.625	1.50	1.625	1.625	2.25	1.75	1.75	2.50	2.50	2.00	2.25	2.125	2.00	2.50	
1.50	2.50	2.00	2.75	2.00	1.125	2.00	2.00	2.50	1.50	2.00	1.625	1.875	2.25	2.50	2.00	2.00	2.50	
2.125	2.00	2.00	1.875	2.00	1.50	2.50	1.60	2.00	3.00	2.00	1.875	2.50	2.60	2.625	2.00	1.875	2.125	
2.375	2.00	1.50	1.875	1.50	2.00	1.625	1.625	2.00	2.00	3.00	1.75	2.125	2.50	2.25	2.25	2.25	2.50	
1.75	2.375	2.00	2.00	1.875	1.625	1.625	1.50	2.00	1.875	2.00	2.375	1.875	2.00	2.00	2.00	2.00	2.00	
2.00	1.75	2.00	1.75	1.875	1.50	1.60	1.50	2.375	1.625	2.00	2.00	2.125	2.125	3.50	1.50	3.00	2.50	
1.875	1.50	2.00	3.00	2.625	1.375	1.025	2.50	2.00	1.625	1.75	2.125	1.875	2.00	3.375	1.50	2.50	2.125	
2.00	1.375	2.00	2.50	1.875	1.375	2.125	2.00	1.50	2.25	2.00	2.25	1.875	2.25	2.75	2.50	2.50	2.125	
1.875	2.00	1.875	2.00	2.25	2.00	1.50	2.00	1.75	1.75	1.50	1.625	1.875	2.125	2.75	1.50	2.125	2.00	
1.875	2.125	1.875	1.875	2.125	1.375	1.75	1.75	2.00	1.625	1.75	1.75	2.00	2.00	2.875	1.875	2.25	2.50	
1.50	1.75	2.00	1.50	2.00	1.875	2.00	1.875	2.00	1.50	2.50	2.00	2.00	2.50	2.50	2.00	2.60	2.375	
1.50	2.50	2.50	2.125	1.76	1.25	1.50	1.025	1.625	1.125	1.50	1.875	1.625	2.50	1.875	1.75	1.60	2.00	
1.875	2.25	2.00	2.00	2.00	2.00	1.875	2.00	2.00	2.00	1.875	2.00	2.875	2.00	2.50	2.00	2.00	2.25	
2.25	1.75	1.50	2.125	2.50	1.625	2.00	2.00	2.25	1.625	1.625	2.00	2.00	2.50	2.50	1.75	2.25	2.00	
2.50	2.00	2.00	2.00	2.00	1.50	2.00	2.50	2.00	2.00	1.50	1.75	1.875	2.50	2.375	2.50	2.50	2.00	
2.60	2.00	1.75	1.75	1.75	1.75	2.50	2.00	2.125	1.625	1.625	2.375	2.00	2.75	2.50	2.00	2.25	1.50	
2.125	1.50	2.50	2.00	2.00	1.625	1.375	2.00	2.375	1.75	2.00	1.50	2.00	2.00	2.00	2.50	2.00	2.50	
2.25	1.75	1.50	2.50	1.875	2.50	1.50	2.625	1.50	2.00	1.75	1.625	2.50	2.00	2.375	1.625	2.75	2.00	
1.50	1.875	2.25	2.00	1.50	2.00	1.625	2.375	1.75	1.875	1.75	2.25	2.125	2.50	2.25	2.00	1.50	1.75	
2.00	2.125	1.875	2.125	1.50	1.875	1.875	2.00	2.00	1.375	1.50	2.00	1.875	2.25	2.125	2.625	1.60	2.875	
2.00	1.875	2.00	2.50	2.375	2.00	1.50	1.50	1.75	1.50	1.50	1.875	1.875	2.375	2.50	2.00	2.00	2.00	
Totals .....	07.625	07.75	00.25	106.00	97.50	87.375	92.25	96.75	103.50	88.625	78.875	98.875	100.625	114.25	124.25	102.375	106.125	105.875

Recapitulation and réduction:	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.						
Maximum measurements.	B'	2.50	0.9842	B'	3.25	1.2705	B'	2.50	0.9842	B'	3.00	1.1811	B'	2.50	0.9842	B'	3.00	1.1811
	B''	2.50	0.9842	B''	2.875	1.1318	B''	2.625	1.0334	B''	3.00	1.1811	B''	3.00	1.1811	B''	3.00	1.1811
	B'''	2.50	0.0842	B'''	2.60	0.9842	B'''	3.50	1.3779	B'''	2.50	0.0842	B'''	4.00	1.5748	B'''	2.875	1.1318
Highest.....		2.50	0.0842		3.25	1.2795		3.50	1.3779		3.00	1.1811		4.00	1.5748		3.00	1.1811
Minimum measurements.	B'	1.50	0.5905	B'	1.50	0.5905	B'	1.375	0.5413	B'	1.125	0.4420	B'	1.50	0.5905	B'	1.875	0.5413
	B''	1.875	0.5413	B''	1.60	0.5905	B''	1.375	0.5413	B''	1.60	0.5905	B''	1.75	0.6899	B''	1.60	0.5905
	B'''	1.50	0.5905	B'''	1.125	0.4420	B'''	1.50	0.5905	B'''	1.875	0.5413	B'''	1.625	0.6397	B'''	1.50	0.5905
Lowest.....		1.375	0.5413		1.125	0.4420		1.375	0.5413		1.125	0.4420		1.50	0.5905		1.375	0.5413
Average measurements..	B'	1.953	0.7088	B'	2.12	0.8346	B'	1.845	0.7269	B'	1.773	0.6982	B'	2.013	0.7925	B'	2.048	0.8062
	B''	1.953	0.7696	B''	1.95	0.7677	B''	1.935	0.7618	B''	1.978	0.6212	B''	2.285	0.8996	B''	2.123	0.8558
	B'''	1.985	0.7814	B'''	1.748	0.6881	B'''	2.07	0.8149	B'''	1.978	0.7787	B'''	2.485	0.9783	B'''	2.118	0.8338
Average.....		1.96	0.7716		1.93	0.7598		1.95	0.7677		1.776	0.6992		2.261	0.8901		2.090	0.8251
Measurements above average..			84			77			79			85			64			62
Measurements below average..			66			73			71			65			86			88







TABLE I.—Measurements of fineness of wools—Continued.

		MINNESOTA.																	
		RAMS, 2 TO 3 YEARS OLD.																	
Catalogue number of samples..	Number of section.....	509.			510.			511.			512.			513.			514.		
		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
		2.00	2.25	2.25	2.00	1.75	1.50	2.00	2.50	2.50	2.00	1.875	2.125	2.00	2.25	1.875	1.625	3.50	1.625
		2.00	2.125	1.75	2.50	2.00	2.00	2.25	2.75	3.25	1.50	2.50	2.00	2.75	2.00	2.00	2.50	2.00	1.75
		2.00	1.50	1.375	2.25	2.00	1.875	2.00	1.875	3.625	2.25	1.50	1.75	2.375	2.50	2.25	2.25	2.50	2.00
		1.875	2.00	1.875	3.00	2.00	2.00	3.00	2.00	3.00	2.00	2.125	1.625	2.375	2.375	2.125	2.00	3.00	1.50
		2.00	1.875	2.50	2.25	1.625	2.00	2.00	2.00	2.50	2.00	1.75	1.75	2.00	2.25	2.00	1.875	2.00	2.00
		2.25	2.25	1.75	1.50	2.375	2.00	2.50	2.00	2.50	1.875	2.50	2.00	2.25	2.125	2.00	1.75	2.00	1.75
		2.00	2.125	2.00	2.00	1.875	2.00	4.00	3.00	3.00	2.125	1.50	2.00	2.75	2.00	1.875	2.375	2.375	2.75
		1.60	2.00	2.375	2.375	2.00	2.125	2.00	2.00	2.50	2.50	2.00	1.75	3.00	1.75	2.00	2.50	2.50	2.50
		1.625	2.00	2.00	1.875	2.75	2.25	2.00	2.25	2.875	2.50	2.625	3.75	2.25	2.00	2.50	2.125	1.75	2.00
		2.00	1.375	2.00	2.00	2.25	2.00	2.00	2.50	2.00	2.50	2.375	1.50	1.875	2.125	2.25	2.00	2.00	2.125
		2.00	2.00	2.00	2.125	2.375	2.00	3.50	4.00	2.625	2.125	2.25	1.625	2.25	1.75	2.375	2.00	3.00	2.375
		2.00	2.00	1.875	1.875	2.00	1.50	2.50	2.50	2.00	2.00	2.00	1.50	2.50	2.50	2.125	2.00	2.00	1.75
		1.75	2.125	1.75	2.625	2.375	1.25	3.625	1.625	2.00	2.25	2.25	2.00	1.75	3.50	1.50	2.375	1.50	2.00
		1.75	2.00	1.875	2.25	1.50	2.50	2.875	2.00	3.25	2.375	2.00	2.25	2.125	2.00	2.00	2.25	3.25	2.125
		2.00	2.25	2.00	1.625	2.00	2.25	2.125	2.375	2.50	2.25	1.875	1.75	2.25	2.25	1.875	2.25	2.00	1.875
		1.625	1.875	1.50	2.00	2.125	2.00	1.875	3.50	3.00	3.50	2.00	1.75	2.00	2.375	2.00	2.625	2.00	1.75
		2.00	2.125	2.375	2.00	2.125	2.125	3.00	2.25	2.00	3.25	2.00	2.375	2.50	2.25	2.00	2.00	1.75	2.00
		2.125	1.625	1.875	3.00	2.00	2.60	1.875	2.50	2.00	1.50	1.50	1.875	2.25	2.25	2.375	2.50	1.75	2.00
		1.75	2.00	2.00	2.00	2.50	1.875	2.125	2.50	1.875	2.00	1.50	1.75	2.125	1.75	1.375	1.75	2.00	2.00
		2.00	2.125	1.875	3.50	2.50	1.625	2.00	2.125	3.625	2.00	1.25	2.50	2.875	2.50	2.00	1.875	2.00	1.75
		2.25	1.75	2.00	2.375	2.25	2.375	2.125	2.00	2.875	2.00	2.00	3.00	1.875	2.375	2.60	1.75	2.125	2.00
		2.875	2.00	1.60	2.50	2.125	3.00	1.875	3.125	2.50	1.50	2.375	2.25	1.875	2.50	2.75	3.125	1.875	2.00
		1.75	2.00	2.00	1.625	2.00	2.50	2.60	3.875	2.00	2.125	2.25	2.00	2.25	1.75	1.625	3.00	2.50	1.75
		1.50	1.875	1.75	1.875	2.625	2.125	3.125	3.125	2.625	2.75	2.375	1.75	2.25	2.375	2.00	2.25	2.75	1.875
		2.00	2.50	2.00	2.50	2.25	2.00	2.00	2.75	1.50	2.375	1.875	2.75	2.375	2.00	2.375	1.625	1.875	
		2.00	1.875	1.875	2.00	2.50	2.50	3.125	2.25	3.00	1.50	2.50	1.875	2.00	2.25	2.125	2.00	1.75	2.00
		1.75	2.00	2.00	2.00	1.875	1.75	2.25	2.25	3.00	1.50	2.25	2.00	1.50	1.50	2.125	1.375	1.75	2.00
		1.75	2.00	1.875	2.125	2.125	2.00	2.50	2.50	2.00	1.625	2.50	2.125	1.875	2.50	2.25	2.00	2.50	1.50
		1.875	1.75	1.625	2.25	2.00	2.75	1.75	1.875	3.25	2.00	2.25	2.00	3.00	2.50	1.75	2.00	1.50	
		1.75	1.875	2.375	2.50	2.25	2.125	2.00	2.00	3.00	3.75	2.125	1.875	3.00	2.50	1.75	2.00	1.50	
		2.60	1.50	2.60	2.375	2.00	2.25	2.75	2.00	3.00	2.00	2.00	1.875	2.375	2.00	3.375	1.375	1.625	
		1.75	1.50	2.00	2.25	2.00	2.00	1.875	2.25	2.25	2.00	2.75	3.75	2.50	3.00	3.375	1.375	1.75	
		2.00	1.50	1.875	1.875	1.75	2.50	3.00	2.50	2.375	1.625	4.00	3.75	2.50	3.25	3.00	1.375	2.00	
		2.375	1.75	2.00	2.625	2.00	2.50	2.375	2.00	1.875	1.50	1.50	2.00	2.25	1.50	2.25	2.125	1.50	
		2.50	2.00	2.375	2.25	2.00	1.875	2.00	2.25	1.625	1.00	2.50	1.875	2.50	2.25	1.50	2.50	1.875	1.875
		2.25	1.875	2.125	1.75	2.50	2.00	2.25	2.25	2.125	1.50	2.375	2.00	1.50	2.25	2.25	2.25	2.25	2.00
		1.75	2.00	1.75	1.75	1.875	1.875	3.875	1.75	1.875	2.25	2.375	2.125	2.00	1.50	2.00	2.00	2.00	2.00
		2.00	2.00	2.00	2.00	1.60	2.375	2.625	2.00	2.00	2.00	2.50	2.00	2.00	2.00	2.00	1.75	2.00	2.25
		1.75	2.125	2.125	2.125	1.875	2.25	2.125	1.50	2.75	2.125	2.00	2.00	2.00	2.375	2.50	2.00	1.875	2.00
		1.375	1.60	2.00	2.125	2.125	2.50	2.125	2.00	2.00	2.00	2.25	2.00	2.125	2.025	2.25	2.00	1.75	1.75
		2.00	1.75	2.00	2.95	1.625	1.875	2.375	2.50	1.625	2.00	2.50	2.00	2.625	1.75	2.00	2.00	2.00	2.375
		2.25	2.00	1.75	1.75	2.00	1.875	2.00	3.00	1.875	1.50	2.50	1.625	2.25	3.00	1.625	1.875	2.25	2.25
		2.125	1.75	1.625	2.50	2.00	1.875	2.125	2.25	2.00	2.00	2.025	1.625	1.875	2.00	2.875	1.50	2.125	1.75
		1.875	2.00	1.625	2.25	2.125	2.125	2.75	3.00	2.25	2.00	2.025	1.75	1.50	2.00	2.375	2.25	2.125	2.25
		2.00	1.875	2.00	3.00	2.00	1.875	2.50	3.00	2.25	1.75	3.25	1.50	2.25	2.00	2.25	2.25	1.75	2.00
		1.50	2.60	1.75	1.875	1.375	2.50	1.50	1.625	2.75	3.00	1.75	1.375	1.875	2.50	2.125	2.00	2.00	2.00
		1.50	2.00	1.75	1.875	2.375	2.00	2.50	1.625	1.625	2.125	1.50	1.75	2.25	2.25	1.875	1.75	2.375	1.75
		2.125	2.125	1.875	1.75	1.875	2.125	2.50	2.50	1.875	1.50	2.25	1.625	2.00	2.375	1.50	2.25	1.75	2.25
		1.875	2.25	2.00	2.50	2.00	2.25	2.50	2.00	2.50	2.00	1.75	1.50	2.25	2.00	2.00	2.375	1.50	2.00
		1.875	1.875	1.50	2.00	2.50	3.00	2.025	2.50	1.75	3.75	1.375	2.00	2.50	1.75	2.25	2.875	2.375	1.75
	Totals .....	99.125	96.375	90.625	108.625	104.875	107.00	117.375	120.125	124.625	96.25	110.375	102.625	111.25	111.50	103.375	105.625	107.245	96.40

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.		No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.		No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.	
		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.						
Maximum measurements.	B'	2.875	1.1818	3.50	1.3779	B'	3.625	1.4271	B'	3.25	1.2795	B'	3.00	1.7811	B'	3.125	1.2303	
	B''	2.50	0.9842	B''	2.75	1.0826	B''	4.00	1.5748	B''	4.00	1.5748	B''	3.50	1.8779	B''	3.50	1.3779
	B'''	2.50	0.9842	B'''	3.00	1.1811	B'''	4.00	1.5748	B'''	3.75	1.4763	B'''	3.375	1.3287	B'''	2.75	1.0826
Highest.....		2.875	1.1818	3.50	1.3779		4.00	1.5748		4.00	1.5748		3.50	1.3779		3.50	1.3779	
Minimum measurements.	B'	1.375	0.5413	B'	1.50	0.5905	B'	1.50	0.5905	B'	1.00	0.3937	B'	1.50	0.5905	B'	1.25	0.4921
	B''	1.375	0.5413	B''	1.875	0.5413	B''	1.625	0.6397	B''	1.25	0.4921	B''	1.00	0.3937	B''	1.50	0.5905
	B'''	1.375	0.5413	B'''	1.50	0.5905	B'''	1.625	0.6397	B'''	1.50	0.5905	B'''	1.375	0.5413	B'''	1.375	0.5413
Lowest.....		1.375	0.5413	1.375	0.5413		1.50	0.5905		1.00	0.3937		1.00	0.3937		1.25	0.4921	
Average measurements..	B'	1.983	0.7677	B'	2.17	0.8543	B'	2.34	0.9212	B'	1.025	0.7578	B'	2.23	0.8779	B'	2.112	0.8314
	B''	1.928	0.7586	B''	2.097	0.8255	B''	2.40	0.9448	B''	2.207	0.8688	B''	2.23	0.8779</			



TABLE I.—Measurements of fineness of wools—Continued.

		MINNESOTA.																	
		RAMS, 2 TO 3 YEARS OLD.																	
Catalogue number of samples.....		515.			510.			517.			518.			519.			520.		
Number of section.....		B'	B''	B'''	B'	B''	B'''	B'	B''	B'''	B'	B''	B'''	B'	B''	B'''	B'	B''	B'''
		2.50	1.25	1.875	3.00	1.50	2.00	2.50	1.50	1.50	2.375	3.25	8.00	2.25	2.25	2.50	1.625	2.75	2.00
		3.00	1.375	1.75	2.50	1.50	2.25	1.75	1.875	2.00	2.25	3.875	2.50	2.00	2.00	2.00	1.75	2.00	1.50
		2.25	2.125	1.50	2.25	1.25	1.75	1.025	2.50	1.50	2.125	2.75	2.25	2.125	1.625	2.50	2.00	2.125	1.50
		1.875	2.25	2.00	2.375	2.00	1.50	1.75	2.00	1.875	1.75	2.75	2.875	2.25	2.00	2.125	1.50	2.50	2.00
		2.50	2.50	2.00	2.00	2.25	1.50	1.875	2.75	2.25	1.50	2.50	2.00	2.50	1.75	1.75	1.50	2.50	1.00
		2.75	1.25	1.50	3.00	2.00	1.50	2.00	2.00	1.75	1.50	2.00	2.125	2.00	1.625	1.75	2.00	2.75	1.25
		2.00	2.25	2.375	2.125	1.75	1.75	2.00	2.375	2.00	1.375	2.50	2.25	2.75	2.125	2.00	3.00	1.625	1.50
		2.125	2.50	2.25	2.25	1.25	1.025	2.00	2.50	2.125	1.625	2.25	1.75	2.125	2.00	2.00	3.00	2.75	1.625
		1.875	2.00	1.75	2.375	2.00	1.50	1.75	1.625	2.00	1.50	3.00	1.875	2.00	1.50	1.50	1.025	2.50	2.50
		1.875	2.00	1.625	2.25	1.75	2.00	2.25	2.125	1.50	2.25	1.875	1.75	2.00	2.125	2.25	2.00	1.50	2.00
		2.25	1.15	2.00	2.50	1.50	1.875	2.375	1.50	2.25	2.25	2.00	2.00	1.75	2.25	2.50	1.75	2.375	1.75
		2.875	1.875	1.50	2.125	1.50	3.00	2.00	2.00	2.25	2.375	2.25	1.875	1.875	2.00	2.375	1.50	2.00	2.00
		1.75	2.50	1.75	3.00	1.375	1.50	2.125	2.625	1.50	2.875	2.75	2.50	1.875	2.50	1.125	2.00	2.50	1.50
		2.25	3.35	2.00	2.00	2.125	2.00	1.75	2.875	2.375	2.25	2.875	2.875	1.75	1.675	1.50	2.00	2.00	1.50
		2.375	2.00	2.375	2.125	2.00	2.00	1.75	2.75	2.25	2.375	3.00	2.00	2.00	1.675	3.00	2.00	2.00	1.75
		2.00	2.00	2.00	1.875	2.00	1.025	1.30	1.50	1.50	1.75	2.00	2.125	1.625	2.875	2.00	1.50	2.00	2.00
		1.75	1.50	2.00	2.50	1.50	1.50	1.50	2.00	1.50	1.875	2.00	2.25	2.00	2.25	2.875	2.00	2.00	1.50
		1.50	2.75	1.875	2.50	3.00	2.00	1.025	2.625	1.025	2.00	1.75	2.375	1.75	2.875	1.625	2.00	2.25	1.50
		1.75	2.00	1.75	3.75	1.25	2.75	1.025	2.125	1.50	2.00	2.375	1.875	2.25	2.50	1.75	1.75	2.125	1.75
		2.25	1.875	2.00	3.00	2.00	2.025	2.00	2.50	2.00	3.25	1.50	2.00	1.625	1.875	1.875	1.50	2.00	2.00
		2.375	1.25	2.25	3.125	2.00	2.00	2.00	2.00	2.25	1.75	2.00	2.00	2.50	2.25	1.875	1.25	2.50	2.00
		1.75	1.75	2.125	3.50	2.00	2.00	2.00	2.25	2.00	3.125	2.125	2.00	2.25	1.50	1.75	1.00	2.125	2.00
		2.00	2.00	2.00	2.50	1.875	2.25	1.50	1.625	2.125	1.50	1.50	2.75	2.125	1.75	2.25	1.25	1.50	2.00
		3.00	2.50	2.025	2.25	2.125	2.375	1.75	2.75	1.75	1.50	3.50	2.75	1.75	1.875	2.50	1.50	2.00	2.125
		1.50	2.50	2.75	2.125	1.50	2.375	1.50	2.00	2.00	2.00	2.25	1.75	2.25	2.00	2.00	1.50	2.00	2.50
		2.00	2.00	3.00	2.25	1.50	1.75	1.75	1.75	1.75	1.375	1.50	1.25	2.125	1.50	2.00	1.00	2.50	1.875
		2.375	1.50	2.25	2.50	2.25	2.125	2.25	1.50	2.00	1.50	2.50	1.25	2.00	2.00	2.25	1.50	2.25	1.50
		2.00	2.00	1.875	2.25	2.50	2.00	2.00	1.50	2.00	1.60	1.50	1.50	2.25	1.50	2.25	1.75	2.00	1.75
		2.125	2.50	1.875	2.00	2.25	2.00	1.75	2.25	1.875	1.75	1.375	2.25	2.875	2.75	2.125	1.50	2.25	1.875
		1.875	2.75	2.25	2.00	2.00	1.50	1.50	1.50	1.625	2.25	2.00	2.375	2.00	2.125	1.50	1.625	2.125	3.00
		1.75	2.00	2.00	2.50	2.50	1.025	1.75	1.50	2.50	2.25	1.50	2.00	2.25	2.00	1.50	1.25	1.75	2.00
		2.50	2.00	2.00	2.025	1.50	2.50	2.00	2.00	2.50	1.875	2.125	1.50	2.25	2.00	2.00	1.50	2.125	1.50
		2.00	1.875	2.25	2.25	1.25	2.25	1.50	2.25	2.625	3.00	3.00	2.00	2.00	1.75	2.125	2.50	2.25	1.75
		2.375	2.875	1.875	2.25	2.25	1.50	2.75	1.75	1.75	3.125	2.25	2.00	2.25	2.25	1.75	2.00	1.875	1.50
		2.25	1.875	1.75	1.50	1.375	1.75	2.875	2.25	2.125	2.50	1.625	2.125	2.375	1.50	1.625	1.75	1.75	1.50
		1.50	2.50	1.875	2.375	3.25	2.00	2.025	1.875	2.00	1.50	2.00	2.00	2.00	2.00	1.875	2.00	1.875	2.50
		1.50	1.25	2.125	2.75	2.00	2.125	2.00	2.50	2.50	1.50	2.25	1.75	2.25	2.50	2.50	2.00	2.00	3.00
		1.625	1.625	2.25	2.00	1.00	2.00	2.25	1.50	2.25	1.75	1.50	1.60	2.25	2.875	2.125	1.75	1.875	2.00
		1.75	1.75	2.00	2.00	1.875	1.875	2.125	1.50	1.625	1.125	2.75	1.75	2.00	2.00	1.75	2.00	2.00	1.50
		1.025	3.50	2.00	2.875	1.75	2.50	2.50	1.50	1.75	2.25	2.75	2.50	2.00	1.75	1.875	1.25	2.00	1.50
		2.25	2.50	2.25	2.25	2.00	2.25	2.25	1.50	2.25	3.00	2.00	2.125	1.875	1.875	2.00	1.50	2.50	2.50
		2.25	2.00	1.875	2.375	3.375	2.00	2.50	1.875	4.50	1.75	1.50	2.00	1.75	1.50	2.50	1.75	2.00	2.50
		2.875	2.25	2.25	2.50	1.50	2.025	2.00	2.25	2.00	1.50	1.75	2.25	2.50	2.00	2.00	2.00	2.00	2.50
		2.50	2.375	1.75	2.50	2.125	1.75	2.25	2.50	1.75	1.50	2.00	2.125	1.75	2.125	2.00	1.625	2.00	2.50
		2.125	2.25	2.50	1.75	2.25	1.00	1.50	1.50	2.00	1.50	1.75	2.50	2.00	2.25	2.25	2.00	2.00	2.25
		1.50	2.00	2.25	1.875	2.00	1.025	2.125	2.125	2.00	1.625	1.50	2.00	2.00	2.875	2.125	1.625	2.00	2.00
		2.50	1.875	2.00	2.125	1.50	2.125	1.00	1.875	1.875	2.375	1.50	2.50	1.875	2.00	1.875	2.00	2.25	2.25
		2.25	1.75	1.75	1.50	1.50	1.75	2.00	2.375	1.625	2.00	1.50	2.25	2.00	1.875	1.75	1.00	1.75	2.25
		2.00	2.00	1.50	2.00	1.025	1.875	1.75	2.00	1.50	1.875	1.75	1.75	2.25	2.00	2.00	1.125	2.00	2.50
Totals.....		107.375	106.500	101.75	118.625	93.750	98.625	85.00	107.00	04.25	97.125	108.875	104.375	104.75	100.375	101.625	82.50	105.00	95.25

	No. of section.	In centimillime- ters.	In thousandths of inch.	No. of section.	In centimillime- ters.	In thousandths of inch.	No. of section.	In centimillime- ters.	In thousandths of inch.	No. of section.	In centimillime- ters.	In thousandths of inch.	No. of section.	In centimillime- ters.	In thousandths of inch.	No. of section.	In centimillime- ters.	In thousandths of inch.
Recapitulation and reduction:																		
Maximum measurements.	B'	3.00	1.1811	B'	3.75	1.4763	B'	2.875	1.1318	B'	3.25	1.2795	B'	2.75	1.0826	B'	3.00	1.1811
	B''	3.75	1.4763	B''	3.875	1.3287	B''	4.50	1.7710	B''	3.50	1.3779	B''	2.75	1.0820	B''	2.75	1.0820
	B'''	3.00	1.1811	B'''	3.00	1.1811	B'''	2.625	1.0334	B'''	3.00	1.1811	B'''	3.00	1.1811	B'''	3.00	1.1811
Highest.....		3.75	1.4763		3.75	1.4763		4.50	1.7718		3.50	1.3779		3.00	1.1811		3.00	1.1811
Minimum measurements.	B'	1.375	0.5413	B'	1.50	0.5905	B'	1.50	0.5905	B'	1.125	0.4429	B'	1.625	0.6397	B'	1.00	0.3937
	B''	1.25	0.4921	B''	1.00	0.3937	B''	1.50	0.5905	B''	1.375	0.5413	B''	1.50	0.5905	B''	1.50	0.5905
	B'''	1.50	0.5905	B'''	1.50	0.5905	B'''	1.50	0.5905	B'''	1.25	0.4921	B'''	1.50	0.5905	B'''	1.00	0.3937
Lowest.....		1.25	0.4921		1.00	0.3937		1.50	0.5905		1.125	0.4429		1.50	0.5905		1.00	0.3937
Average measurements..	B'	2.147	0.8432	B'	2.372	0.9338	B'	1.70	0.6092	B'	1.942	0.7645	B'	2.095	0.8218	B'	1.65	0.6400
	B''	2.13	0.9385	B''	1.015	0.7339	B''	2.14	0.8267	B''	2.178	0.8574	B''	2.068	0.7905	B''	2.100	0.8267
	B'''	2.035	0.8011	B'''	1.992	0.7842	B'''	1.885	0.7421	B'''	2.087	0.8210	B'''	2.033	0.8003	B'''	1	



TABLE I.—Measurements of fineness of wools—Continued.

		MINNESOTA.																	
		RAMS, 2 TO 3 YEARS OLD.					EWES, 2 TO 3 YEARS OLD.												
Catalogue number of samples..		521.			482.			483.			494.			485.			486.		
Number of section.....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
1.25		2.125	1.50	2.00	2.00	2.375	1.625	2.125	2.00	1.625	1.50	2.125	2.00	2.00	1.875	2.00	2.25	2.00	2.00
1.50		2.00	2.25	1.50	2.50	1.875	1.625	2.00	2.125	1.625	2.00	1.75	2.50	1.875	2.00	1.875	2.50	1.75	2.125
1.50		2.25	2.00	2.125	1.50	2.125	2.50	2.125	2.75	1.50	1.75	2.50	2.50	1.625	1.50	1.625	1.875	2.25	2.625
1.75		1.50	1.25	1.50	2.125	1.625	1.75	2.25	2.00	2.00	1.50	1.875	2.00	2.00	1.875	2.00	2.00	2.00	2.00
2.50		2.125	1.50	2.00	2.50	2.50	2.00	2.00	2.00	1.875	1.75	2.50	2.00	2.00	2.125	2.00	2.25	1.75	1.75
1.50		2.625	2.60	1.875	1.25	1.125	1.75	2.25	2.00	1.75	1.75	2.25	2.00	1.875	2.00	1.875	1.625	2.25	2.50
2.00		2.75	1.50	3.00	2.00	2.00	1.50	2.50	2.125	2.00	1.50	2.50	2.125	2.00	1.875	2.00	1.75	1.75	2.25
1.25		2.00	1.50	2.50	2.00	2.00	2.00	2.00	2.50	1.875	2.00	1.50	2.00	1.50	3.00	2.125	1.875	1.25	2.50
1.75		1.75	1.75	1.875	1.50	2.50	1.875	1.75	2.125	2.00	2.00	2.00	2.00	2.00	2.00	1.375	1.625	2.375	2.00
2.00		1.50	1.50	1.75	2.50	2.875	1.50	3.00	2.125	1.75	1.875	2.00	1.875	2.00	1.375	1.625	1.75	1.25	2.50
1.75		2.50	1.75	1.25	1.75	2.00	1.75	1.625	2.00	2.00	2.00	2.00	2.00	2.00	1.375	1.50	2.25	2.00	1.50
2.00		1.625	2.00	1.75	2.50	2.375	2.00	2.00	2.375	2.00	2.375	2.00	2.375	2.00	1.75	1.375	2.125	2.25	2.00
2.00		1.50	1.50	1.875	2.25	1.875	1.875	1.75	1.75	2.125	2.50	3.00	1.50	1.125	1.75	1.50	2.25	2.25	2.00
1.60		2.60	1.625	1.625	2.625	2.00	1.75	1.875	1.875	2.00	2.50	1.375	2.00	2.50	1.875	1.875	1.875	1.875	2.50
1.625		2.00	2.00	2.25	1.50	2.125	1.875	2.50	2.50	1.75	2.50	2.125	2.50	2.50	1.875	2.00	2.00	2.00	1.625
2.00		2.00	1.50	1.875	2.50	1.50	1.75	1.875	2.00	1.50	1.60	2.25	1.875	2.75	2.25	2.00	2.50	2.00	2.00
2.50		1.50	1.75	2.00	2.25	2.50	1.875	2.50	1.875	1.75	1.75	2.00	2.875	1.625	3.125	3.125	2.00	2.50	2.50
1.50		2.00	1.75	1.875	2.00	2.25	1.50	2.00	2.875	2.00	2.125	2.00	2.00	1.875	2.25	3.00	2.125	1.50	2.00
2.25		2.50	2.50	1.625	2.375	1.875	1.695	1.75	2.00	2.50	2.00	2.125	2.00	2.00	1.50	2.375	1.50	2.125	2.125
1.60		2.00	2.50	2.00	1.75	1.625	1.625	2.00	2.00	2.125	1.625	2.875	1.625	1.75	2.125	2.00	1.50	2.60	2.60
2.25		2.00	1.25	1.75	1.875	1.50	2.375	2.00	2.00	2.375	2.25	1.625	1.625	2.00	2.125	2.00	1.875	2.00	2.00
1.60		2.00	1.375	1.50	1.50	1.75	1.625	1.875	2.00	2.00	2.125	2.25	1.50	2.00	1.50	1.875	2.50	2.00	2.00
2.00		2.00	2.00	2.00	1.875	2.875	2.375	2.25	2.00	2.25	2.25	2.00	1.625	1.50	2.125	2.00	2.00	1.875	1.875
1.50		2.50	1.75	2.375	1.75	2.50	2.50	2.00	2.00	2.125	1.75	1.625	2.00	1.875	1.625	2.25	1.60	2.00	2.00
2.00		2.50	1.625	1.50	2.625	2.125	1.50	1.875	2.00	1.75	1.75	1.50	2.00	1.625	2.00	1.875	2.00	1.75	1.75
1.50		3.25	2.00	2.25	2.625	2.375	1.875	2.125	3.00	2.00	2.00	1.75	2.125	1.625	1.50	2.125	2.00	1.375	1.375
1.625		3.25	2.25	2.25	2.50	2.75	2.375	1.875	2.50	2.25	2.00	2.875	1.875	2.25	1.625	1.625	1.625	1.60	2.00
1.50		2.00	1.75	2.00	1.75	2.625	1.625	2.125	2.00	2.125	2.00	3.00	2.00	1.875	2.375	1.625	1.50	2.00	2.00
1.50		2.00	1.50	1.375	2.50	1.50	1.625	1.75	2.00	2.125	2.00	1.50	1.625	1.60	1.875	2.00	2.50	2.50	2.50
2.50		1.875	1.50	1.75	2.25	1.875	2.50	2.00	3.00	2.125	2.00	2.875	1.75	2.00	1.75	1.625	2.50	2.60	2.60
2.00		1.60	2.00	1.875	1.875	2.00	1.625	1.875	3.50	1.50	1.75	2.00	2.375	2.00	1.50	1.625	2.00	2.00	2.00
1.50		1.75	1.875	2.00	1.875	2.375	1.625	1.75	2.00	1.50	1.75	1.875	1.625	1.625	1.75	1.50	2.75	2.125	2.125
2.50		2.00	1.75	2.125	1.875	1.875	1.50	2.00	1.175	2.125	1.75	1.50	2.00	2.00	1.625	1.75	2.75	2.125	2.125
2.00		2.00	1.625	1.875	2.375	1.75	1.50	2.00	2.25	2.00	2.00	2.50	2.00	1.75	2.375	1.375	2.50	1.875	1.875
1.25		2.125	2.25	1.375	2.50	2.125	1.875	2.25	2.00	3.00	1.625	2.625	2.125	2.125	1.875	1.375	2.50	2.125	2.125
1.75		2.50	2.00	2.00	2.625	2.00	2.875	2.00	2.00	2.50	2.00	1.375	1.875	2.375	2.375	1.875	2.00	2.125	2.125
2.00		1.875	2.00	1.25	1.75	1.50	2.00	1.50	1.625	2.125	2.00	2.00	2.375	2.00	1.50	2.00	1.75	1.75	1.75
1.50		2.00	2.50	2.375	2.50	2.75	1.875	1.75	2.125	2.625	2.50	1.00	1.875	2.125	2.50	1.25	2.00	2.00	2.00
2.60		1.625	1.50	2.00	1.625	1.625	2.375	2.00	1.50	3.00	1.50	1.75	1.875	1.625	1.75	2.375	2.00	2.125	2.125
2.50		2.00	1.625	2.00	2.25	2.00	1.875	1.75	2.50	2.50	1.625	2.125	1.50	2.00	2.875	2.125	2.00	2.25	2.25
1.75		2.125	2.00	1.375	2.75	2.00	2.00	1.875	1.75	2.00	2.00	2.125	1.50	2.00	1.875	1.75	2.00	2.00	2.50
1.875		2.125	1.50	3.25	2.50	1.625	1.875	1.875	2.625	2.25	2.375	2.125	1.875	1.875	1.50	1.875	3.00	2.375	2.375
1.50		1.625	1.25	2.125	2.125	2.625	2.00	1.625	1.75	2.125	1.60	1.875	1.75	2.00	2.875	1.875	2.00	1.75	1.75
1.375		1.75	1.50	1.50	2.25	2.00	1.75	1.75	1.50	2.25	1.025	1.75	1.875	1.875	2.00	2.00	2.00	2.50	2.50
2.00		1.875	1.50	2.00	2.50	2.25	2.125	1.75	2.375	1.75	1.875	1.75	2.375	1.875	2.375	2.375	2.50	2.25	2.25
1.25		1.75	1.625	1.50	2.50	2.00	1.625	1.875	2.375	2.00	2.00	1.75	1.875	2.00	1.60	1.375	1.50	1.625	1.625
2.00		3.00	2.125	2.00	2.00	2.00	2.00	2.00	2.00	1.50	1.50	1.875	2.25	1.875	2.00	1.875	2.00	1.75	1.75
1.25		1.625	2.25	2.00	2.00	2.00	1.75	2.00	2.00	2.125	1.625	1.875	2.375	1.875	2.00	2.125	2.25	2.00	2.00
1.50		2.00	1.50	3.125	2.50	1.875	1.75	2.00	2.50	2.00	1.50	1.875	1.375	2.125	2.25	2.00	2.375	1.75	1.75
1.50		1.50	2.00	1.875	2.25	2.125	1.75	1.75	2.625	2.00	2.125	1.875	2.50	1.625	2.00	1.625	2.375	2.00	2.00
Totals.....		89.625	102.375	89.00	96.875	107.25	100.125	94.875	99.50	107.375	99.75	95.875	100.50	95.75	96.00	100.75	94.375	104.75	102.625

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.			
Recapitulation and reduction:																					
Maximum measurements.	B'.	2.50	0.9842	B'.	3.25	1.2795	B'.	2.875	1.1318	B'.	3.00	1.1811	B'.	3.00	1.1811	B'.	3.00	1.1811	B'.	3.00	1.1811
	B''.	2.50	0.9842	B''.	2.875	1.1318	B''.	3.50	1.3779	B''.	3.00	1.1811	B''.	3.125	1.2303	B''.	2.625	1.0334	B''.	2.625	1.0334
Height.....		3.25	1.2795		3.25	1.2795		3.50	1.3779		3.00	1.1811		3.125	1.2303		3.00	1.1811		3.00	1.1811
Minimum measurements.	B'.	1.25	0.4921	B'.	1.25	0.4921	B'.	1.50	0.5905	B'.	1.50	0.5905	B'.	1.375	0.5413	B'.	1.25	0.4921	B'.	1.25	0.4921
	B''.	1.50	0.5905	B''.	1.25	0.4921	B''.	1.50	0.5905	B''.	1.50	0.5905	B''.	1.25	0.4921	B''.	1.50	0.5905	B''.	1.50	0.5905
	B'''.	1.25	0.4921	B'''.	1.125	0.4429	B'''.	1.50	0.5905	B'''.	1.00	0.3937	B'''.	1.50	0.5905	B'''.	1.375	0.5413	B'''.	1.375	0.5413
Lowest.....		1.25	0.4921		1.125	0.4429		1.50	0.5905		1.00	0.3937		1.125	0.4429		1.25	0.4921		1.25	0.4921
Average measurements..	B'.	1.793	0.7059	B'.	1.93	0.7598	B'.	1.89	0.7440	B'.	1.09	0.7894	B'.	1.92	0.7559	B'.	1.88	0.7401	B'.	1.88	0.7401
	B''.	2.048	0.8062	B''.	2.14	0.8425	B''.	1.99	0.7884	B''.	1.01	0.7519	B''.	1.92	0.7559	B''.	2.09	0.8228	B''.	2.09	0.8228
	B'''.	1.78	0.7007	B'''.	2																



TABLE I.—Measurements of fineness of wools—Continued.

		MINNESOTA.																
		EWES, 2 TO 3 YEARS OLD.																
Catalogue number of samples..	487.			488.			489.			490.			491.			492.		
Number of section.....	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
	1.75	2.00	2.00	2.00	2.25	2.25	3.00	1.50	3.00	1.50	2.875	2.375	2.25	1.875	1.50	2.00	2.00	2.00
	2.50	2.00	1.25	2.50	2.125	2.375	1.025	1.025	2.375	1.75	1.875	2.50	2.50	2.375	2.50	2.00	2.25	2.125
	2.875	2.125	2.00	2.00	2.025	2.00	1.50	2.00	2.00	2.00	1.75	2.50	2.50	2.50	1.50	2.00	2.25	2.125
	2.00	1.875	2.00	2.25	2.00	2.125	2.00	2.50	1.50	1.625	2.125	2.125	2.00	2.25	2.125	2.00	2.25	2.00
	1.00	1.875	1.75	2.75	2.50	1.875	2.75	2.00	2.00	1.50	2.00	2.00	2.00	2.25	2.875	2.50	1.50	2.00
	1.875	1.75	2.00	2.125	1.625	2.00	1.75	2.00	2.25	1.625	1.25	2.375	2.00	2.00	2.00	2.50	2.25	1.875
	2.00	1.75	2.00	2.00	1.75	2.25	2.875	2.25	1.875	1.625	2.25	2.375	1.25	2.375	2.00	2.50	2.25	1.875
	2.00	2.00	2.25	2.00	2.25	2.00	1.50	1.625	2.50	2.00	2.50	2.125	2.50	2.375	2.125	2.875	1.75	1.875
	1.50	2.00	1.75	2.00	2.00	2.00	1.875	1.75	2.00	2.00	1.625	3.00	2.50	2.00	2.50	2.50	2.00	2.75
	2.00	2.00	2.00	2.125	3.00	2.375	1.50	2.00	2.00	2.375	2.00	2.50	2.00	2.50	2.00	1.875	2.50	2.00
	2.00	2.00	2.75	2.25	2.25	2.00	2.00	1.75	2.00	2.50	2.00	2.00	2.00	2.00	1.875	1.875	2.00	1.875
	1.625	2.125	2.525	2.00	2.00	2.125	1.75	2.00	2.50	1.875	2.125	2.00	2.00	2.00	2.625	2.625	1.75	2.50
	2.00	2.00	1.375	2.00	2.00	2.00	2.00	2.125	2.00	1.50	2.125	1.875	2.00	2.125	1.875	2.00	2.00	2.00
	1.875	1.375	1.625	3.00	2.125	2.50	2.125	2.25	2.00	2.00	2.375	2.50	2.00	2.375	2.50	2.00	1.75	2.875
	1.025	1.625	2.00	1.875	2.00	2.00	2.375	2.00	2.50	2.50	2.125	1.625	2.00	1.875	2.25	2.625	2.875	2.125
	2.00	1.625	2.00	2.00	2.75	2.25	1.625	2.00	2.00	1.50	2.375	1.50	2.00	2.125	2.25	2.00	2.50	3.00
	2.00	1.50	2.00	2.00	2.50	2.125	2.00	2.00	1.625	2.00	3.00	2.375	1.75	3.00	2.375	1.75	1.625	1.75
	2.50	1.875	2.25	1.875	2.50	2.00	1.50	2.00	2.125	1.50	2.625	2.125	2.00	1.625	2.00	1.625	1.75	1.50
	2.25	1.50	1.875	2.125	2.50	2.125	1.625	1.875	1.875	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875	2.25
	1.875	2.00	2.00	2.375	2.625	2.625	1.625	2.00	2.50	1.625	1.625	2.00	1.875	2.00	1.625	2.00	1.625	2.00
	2.50	1.75	2.00	1.875	2.00	2.25	2.00	2.125	2.125	2.00	2.00	2.50	2.00	2.00	2.50	2.00	1.25	2.00
	2.25	1.75	1.75	2.00	2.25	2.125	2.00	2.00	2.125	2.125	1.75	1.875	2.00	1.50	2.00	1.50	2.00	1.875
	2.00	1.75	1.25	2.00	2.00	2.00	1.75	1.875	1.025	1.875	2.125	2.125	2.125	2.00	2.00	2.00	2.50	2.375
	2.00	2.00	1.75	2.25	2.00	2.50	1.50	2.00	2.125	2.00	2.00	1.75	2.25	2.25	2.75	1.75	2.00	2.00
	2.125	2.25	1.625	2.00	2.25	2.00	2.00	1.625	2.50	2.00	1.50	2.50	2.50	1.50	1.625	1.60	1.625	1.60
	1.75	2.00	2.50	2.00	2.00	2.125	2.00	2.00	2.125	2.00	2.875	2.625	1.875	1.75	2.50	2.25	1.125	2.00
	1.025	1.75	2.00	1.625	2.00	2.00	1.50	2.125	1.875	2.00	2.25	2.00	2.875	1.75	2.375	1.75	2.00	2.00
	2.625	2.00	1.75	2.125	2.125	3.00	1.625	1.375	4.00	1.875	2.50	2.00	3.375	1.875	2.00	2.25	2.25	2.875
	2.50	1.50	1.875	2.00	2.50	3.00	1.625	2.00	2.125	1.875	1.60	2.00	3.875	2.00	2.25	2.00	2.50	1.75
	2.00	2.50	2.00	2.00	2.50	3.00	1.625	2.00	2.125	2.00	1.625	1.875	2.50	1.75	2.50	2.00	1.75	2.00
	2.25	1.50	1.625	2.00	2.50	3.00	1.625	2.00	2.125	1.875	2.50	2.125	1.875	2.00	1.75	2.00	2.00	2.00
	2.00	1.875	1.50	2.375	2.00	1.75	2.00	2.125	1.875	1.575	2.50	2.125	1.875	2.00	1.625	2.00	2.00	1.625
	2.125	1.50	2.125	2.00	2.50	2.75	2.00	2.00	4.00	2.00	2.00	2.00	2.00	2.00	2.125	2.00	2.50	2.50
	2.00	1.75	2.00	2.00	2.25	1.75	2.00	1.625	2.25	1.50	1.625	2.00	2.25	1.875	3.00	1.625	1.75	1.75
	2.125	1.375	1.75	2.00	2.00	2.50	2.00	1.75	2.125	2.00	1.625	2.375	2.00	2.125	3.00	1.875	1.875	2.125
	2.375	1.625	2.00	2.00	2.25	1.75	1.875	1.75	2.00	3.00	1.875	2.25	2.00	1.875	2.50	2.00	2.00	2.00
	2.00	1.625	2.00	2.00	2.00	2.00	1.25	1.625	2.25	2.00	1.875	1.50	2.00	1.50	1.875	2.00	1.50	2.125
	1.75	2.00	1.125	2.00	2.125	1.875	1.75	2.00	2.00	1.75	3.375	2.125	2.00	1.75	1.875	2.125	1.75	1.75
	1.50	2.00	2.25	2.00	2.125	2.00	1.875	2.00	1.875	2.50	2.125	1.25	1.875	1.75	1.75	2.25	2.50	2.50
	2.125	2.00	2.00	2.00	2.125	2.00	1.875	2.00	2.00	1.625	2.875	2.00	1.875	2.50	1.125	1.75	3.00	3.00
	2.00	1.625	2.125	2.00	2.00	2.00	2.00	2.125	2.25	2.125	2.125	2.00	2.25	2.00	2.00	2.00	1.50	2.50
	1.875	2.00	1.75	2.00	2.00	2.50	1.60	2.00	1.75	2.00	2.00	2.375	2.00	2.00	2.00	2.00	1.75	2.125
	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875	2.00	2.00	1.875	2.00	1.875	1.875	2.00	2.00	2.125
	2.125	2.125	1.875	2.375	2.375	2.50	2.50	1.625	2.00	1.875	2.00	2.00	2.50	2.00	1.875	2.625	2.50	2.50
	2.00	2.00	1.75	2.00	2.00	3.00	2.50	2.00	1.50	1.625	1.875	2.50	2.00	2.25	2.50	2.375	2.00	2.00
	2.00	2.00	1.75	2.25	2.00	2.00	1.75	2.00	1.25	2.00	2.375	2.00	2.00	1.75	1.50	1.75	2.50	2.50
	2.00	1.875	2.00	2.00	2.125	2.50	2.00	1.50	1.625	2.00	1.875	2.25	2.00	2.00	2.00	2.00	2.00	1.50
	1.75	2.00	2.00	2.00	2.125	2.50	1.75	1.875	2.00	2.00	2.50	1.75	1.75	2.00	1.50	2.25	1.25	1.25
	2.00	1.875	1.75	2.25	2.50	3.00	1.75	2.125	1.50	1.875	2.00	2.00	1.875	2.125	1.675	1.625	1.625	1.75
Totals .....	103.50	92.125	90.75	110.00	112.250	112.625	05.00	96.375	107.625	07.125	108.375	105.250	104.875	103.625	101.125	97.625	103.125	104.50

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:															
Maximum measurements.	B'	2.625	1.0304	B'	3.00	1.1811	B'	3.00	1.1811	B'	3.00	1.1811	B'	2.375	1.3267
	B''	2.50	0.9842	B''	3.00	1.1811	B''	2.50	0.9842	B''	3.375	1.3267	B''	2.625	1.0304
	B'''	2.75	1.0826	B'''	3.00	1.1811	B'''	4.00	1.6748	B'''	2.875	1.1318	B'''	3.00	1.1811
Highest .....		2.75	1.0826		3.00	1.1811		4.00	1.5745		3.375	1.3267		3.375	1.3267
Minimum measurements.	B'	1.50	0.5905	B'	1.625	0.6397	B'	1.50	0.5905	B'	1.50	0.5905	B'	1.25	0.4921
	B''	1.375	0.5413	B''	1.625	0.6397	B''	1.875	0.5413	B''	1.25	0.4921	B''	1.625	0.6397
	B'''	1.25	0.4921	B'''	1.50	0.5905	B'''	1.25	0.4921	B'''	1.50	0.5905	B'''	1.50	0.5905
Lowest .....		1.25	0.4921		1.50	0.5905		1.25	0.4921		1.25	0.4921		1.25	0.4921
Average measurements.	B'	2.07	0.8140	B'	2.20	0.8601	B'	1.90	0.7480	B'	1.943	0.7649	B'	2.098	0.8250
	B''	1.84	0.7244	B''	2.24	0.8818	B''	1.92	0.7550	B''	2.068	0.8141	B''	2.073	0.8161
	B'''	1.93	0.7598	B'''	2.25	0.8658	B'''	2.15	0.8464	B'''	2.105	0.8257	B'''	2.023	0.7964
Average .....		1.94	0.7639		2.23	0.8770		1.90	0.7634		2.039	0.8027		2.06	0.8110
Measurements above average.		89			89			89			57			58	
Measurements below average.		61			61			52			98			92	



TABLE I.—Measurements of fineness of wools—Continued.

		MINNESOTA.																	
		EWES, 2 to 3 YEARS OLD.																	
Catalogue number of samples..		493.			494.			495.			496.			497.			498.		
Number of section.....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
		1.00	2.00	2.00	1.875	1.625	2.25	2.25	1.75	1.75	3.25	3.00	3.50	1.50	1.625	1.50	2.00	1.50	2.00
		2.00	2.25	2.75	1.50	1.625	1.50	2.00	2.375	2.00	2.50	2.75	2.00	1.25	1.50	2.50	1.75	1.50	2.00
		2.25	2.375	1.625	1.625	1.50	1.625	1.50	3.00	2.625	2.50	2.00	2.625	2.50	1.75	1.50	1.875	1.50	1.875
		1.75	2.125	2.00	1.50	1.75	1.50	1.50	2.25	2.375	2.75	2.375	2.25	1.25	1.875	2.25	1.75	1.50	1.50
		1.75	2.25	3.00	1.625	1.50	1.25	1.875	2.375	3.50	2.375	2.50	1.50	1.25	1.625	1.50	2.00	1.75	1.50
		1.50	2.125	2.25	2.50	1.50	2.25	2.25	2.25	3.00	2.50	2.25	2.50	1.75	1.875	2.00	2.50	1.75	1.75
		2.00	2.125	2.50	2.00	1.875	2.625	2.00	2.00	2.50	1.625	2.375	2.625	1.75	2.00	1.625	3.25	1.75	2.00
		2.00	2.125	2.25	1.75	1.75	1.50	2.625	2.75	2.25	3.25	2.375	2.375	2.00	2.125	2.25	2.00	1.875	1.375
		1.75	2.25	2.00	2.375	1.875	2.00	3.00	3.00	2.00	2.375	2.50	2.25	3.00	2.25	2.50	1.375	1.625	1.25
		1.75	2.25	2.00	2.00	2.25	1.50	3.75	1.75	2.50	2.00	2.00	2.125	1.375	1.50	1.625	2.00	1.625	1.50
		2.125	2.125	1.625	1.25	2.00	1.75	2.00	2.00	2.50	2.625	2.00	2.50	2.00	1.50	1.875	1.75	2.00	1.75
		1.75	2.00	2.00	1.25	1.50	2.125	2.125	2.125	2.50	3.75	1.875	2.375	2.50	1.50	1.75	1.375	2.25	1.75
		1.50	2.00	2.25	2.50	1.75	1.875	2.25	2.50	3.00	2.50	2.125	2.875	1.375	2.25	1.75	1.50	2.00	1.75
		2.00	2.00	3.50	2.00	1.375	1.50	1.875	2.00	1.75	1.50	2.25	2.00	1.25	1.375	1.875	1.75	1.50	1.50
		2.00	2.25	1.75	2.50	1.50	1.50	2.00	2.00	2.25	1.75	1.75	2.50	1.50	2.50	1.50	2.125	3.00	1.875
		2.00	2.125	3.875	1.50	1.875	1.75	1.75	2.125	1.75	1.875	2.60	2.125	2.00	1.50	1.50	1.50	1.25	1.25
		2.125	2.00	2.00	1.625	1.75	2.00	1.875	2.00	1.50	2.375	2.625	1.875	1.50	3.00	1.75	1.50	1.50	1.50
		2.00	2.00	1.75	1.50	2.00	1.00	2.00	2.75	2.125	1.00	2.00	2.25	1.50	1.375	1.50	1.75	1.50	1.75
		2.125	1.75	2.50	1.75	1.75	1.875	1.50	1.50	3.50	2.00	1.75	2.25	1.50	1.60	2.375	1.75	1.50	1.125
		2.25	1.875	2.50	2.75	1.75	1.875	3.50	2.00	2.875	2.375	1.875	2.60	1.50	2.00	2.00	1.375	1.50	1.375
		2.25	2.125	1.875	2.00	1.375	1.75	3.00	1.875	2.00	2.00	1.75	1.625	2.375	2.00	2.125	2.00	1.625	2.25
		1.625	2.00	2.00	1.75	2.00	2.00	2.00	2.00	1.75	2.00	1.75	2.25	1.375	1.875	2.625	2.00	2.00	2.00
		1.75	1.875	1.00	1.625	1.75	2.00	2.00	1.375	1.75	1.875	2.50	2.125	1.50	1.50	2.50	2.25	2.00	2.00
		2.25	2.00	2.75	2.00	1.875	2.00	1.875	1.50	1.75	1.60	2.00	2.125	1.625	1.75	2.00	1.625	1.50	1.50
		2.50	2.125	2.25	1.50	1.75	1.75	2.125	3.00	2.00	1.50	1.75	1.50	1.75	2.50	2.125	2.375	1.50	1.375
		2.50	1.875	2.25	1.625	2.25	1.875	1.375	2.125	2.00	2.125	1.875	1.375	1.50	2.25	2.00	2.00	1.625	2.25
		2.375	2.25	1.625	2.25	2.375	2.00	2.50	1.75	3.00	2.125	2.00	2.125	2.00	2.00	2.00	2.00	1.625	2.00
		2.625	1.875	2.00	2.125	1.50	2.125	1.50	1.50	2.00	3.00	3.00	2.25	1.50	2.00	2.50	2.375	2.00	1.25
		2.00	2.25	2.00	2.75	1.75	1.00	2.25	2.125	1.875	3.50	3.00	2.125	2.875	2.00	2.50	2.375	2.00	1.25
		1.50	2.00	2.125	1.50	1.875	2.00	2.125	2.00	2.00	2.125	2.375	3.50	2.25	2.25	2.00	1.60	1.375	1.25
		1.875	2.875	1.25	1.75	1.625	1.625	1.75	1.75	1.375	2.125	2.375	1.75	2.50	1.60	2.375	1.625	1.375	1.50
		1.625	2.00	1.625	1.875	1.625	1.75	3.00	2.125	2.25	1.125	2.50	2.125	2.375	1.625	1.75	2.25	1.50	2.00
		1.875	2.50	1.625	2.00	2.00	1.75	2.00	2.00	2.00	2.125	2.50	2.125	2.375	1.625	1.75	2.25	1.50	2.00
		2.25	1.625	1.75	1.50	1.75	2.00	1.50	2.25	2.25	3.00	1.75	2.25	1.50	1.375	3.00	2.125	1.50	1.50
		2.25	2.125	2.00	1.50	2.75	2.125	1.875	2.375	2.125	2.00	1.75	2.25	1.75	1.50	2.50	2.25	2.00	1.75
		2.00	2.25	2.00	1.50	1.75	2.50	2.50	2.125	1.625	1.00	1.875	3.00	1.50	2.00	2.00	2.00	1.75	2.00
		1.25	2.375	1.75	1.50	1.625	2.00	2.125	2.375	2.00	2.00	2.00	1.625	2.25	2.00	1.50	2.00	2.50	1.50
		1.875	2.00	1.625	2.25	2.00	2.25	2.25	1.50	3.00	2.00	3.50	2.50	1.375	1.875	2.25	2.25	1.75	1.375
		2.00	2.00	2.50	2.00	1.50	2.125	1.50	2.00	2.00	2.00	3.625	2.00	1.50	2.125	2.50	2.375	1.75	1.375
		1.875	1.75	2.00	2.00	1.75	1.75	1.875	2.00	2.125	1.375	2.00	2.625	2.50	2.25	2.25	1.50	1.875	2.00
		2.00	1.875	2.00	1.75	2.00	2.00	2.00	3.00	2.125	2.00	2.25	2.00	1.875	2.25	2.875	1.50	1.50	1.75
		2.50	1.75	1.50	1.50	1.50	1.75	1.75	1.50	2.375	3.375	2.375	2.50	2.125	2.00	2.625	2.00	1.50	1.125
		2.625	2.50	2.00	1.625	1.50	1.625	1.875	1.50	2.00	2.50	2.375	2.25	1.50	1.50	2.125	2.375	1.75	1.375
		2.00	2.00	2.25	1.50	1.875	1.25	2.00	2.00	2.125	2.50	1.75	3.00	2.00	2.00	1.50	2.25	1.875	1.50
		2.50	2.00	3.00	2.00	1.75	2.60	1.50	2.00	2.00	2.625	1.875	3.50	1.75	2.75	1.875	2.875	2.00	2.00
		2.625	1.875	2.50	2.50	2.25	1.50	2.00	2.00	2.375	2.625	2.50	4.00	1.50	2.25	2.25	2.125	2.125	1.875
		2.125	1.875	1.75	1.50	1.875	1.50	2.00	1.50	2.75	2.00	2.25	3.125	1.50	2.375	3.50	2.25	2.125	1.375
		1.625	2.00	1.625	1.50	1.875	1.625	2.00	1.75	2.875	2.00	2.375	2.50	2.00	1.50	3.00	2.00	2.00	1.50
		2.625	1.75	2.00	1.25	1.50	1.75	2.25	2.00	2.625	1.375	1.50	2.375	1.375	1.50	2.50	1.75	1.875	1.50
		2.25	1.75	2.25	1.50	1.75	2.00	1.75	1.875	1.50	2.125	2.00	2.00	1.625	1.625	2.00	2.00	1.625	1.50
	Totals.....	100.50	103.250	107.00	89.00	89.250	91.125	103.75	103.625	114.375	104.50	100.25	118.625	88.625	92.75	108.25	100.750	85.750	81.95

		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:																			
Maximum measurements.	B'	2.625	1.0334		B'	2.75	1.0826		B'	3.75	1.4763		B'	3.375	1.3287		B'	3.00	1.1811
	B''	2.50	0.9842		B''	2.75	1.0826		B''	3.00	1.1811		B''	3.50	1.3779		B''	2.75	1.0826
	B'''	3.875	1.5255		B'''	2.625	1.0334		B'''	3.50	1.3779		B'''	4.00	1.5748		B'''	3.50	1.3779
Highest.....		3.875	1.5255		2.75	1.0826		3.75	1.4763		4.00	1.5748		3.50	1.3779		3.25	1.2795	
Minimum measurements.	B'	1.00	0.3937		B'	1.25	0.4921		B'	1.375	0.5413		B'	1.00	0.3937		B'	1.25	0.4921
	B''	1.025	0.6397		B''	1.375	0.5413		B''	1.375	0.5413		B''	1.50	0.5905		B''	1.375	0.5413
	B'''	1.00	0.3937		B'''	1.00	0.3937		B'''	1.50	0.5905		B'''	1.375	0.5413		B'''	1.375	0.5413
Lowest.....		1.00	0.3937		1.00	0.3937		1.375	0.5413		1.00	0.3937		1.25	0.4921		1.25	0.4921	
Average measurements..	B'	2.01	0.7913		B'	1.78	0.7007		B'	2.075	0.8169		B'	2.00	0.8228		B'	1.773	0.6980
	B''	2.005	0.8120		B''	1.785	0.7027		B''	2.073	0.8161		B''	2.005	0.7898		B''	1.855	0.7303
	B'''	2.14	0.8425		B'''	1.823	0.7177		B'''	2.287	0.9003		B'''	2.373	0.9342		B'''	2.125	0.8366
Average.....		2.072	0.8157		1.796	0.7070		2.145	0.8444		2.156	0.8488		1.917	0.7547		1.786	0.7031	
Measurements above average.			61			65			56			76		71					



TABLE I.—Measurements of fineness of wools—Continued.

Catalogue number of samples..	MINNESOTA.									ILLINOIS.								
	EWES, 2 TO 3 YEARS OLD.									RAMS, 1 YEAR OLD.								
	499.			500.			501.			447.			448.			449.		
Number of section.....	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
2.375	2.00	2.00	2.25	1.50	3.00	2.75	1.75	2.00	2.25	2.00	1.875	1.75	2.00	1.50	2.50	2.00	2.00	1.50
2.125	2.25	2.125	2.50	1.25	3.00	3.00	1.875	2.00	1.50	1.50	1.75	1.75	1.75	1.75	1.75	1.875	1.875	2.50
2.00	2.00	1.50	2.25	2.375	2.75	2.00	2.00	1.75	2.00	1.50	2.00	2.00	2.00	1.875	1.875	2.00	2.00	1.875
1.50	2.00	2.25	2.00	2.00	2.875	1.75	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.75	1.75	1.50	2.375	2.00
1.75	1.875	2.375	1.50	1.60	2.00	2.00	2.00	1.875	2.00	1.50	1.50	1.50	1.50	1.875	1.50	2.00	2.00	2.00
2.25	2.00	1.875	1.75	1.375	2.00	2.25	2.00	2.125	2.00	2.50	2.00	2.00	2.00	1.50	2.00	1.50	1.875	1.875
2.50	1.50	2.125	1.75	2.00	2.325	1.625	2.00	2.00	1.60	2.25	1.875	1.75	1.75	1.75	2.00	2.00	2.50	1.875
2.125	2.00	1.50	2.00	1.50	2.00	1.75	2.60	1.50	2.50	2.00	2.00	2.00	2.00	1.625	1.60	1.875	2.60	3.00
1.75	1.875	1.75	2.25	2.00	2.25	2.50	1.875	1.75	2.00	1.75	2.00	1.75	2.00	1.50	1.625	2.00	2.00	2.00
2.00	1.875	1.875	2.125	1.50	2.00	2.875	1.75	1.75	1.625	1.50	2.025	1.50	2.00	1.50	2.00	1.625	2.025	2.00
1.75	2.00	2.00	1.875	2.00	2.25	2.00	2.00	2.125	2.00	2.00	2.125	2.00	2.00	2.00	2.25	2.50	2.00	2.60
1.875	2.125	2.00	3.50	1.625	2.00	2.375	1.50	2.125	2.00	1.75	2.00	1.625	2.00	1.625	2.00	2.50	2.125	2.125
1.60	2.25	2.375	2.00	1.75	1.75	2.25	1.50	1.50	1.875	2.00	2.25	1.50	1.50	2.00	2.00	2.00	2.00	2.25
2.25	1.75	2.00	2.125	2.25	1.875	1.75	2.25	1.50	1.875	1.75	1.875	1.75	1.50	2.00	1.625	2.00	2.025	2.025
1.625	2.00	1.75	1.75	1.50	1.50	2.00	1.75	2.00	2.00	1.50	2.00	2.00	1.50	2.00	1.50	2.00	2.375	3.00
1.60	2.25	1.875	1.875	1.875	1.50	2.375	1.375	1.75	1.625	2.00	1.50	2.00	2.00	2.00	2.00	1.875	1.375	2.125
1.50	2.50	1.75	1.75	1.60	1.625	2.25	1.75	1.875	2.00	1.50	2.00	1.50	2.00	1.625	1.50	2.50	2.125	2.00
2.00	1.50	2.00	1.50	2.25	3.00	2.00	2.00	2.25	2.00	2.25	2.00	1.75	1.75	2.00	1.50	2.375	2.00	1.60
2.125	2.25	2.00	2.00	2.50	2.75	2.00	1.75	2.25	2.00	1.50	2.00	1.50	2.00	1.50	1.75	2.00	2.25	2.50
2.375	2.125	2.00	1.75	2.00	2.00	1.75	1.875	2.375	1.25	1.50	1.60	1.60	2.00	1.50	1.50	2.00	2.75	1.75
2.25	1.375	1.875	1.875	2.00	2.75	2.125	2.125	2.375	1.50	1.50	2.00	2.00	2.00	2.00	1.50	1.75	1.875	2.125
1.50	1.50	1.75	2.00	2.25	1.25	2.50	2.00	2.125	1.60	2.25	2.00	2.00	1.75	2.00	1.50	1.75	1.50	2.25
2.25	1.875	1.875	3.00	2.25	1.875	2.00	2.25	1.875	2.50	1.625	1.75	1.75	2.00	1.625	1.75	2.50	2.00	2.00
2.00	2.50	2.25	3.00	2.00	2.375	1.75	1.375	1.875	2.50	1.625	2.00	1.75	2.00	1.75	2.00	2.125	2.625	1.875
2.00	1.50	2.375	2.50	2.00	1.50	2.125	2.375	2.25	1.75	2.00	2.50	1.50	2.00	2.00	1.875	2.375	1.625	2.50
2.00	1.75	1.75	2.75	1.875	2.00	1.875	1.50	2.125	3.00	1.60	1.50	1.75	2.00	1.60	1.875	1.875	2.625	2.00
2.25	2.00	1.75	2.875	2.00	1.75	2.25	1.60	1.60	1.75	2.00	1.625	1.50	1.625	2.00	2.125	2.00	2.375	2.375
2.50	2.00	1.875	1.875	1.75	1.875	1.125	1.25	1.875	2.00	1.25	1.875	2.00	1.25	1.875	2.00	1.50	2.50	2.50
2.00	1.875	2.25	2.00	1.75	2.00	2.00	2.375	2.00	1.375	2.25	2.25	1.875	1.75	1.75	2.00	1.875	2.00	1.75
2.125	1.375	2.50	1.50	2.00	2.125	2.125	2.25	2.00	1.50	1.875	1.75	2.00	2.00	2.00	2.00	3.00	2.00	1.75
2.625	2.00	2.125	1.75	2.125	2.25	2.50	1.60	2.25	2.00	1.50	1.50	1.50	2.00	2.00	2.00	2.00	2.00	2.50
2.75	2.50	2.00	1.875	2.00	2.125	2.00	2.25	2.00	2.00	1.875	2.375	1.875	2.00	2.00	2.00	1.875	1.75	2.00
1.875	1.75	2.125	1.75	1.875	2.00	2.25	1.125	1.125	2.625	1.625	1.125	1.75	1.50	1.50	1.875	1.875	1.50	2.50
2.00	1.50	2.25	1.75	1.75	2.00	3.00	2.00	2.00	1.50	1.50	1.125	2.60	1.50	2.00	2.50	1.875	1.875	2.00
2.125	2.00	2.00	3.00	1.875	2.25	2.00	2.00	2.00	1.75	1.50	1.125	2.00	2.00	1.50	1.375	1.625	2.25	3.00
1.875	2.00	1.25	2.50	2.00	2.375	2.025	2.25	2.00	1.50	1.60	1.60	1.875	1.50	2.00	1.50	2.00	2.00	1.875
1.75	2.00	1.875	2.00	2.25	2.00	2.50	3.00	1.50	1.50	1.75	1.50	2.00	1.50	2.00	2.25	2.125	2.125	1.625
2.00	2.25	2.00	1.875	1.75	1.50	2.00	1.60	2.00	2.25	2.50	2.50	1.75	2.00	1.875	1.50	2.25	2.25	2.00
2.25	2.50	3.75	1.75	1.875	2.00	1.75	2.375	2.00	1.625	1.125	1.875	2.00	1.50	1.625	1.50	1.60	2.375	2.00
2.25	2.00	2.00	1.75	1.75	1.75	2.00	2.00	1.75	2.00	1.75	2.00	1.375	2.00	1.75	1.25	2.00	2.25	1.50
1.75	1.875	2.00	1.75	1.75	2.75	2.50	2.00	1.875	1.25	2.50	2.50	1.25	2.50	1.625	1.75	2.00	1.75	3.00
2.375	1.75	2.125	2.00	1.60	2.25	2.375	2.00	2.00	1.75	1.625	1.75	2.00	2.00	2.125	2.00	2.00	2.60	2.00
2.00	2.00	1.875	2.50	1.50	1.875	2.50	2.00	1.875	2.25	1.50	2.00	1.75	2.00	1.75	2.00	1.875	2.00	2.50
2.875	2.25	1.75	3.25	1.75	2.25	2.25	1.875	2.25	1.50	2.00	2.00	1.625	1.75	1.50	2.00	2.00	2.00	2.25
2.00	2.00	1.75	2.25	1.75	2.25	1.125	1.75	2.00	1.50	1.60	1.75	1.50	1.50	1.50	1.375	1.75	1.125	2.375
2.125	1.375	1.50	2.25	2.00	2.375	2.00	1.75	2.00	1.60	1.50	1.75	1.75	1.75	2.00	2.125	2.00	2.00	2.00
1.875	2.00	1.875	3.50	2.50	2.00	2.25	1.60	1.80	2.00	1.50	2.25	1.50	2.00	1.50	2.00	1.875	2.00	2.00
2.00	2.00	2.00	1.75	1.50	1.75	2.00	1.75	1.50	2.00	1.50	2.00	1.75	2.50	1.625	2.00	1.50	2.00	2.00
2.25	3.00	1.75	2.00	2.375	1.875	2.375	2.125	1.625	2.50	2.50	2.25	1.50	1.50	2.00	2.50	1.875	1.60	2.00
Totals.....	102.50	101.625	97.125	105.875	99.000	102.625	108.25	97.125	98.625	90.875	84.625	97.75	87.75	60.375	91.00	100.125	105.00	108.75

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:																		
Maximum measurements.	B' 2.875 B'' 2.25 B''' 2.50	1.1318 1.2705 0.9842	B' 3.50 B'' 3.00 B''' 3.00	1.3779 1.1811 1.1811	B' 3.00 B'' 3.00 B''' 2.625	1.611 1.1811 1.0334	B' 2.00 B'' 2.50 B''' 2.625	1.1811 0.9842 1.0334	B' 2.25 B'' 2.50 B''' 2.50	0.8858 0.8842 0.8842	B' 2.50 B'' 3.00 B''' 3.00	0.9842 1.1811 1.1811	B' 2.50 B'' 2.50 B''' 2.50	0.8858 0.8842 0.8842	B' 2.50 B'' 3.00 B''' 3.00	0.9842 1.1811 1.1811	B' 2.50 B'' 3.00 B''' 3.00	0.9842 1.1811 1.1811
Highest.....	3.25	1.2795	3.50	1.3779	3.00	1.1811	3.00	1.1811	3.00	1.1811	3.00	1.1811	3.00	1.1811	3.00	1.1811	3.00	1.1811
Minimum measurements.	B' 1.50 B'' 1.375 B''' 1.875	0.5905 0.5418 0.5413	B' 1.50 B'' 1.25 B''' 1.60	0.5905 0.4921 0.5905	B' 1.125 B'' 1.25 B''' 1.50	0.4429 0.4921 0.5905	B' 1.25 B'' 1.125 B''' 1.50	0.4921 0.4429 0.5905	B' 1.25 B'' 1.125 B''' 1.50	0.4921 0.4429 0.5905	B' 1.50 B'' 1.50 B''' 1.25	0.5905 0.5905 0.4921	B' 1.50 B'' 1.50 B''' 1.25	0.5905 0.5905 0.4921	B' 1.50 B'' 1.50 B''' 1.50	0.5905 0.5905 0.5905	B' 1.50 B'' 1.875 B''' 1.50	0.5905 0.5413 0.5905
Lowest.....	1.375	0.5413	1.25	0.4921	1.125	0.4429	1.125	0.4429	1.125	0.4429	1.125	0.4429	1.25	0.4921	1.875	0.5413		
Average measurements..	B' 2.05 B'' 2.033 B''' 1.943	0.7992 0.8970 0.7649	B' 2.117 B'' 1.98 B''' 2.053	0.8334 0.7795 0.8082	B' 2.165 B'' 1.943 B''' 1.972	0.8593 0.7649 0.7763	B' 1.818 B'' 1.692 B''' 1.955	0.7157 0.6661 0.7696	B' 1.755 B'' 1.807 B''' 1.82	0.6909 0.7114 0.7185	B' 2.00 B'' 2.10 B''' 2.173	0.7874 0.8267 0.8562	B' 2.00 B'' 2.10 B''' 2.173	0.6909 0.7114 0.7185	B' 2.00 B'' 2.10 B''' 2.173	0.7874 0.8267 0.8562		
Average.....	2.008	0.7905	2.05	0.8070	2.03	0.7992	1.821	0.7160	1.79	0.7047	2.00	0.8228						
Measurements above average..	53		51		50		75		69		67							
Measurements below average..	97		96		90		75		81		83							



TABLE I.—Measurements of fineness of wools—Continued.

		ILLINOIS.																	
		RAMS, 1 YEAR OLD.																	
Catalogue number of samples..		450.			451.			452.			453.			454.			455.		
Number of section .....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
		2.00	1.625	1.75	2.375	2.50	1.50	2.00	2.125	1.125	2.125	2.00	2.00	2.00	2.00	1.50	1.50	2.00	1.875
		1.375	1.50	1.50	1.625	2.50	1.75	1.50	1.25	1.375	2.50	1.50	1.50	2.50	2.00	1.75	1.625	1.75	1.625
		1.375	1.50	2.00	1.75	2.25	2.25	1.50	1.50	1.375	2.00	3.00	3.00	2.00	2.00	1.50	1.50	1.50	1.50
		2.00	2.00	1.50	1.50	2.375	1.50	1.375	1.625	1.375	2.50	2.50	2.25	1.50	2.00	2.25	1.50	2.125	1.625
		2.00	1.625	1.75	1.50	2.00	2.25	1.75	2.00	1.625	2.625	2.00	2.375	2.00	1.75	2.00	1.50	1.625	1.50
		1.875	1.875	2.00	2.00	2.125	2.125	1.875	1.375	1.25	2.75	2.75	2.50	1.625	2.00	2.00	1.625	2.00	1.875
		2.00	1.625	1.75	1.60	1.875	2.125	1.50	1.50	1.50	2.00	2.00	2.125	1.50	1.625	2.25	1.625	2.00	1.625
		1.75	1.625	1.50	2.00	2.25	2.00	1.25	1.50	1.875	2.25	2.125	2.50	2.00	2.00	2.25	1.875	1.875	1.625
		1.625	1.375	1.50	2.125	2.25	2.00	1.875	1.50	1.50	2.00	2.25	2.625	1.625	1.75	2.50	1.875	1.875	1.875
		1.75	2.00	2.00	2.125	2.00	2.125	1.50	1.25	1.125	2.00	2.25	2.375	1.625	2.50	1.50	1.50	1.875	2.50
		1.50	1.875	2.00	2.00	2.00	2.00	1.50	1.50	1.00	2.50	2.375	2.375	1.50	2.25	1.75	2.00	1.875	1.875
		2.00	1.875	1.50	2.125	2.00	1.625	1.50	1.625	1.50	2.375	1.875	2.50	1.50	1.625	2.00	2.00	1.875	1.25
		1.50	1.625	1.50	2.00	1.875	1.625	1.875	1.875	1.875	2.375	2.50	2.50	2.00	2.00	2.50	2.00	1.875	1.50
		1.375	1.60	2.00	2.125	2.75	1.60	1.875	1.50	1.625	2.125	3.00	2.00	1.50	2.00	2.00	2.25	2.00	2.50
		1.50	1.625	1.50	2.125	2.375	2.50	1.375	2.00	1.50	2.00	2.00	3.375	2.00	1.50	2.00	2.00	2.125	1.50
		1.75	1.50	1.625	2.125	2.00	1.875	2.50	2.50	1.375	1.25	1.75	2.375	3.00	1.50	2.00	1.50	1.50	1.25
		2.00	1.625	1.625	2.25	1.75	3.375	1.875	1.50	1.375	2.00	2.00	2.50	1.50	2.50	1.625	2.50	2.00	1.50
		2.00	2.00	1.50	1.875	2.50	3.375	1.50	1.50	1.50	2.00	1.625	2.00	1.50	1.625	1.75	2.25	1.50	1.75
		1.25	1.50	2.125	1.75	1.875	1.375	2.00	1.875	1.375	2.00	2.50	2.75	1.875	1.625	1.625	2.625	2.00	2.00
		1.50	1.625	2.00	2.25	2.50	2.75	1.375	1.375	1.625	2.00	1.75	2.00	1.50	2.00	1.50	2.00	1.625	1.625
		2.00	2.00	2.00	1.625	2.25	2.00	1.625	1.50	1.50	2.00	2.00	2.50	1.50	1.75	2.625	1.50	1.625	1.875
		1.625	2.125	1.875	2.00	1.75	2.00	1.50	1.50	1.50	2.50	1.875	2.25	1.625	2.00	2.625	2.00	2.00	1.625
		1.75	2.00	1.75	2.50	1.875	1.75	1.125	1.00	1.50	2.625	2.50	2.00	2.25	1.75	2.00	1.50	1.625	1.125
		1.50	2.00	1.75	1.875	1.625	2.00	2.00	1.625	1.625	2.00	1.875	2.00	1.75	2.50	2.00	1.75	1.50	1.25
		2.50	2.00	1.75	2.125	2.875	2.25	1.625	1.625	2.50	2.00	1.75	2.00	1.875	2.00	1.625	1.50	2.00	2.00
		1.75	1.50	2.00	2.50	2.00	2.25	2.00	1.50	1.125	1.75	2.00	2.00	2.00	2.50	1.625	1.875	1.625	1.875
		1.75	1.75	1.50	2.00	2.50	2.125	2.00	1.50	1.625	2.00	2.50	2.25	1.75	2.00	3.00	2.00	1.50	1.375
		1.625	1.50	1.50	1.25	2.25	2.125	1.875	1.50	2.00	2.50	3.00	1.75	2.00	2.00	2.50	1.50	2.00	1.875
		1.375	2.00	1.50	2.00	1.875	1.75	2.00	1.25	1.625	2.25	2.625	2.00	2.375	2.75	1.50	2.50	1.50	1.375
		1.75	1.75	2.00	2.25	2.375	2.00	1.50	1.625	1.375	2.00	2.50	2.50	2.50	1.625	1.50	2.00	1.875	1.375
		1.375	1.25	1.50	1.375	1.625	1.25	1.50	1.125	1.50	2.625	2.50	2.25	1.625	2.50	1.75	2.25	1.875	2.125
		1.75	1.375	2.00	1.50	2.00	2.00	1.875	1.25	1.50	2.50	3.00	2.00	1.625	2.50	1.75	1.875	1.625	2.00
		1.875	1.375	2.00	1.50	1.875	1.875	2.00	1.50	1.875	3.00	3.00	2.375	1.825	1.625	1.875	2.50	1.625	1.50
		1.625	1.625	1.875	1.125	1.50	2.125	1.50	1.75	1.50	2.625	2.00	2.25	2.375	2.00	2.00	2.00	1.375	1.375
		1.375	2.00	2.50	2.25	1.875	1.50	1.625	1.50	1.50	1.75	2.50	2.00	2.125	2.00	2.50	2.00	1.50	2.00
		1.50	1.625	1.75	3.00	2.875	2.50	1.50	1.50	1.625	2.50	3.00	2.50	2.00	2.25	2.00	1.50	1.50	2.00
		1.625	1.50	1.50	2.00	1.625	2.00	1.50	1.875	1.375	2.00	2.50	2.50	1.625	1.625	1.50	1.75	1.50	1.75
		1.875	1.625	1.50	2.00	1.50	2.00	1.50	1.875	1.875	2.625	2.00	2.50	1.75	1.75	2.00	1.50	1.625	1.75
		1.50	1.50	1.75	2.25	2.50	2.125	2.125	1.375	1.50	2.00	2.00	2.00	1.875	2.25	2.00	1.50	1.875	1.75
		1.875	1.60	1.75	2.00	2.125	2.875	2.00	1.625	1.50	2.00	2.00	2.00	2.00	2.75	2.00	1.50	2.125	1.75
		2.50	1.50	1.50	2.00	2.125	2.375	2.00	1.875	1.875	2.25	2.00	2.00	2.00	2.00	1.625	1.75	1.625	1.50
		1.75	1.625	1.50	1.50	1.75	2.00	2.00	1.375	1.625	2.50	1.75	2.25	1.25	2.00	2.125	2.125	2.125	2.00
		1.00	2.00	1.875	1.50	2.25	1.625	1.50	1.125	1.50	2.50	2.50	2.625	1.50	1.75	2.00	1.75	1.50	2.125
		1.375	1.50	1.875	2.375	2.00	2.00	2.00	1.625	1.625	2.00	2.375	1.75	1.875	1.75	2.25	2.375	1.25	1.875
		1.75	2.00	1.75	2.00	2.00	1.875	1.625	1.50	1.875	2.50	2.75	2.75	1.75	2.00	1.625	2.50	2.00	1.50
		2.00	2.125	1.50	2.00	1.75	2.50	1.50	1.875	1.125	2.50	2.00	2.375	1.875	1.50	2.50	1.375	1.50	1.75
		1.75	1.50	2.00	2.00	2.00	1.50	1.00	2.00	1.625	2.50	1.625	3.00	1.75	2.00	2.00	2.00	1.875	1.625
		1.875	1.50	2.00	1.50	1.875	2.50	1.50	1.50	1.375	2.50	2.50	2.00	2.50	1.50	2.00	1.625	1.50	1.75
		2.00	2.00	1.75	1.50	2.25	2.00	1.50	1.50	2.00	2.00	2.375	2.50	2.375	2.375	1.875	2.00	1.50	2.00
		1.125	1.375	1.50	2.00	1.75	2.50	2.00	1.00	1.625	2.50	2.00	2.25	1.50	2.00	2.25	1.75	1.50	1.125
Totals .....		85.25	84.625	87.125	97.125	104.125	102.375	85.00	77.125	77.125	112.875	114.375	114.875	91.875	99.00	98.50	93.375	87.50	85.50

		No. of section.			In centimillimeters.			In thousandths of inch.			No. of section.			In centimillimeters.			In thousandths of inch.		
<b>Recapitulation and reduction:</b>																			
Maximum measurements	B'	2.50	0.9842	B'	3.00	1.1811	B'	2.50	0.9842	B'	3.00	1.1811	B'	2.50	0.9842	B'	2.625	1.0334	
	B''	2.125	0.8306	B''	2.875	1.1318	B''	2.125	0.8966	B''	3.00	1.1811	B''	2.75	1.0826	B''	2.125	0.8360	
	B'''	2.50	0.9842	B'''	3.375	1.3287	B'''	2.50	0.9842	B'''	3.00	1.1811	B'''	3.00	1.1811	B'''	2.50	0.9842	
Highest .....		2.50	0.9842		3.375	1.3287		2.50	0.9842		3.00	1.1811		3.00	1.1811		2.625	1.0334	
Minimum measurements.	B'	1.00	0.3987	B'	1.125	0.4429	B'	1.125	0.4429	B'	1.75	0.6889	B'	1.25	0.4921	B'	1.375	0.5413	
	B''	1.25	0.4921	B''	1.50	0.5905	B''	1.00	0.3987	B''	1.625	0.6907	B''	1.50	0.5905	B''	1.25	0.4921	
	B'''	1.50	0.5905	B'''	1.25	0.4921	B'''	1.00	0.3987	B'''	1.50	0.5905	B'''	1.50	0.5905	B'''	1.125	0.4429	
Lowest .....		1.00	0.3987		1.125	0.4429		1.00	0.3987		1.50	0.5905		1.25	0.4921		1.125	0.4429	
Average measurements.	B'	1.705	0.6712	B'	1.943	0.7640	B'	1.70	0.6062	B'	2.258	0.8889	B'	1.898	0.7236	B'	1.898	0.7354	
	B''	1.693	0.6605	B''	2.083	0.8200	B''	1.543	0.6074	B''	2.288	0.9007	B''	1.98	0.7705	B''	1.75	0.6889	
	B'''	1.743	0.6862	B'''	2.048	0.8062	B'''	1.543	0.6074	B'''	2.208	0.9047	B'''	1.97	0.7701	B'''	1.71	0.6732	
Average .....		1.71	0.6732		2.03	0.7992		1.595	0.6279		2.28	0.8976		1.93	0.7598		1.77	0.6968	
Measurements above average.			74			64		64			61			76				67	
Measurements below average.			76			86													



TABLE I.—Measurements of fineness of wools—Continued.

		ILLINOIS.																	
		RAMS, 1 YEAR OLD.																	
Catalogue number of samples.		450.			457.			458.			459.			460.			461.		
Number of section.....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
	1.50	1.50	1.75	1.75	2.00	2.00	2.50	2.375	2.375	1.75	3.00	3.125	1.50	3.50	2.25	1.50	2.00	2.125	
	2.125	1.875	2.00	1.75	2.00	2.00	2.00	1.75	2.00	2.60	1.625	2.25	2.25	2.50	1.625	1.75	1.50	2.00	
	1.00	2.25	1.50	2.00	1.625	1.50	2.50	2.00	2.00	2.50	3.50	2.125	2.00	2.50	2.00	2.50	2.00	1.75	
	2.00	1.875	1.50	1.50	2.00	1.625	1.75	2.25	1.625	2.00	1.50	2.00	1.50	2.60	1.50	1.75	2.00	3.00	
	1.125	1.875	1.50	1.75	2.00	1.75	1.875	2.375	2.00	2.00	2.00	2.00	1.75	2.00	3.375	2.00	2.25	2.00	
	1.50	1.875	1.875	1.875	1.75	1.875	1.025	2.625	3.00	2.375	2.50	2.125	1.875	3.00	2.60	1.25	1.75	2.00	
	1.50	1.75	1.75	2.00	1.50	2.125	1.75	2.00	3.00	2.50	2.50	2.125	1.875	2.25	2.50	1.25	1.50	1.75	
	1.50	1.625	1.875	1.75	2.125	1.375	2.50	1.875	2.50	2.00	2.50	2.375	3.25	2.50	2.00	1.50	2.00	1.875	
	2.00	1.875	2.375	2.75	2.50	1.375	2.00	2.50	2.50	2.00	2.50	2.50	2.00	2.50	2.00	2.00	2.375	2.75	
	2.375	1.00	1.375	2.00	2.00	1.75	2.00	1.50	1.75	2.00	2.50	2.00	1.875	2.00	2.50	1.875	2.00	1.875	
	1.875	1.50	2.00	1.50	2.00	1.75	1.625	1.50	2.125	1.75	2.00	1.50	2.00	1.75	1.50	1.625	2.00	2.00	
	2.00	1.50	2.00	1.50	2.25	2.00	2.50	2.375	1.75	1.50	2.125	2.00	2.00	2.50	2.25	1.875	2.00	1.25	
	1.50	2.00	1.375	1.75	1.50	1.50	2.00	2.25	2.00	1.025	1.50	3.375	2.375	3.00	2.125	1.625	2.00	1.75	
	2.25	1.50	3.00	2.00	2.00	2.00	1.50	2.50	2.50	1.375	1.625	3.50	2.50	2.25	2.00	2.00	2.00	1.875	
	1.50	2.50	1.875	2.00	2.50	1.025	2.00	2.50	2.25	1.75	2.50	2.25	2.00	2.00	1.50	1.875	1.50	2.375	
	2.50	2.50	1.50	2.00	2.60	1.50	2.25	2.25	2.50	1.75	2.50	1.625	1.75	3.00	2.125	2.00	2.00	2.50	
	2.00	2.25	1.25	1.625	2.00	1.50	2.25	2.50	3.00	1.75	3.00	2.00	1.50	3.00	2.25	2.375	1.50	2.375	
	2.00	2.50	1.625	1.50	2.00	1.875	1.00	2.00	1.625	2.00	2.50	2.00	3.00	2.00	2.00	2.00	2.25	2.125	
	1.875	2.00	1.625	1.75	2.00	1.50	2.125	2.00	2.875	2.00	1.50	1.50	3.50	2.00	2.625	1.75	2.00	2.00	
	1.875	2.125	1.875	2.00	2.375	2.00	1.50	2.125	1.75	1.75	2.00	2.875	1.75	1.75	3.00	1.75	1.75	2.00	
	1.75	1.625	2.125	1.50	2.00	1.75	1.50	1.55	3.00	2.00	2.00	2.875	1.50	2.25	2.75	2.00	1.875	2.125	
	1.50	1.625	1.25	1.75	2.375	1.75	1.625	1.75	2.00	2.375	1.75	1.50	2.375	1.75	2.00	2.25	1.50	1.625	
	1.75	2.625	2.00	1.50	2.00	2.00	2.50	1.875	2.25	2.00	2.00	2.00	2.00	2.375	3.00	2.00	1.75	1.50	
	1.875	1.75	1.625	1.625	2.00	1.625	2.575	2.00	2.00	2.00	2.00	2.00	2.50	2.75	2.75	2.50	2.00	1.75	
	1.925	1.875	1.125	1.625	2.50	2.25	2.60	2.00	1.625	2.00	2.50	1.50	2.50	2.60	1.125	1.75	2.25	2.125	
	2.625	1.375	2.00	1.75	2.50	1.125	1.00	1.625	1.50	3.125	2.00	1.50	2.50	1.75	2.50	1.625	1.60	1.75	
	1.625	1.50	2.60	2.375	1.875	1.875	1.50	2.00	1.75	1.75	2.00	1.75	2.00	2.00	1.75	2.00	1.625	1.75	
	1.50	1.50	1.625	2.00	2.00	2.00	2.00	2.50	2.125	1.50	2.00	1.875	3.00	2.25	1.375	2.00	1.875	2.00	
	1.875	1.50	1.625	2.00	1.50	1.625	2.00	2.50	1.875	1.50	2.50	1.625	2.00	3.00	2.125	2.00	1.75	1.50	
	2.25	1.75	1.50	2.00	2.00	1.75	1.50	1.25	2.50	1.60	2.50	2.25	2.00	2.00	2.00	2.50	1.375	1.50	
	1.375	1.875	2.00	2.50	2.375	2.00	2.00	2.00	2.25	2.00	2.00	1.50	2.50	2.25	2.50	1.75	2.00	1.75	
	2.00	1.125	2.00	2.25	2.00	2.00	1.50	1.50	1.75	1.50	2.75	2.00	2.00	2.00	2.00	2.00	1.75	1.875	
	1.75	1.50	2.00	2.25	1.50	1.75	1.75	1.875	2.50	3.00	2.50	2.375	1.50	2.50	2.00	2.00	2.00	1.75	
	1.375	1.375	1.375	1.50	2.00	1.875	1.75	2.625	2.00	1.625	1.60	2.75	3.00	2.00	1.75	1.375	1.50	1.625	
	1.50	1.25	2.25	1.50	1.875	1.50	2.00	2.25	2.875	1.50	2.50	1.75	2.50	2.50	1.75	1.875	1.75	1.625	
	1.50	2.375	1.50	2.00	2.00	2.00	2.125	2.50	1.875	1.50	2.50	2.75	1.50	1.75	2.00	1.50	1.375	2.00	
	2.00	2.00	1.375	2.00	2.00	2.00	2.00	1.625	1.875	2.00	1.50	1.50	1.875	2.75	2.625	2.00	1.375	1.75	
	2.75	1.875	1.25	2.00	1.50	2.00	1.875	2.00	2.875	2.00	2.50	2.75	1.50	2.625	2.50	1.875	2.00	2.875	
	1.375	1.625	2.125	1.75	1.75	1.625	3.375	1.75	1.50	2.125	2.50	1.50	2.25	2.50	2.50	2.00	2.00	1.75	
	2.375	2.00	2.50	1.50	1.50	2.00	2.875	1.625	2.00	2.00	2.625	2.25	2.375	2.125	2.00	2.00	1.50	1.60	
	1.75	1.50	2.50	1.50	2.125	1.50	2.50	2.00	1.50	1.50	1.625	2.50	2.625	2.00	2.125	1.875	2.00	2.00	
	1.875	2.00	2.25	2.00	1.50	1.375	2.25	2.375	2.75	2.50	1.75	1.125	3.00	2.25	2.375	1.50	2.25	2.00	
	1.50	2.375	1.25	1.875	1.50	1.50	1.625	2.00	1.75	1.75	2.125	1.75	1.875	2.625	3.00	2.00	2.375	2.00	
	1.625	1.875	2.25	2.00	2.00	1.625	1.50	2.50	1.875	2.25	1.625	1.50	2.00	2.75	1.50	2.00	2.00	2.00	
	1.875	2.125	2.75	1.625	1.75	1.625	2.60	1.50	2.50	1.50	1.75	1.25	3.00	2.00	2.00	2.00	1.75	3.50	
	1.625	1.375	1.50	2.25	2.00	1.75	1.75	3.00	2.00	2.50	2.50	2.875	2.25	3.00	2.375	2.00	1.875	2.50	
	1.875	2.00	2.00	1.875	2.25	1.75	2.125	1.25	2.25	2.125	2.50	2.75	2.25	1.875	2.25	1.625	2.25	2.50	
	1.625	1.50	2.00	1.50	2.125	1.875	1.50	2.625	2.125	2.00	1.25	2.125	1.50	2.375	3.00	1.75	2.00	2.00	
	1.625	1.625	1.50	1.50	2.00	2.25	1.875	2.00	1.00	1.00	1.25	1.625	2.00	2.50	2.00	1.875	1.875	1.75	
	1.875	2.375	1.625	1.625	1.50	2.25	2.50	2.00	2.00	1.75	1.625	1.25	2.25	2.125	2.00	1.625	2.00	2.00	
Totals.....	88.425	90.75	90.00	91.875	99.125	88.625	98.375	104.125	107.875	97.125	107.50	102.625	108.375	117.125	110.75	92.375	93.375	98.50	

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:																		
Maximum measurements:	B'	2.75	1.0826	B'	2.75	1.0826	B'	3.375	1.3267	B'	3.125	1.2303	B'	3.50	1.3770	B'	2.50	0.9843
	B''	2.625	1.0337	B''	3.00	1.1811	B''	3.00	1.1811	B''	3.50	1.3770	B''	3.60	1.3770	B''	2.875	0.9350
	B'''	3.00	1.1811	B'''	2.25	0.8868	B'''	3.00	1.1811	B'''	3.375	1.3267	B'''	3.875	1.3267	B'''	3.00	1.1811
Highest.....		3.00	1.1811		3.00	1.1811		3.375	1.3267		3.50	1.3770		3.50	1.3770		3.00	1.1811
Minimum measurements:	B'	1.00	0.3937	B'	1.50	0.5905	B'	1.375	0.5413	B'	1.00	0.3937	B'	1.50	0.5905	B'	1.25	0.4921
	B''	1.00	0.3937	B''	1.50	0.5905	B''	1.25	0.4921	B''	1.25	0.4921	B''	1.75	0.6880	B''	1.375	0.5413
	B'''	1.25	0.4921	B'''	1.125	0.4429	B'''	1.50	0.5905	B'''	1.25	0.4921	B'''	1.125	0.4429	B'''	1.25	0.4921
Lowest.....		1.00	0.3937		1.125	0.4429		1.25	0.4921		1.00	0.3937		1.125	0.4429		1.25	0.4921
Average measurements:	B'	1.773</																



TABLE I.—Measurements of fineness of wools—Continued.

		ILLINOIS.																	
		RAMS, 1 YEAR OLD.						RAMS, 2 YEARS OLD.						RAMS, 3 YEARS OLD.					
Catalogue number of samples..		462.			442.			445.			446.			440.			441.		
Number of section.....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
Actual measurement in centimillimeters.	1.875	2.00	2.125	1.50	2.125	2.00	2.00	1.75	2.00	1.875	2.00	2.00	2.625	2.00	1.75	2.50	2.25	2.125	2.125
	1.625	2.375	1.50	2.375	1.75	2.25	2.00	1.75	1.75	1.375	2.00	1.50	2.125	2.625	2.00	2.25	2.50	2.625	2.625
	2.50	2.25	2.00	1.50	2.375	2.00	2.00	2.00	1.625	1.875	1.50	1.75	1.50	1.75	2.125	3.00	3.00	2.25	2.625
	2.50	2.50	1.625	1.50	2.00	2.125	2.00	1.875	2.00	1.625	2.00	1.625	2.00	1.625	2.00	2.00	1.875	2.50	2.50
	1.75	2.00	2.00	1.50	2.50	1.75	1.875	1.50	1.625	2.00	1.625	2.00	2.00	2.875	2.125	1.875	2.25	2.50	2.00
	1.875	2.25	2.00	2.50	2.00	1.875	2.00	1.625	2.00	1.625	1.50	2.25	2.00	1.75	1.875	2.00	3.00	2.00	2.50
	1.875	2.50	2.00	2.00	2.50	1.875	2.00	2.50	2.00	2.50	1.60	2.125	2.00	2.60	2.00	1.75	2.50	2.00	2.50
	2.125	2.25	2.50	1.375	1.875	2.00	2.25	2.00	2.375	2.00	2.375	2.00	1.50	1.50	2.125	1.50	3.00	2.00	2.50
	1.75	2.00	2.00	2.50	2.50	1.75	1.875	1.625	2.00	1.50	2.50	2.50	2.50	2.25	2.25	2.00	2.75	1.75	2.375
	2.00	1.75	2.25	2.00	2.125	1.75	2.125	1.75	1.50	2.00	1.50	2.00	1.50	2.00	2.00	1.50	3.00	2.50	2.75
	2.50	2.00	2.00	2.00	2.50	2.50	2.00	2.00	2.00	1.50	1.375	1.875	2.50	2.00	2.125	1.625	2.75	2.50	2.00
	1.25	2.00	2.375	2.375	3.00	1.25	1.75	1.50	2.125	1.50	1.875	1.875	2.00	2.00	2.00	1.75	2.00	1.625	2.00
	2.00	2.00	2.375	1.50	1.625	1.875	2.50	2.00	2.00	2.00	2.00	2.00	2.00	1.50	2.00	2.50	1.75	2.125	2.375
	2.25	2.00	2.375	1.75	2.625	2.25	2.125	1.50	1.75	2.00	1.875	1.50	2.00	2.00	2.00	2.125	1.75	2.00	3.125
	1.50	2.875	2.375	1.625	2.50	2.25	2.125	1.125	2.50	1.50	1.25	1.50	1.50	1.625	2.50	2.50	2.00	2.50	2.125
	1.75	1.50	1.75	1.50	1.75	2.125	1.75	2.00	2.25	1.25	2.125	1.60	2.00	2.00	1.75	1.50	1.75	2.75	1.75
	2.00	2.00	1.50	1.75	1.60	1.75	1.625	2.125	1.875	1.625	1.75	2.00	1.50	2.00	2.00	1.25	1.50	2.25	2.00
	2.00	2.25	2.50	2.00	1.50	1.75	2.625	1.50	1.75	2.125	1.50	1.75	2.125	2.00	2.00	2.00	2.75	2.375	2.125
	2.00	2.875	2.50	2.125	1.875	2.50	2.50	2.00	2.00	2.00	2.00	2.00	2.125	1.875	2.125	1.25	2.50	1.625	2.00
	1.50	2.50	2.00	1.50	1.625	2.50	1.875	1.625	2.125	2.125	2.00	1.625	2.00	2.50	1.75	2.125	2.00	2.00	2.50
	2.00	1.50	2.00	1.50	1.875	1.875	1.625	2.00	2.125	2.125	2.00	2.125	2.00	2.00	1.875	1.875	2.00	2.00	2.00
	2.875	2.00	2.25	1.50	2.625	2.125	2.00	2.25	2.00	1.75	1.875	2.00	2.125	2.25	2.125	2.50	2.00	2.00	2.00
	1.75	2.50	1.50	1.50	1.625	2.00	1.875	1.625	2.25	1.25	1.50	2.00	2.00	2.00	2.25	2.125	3.00	2.00	2.00
	2.60	1.50	2.125	3.00	2.50	1.75	2.00	2.00	2.00	2.00	2.00	1.75	2.00	2.375	2.125	2.00	2.25	2.00	1.875
	2.00	2.00	2.125	1.875	1.50	2.25	1.75	1.375	1.75	2.125	2.00	1.75	2.125	2.00	2.50	2.00	2.25	2.00	1.875
	2.00	2.00	1.75	1.50	1.75	2.125	2.00	1.625	2.00	1.75	1.50	2.00	1.50	2.50	2.50	2.00	2.25	2.00	1.875
	2.00	2.00	2.875	2.50	2.00	1.875	2.50	2.00	2.00	2.00	2.00	2.00	2.00	1.625	1.875	2.50	2.50	2.00	2.00
	1.50	2.50	2.00	1.50	1.625	2.50	1.875	1.625	2.125	2.125	2.00	1.625	2.00	2.50	1.75	2.125	2.00	2.00	2.50
	2.00	1.50	2.00	1.50	1.875	1.875	1.625	2.00	2.125	2.125	2.00	2.125	2.00	2.00	1.875	1.875	2.00	2.00	2.00
	2.00	2.00	2.00	3.00	2.50	2.125	1.50	1.875	2.00	2.00	1.625	2.00	1.625	2.00	2.00	2.625	2.50	3.00	2.125
	2.25	2.00	2.50	1.875	2.125	1.50	2.00	1.625	2.00	1.50	2.125	1.00	2.25	1.625	2.50	2.00	2.625	2.50	2.50
	2.00	1.50	2.00	2.00	2.00	3.50	2.125	1.875	2.50	2.50	2.00	1.50	1.50	2.625	2.625	1.375	2.00	2.00	1.25
	2.00	2.00	2.25	1.625	2.50	2.50	1.875	1.875	1.75	2.00	1.75	1.25	1.50	2.00	2.00	1.875	2.125	2.00	2.00
	2.50	2.00	1.50	2.00	2.125	2.60	2.00	1.875	1.75	2.00	1.50	1.25	3.00	3.00	2.00	2.50	2.25	4.125	2.00
	2.00	1.60	2.375	1.50	2.00	1.25	2.00	1.50	2.375	1.875	1.625	2.25	1.50	2.50	2.375	2.00	1.875	2.50	2.50
	1.75	2.00	2.00	2.25	3.00	1.625	1.875	1.625	2.50	2.125	1.875	2.00	2.25	2.00	2.50	2.00	2.00	2.00	2.625
	2.00	1.75	2.00	1.50	2.625	1.25	1.875	1.875	2.00	2.125	2.00	1.50	1.625	2.50	2.50	2.25	2.125	1.875	2.50
	1.875	2.00	2.00	1.50	2.00	1.625	1.875	2.00	3.00	2.00	1.75	1.50	2.00	2.00	2.125	2.00	1.875	2.125	2.125
	2.50	2.00	2.00	1.75	1.875	2.625	1.75	1.50	3.125	1.875	1.75	1.50	1.50	2.00	1.625	2.00	2.00	2.25	2.50
	2.375	1.875	2.50	2.50	2.50	2.00	2.00	2.60	2.00	2.00	2.00	2.00	1.50	2.375	2.50	2.25	2.00	2.00	2.625
2.00	2.125	2.00	1.50	2.00	1.625	1.875	1.875	2.375	2.25	1.375	2.00	2.00	2.00	2.00	2.50	2.00	1.75	2.375	
1.875	1.75	2.00	2.00	1.625	1.60	2.375	1.50	2.50	1.50	2.00	2.00	2.00	2.00	2.00	1.625	2.00	2.75	2.625	
2.375	1.625	2.50	2.50	1.875	1.875	1.875	2.00	2.00	2.00	1.75	2.00	2.00	2.25	1.75	2.50	2.50	3.00	3.00	
2.00	1.50	2.00	2.00	2.00	3.25	1.375	1.75	2.50	1.60	1.375	1.875	2.125	2.50	2.00	2.00	2.00	2.00	2.125	
1.60	2.375	2.50	2.50	2.50	1.75	1.625	1.50	2.25	2.125	1.50	1.50	2.50	2.125	1.875	2.00	2.00	2.00	2.00	
2.60	1.75	2.50	1.50	2.00	2.00	2.375	1.50	2.50	2.125	2.375	1.50	2.50	2.00	2.60	2.375	2.50	2.25	2.00	
2.00	2.00	2.00	1.75	2.50	1.75	2.00	3.125	1.625	1.875	1.625	2.00	1.50	2.50	2.50	1.875	2.50	1.75	2.50	
2.50	2.25	1.75	1.625	1.625	1.625	1.50	2.00	2.00	2.00	1.50	1.50	1.375	1.50	2.625	2.00	1.75	2.50	2.50	
2.00	1.75	1.50	1.50	1.50	2.125	2.125	1.50	1.75	1.50	2.375	1.60	2.00	2.00	1.625	2.50	2.00	2.50	2.50	
2.00	1.75	2.375	1.875	2.375	2.125	1.875	1.75	2.00	1.625	2.00	2.125	1.50	2.50	2.375	2.50	2.00	2.50	2.50	
1.75	1.75	2.00	1.75	1.50	2.00	2.00	1.75	2.125	1.625	2.125	2.00	2.125	2.00	1.75	2.125	2.00	1.75	3.75	
Totals.....	100.125	99.125	104.75	94.125	104.75	98.625	98.25	89.375	102.375	92.75	92.875	92.125	99.875	108.625	102.375	113.25	106.875	117.375	

		No. of section.		In centimillimeters.		In thousandths of inch.		No. of section.		In centimillimeters.		In thousandths of inch.		No. of section.		In centimillimeters.		In thousandths of inch.	
Recapitulation and reduction:	Maximum measurements.	B'	2.50	0.9842	B'	3.00	1.1811	B'	2.625	1.0334	B'	2.50	0.9842	B'	3.00	1.1811	B'	3.00	1.1811
		B''	2.50	0.9842	B''	3.00	1.1811	B''	3.125	1.2303	B''	2.50	0.9842	B''	3.00	1.1811	B''	2.75	1.0826
		B'''	2.875	1.1318	B'''	3.50	1.3779	B'''	3.125	1.2303	B'''	2.50	0.9842	B'''	2.50	0.9842	B'''	4.125	1.6240
Highest.....		2.875	1.1318		3.50	1.3779		3.125	1.2303		2.50	0.9842		3.00	1.1811		4.125	1.6240	
Minimum measurements.	Lowest.....	B'	1.25	0.4921	B'	1.375	0.5413	B'	1.375	0.5413	B'	1.25	0.4921	B'	1.375	0.5413	B'	1.50	0.5905
		B''	1.50	0.5905	B''	1.25	0.4921	B''	1.125	0.4420	B''	1.25	0.4921	B''	1.50	0.5905	B''	1.625	0.6397
		B'''	1.50	0.5905	B'''	1.25	0.4921	B'''	1.60	0.5905	B'''	1.00	0.3937	B'''	1.375	0.5413	B'''	1.25	0.4921
Average measurements..		1.25	0.4921		1.25	0.4921		1.125	0.4420		1.00	0.3937		1.375	0.5413		1.25	0.4921	
Average	Average.....	B'	2.003	0.7885	B'	1.882	0.7409	B'	1.965	0.7736	B'	1.855	0.7303	B'	1.997	0.7852	B'	2.265	0.8917
		B''	1.983	0.7807	B''	2.095	0.8248	B''	1.788	0.7089	B''	1.857	0.7311	B''	2.172	0.8551	B''	2.137	0.8413
		B'''	2.095	0.8248	B'''	1.972	0.7763	B'''	2.047	0.8059	B'''	1.842	0.7251	B'''	2.047	0.8059	B'''	2.347	0.9240
Measurements above average..		2.03	0.7992		1.98	0.7795		1.93	0.7598		1.85	0.7283		2.072</					



TABLE I.—Measurements of fineness of wools—Continued.

		ILLINOIS.																	
		EWE, LAMB.			EWES, 1 YEAR OLD.									EWES, 2 YEARS OLD.					
Catalogue number of samples..		481.			477.			478.			479.			460.			463.		
Number of section.....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
Actual measurement in centimillimeters.	1.875	1.625	1.625	2.50	1.75	2.00	2.50	1.50	1.50	1.75	2.00	1.50	2.375	2.50	3.875	1.50	2.25	2.375	
	2.25	1.75	2.125	2.25	1.75	2.375	1.875	1.625	1.75	2.00	1.625	1.875	2.375	1.50	2.00	1.875	1.50	2.25	
	2.00	2.00	1.50	1.75	2.00	1.75	2.75	2.00	1.75	2.25	2.00	2.375	2.00	1.875	1.75	1.75	2.00	2.00	
	1.625	1.625	2.375	1.50	1.50	2.375	2.00	2.30	2.25	1.875	2.50	1.50	2.00	1.625	2.00	2.375	2.25	1.625	
	1.75	1.625	2.25	2.00	2.00	2.00	1.50	2.375	2.00	2.00	2.375	1.625	1.60	2.00	1.75	2.00	2.00	2.25	
	1.625	1.875	1.875	1.50	2.00	2.00	1.625	1.625	1.875	1.875	2.00	1.625	1.625	1.60	1.75	1.625	1.75	1.50	1.50
	2.00	1.50	1.50	2.25	2.50	1.50	1.875	1.75	2.25	1.60	1.625	1.50	1.50	2.00	2.00	2.25	2.375	1.75	1.50
	1.75	2.25	2.125	1.625	1.75	1.75	1.75	1.50	2.375	2.00	1.50	1.625	1.625	2.25	1.625	2.00	1.875	2.00	2.00
	1.50	1.75	1.875	2.00	2.50	2.00	2.00	2.00	1.75	2.375	1.50	1.50	1.50	2.00	1.875	1.75	2.025	1.75	3.00
	2.00	2.125	2.00	2.00	1.625	1.625	1.625	2.00	1.60	3.00	2.125	2.125	2.125	1.50	2.25	2.00	2.25	2.25	2.00
	1.75	1.50	2.25	1.25	1.50	1.75	2.00	2.00	1.875	1.75	1.875	2.00	1.875	2.00	1.875	1.75	2.00	2.375	2.00
	1.625	1.625	1.75	1.75	1.75	2.25	2.25	1.75	2.00	2.00	1.75	2.50	2.00	1.75	2.625	1.75	2.875	2.00	1.875
	1.875	1.50	2.75	1.25	1.50	1.50	1.625	2.00	1.75	2.25	2.00	2.375	2.00	2.00	2.125	1.625	2.00	2.00	2.00
	1.375	3.25	1.875	1.625	2.00	2.00	2.00	2.75	2.00	1.875	2.00	2.375	2.00	1.875	2.00	2.375	2.00	1.75	1.875
	1.625	1.50	1.50	1.50	1.50	1.50	2.00	2.375	1.75	2.75	2.00	2.00	1.875	2.00	1.50	1.625	2.375	1.875	2.50
	1.50	1.75	2.00	1.625	1.875	2.00	2.00	2.25	2.00	2.00	1.625	2.00	2.125	2.00	2.00	1.75	1.75	2.50	2.00
	2.00	1.50	1.875	1.625	2.125	1.875	2.125	1.75	2.375	1.50	1.50	2.00	2.00	2.00	2.125	1.75	1.50	1.50	2.25
	1.625	1.75	2.25	1.625	1.60	2.00	1.75	2.25	2.25	2.875	1.50	2.00	2.00	1.625	1.50	1.75	2.50	2.50	1.60
	1.50	1.50	1.50	1.75	1.60	1.75	2.25	1.625	1.25	1.75	2.50	1.875	2.00	1.375	1.50	1.75	1.625	1.75	1.75
	1.625	1.50	1.625	1.875	1.875	1.50	1.50	1.75	1.50	1.875	1.50	2.00	1.50	2.00	2.00	2.625	1.50	1.50	1.50
2.00	2.375	1.50	1.50	1.50	2.00	2.00	2.375	1.875	1.875	1.875	1.625	3.25	3.50	1.875	2.125	2.25	2.25	1.50	
1.75	1.60	2.00	2.00	1.50	1.50	2.00	2.25	1.75	2.50	1.75	2.00	1.75	2.00	1.50	3.00	1.75	1.625	2.00	
1.50	2.00	1.875	1.375	2.00	1.50	2.00	2.25	1.25	1.375	1.625	1.50	1.50	2.00	2.875	2.50	2.50	1.375	1.50	
1.50	1.875	1.875	2.50	1.75	1.50	2.00	2.60	0.75	2.00	2.00	1.625	2.00	1.50	2.00	2.00	1.75	2.00	3.00	
1.25	1.75	2.375	1.75	3.00	1.60	1.625	1.25	2.00	2.125	1.375	2.00	1.50	2.00	2.125	2.50	1.625	2.00	2.00	
1.50	1.625	2.25	2.50	2.00	2.00	1.625	1.875	2.00	4.00	1.75	1.625	2.25	2.00	2.00	2.50	2.50	1.50	2.00	
1.50	2.00	1.375	1.625	3.375	1.375	2.125	1.875	1.875	1.50	1.60	2.00	1.625	2.00	1.875	2.00	2.25	2.25	2.00	
1.375	1.50	1.75	2.875	1.50	1.875	1.875	1.875	2.00	2.00	1.60	2.00	2.00	2.00	2.375	2.00	2.50	2.50	2.00	
1.50	1.875	1.875	1.125	2.00	1.75	1.625	2.25	1.75	2.25	2.50	2.875	1.75	2.25	2.625	1.50	1.75	2.00	8.00	
1.625	1.60	2.125	1.625	1.75	1.50	1.625	1.50	2.875	2.00	1.50	2.25	2.00	1.50	2.00	2.00	2.00	2.25	1.75	
1.75	1.875	1.375	1.25	1.60	2.00	2.50	2.00	1.50	1.75	2.125	2.125	2.125	1.75	1.625	2.00	2.50	2.25	3.00	
1.50	2.125	1.25	2.25	1.875	1.50	1.625	1.375	2.125	2.25	2.00	2.125	1.75	1.75	2.50	2.00	2.00	2.50	2.00	
1.75	1.75	1.875	1.75	2.00	2.25	2.25	1.875	1.625	1.75	2.50	2.50	2.50	1.875	1.875	2.50	2.25	2.25	2.25	
1.50	2.00	2.00	2.00	2.00	2.50	2.00	2.00	1.875	1.625	2.00	1.75	2.875	1.625	1.50	2.00	2.25	2.125	1.75	
1.875	2.00	1.25	1.75	2.00	2.00	2.375	2.375	1.50	1.75	1.875	1.875	1.75	1.875	1.75	2.00	2.25	2.50	2.00	
2.00	1.75	1.75	1.50	1.875	1.75	2.00	1.625	1.50	1.50	2.00	2.00	2.00	2.00	1.75	1.75	2.00	2.50	2.625	
2.00	2.00	1.625	2.00	1.50	2.00	1.75	1.75	2.00	2.00	2.00	1.50	1.625	2.25	1.75	1.75	2.00	2.00	1.75	
1.625	1.625	2.00	1.75	2.125	2.00	1.75	2.125	1.875	2.50	1.75	2.25	1.875	1.75	1.75	2.125	2.00	2.00	2.125	
1.00	1.50	1.75	1.375	1.625	1.75	2.00	1.875	1.50	1.50	1.60	1.625	1.625	1.60	1.625	2.625	2.375	1.625	1.625	
2.00	2.00	2.25	1.75	1.75	2.00	1.75	2.125	2.25	2.50	1.875	1.75	2.00	1.75	2.00	2.125	2.50	2.25	2.00	
2.00	1.875	1.75	1.625	1.75	1.75	1.75	1.625	1.50	1.75	2.00	2.00	1.75	1.50	1.60	2.125	2.00	2.25	1.875	
1.625	2.00	1.75	2.00	2.00	2.00	2.00	2.25	1.875	1.75	1.75	2.00	3.00	1.625	3.00	2.00	2.00	2.50	2.50	
1.75	2.00	1.50	2.00	2.625	2.00	1.50	1.75	1.75	2.00	1.75	1.625	2.00	2.00	1.875	1.625	2.00	1.75	1.75	
1.875	1.50	1.75	2.25	1.875	2.00	2.00	1.75	2.25	2.25	1.625	1.75	1.75	2.00	1.875	1.75	2.25	2.00	2.00	
1.50	1.75	1.50	2.00	1.75	2.50	2.375	1.50	1.50	1.125	1.625	2.625	2.875	2.00	2.375	2.375	2.25	2.00	2.00	
1.625	1.625	2.60	2.00	2.00	1.625	2.125	1.25	1.75	1.75	1.50	2.125	2.00	2.00	2.00	2.375	1.875	2.60	1.875	
1.875	1.625	1.50	1.50	2.00	1.875	2.00	1.625	2.00	1.50	1.75	1.75	1.75	1.625	1.50	2.75	2.00	2.25	2.00	
2.125	2.00	2.00	2.00	2.00	2.50	2.00	2.00	2.00	1.50	3.00	1.50	1.625	1.50	2.25	2.375	1.50	1.50	1.75	
1.625	1.875	1.875	1.875	1.75	1.625	2.875	1.375	2.25	2.00	1.60	1.75	1.625	2.00	2.00	2.125	1.625	1.625	1.625	
2.50	1.625	2.00	1.50	1.50	1.75	2.00	1.625	2.00	1.75	1.625	2.875	1.50	2.125	1.625	2.675	2.00	1.50	2.50	
Totals.....	88.375	89.00	92.125	89.50	95.00	92.875	100.25	90.875	94.625	91.50	93.375	90.375	93.875	92.75	103.375	103.875	102.75	103.625	

		No. of section.			In centimillimeters.			In thousandths of inch.											
Recapitulation and reduction:	Maximum measurements.	B'	2.50	0.9842	B'	2.50	0.9842	B'	2.75	1.0826	B'	2.00	1.1811	B'	2.875	1.1318	B'	2.875	1.1318
		B''	2.375	0.9350	B''	2.375	1.3287	B''	2.50	0.9842	B''	2.875	1.1318	B''	2.875	1.1318	B''	2.50	0.9342
		B'''	2.75	1.0826	B'''	2.875	0.9850	B'''	2.875	1.1318	B'''	2.625	1.0334	B'''	3.875	1.5256	B'''	3.00	1.1811
Highest.....		2.75	1.0826		3.375	1.3287		2.875	1.1318		3.00	1.1811		3.875	1.5256		3.00	1.1811	
Minimum measurements.	Lowest.....	B'	1.00	0.3937	B'	1.125	0.4429	B'	1.375	0.5413	B'	1.125	0.4429	B'	1.50	0.5905	B'	1.50	0.5905
		B''	1.50	0.5905	B''	1.50	0.5905	B''	0.75	0.2953	B''	1.375	0.5413	B''	1.375	0.5413	B''	1.375	0.5413
		B'''	1.25	0.4921	B'''	1.375	0.5413	B'''	1.25	0.4921	B'''	1.50	0.5905	B'''	1.50	0.5905	B'''	1.50	0.5905
Average measurements.		1.00	0.3937		1.125	0.4429		0.75	0.2953		1.125	0.4429		1.375	0.54				



TABLE I.—Measurements of fineness of wools—Continued.

		ILLINOIS.																	
		EWES, 2 YEARS OLD.																	
Catalogue number of samples..		464.			465.			466.			467.			468.			469.		
Number of section .....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
		1.50	2.125	1.625	1.50	1.50	1.375	2.00	2.00	2.00	1.875	2.00	1.50	1.375	2.00	1.875	2.125	2.00	2.00
		1.50	1.50	2.00	1.375	1.50	1.375	3.125	1.50	2.00	1.875	1.625	2.125	1.25	2.50	1.50	2.875	2.875	2.125
		2.00	2.00	2.00	1.375	1.50	1.00	1.025	2.00	2.25	1.875	1.50	2.50	1.375	1.50	1.875	1.75	1.75	3.375
		2.00	1.875	1.50	1.375	1.025	1.00	2.50	2.00	2.25	1.625	2.50	1.50	2.50	1.50	1.50	1.75	2.00	1.50
		1.125	1.875	2.00	1.625	1.50	1.50	2.25	1.50	1.75	2.00	1.75	1.50	1.875	1.375	1.75	1.375	1.375	1.625
		1.375	1.50	2.00	1.375	1.50	1.50	2.375	2.125	1.625	1.625	1.50	1.50	1.50	1.625	1.625	1.625	1.625	2.125
		1.50	1.75	1.75	1.625	2.00	1.75	1.50	1.625	1.875	1.50	1.50	2.625	1.875	1.375	1.125	2.375	1.75	1.625
		1.50	2.00	2.00	1.025	1.75	1.375	2.00	2.50	2.00	1.75	1.75	2.125	1.75	1.50	1.50	1.875	2.25	1.875
		1.625	2.00	2.00	1.75	1.625	1.875	1.875	1.50	1.50	1.875	1.75	2.00	1.625	2.50	2.50	2.25	2.75	1.375
		1.375	1.75	2.00	1.50	1.50	1.875	1.00	2.00	1.375	1.375	1.625	1.25	1.25	1.125	1.125	2.00	2.00	2.625
		1.50	1.75	2.125	2.00	1.375	2.375	1.75	2.25	1.50	1.75	2.50	2.375	1.875	1.125	2.125	2.25	1.50	2.00
		1.50	2.00	1.75	1.875	1.375	2.125	1.875	1.75	1.625	1.875	1.50	1.625	1.50	1.375	2.00	2.25	2.625	1.50
		1.25	2.00	2.00	1.75	1.50	1.50	1.625	2.00	1.375	1.875	1.625	1.75	1.875	1.50	2.50	1.875	3.00	1.50
		1.875	2.00	1.75	1.625	1.50	1.75	1.025	1.25	1.50	1.50	1.875	1.375	2.25	1.50	1.75	1.75	1.625	2.00
		1.75	2.00	1.60	1.375	2.00	1.50	1.50	2.00	1.50	1.875	2.375	2.875	1.50	2.50	1.50	1.75	2.125	2.00
		1.50	1.75	1.625	2.00	1.625	1.50	1.625	1.875	1.50	1.75	1.50	1.625	1.125	1.25	1.50	1.875	1.875	1.50
		1.025	2.00	1.60	1.25	1.50	1.625	1.375	2.00	1.875	1.75	1.875	1.875	1.25	1.875	2.125	2.00	2.00	1.375
		1.50	1.875	1.50	1.375	1.375	1.375	1.50	2.625	2.00	1.625	1.25	2.00	1.125	2.00	1.50	1.50	2.625	1.375
		1.125	1.75	1.875	2.00	1.25	1.25	2.125	2.00	2.625	1.025	1.875	1.50	1.375	1.50	1.125	1.625	1.625	1.125
		1.25	1.025	1.50	1.50	1.50	1.75	1.75	1.625	1.75	1.50	1.25	2.125	1.50	1.875	1.50	1.875	1.625	1.625
		1.50	2.00	2.00	1.025	1.625	1.50	1.875	1.50	3.025	1.375	2.125	1.50	1.50	2.00	2.25	2.875	2.00	2.25
		1.75	1.75	2.00	1.50	2.25	1.25	2.375	2.00	1.50	1.75	1.375	1.75	1.375	1.50	1.60	2.125	3.25	2.00
		1.25	2.50	1.60	1.50	1.50	1.75	1.75	2.00	2.125	1.375	1.125	1.875	1.50	1.50	1.75	1.875	2.875	1.375
		1.625	2.50	2.375	1.50	2.00	1.50	1.25	2.00	2.375	1.625	2.00	2.625	2.00	1.625	1.125	2.375	2.625	1.50
		1.125	1.75	2.00	1.125	1.50	1.375	1.625	1.875	2.00	1.50	1.875	1.25	1.50	1.50	1.75	1.875	2.625	1.625
		1.25	1.025	2.00	1.875	1.50	1.50	1.625	1.75	2.50	1.375	1.75	1.75	1.625	1.25	1.125	1.75	1.375	1.75
		1.375	3.00	2.125	2.00	1.375	1.50	1.50	2.00	1.75	1.625	1.75	1.625	1.25	1.50	2.25	2.50	1.625	1.25
		1.25	1.50	1.50	2.25	1.50	1.625	1.50	2.875	2.375	1.375	1.875	2.25	1.50	1.50	1.25	1.625	2.00	1.00
		1.375	1.375	1.875	2.25	1.50	1.50	1.50	1.75	1.50	2.375	1.75	2.125	2.00	1.50	1.625	1.625	2.25	2.00
		1.25	2.00	2.00	2.00	1.125	2.00	1.025	2.00	1.50	1.875	1.625	1.75	1.50	2.00	1.875	2.00	2.75	1.50
		1.375	1.625	1.50	1.25	1.875	1.50	1.375	2.125	2.00	2.00	1.875	1.375	1.625	2.00	1.125	2.25	1.875	1.50
		2.375	2.375	1.875	1.375	1.375	1.50	1.875	2.00	1.75	1.75	2.25	2.125	1.50	1.75	1.625	1.75	1.50	2.00
		1.75	2.25	2.00	1.50	1.50	1.625	1.50	2.00	2.25	2.125	1.60	1.875	1.125	1.375	1.50	2.25	2.00	1.50
		1.50	2.75	2.00	1.625	1.625	1.75	1.125	2.00	2.50	1.625	1.625	1.625	1.50	1.25	1.125	1.875	1.625	1.50
		1.60	2.00	1.60	1.75	1.375	2.00	1.50	1.875	1.75	2.00	1.875	1.875	1.75	1.50	2.00	1.60	1.875	1.875
		1.375	1.50	2.00	2.125	1.50	1.25	1.50	1.875	2.00	1.875	2.00	1.625	1.50	1.125	1.50	1.75	2.125	2.00
		1.025	1.375	1.875	1.75	2.00	1.375	4.00	2.00	1.875	1.875	1.375	2.00	1.75	2.25	1.125	1.75	1.625	2.00
		1.125	2.00	2.50	2.00	1.50	1.875	1.125	1.625	2.00	1.75	2.00	1.875	1.125	1.50	1.625	1.75	1.50	1.50
		1.00	1.75	2.25	2.50	1.025	1.375	1.75	2.00	1.625	1.75	1.025	2.25	1.95	1.375	1.25	1.75	1.875	1.125
		1.625	1.50	2.00	1.625	1.025	2.25	2.00	1.875	2.00	1.875	1.875	1.125	1.25	1.375	1.625	1.375	1.875	1.50
		2.50	1.625	2.125	1.75	1.625	2.00	1.875	2.125	2.625	2.375	1.50	1.75	1.375	1.50	1.50	2.25	2.00	1.50
		1.875	2.00	1.875	1.25	1.75	1.025	1.25	2.00	1.50	2.125	1.875	1.50	1.375	1.75	1.125	1.75	1.50	1.00
		1.50	1.875	2.00	2.50	1.375	1.125	2.00	2.00	1.875	1.625	2.375	1.875	2.00	2.00	1.625	2.125	1.50	1.375
		1.75	1.75	2.50	1.50	2.00	1.375	1.50	2.25	2.00	1.75	2.00	3.00	1.75	1.125	1.875	1.875	2.00	1.50
		1.25	1.50	1.875	2.25	1.75	1.50	2.00	1.75	1.50	2.50	2.25	1.75	1.25	1.50	1.50	1.50	1.50	1.50
		2.50	1.50	1.875	2.00	1.50	2.00	1.875	1.75	2.00	1.75	2.00	1.25	1.50	1.625	1.875	2.00	2.00	1.50
		1.125	2.00	1.50	1.375	1.50	1.50	1.625	1.625	2.125	1.50	1.625	1.875	1.375	1.375	1.75	1.375	1.125	1.50
		1.50	2.00	1.875	1.50	1.75	1.625	1.025	2.00	1.75	1.75	1.50	1.50	1.75	1.625	1.375	1.375	1.625	1.50
		1.25	1.50	1.625	1.375	2.25	1.875	1.50	2.50	2.00	1.875	1.625	1.50	1.75	1.875	2.50	1.625	1.125	2.25
		1.25	2.00	1.60	1.375	2.00	1.50	2.375	2.00	1.50	1.875	1.625	1.50	1.50	1.50	1.375	2.50	1.75	1.50
Totals .....		75.875	94.00	98.625	83.00	81.25	77.50	90.125	96.375	97.125	88.25	88.875	91.25	78.125	82.375	82.625	95.75	90.00	82.50

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:																		
Maximum measurements.	B' 2.50 B'' 3.00 B''' 2.60	0.9842 1.1811 0.9842	B' 2.50 B'' 2.25 B''' 2.375	0.9842 0.8858 0.9350	B' 4.00 B'' 2.875 B''' 3.625	1.5748 1.1318 1.4271	B' 2.50 B'' 2.50 B''' 3.00	0.9842 0.9842 1.1811	B' 2.50 B'' 3.00 B''' 2.50	0.9842 1.1811 0.9842	B' 2.875 B'' 3.25 B''' 2.50	1.1318 1.2795 0.9842						
Highest .....	3.00	1.1811	2.60	0.9842	4.00	1.5748	3.00	1.1811	3.00	1.1811	3.25	1.2795						
Minimum measurements.	B' 1.00 B'' 1.25 B''' 1.50	0.3937 0.4921 0.5905	B' 1.125 B'' 1.25 B''' 1.00	0.4420 0.4920 0.3937	B' 1.00 B'' 1.25 B''' 1.375	0.3937 0.4921 0.5413	B' 1.375 B'' 1.125 B''' 1.125	0.5413 0.4420 0.4420	B' 1.125 B'' 1.125 B''' 1.125	0.4420 0.4420 0.4420	B' 1.375 B'' 1.125 B''' 1.00	0.5413 0.4429 0.3937						
Lowest .....	1.00	0.3937	1.00	0.3937	1.00	0.3937	1.225	0.4420	1.125	0.4420	1.00	0.3937						
Average measurements.	B' 1.51 B'' 1.88 B''' 1.672	0.5944 0.7401 0.7374	B' 1.66 B'' 1.625 B''' 1.55	0.6535 0.6897 0.6102	B' 1.802 B'' 1.927 B''' 1.942	0.7004 0.7586 0.7645	B' 1.765 B'' 1.777 B''' 1.825	0.6948 0.6990 0.7165	B' 1.562 B'' 1.647 B''' 1.692	0.6149 0.6464 0.6503	B' 1.915 B'' 1.98 B''' 1.65	0.7539 0.7705 0.6496						
Average .....	1.754	0.6905	1.611	0.6242	1.80	0.7440	1.780	0.7143	1.62	0.6377	1.838	0.7286						
Measurements above average.		67		67		71		65		60		74						
Measurements below average.		83		83		79		85		90		76						



TABLE I.—Measurements of fineness of wools—Continued.

		ILLINOIS.																	
		EWES, 2 YEARS OLD.												EWES, 3 YEARS OLD.					
Catalogue number of sample...		470.			471.			472.			473.			474.			475.		
Number of section .....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
		2.125	1.50	2.00	2.25	2.125	2.00	1.25	2.00	1.75	2.00	2.625	2.625	2.375	3.00	2.25	2.125	1.75	2.50
		1.00	2.00	2.50	1.75	1.50	2.00	2.25	2.00	1.625	2.00	1.50	2.00	2.00	2.00	2.125	1.625	2.375	2.625
		1.50	1.50	1.75	1.75	1.25	2.00	1.625	2.75	2.50	2.00	3.00	1.875	2.00	3.00	2.00	1.625	2.25	2.125
		1.875	2.00	1.375	2.125	2.50	2.00	1.75	2.25	1.75	2.00	2.00	3.00	2.125	2.00	3.00	1.50	1.625	1.875
		1.625	3.125	1.625	2.50	2.025	2.00	1.50	2.00	1.75	1.75	2.50	2.75	2.00	2.00	2.50	2.00	1.875	2.00
		1.25	2.50	1.625	2.00	1.50	3.00	2.50	2.25	1.625	2.25	2.00	2.125	1.50	2.00	2.50	1.75	2.50	2.25
		2.00	1.50	2.25	2.00	2.00	2.50	1.875	2.00	1.75	2.00	2.125	2.50	1.75	2.75	2.25	1.75	1.875	1.875
		2.00	2.00	2.00	2.25	1.75	2.00	1.625	2.00	2.00	2.00	2.60	2.00	2.00	2.50	2.25	1.875	1.375	1.875
		1.50	1.75	1.625	2.00	3.00	1.50	1.375	2.00	2.00	2.00	2.25	2.25	2.00	2.00	2.125	1.625	2.00	1.75
		1.50	1.625	1.75	2.50	1.875	2.125	1.50	1.50	2.50	2.25	2.00	2.25	2.575	2.25	2.575	1.50	2.125	2.00
		1.375	1.625	2.25	2.50	1.875	3.375	3.125	1.875	1.75	2.00	2.00	2.675	2.00	2.125	3.125	2.125	1.625	1.50
		1.50	1.875	1.875	2.25	1.75	3.00	2.00	2.375	2.125	2.375	2.00	3.125	2.00	2.00	2.00	1.75	2.50	2.575
		1.25	1.75	2.25	2.00	1.50	3.00	1.75	2.50	2.00	1.50	2.25	2.25	1.25	2.25	2.50	1.75	2.00	1.50
		1.625	1.50	2.00	2.00	1.875	2.50	2.125	1.875	2.50	2.125	2.50	2.00	2.50	2.60	3.00	1.875	1.75	1.50
		1.75	2.625	1.75	1.75	2.00	2.125	2.125	2.00	2.25	2.25	2.75	2.00	1.625	1.75	2.625	1.50	1.125	2.125
		1.50	2.50	3.00	1.50	1.75	3.00	2.50	2.00	2.00	1.75	2.25	2.00	2.25	2.25	3.00	1.50	2.00	1.875
		1.75	2.50	3.00	2.00	2.50	2.25	1.50	2.375	2.00	2.125	2.25	2.00	1.625	1.75	2.375	1.875	1.25	2.25
		1.125	1.50	2.00	2.50	2.50	1.75	2.00	2.00	2.125	2.50	1.875	2.75	2.00	3.25	2.125	1.875	2.50	1.675
		1.50	1.625	2.00	1.75	1.50	2.50	1.00	1.875	1.50	2.50	2.00	2.00	2.125	2.25	2.625	1.75	1.675	2.125
		1.60	1.75	2.00	2.25	2.00	2.00	1.625	2.25	2.25	2.00	2.25	1.75	2.50	2.50	2.00	2.50	2.00	3.00
		1.875	2.50	2.00	2.00	2.00	3.00	3.00	2.00	2.375	1.50	2.00	2.875	1.50	2.50	2.00	1.50	1.00	1.50
		2.00	1.50	3.00	2.00	1.50	1.75	1.50	1.875	1.875	2.00	2.00	2.125	2.875	2.25	2.50	1.625	2.00	1.625
		2.00	2.50	2.00	1.50	1.875	2.00	2.025	1.75	2.25	2.60	1.75	2.375	2.875	2.75	2.00	1.50	1.875	2.375
		1.50	1.75	1.625	1.625	2.125	1.125	1.875	1.50	2.00	2.00	1.025	2.75	2.50	2.25	2.50	1.50	1.625	1.875
		1.50	1.50	1.75	1.50	2.50	2.125	2.00	1.875	2.00	2.50	2.00	2.25	2.00	2.00	2.50	2.00	1.875	1.875
		1.50	2.00	2.00	2.25	2.00	2.00	2.50	1.50	2.00	2.275	1.50	1.625	2.375	2.00	2.00	1.25	2.00	2.575
		1.625	1.50	1.50	2.125	2.50	2.00	1.375	2.00	1.75	2.25	3.00	3.00	1.75	1.75	2.50	2.875	2.00	1.50
		1.50	1.50	2.00	3.50	2.50	1.75	1.50	2.00	2.00	2.00	1.50	2.00	2.00	2.00	2.875	1.50	2.00	1.625
		2.125	2.25	2.00	2.00	2.25	2.375	1.50	2.375	1.875	2.00	2.50	2.25	1.75	2.50	3.00	2.50	1.875	1.875
		1.125	1.75	2.25	2.50	1.625	1.75	2.00	1.50	1.75	2.00	2.00	2.125	2.00	2.375	2.00	1.50	2.00	1.50
		1.50	2.00	1.50	1.25	2.50	2.50	1.75	2.00	2.125	2.00	1.875	2.00	2.50	2.75	2.00	1.50	2.00	2.25
		1.875	2.625	2.00	2.25	2.50	2.50	1.625	1.875	2.125	2.00	1.875	2.375	1.625	3.00	2.00	1.50	2.125	1.875
		1.00	2.75	1.875	1.50	2.50	2.375	2.50	1.625	2.125	2.00	1.75	2.125	1.75	2.00	2.00	1.60	1.625	2.75
		1.625	2.00	2.00	2.00	2.00	1.875	1.50	1.60	2.00	2.00	1.875	2.375	2.00	2.25	2.00	1.50	1.75	1.25
		1.50	1.75	2.00	2.50	1.50	2.125	1.875	1.625	1.875	2.00	2.00	2.00	2.00	3.00	2.00	1.50	2.00	1.875
		1.50	2.50	1.50	2.00	2.50	2.00	2.00	1.75	1.50	2.25	2.00	2.00	2.00	3.00	2.25	1.625	2.50	1.875
		1.30	1.625	1.75	2.50	2.50	2.00	2.375	2.25	2.00	2.25	2.00	2.00	1.00	2.00	2.125	1.625	1.50	1.675
		1.375	1.875	1.75	2.00	1.50	2.00	1.625	1.875	1.625	2.375	2.25	2.625	1.75	2.00	2.00	1.00	1.625	1.625
		1.50	1.75	1.125	2.50	2.00	1.875	1.625	1.875	2.125	2.00	2.00	2.00	2.00	2.125	3.25	1.625	2.50	2.25
		1.50	2.00	2.125	2.50	1.625	2.00	1.50	2.00	2.00	2.125	1.875	2.00	2.00	2.375	1.50	2.50	2.875	1.875
		1.50	2.00	1.625	2.25	2.00	1.50	3.00	2.025	1.50	2.25	1.50	2.00	1.50	2.50	2.75	1.25	1.75	2.00
		1.00	1.50	1.60	2.50	2.00	1.75	2.00	2.00	2.25	2.125	2.25	2.00	2.125	2.00	2.125	1.625	1.875	1.75
		1.875	1.75	1.75	2.125	2.375	2.00	2.00	2.00	1.50	1.50	2.125	2.25	2.00	2.125	1.875	2.375	2.00	2.125
		1.50	2.00	2.00	2.25	1.75	2.00	2.125	1.75	1.75	2.125	2.00	2.125	2.00	2.00	2.00	2.25	2.25	2.25
		1.75	2.375	2.00	2.25	2.00	2.00	1.875	1.75	2.00	2.00	2.00	1.625	2.00	3.00	3.50	2.125	2.00	1.875
		1.50	2.25	2.00	2.75	2.50	1.625	2.625	1.75	2.375	2.00	1.875	2.375	2.00	2.125	2.25	1.625	2.25	2.00
		1.625	2.00	2.00	2.50	2.50	2.00	1.75	1.625	2.50	2.00	1.625	2.00	2.50	2.25	2.125	3.00	1.50	1.50
		1.375	2.00	1.625	2.50	2.25	2.125	2.00	2.00	1.625	2.00	1.75	2.125	2.50	1.50	2.00	1.625	1.875	1.875
		1.625	2.50	1.75	2.50	2.125	1.875	1.50	2.00	3.00	2.00	1.875	2.25	2.00	1.75	2.125	2.00	2.375	2.375
		1.00	1.50	2.00	2.50	2.50	2.00	1.125	2.00	2.50	2.00	1.75	2.25	2.375	2.125	1.75	2.125	2.25	2.25
Totals.....		75.625	97.25	94.875	108.125	103.00	102.625	95.75	98.50	100.125	102.875	101.75	111.00	100.50	115.375	122.25	88.00	100.125	90.125

		470.			471.			472.			473.			474.			475.		
No. of section.		In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	
Recapitulation and reduction:																			
Maximum measurements.	B'	2.125	0.8366	B'	2.50	1.8770	B'	3.00	1.1611	B'	2.50	0.9642	B'	2.50	0.9842	B'	2.50	0.8642	
	B''	2.75	1.0826	B''	2.75	1.0826	B''	2.75	1.0826	B''	3.00	1.1811	B''	3.25	1.2705	B''	3.00	1.1811	
	B'''	3.00	1.1811	B'''	3.00	1.1811	B'''	3.00	1.1811	B'''	3.00	1.1811	B'''	3.00	1.1811	B'''	3.00	1.1811	
Highest .....		3.00	1.1811		2.50	1.3770		2.00	1.1611		3.00	1.1611		3.50	1.3770		3.00	1.1811	
Minimum measurements.	B'	1.00	0.3687	B'	1.25	0.4921	B'	1.125	0.4129	B'	1.50	0.5905	B'	1.25	0.4921	B'	1.25	0.4921	
	B''	1.50	0.5905	B''	1.25	0.4921	B''	1.50	0.5905	B''	1.50	0.5905	B''	1.75	0.6889	B''	1.125	0.4429	
	B'''	1.125	0.4429	B'''	1.125	0.4429	B'''	1.50	0.5905	B'''	1.625	0.6397	B'''	1.75	0.6889	B'''	1.25	0.4921	
Lowest .....		1.00	0.3687		1.125	0.4429		1.125	0.4429		1.50	0.5905		1.25	0.4921		1.125	0.4429	
Average measurements.	B'	1.512	0.5592	B'	2.162	0.8511	B'	1.03	0.7598	B'	2.08	0.8188	B'	2.01	0.7913	B'	1.76	0.6929	
	B''	1.045	0.7657	B''	2.00	0.8110	B''												



TABLE I.—Measurements of fineness of wools—Continued.

Catalogue number of samples ..	ILLINOIS.									TEXAS.								
	EWES, 3 YEARS OLD.			MISCELLANEOUS EWE SAMPLES.						RAMS, 2 YEARS OLD.								
	476.			443.			444.			615.			617.			618.		
Number of section .....	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
	2.625	2.00	2.50	2.00	1.75	2.00	1.875	1.625	2.125	2.00	1.625	2.50	2.00	1.75	2.00	2.00	2.00	1.50
	1.625	1.625	2.125	1.50	2.375	2.50	2.00	2.375	2.00	1.75	1.50	1.75	1.875	2.00	1.75	2.50	2.00	2.125
	1.50	2.125	2.25	2.00	2.00	2.00	1.625	2.25	2.00	1.875	1.75	2.00	2.00	2.00	1.625	2.00	2.00	2.50
	1.875	1.875	1.75	1.75	2.50	2.50	1.50	2.00	2.00	2.00	2.00	1.75	2.00	1.875	1.625	2.75	2.50	2.50
	1.75	2.50	2.00	1.50	2.125	2.00	2.50	1.50	2.00	1.50	1.75	2.125	2.375	1.75	1.625	2.125	2.00	2.25
	1.50	2.125	2.00	2.00	2.125	2.00	1.625	1.50	2.50	2.25	2.00	2.00	2.00	2.00	1.50	2.00	2.00	2.00
	1.50	2.00	2.00	1.625	2.25	2.00	2.00	1.75	2.625	1.50	1.875	2.50	1.875	1.125	1.625	1.75	2.00	2.00
	1.625	1.75	2.125	2.25	2.375	2.00	2.00	2.375	1.625	2.00	1.25	1.75	2.00	2.25	1.875	1.875	2.50	2.50
	1.625	1.50	1.875	1.60	2.00	2.00	1.75	2.50	2.50	2.00	2.00	1.50	1.625	1.50	1.875	2.50	2.50	1.625
	2.375	1.75	2.50	2.375	2.375	2.00	2.00	2.50	2.00	1.75	2.00	1.50	1.75	2.00	2.00	2.00	2.00	2.125
	2.00	2.625	2.00	2.00	2.00	2.00	1.875	2.50	1.75	1.875	1.875	2.50	1.75	2.00	2.50	2.50	2.50	2.50
	1.50	3.00	1.75	2.00	2.00	2.00	2.00	2.75	2.00	1.875	1.75	1.375	1.75	2.25	2.00	1.25	2.25	1.25
	1.25	2.00	2.125	1.875	1.75	2.50	2.50	3.00	2.50	1.875	1.50	3.00	2.00	1.625	1.875	1.50	2.50	2.00
	1.625	2.25	2.00	1.875	1.875	1.75	2.00	2.00	2.00	1.875	2.00	2.75	1.75	1.625	1.75	2.25	1.375	2.00
	1.75	1.75	2.00	1.50	2.25	1.875	2.50	2.25	2.00	1.75	1.875	1.50	1.625	1.75	2.00	2.375	2.50	1.75
	1.75	2.00	2.50	2.00	2.00	1.625	2.00	2.25	1.875	2.00	1.75	2.00	1.75	1.875	1.50	2.25	1.375	2.00
	2.50	2.25	2.125	1.50	1.875	1.875	2.125	2.00	2.50	1.75	1.75	1.75	2.375	2.50	1.50	2.50	2.00	2.00
	1.875	1.625	2.00	2.00	1.50	2.125	2.00	2.50	2.00	1.875	1.125	2.50	2.00	2.00	1.25	2.625	2.625	1.75
	1.875	2.00	1.875	1.625	2.00	1.50	2.50	1.875	1.875	1.50	2.50	2.25	2.00	1.60	1.875	2.50	1.25	2.00
	1.625	2.25	2.00	1.875	1.75	1.50	2.00	2.50	2.00	1.75	2.25	1.625	2.50	1.50	1.75	2.00	2.00	2.00
	2.00	1.75	1.625	1.75	2.00	1.625	2.125	2.00	2.00	2.00	2.00	2.00	1.75	1.75	1.625	2.50	2.00	1.50
	1.75	2.00	2.125	2.375	2.375	1.50	1.875	2.50	1.125	1.625	2.125	2.25	2.50	1.875	1.75	2.375	3.50	2.50
	1.75	1.75	1.625	2.50	2.00	2.00	1.875	2.00	2.50	1.875	2.00	1.50	2.00	1.75	2.00	2.25	1.50	1.875
	1.875	2.25	2.25	2.50	2.00	1.625	2.00	2.00	2.25	2.50	1.875	1.50	2.375	2.00	1.50	2.00	1.50	2.75
	1.025	2.00	2.25	2.125	2.125	1.625	2.50	2.00	2.00	1.875	1.75	1.50	1.625	1.625	1.625	2.125	2.50	1.75
	2.00	2.00	2.00	1.75	2.00	2.125	2.125	2.375	1.625	2.00	1.625	1.75	2.375	1.50	1.625	1.75	1.50	2.50
	2.00	2.875	1.875	2.125	2.375	2.50	1.75	2.25	2.50	2.00	1.50	1.375	1.50	1.625	2.00	1.75	2.50	2.125
	1.75	2.00	2.00	2.00	1.625	2.125	2.00	2.00	2.50	2.50	1.625	2.375	1.75	2.00	1.75	1.875	1.50	2.00
	1.75	2.00	2.00	2.50	2.00	2.00	2.00	2.125	2.00	2.25	1.625	1.625	1.875	1.75	2.25	2.00	2.00	2.125
	1.75	2.00	2.00	2.00	2.375	2.00	2.00	1.875	2.375	1.75	2.50	1.75	2.00	2.00	2.00	1.75	2.00	2.00
	2.00	1.625	2.00	2.50	2.125	2.50	2.00	2.50	2.375	1.875	2.125	1.50	2.00	2.25	1.375	1.75	1.75	1.375
	1.75	2.125	2.00	2.60	1.125	2.00	2.125	1.75	2.00	2.00	1.625	2.00	2.00	1.50	1.875	2.00	1.50	1.50
	1.75	2.125	1.625	2.00	2.00	2.50	1.875	2.00	2.00	1.25	1.625	3.00	2.25	1.25	1.375	1.875	2.00	2.125
	1.875	2.125	2.50	2.25	2.60	1.50	1.75	2.50	2.00	1.50	1.50	2.00	1.75	1.375	2.00	2.75	1.50	2.00
	2.25	2.25	2.875	1.875	1.50	2.375	2.25	2.00	2.00	2.00	1.875	2.25	1.875	1.875	2.50	2.00	1.50	1.50
	1.875	2.00	2.00	2.00	2.125	2.00	2.00	2.00	2.375	1.75	1.50	2.25	2.00	1.625	2.00	1.875	2.00	2.50
	1.50	1.50	2.125	1.75	2.00	2.25	2.00	2.00	2.00	1.875	1.125	2.25	1.875	1.75	2.00	1.50	2.50	1.025
	1.625	2.00	2.00	2.00	1.875	2.00	2.125	2.00	2.375	1.75	1.125	1.75	1.75	1.375	1.75	2.50	2.50	2.50
	1.50	2.00	2.25	2.125	2.25	1.625	1.875	2.00	2.00	2.50	2.50	1.625	1.625	2.00	1.625	3.00	1.75	1.50
	1.625	2.00	2.75	2.125	2.00	2.50	2.00	2.00	1.875	2.75	1.375	1.75	2.00	2.125	1.75	1.75	1.875	2.50
	2.375	1.625	1.75	2.00	2.50	2.50	2.00	2.25	2.00	2.50	2.00	2.00	2.25	1.875	2.50	1.625	2.00	2.00
	2.375	1.875	2.60	2.375	2.00	2.00	2.00	2.375	2.125	2.00	2.00	2.50	1.50	1.75	1.375	1.50	2.00	2.50
	2.375	2.25	2.25	1.75	2.00	1.75	2.25	2.00	2.375	1.875	2.00	2.00	1.50	1.625	1.375	1.75	1.50	2.00
	2.375	2.125	1.875	1.625	2.25	1.75	2.00	3.00	2.50	2.00	2.00	1.875	1.625	1.75	2.00	1.625	1.50	2.25
	1.375	2.00	2.125	1.75	2.125	2.50	2.25	2.75	2.00	1.75	1.875	2.00	2.125	1.875	1.75	1.75	1.50	2.00
	1.50	2.625	2.25	1.875	2.00	1.75	2.00	2.00	2.00	2.00	2.25	2.25	1.625	1.75	1.875	3.00	2.25	2.25
	2.125	2.50	1.75	2.00	2.50	2.00	2.00	2.375	2.00	1.875	1.50	2.00	2.00	1.625	1.75	2.25	2.00	1.50
	1.50	2.125	2.00	2.00	2.00	2.00	2.125	2.00	2.00	1.75	1.625	2.25	2.00	2.00	1.875	2.375	2.00	1.75
	1.50	1.75	1.875	1.75	1.75	2.25	2.25	2.50	2.00	1.75	1.50	2.50	2.00	1.75	1.375	2.625	2.00	2.00
	1.875	2.50	2.125	1.875	2.00	2.00	2.00	2.50	1.875	2.00	2.00	2.25	1.875	1.875	2.00	1.50	2.00	2.25
Totals .....	91.125	103.75	103.875	98.00	102.00	101.00	102.00	111.625	106.125	95.375	88.875	99.75	97.125	89.00	87.375	106.25	99.625	100.875

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
<b>Recapitulation and reduction:</b>																		
<b>Maximum measurements.</b>	B'	2.625	1.0534	B'	2.50	0.9842	B'	2.50	0.9842	B'	2.75	1.0820	B'	2.50	0.9842	B'	3.00	1.1811
	B''	3.00	1.1811	B''	2.50	0.9842	B''	3.00	1.1811	B''	2.60	0.9842	B''	2.50	0.9842	B''	3.50	1.3779
	B'''	2.875	1.1318	B'''	2.50	0.9842	B'''	2.625	1.0334	B'''	3.00	1.1811	B'''	2.50	0.9842	B'''	2.75	1.0820
<b>Highest .....</b>		3.00	1.1811		2.50	0.9842		3.00	1.1811		3.00	1.1811		2.50	0.9842		3.50	1.3779
<b>Minimum measurements.</b>	B'	1.25	0.4921	B'	1.50	0.5905	B'	1.50	0.5905	B'	1.25	0.4921	B'	1.50	0.5905	B'	1.25	0.4921
	B''	1.60	0.5905	B''	1.125	0.4429	B''	1.50	0.5905	B''	1.125	0.4429	B''	1.125	0.4429	B''	1.25	0.4921
	B'''	1.625	0.6397	B'''	1.50	0.5905	B'''	1.625	0.6397	B'''	1.375	0.5413	B'''	1.25	0.4921	B'''	1.25	0.4921
<b>Lowest .....</b>		1.25	0.4921		1.125	0.4429		1.50	0.5905		1.125	0.4429		1.125	0.4429</			



TABLE I.—Measurements of fineness of wools—Continued.

		TEXAS.																	
		RAMS, 2 YEARS OLD.																	
Catalogue number of samples..	619.			620.			621.			622.			623.			624.			
	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	
2.00	1.875	2.25	1.50	3.25	2.00	1.875	.75	2.50	2.00	2.00	2.00	2.25	2.125	2.25	2.625	2.50	1.75		
1.25	1.625	2.00	2.00	1.625	2.00	2.00	1.50	3.00	2.50	1.75	1.75	1.875	1.50	1.875	2.50	2.75	1.625		
2.00	2.00	2.00	2.50	1.375	2.00	1.75	1.625	2.25	1.75	2.375	2.50	2.00	1.75	1.50	2.625	2.00	1.80		
2.25	1.50	2.00	3.00	1.50	2.125	2.00	1.50	2.375	2.50	2.50	2.375	2.00	1.50	1.625	2.25	2.25	1.875		
1.125	1.50	2.375	2.00	2.50	2.25	2.125	1.25	2.50	2.00	2.25	1.50	1.75	1.125	2.00	2.00	2.50	2.25		
1.625	2.00	2.00	2.375	1.375	2.00	1.875	1.00	2.25	1.875	1.00	1.875	1.75	1.00	2.00	1.875	3.00	1.60		
1.875	1.625	2.60	3.50	1.50	2.30	2.375	1.50	2.00	2.00	1.50	1.75	2.00	1.625	1.25	1.625	2.50	1.875		
1.50	2.50	2.50	1.50	1.50	2.375	2.00	1.375	1.875	1.25	1.25	2.50	1.875	1.625	1.25	2.25	2.25	1.875		
1.50	2.125	1.50	1.875	1.50	1.75	1.25	2.00	2.75	1.75	1.875	2.00	2.375	1.75	2.00	1.75	2.00	1.50		
2.25	1.75	2.00	2.00	1.25	1.875	1.875	1.625	2.25	2.50	3.00	2.50	1.75	1.50	1.875	2.50	2.00	1.50		
1.875	2.375	2.00	2.00	1.75	2.00	1.875	1.50	2.00	1.625	2.50	2.25	1.625	2.00	2.00	2.125	1.75	2.125		
1.125	1.625	1.875	2.50	1.625	2.50	2.00	1.625	2.50	2.00	2.25	2.00	1.75	1.875	2.00	2.50	1.50	2.00		
2.375	1.875	2.25	2.00	2.25	2.50	1.875	1.375	2.00	1.75	2.60	1.875	1.875	1.75	1.75	1.875	1.875	1.875		
2.00	1.875	1.875	2.00	1.625	2.25	2.00	1.25	2.375	2.00	2.00	2.75	2.25	1.50	1.50	1.875	1.625	1.875		
2.125	1.75	1.50	2.00	1.625	2.25	2.00	1.50	1.50	4.875	1.375	2.60	1.75	1.50	2.25	2.375	2.00	1.75		
2.00	1.625	1.75	2.00	1.625	2.00	2.00	2.00	2.50	2.00	1.50	2.50	2.125	1.75	2.00	2.00	1.875	1.50		
2.50	2.00	1.375	2.50	2.00	1.375	1.75	2.50	1.75	2.00	1.25	1.875	2.00	2.25	2.50	2.00	2.25	1.375		
1.75	2.00	2.125	2.00	1.625	1.50	2.00	1.125	2.00	2.50	1.375	1.75	1.25	1.50	1.25	2.50	1.50	1.375		
1.625	1.75	1.125	2.125	1.75	2.00	1.50	1.50	2.00	2.25	2.25	2.00	1.50	1.50	1.50	2.00	2.00	1.125		
1.75	2.00	3.00	1.625	2.00	1.375	1.875	2.00	1.875	2.50	2.00	2.50	1.50	1.625	1.50	2.00	2.00	1.75		
2.25	2.00	1.50	2.00	1.875	2.00	1.75	2.25	1.75	1.75	2.125	1.25	1.50	1.25	1.50	2.00	2.00	2.25		
1.50	2.00	1.50	1.375	1.625	2.50	2.00	1.375	1.875	1.25	2.00	2.00	2.125	1.50	1.50	1.50	1.75	2.00		
1.75	2.00	1.50	2.00	2.125	2.00	1.75	1.50	2.50	1.50	1.75	3.00	1.875	2.00	1.875	1.50	1.875	2.00		
2.00	2.125	1.50	1.625	1.75	2.00	1.875	1.625	2.00	2.60	1.875	1.875	2.00	1.875	2.00	2.00	2.00	2.25		
2.25	2.50	1.75	2.50	1.625	3.00	2.25	1.75	2.00	2.25	1.75	1.50	2.00	1.875	2.50	1.125	1.50	1.50		
2.00	2.00	1.50	1.625	2.00	3.00	2.50	2.00	1.625	2.50	1.75	1.50	2.50	2.00	2.00	2.75	1.25	1.50		
2.75	1.875	1.125	2.00	1.75	2.50	2.00	2.50	1.75	2.00	2.00	2.375	2.50	2.25	3.00	2.00	1.50	1.50		
2.00	1.875	2.00	2.00	1.75	2.00	2.00	1.75	1.875	1.75	2.25	2.50	1.75	1.50	2.00	2.00	2.00	2.00		
1.875	2.50	2.875	2.00	2.00	2.50	2.125	2.50	1.75	1.875	1.875	2.50	2.00	1.75	1.625	2.00	2.50	1.50		
2.25	2.50	1.625	2.00	1.625	2.00	1.625	1.50	2.00	1.625	2.00	2.00	1.875	1.875	2.75	1.50	2.00	2.00		
1.50	1.75	2.125	1.50	2.00	1.875	2.125	1.25	2.125	1.625	2.50	2.25	2.00	1.50	2.00	1.875	2.25	2.25		
1.875	2.375	1.375	2.00	1.75	2.00	2.00	2.25	2.00	1.50	2.25	2.50	2.00	2.00	1.50	1.50	1.75	2.50		
1.75	2.50	1.75	1.50	1.875	1.75	2.50	1.625	2.375	1.875	2.375	2.50	2.00	1.50	1.875	1.625	1.50	1.50		
1.625	1.75	3.00	2.50	2.00	1.875	2.375	1.375	1.75	2.00	2.00	2.25	1.875	1.75	2.50	2.00	2.00	2.00		
1.50	1.875	1.625	2.50	1.75	2.25	2.00	1.25	2.00	2.25	2.125	1.50	1.625	2.25	1.625	2.00	2.75	2.00		
2.25	2.00	1.75	1.25	1.875	2.00	2.50	1.625	2.00	2.00	1.75	1.75	2.50	2.00	1.75	1.875	2.375	2.00		
1.75	2.50	1.50	2.375	1.50	2.50	2.875	1.375	2.00	2.50	1.875	1.875	1.50	3.50	2.50	1.625	1.50	1.50		
2.25	2.50	2.125	2.125	2.00	2.00	2.25	1.875	2.50	2.50	1.50	2.50	1.75	2.25	1.50	1.50	2.00	2.00		
2.00	3.00	1.25	2.25	2.125	2.25	2.50	1.875	2.00	2.00	1.125	2.375	2.00	2.00	1.50	1.50	1.50	1.50		
2.00	1.75	1.50	2.50	1.375	2.25	2.25	1.50	1.875	1.375	1.50	2.75	2.25	2.00	2.00	1.50	1.50	1.50		
2.50	1.50	1.125	2.75	1.75	3.00	2.00	2.00	1.875	2.00	2.00	2.25	1.75	1.375	1.875	1.50	2.00	2.00		
2.00	2.00	2.00	2.25	1.875	3.00	2.50	1.75	1.75	1.50	1.75	1.875	2.00	1.50	1.875	1.50	1.875	2.00		
2.00	2.125	1.75	2.00	1.75	2.125	2.00	2.00	2.00	2.00	2.25	2.125	1.75	1.375	1.875	1.50	1.50	1.50		
2.00	1.875	2.00	2.25	1.875	2.50	2.50	1.625	2.25	1.875	2.375	1.00	2.00	1.50	1.50	1.50	1.50	1.50		
2.06	1.875	1.50	2.00	2.00	2.00	1.875	1.75	2.00	2.25	2.00	1.50	2.50	1.75	1.50	2.125	1.375	1.875		
2.00	1.625	1.375	1.875	1.625	1.75	2.00	1.875	2.25	1.50	2.375	2.00	1.75	1.75	2.50	2.00	2.125	1.50		
1.50	2.00	2.00	2.50	1.75	2.625	1.75	1.625	1.75	1.625	2.50	2.00	1.875	1.50	1.875	2.00	2.00	2.00		
1.625	1.375	1.50	2.50	1.875	1.75	1.75	2.00	2.00	1.875	1.75	2.125	2.25	1.875	2.00	1.50	1.50	1.50		
2.00	2.50	2.00	1.875	2.50	1.875	2.375	1.875	2.50	1.50	1.875	2.50	1.50	2.25	1.50	2.25	2.00	2.00		
Totals .....	59.125	99.625	91.375	104.375	80.50	109.25	102.50	84.125	103.125	95.75	98.25	103.625	94.625	95.25	93.625	205.25	102.875	102.50	

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:																		
Maximum measurements:	B' 3.00 B'' 3.00 B''' 3.00	1.1811 1.1811 1.1811	B' 3.50 B'' 3.00 B''' 3.00	1.8779 0.9842 1.1811	B' 3.00 B'' 3.00 B''' 3.00	1.1811 0.9842 1.1811	B' 2.50 B'' 2.50 B''' 2.75	0.9842 0.9842 1.0826	B' 2.50 B'' 2.75 B''' 2.75	0.9842 1.3287 1.0826	B' 2.50 B'' 2.875 B''' 2.875	0.9842 1.3287 1.0826	B' 2.50 B'' 2.875 B''' 2.875	0.9842 1.3287 1.0826	B' 3.00 B'' 3.00 B''' 3.00	1.1811 1.1811 1.1811		
Highest .....		3.00	1.1811		3.50	1.8779		3.00	1.1811		3.875	1.3282		3.50	1.8779		3.00	1.1811
Minimum measurements:	B' 1.25 B'' 1.375 B''' 1.125	0.4921 0.5413 0.4429	B' 1.50 B'' 1.25 B''' 1.375	0.5905 0.4921 0.5413	B' 1.25 B'' 0.75 B''' 1.375	0.4921 0.2953 0.5413	B' 1.25 B'' 1.125 B''' 1.00	0.4921 0.4450 0.3937	B' 1.25 B'' 1.125 B''' 1.00	0.4921 0.4450 0.3937	B' 1.25 B'' 1.00 B''' 1.25	0.4921 0.3937 0.4921	B' 1.25 B'' 1.00 B''' 1.25	0.4921 0.3937 0.4921	B' 1.125 B'' 1.375 B''' 1.375	0.4429 0.5413 0.5413		
Lowest .....		1.125	0.4429		1.25	0.4921		0.75	0.2953		1.00	0.3937		1.00	0.3937		1.125	0.4429
Average measurements:	B' 1.93 B'' 1.09 B''' 1.83	0.7705 0.7834 0.7204	B' 2.125 B'' 1.79 B''' 2.185	0.6366 0.7947 0.8602	B' 2.05 B'' 1.68 B''' 2.04	0.8070 0.6614 0.8110	B' 1.91 B'' 1.06 B''' 2.07	0.7519 0.7716 0.8140	B' 1.91 B'' 1.06 B''' 2.07	0.7519 0.7716 0.8140	B' 1.93 B'' 1.09 B''' 1.87	0.7598 0.7480 0.7362	B' 1.93 B'' 1.09 B''' 1.87	0.7598 0.7480 0.7362	B' 2.05 B'' 2.05 B''' 1.82	0.8070 0.8070 0.7105		
Average .....		1.93	0.7598		2.034	0.8015		1.93	0.7598		1.98	0.7795		1.90	0.7480		1.97	0.7755
Measurements above average.		81		53		79		87			60			90			101	
Measurements below average.		69		97		71		63			90			90			49	



TABLE I.—Measurements of fineness of wools—Continued.

		TEXAS.																		
		RAMS, 2 YEARS OLD.						EWES, 2 YEARS OLD.												
Catalogue number of samples.		605.			606.			607.			608.			609.						
Number of section.....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	
	1.875	1.125	2.00	1.50	2.00	1.25	1.25	1.875	1.625	1.50	2.00	1.75	1.25	1.50	2.75	1.50	2.00	1.50	3.00	
	1.25	1.50	1.375	1.50	2.00	1.50	1.50	2.00	1.75	1.625	2.25	2.25	2.25	2.00	2.00	1.625	1.75	1.25	2.25	
	1.50	1.50	2.375	1.625	1.25	1.75	1.125	1.125	1.50	1.75	2.620	2.25	1.50	2.00	1.625	1.875	1.00	2.375		
	2.50	1.50	2.00	1.75	2.00	1.25	1.625	1.50	1.25	1.625	2.00	2.50	2.00	2.00	2.25	2.125	1.75	2.00		
	1.50	1.50	1.875	1.625	2.00	1.625	1.625	2.00	1.25	1.50	2.00	1.50	2.125	1.875	1.50	1.625	1.75	2.00		
	1.50	2.50	2.375	2.125	1.875	1.625	1.50	2.00	1.50	1.375	1.875	2.25	1.875	1.75	1.50	1.50	2.50	2.00		
	1.50	1.75	1.75	2.125	1.50	2.00	1.625	2.00	1.625	1.50	1.75	2.375	1.50	1.50	2.50	1.75	2.00	2.50		
	1.625	1.375	2.125	2.00	1.375	1.25	1.375	2.125	1.75	2.00	1.625	1.75	1.875	2.375	1.125	1.75	1.50	2.00		
	2.00	2.00	2.00	2.50	2.00	1.50	1.625	2.25	1.75	2.00	1.625	1.75	1.625	2.00	2.25	2.00	2.50	2.50		
	2.75	2.375	2.00	1.875	2.25	1.75	1.75	1.875	2.25	2.00	1.875	2.25	1.75	2.00	1.875	2.00	1.625	1.50	2.00	
	1.50	2.00	1.625	2.00	1.875	1.625	1.625	1.75	2.375	2.00	2.75	2.00	2.75	2.00	2.00	1.875	2.75	1.625	1.75	2.00
	1.25	1.625	2.25	2.75	1.625	1.375	1.375	2.00	1.625	1.75	2.00	2.00	1.75	1.25	2.125	2.00	1.625	1.50	2.00	
	2.00	1.875	2.00	1.50	1.875	1.00	1.50	2.00	1.50	1.625	2.00	1.875	2.125	2.00	2.50	2.125	1.00	2.375	1.25	2.75
	2.00	1.00	1.75	1.75	1.875	1.25	1.50	1.375	2.25	2.00	1.25	2.00	1.875	2.00	2.50	1.75	1.25	2.75	1.75	2.75
	1.50	1.50	1.75	1.75	1.875	2.625	1.625	1.75	2.50	1.50	1.50	2.00	2.00	1.75	1.875	2.00	1.50	1.25	1.75	1.75
	2.00	1.50	1.875	1.00	1.375	1.50	1.00	1.625	1.625	1.75	1.875	2.00	1.50	2.125	2.25	1.75	2.00	2.00	2.00	2.00
	1.75	1.00	2.50	1.50	2.625	1.025	1.25	1.75	1.75	1.75	1.75	1.60	2.375	2.125	2.50	2.25	1.875	2.00	2.00	2.00
	2.00	1.875	2.00	1.50	1.50	2.125	1.00	2.375	1.50	1.75	2.00	2.375	2.00	2.00	1.50	2.00	1.875	1.50	1.75	1.75
	1.50	1.50	2.00	2.25	1.625	1.50	1.00	1.60	1.25	2.00	2.00	2.375	2.00	2.00	1.50	1.625	2.00	1.375	2.25	2.25
	2.25	2.00	1.875	2.125	1.75	1.625	1.25	1.375	1.50	1.625	2.00	2.375	2.375	1.75	1.50	1.875	2.50	1.50	3.00	3.00
	2.00	1.875	1.375	1.875	2.50	1.125	1.75	2.00	1.50	2.00	2.375	2.375	2.375	1.75	1.50	1.875	2.50	2.00	2.00	1.50
	1.50	2.00	2.50	1.50	2.375	2.00	1.00	2.25	1.625	2.125	2.50	1.50	1.75	1.875	2.00	2.25	1.75	1.50	1.50	1.75
	1.50	1.50	2.00	1.625	2.50	2.25	1.50	2.125	1.75	2.50	1.50	1.50	1.75	1.75	2.00	1.875	2.25	1.75	1.75	1.75
	1.50	1.875	3.00	1.25	2.50	1.50	1.50	1.375	2.00	1.75	1.75	1.50	2.00	1.875	2.25	1.375	1.00	1.50	1.50	1.50
	2.25	2.00	2.375	2.00	2.25	1.75	1.625	2.00	2.00	1.625	1.875	1.50	1.75	2.00	2.50	1.75	1.25	2.00	1.25	1.25
	1.875	1.625	1.50	1.25	2.50	1.875	1.375	2.00	1.50	2.00	1.50	2.50	2.125	1.75	2.50	1.25	2.00	1.625	1.625	1.625
	1.875	2.00	1.50	1.625	1.75	1.50	1.75	2.125	1.50	2.50	1.50	2.00	1.75	2.125	2.375	1.50	1.875	2.00	1.875	2.00
	1.75	2.00	1.50	1.25	2.00	1.375	1.75	2.25	1.50	1.75	1.625	2.625	2.00	2.25	1.75	2.00	1.50	1.75	1.75	1.75
	2.25	1.875	1.875	1.625	1.75	1.50	1.50	2.00	1.625	2.25	2.00	2.25	2.00	2.375	1.75	2.00	1.50	2.00	2.00	2.00
	2.25	1.875	1.875	1.50	1.375	1.625	1.00	1.75	1.25	2.375	1.75	2.375	1.25	1.375	1.625	2.25	1.50	2.00	2.00	2.00
	2.75	1.875	1.875	1.50	2.50	1.75	1.625	1.50	2.00	2.50	1.75	3.00	2.00	2.75	1.375	1.50	1.625	2.125	2.125	2.125
	1.50	1.50	2.00	1.75	1.875	2.00	1.75	2.375	1.50	1.75	1.625	2.125	1.75	2.375	2.25	2.125	1.75	2.00	2.00	2.00
	1.75	2.00	3.00	2.00	2.875	1.50	1.50	2.25	1.00	1.625	2.75	1.875	1.875	2.125	2.00	1.875	1.75	2.125	1.75	2.125
	1.875	1.50	2.625	2.125	2.00	2.00	1.75	2.25	1.25	1.50	1.50	1.75	2.375	2.50	1.50	1.875	1.50	1.375	1.375	1.375
	1.50	1.50	1.375	1.625	2.125	1.50	2.00	2.00	1.75	1.625	1.875	1.50	2.00	1.50	1.75	1.50	1.50	2.00	2.00	2.00
	2.125	1.75	2.25	2.75	1.60	2.00	1.50	2.00	3.125	2.00	2.00	1.625	1.625	2.375	1.875	1.625	1.00	1.875	1.875	1.875
	2.00	1.875	2.25	3.00	1.75	1.875	1.125	2.375	1.50	2.125	1.60	1.75	1.50	2.50	3.00	2.00	1.25	1.75	1.75	1.75
	2.00	2.00	2.125	1.50	1.50	1.625	1.125	2.00	1.00	2.00	1.50	1.75	1.50	2.00	1.60	2.00	2.25	2.00	2.25	2.00
	2.50	2.00	2.00	1.75	1.875	2.25	2.00	2.125	1.25	1.875	2.25	2.00	1.875	2.25	2.375	1.50	2.00	2.50	2.00	2.00
	1.75	1.625	2.00	2.00	2.125	2.00	2.00	1.75	1.50	1.75	1.375	2.00	2.00	2.125	2.50	2.00	1.75	1.75	1.75	1.75
	1.50	2.00	1.50	1.50	1.875	1.25	1.00	1.60	1.625	1.625	1.25	1.75	1.75	3.125	2.25	1.50	2.00	1.625	1.625	1.625
	1.875	2.00	1.75	1.50	1.875	1.25	1.75	1.50	1.50	2.00	2.00	1.875	2.25	2.00	1.50	1.25	1.875	2.00	2.00	2.00
	1.00	1.625	2.00	1.75	1.50	1.00	1.75	1.625	1.50	1.875	1.50	1.75	2.00	2.50	1.875	2.25	1.875	1.50	1.50	1.50
	2.50	1.50	1.625	1.50	2.00	1.00	1.625	2.375	1.625	2.00	1.50	2.00	1.625	2.50	1.50	1.875	2.00	1.25	2.00	1.25
	1.50	1.875	2.50	1.50	2.125	1.25	1.25	2.25	1.125	2.00	1.50	1.875	2.125	2.00	1.125	1.975	2.00	1.875	1.875	1.875
	2.50	1.625	2.50	1.875	2.00	1.00	1.625	2.00	1.50	1.25	2.00	1.50	1.875	2.125	2.25	1.75	1.375	1.00	1.00	1.00
	1.00	2.00	2.00	1.625	1.875	2.50	1.50	2.00	2.00	1.875	2.875	1.625	1.75	2.375	2.00	1.75	2.50	2.00	2.00	2.00
	1.875	1.625	2.00	1.75	2.00	2.25	1.75	1.625	2.125	3.00	1.50	2.00	1.50	1.875	2.125	1.625	2.00	1.625	2.00	1.75
	1.50	1.875	2.00	2.00	1.50	1.50	1.75	1.875	1.75	1.25	2.00	1.75	1.625	2.00	1.875	1.50	2.125	1.50	2.125	2.125
	1.75	1.625	1.625	1.50	1.75	1.75	1.75	2.00	1.75	1.50	1.00	2.125	1.375	1.50	2.00	2.00	2.00	2.00	2.00	2.25
Totals.....	91.25	86.50	90.75	88.75	97.375	81.00	75.00	95.00	83.25	90.375	93.50	90.00	01.25	100.00	102.625	931.625	84.375	08.00		

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:																		
Maximum measurements.	B' 2.75 B'' 2.50 B''' 3.00	1.0826 0.9842 1.1811	B' 3.00 B'' 2.625 B''' 2.625	1.1811 1.0934 1.0334	B' 2.00 B'' 2.375 B''' 3.125	0.7874 0.9350 1.2903	B' 3.00 B'' 2.75 B''' 3.00	1.1811 1.0826 1.1811	B' 2.375 B'' 3.125 B''' 2.75	0.9350 1.2303 1.0826	B' 3.00 B'' 3.00 B''' 3.00	1.1811 1.0826 1.1811	B' 2.375 B'' 3.125 B''' 2.75	0.9350 1.2303 1.0826	B' 3.00 B'' 3.00 B''' 3.00	1.1811 1.0826 1.1811	B' 3.00 B'' 2.50 B''' 3.00	1.1811 0.9842 1.1811
Highest.....	3.00	1.1811	3.00	1.1811	3.125	1.2903	3.00	1.1811	3.125	1.2903	3.00	1.1811	3.125	1.2903	3.00	1.1811	3.00	1.1811
Minimum measurements.	B' 1.00 B'' 1.00 B''' 1.375	0.3937 0.3937 0.5413	B' 1.00 B'' 1.25 B''' 1.00	0.3937 0.4021 0.3937	B' 1.00 B'' 1.125 B''' 1.00	0.3937 0.4429 0.3937	B' 1.25 B'' 1.25 B''' 1.50	0.4921 0.4921 0.5005	B' 1.125 B'' 1.25 B''' 1.375	0.4429 0.4921 0.5413	B' 1.00 B'' 1.00 B''' 1.00	0.3937 0.3937 0.3937	B' 1.125 B'' 1.25 B''' 1.375	0.4429 0.4921 0.5413	B' 1.00 B'' 1.00 B''' 1.00	0.3937 0.3937 0.3937	B' 1.25 B'' 1.00 B''' 1.00	0.4921 0.3937 0.3937
Lowest.....	1.00	0.3937	1.00	0.3937	1.00	0.3937	1.25	0.4921	1.125	0.4429	1.00	0.3937	1.125	0.4429	1.00	0.3937	1.25	0.4921
Average measurements..	B' 1.82 B'' 1.73 B''' 1.99	0.7165 0.6811 0.7834	B' 1.775 B'' 1.948 B''' 1.620	0.6988 0.7069 0.6377	B' 1.50 B'' 1.90 B''' 1.665	0.5005 0.7480 0.6555	B' 1.807 B'' 1.87 B''' 1.08	0.7114 0.7862 0.7795	B' 1.825 B'' 2.00 B'''									





TABLE I.—Measurements of fineness of wools—Continued.

		TEXAS.																	
		EWES, 2 YEARS OLD.																	
Catalogue number of samples..		610.			611.			612.			613.			614.			615.		
Number of section.....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
		1.125	1.00	2.25	2.25	1.75	2.00	1.875	1.00	2.00	1.625	2.125	2.00	3.25	1.50	2.50	2.00	2.125	1.75
		2.00	2.00	1.75	1.50	2.75	2.25	2.00	2.00	1.75	2.25	2.25	2.125	2.00	2.00	1.75	1.875	1.375	1.875
		2.00	1.50	2.00	1.50	2.00	2.50	2.00	1.75	1.625	2.00	1.50	2.25	2.00	2.00	1.50	2.00	1.50	1.875
		2.125	1.25	2.125	1.875	1.50	1.50	2.00	2.00	2.25	1.75	1.50	2.25	1.875	1.025	2.00	2.00	1.625	2.375
		2.00	1.75	1.875	1.75	1.125	1.25	1.625	1.50	2.00	1.875	2.00	2.375	1.50	1.75	2.25	1.875	1.75	1.75
		1.375	2.00	2.00	1.50	2.00	2.00	1.50	1.75	1.75	2.00	1.75	2.125	2.125	1.75	2.125	2.00	1.875	1.875
		1.75	2.125	2.00	2.00	2.125	1.75	1.75	1.875	1.60	1.75	1.50	1.75	2.00	1.875	2.125	2.00	2.00	2.25
		2.00	2.00	1.75	2.125	1.625	1.875	2.00	2.00	2.00	1.75	2.00	1.25	1.75	2.00	2.00	1.50	2.25	1.50
		2.125	1.75	1.50	2.00	2.00	1.75	1.625	1.50	2.25	1.875	1.625	2.00	1.50	1.75	2.25	1.50	2.00	1.50
		1.75	1.50	1.875	2.25	1.25	2.00	1.75	1.50	2.25	2.00	1.875	1.025	1.75	1.025	2.00	1.50	2.00	2.00
		2.25	2.25	2.00	1.75	1.125	2.125	1.875	1.75	2.00	1.625	2.00	2.125	2.375	1.75	1.75	2.00	1.875	1.75
		2.00	1.50	2.00	2.25	1.50	2.375	2.00	1.875	1.875	1.625	1.50	2.00	2.00	2.00	2.00	2.75	1.875	1.00
		1.50	1.50	1.875	2.00	2.00	1.25	1.75	2.00	1.75	1.375	1.25	2.00	2.00	2.00	2.125	2.25	2.00	1.255
		1.75	1.875	1.75	2.50	2.00	1.50	1.50	1.625	2.00	2.25	2.25	2.25	2.125	2.00	2.25	1.50	1.025	1.875
		1.875	2.00	2.50	1.625	2.00	1.875	2.125	1.75	1.375	2.00	2.00	2.00	1.625	1.625	1.875	1.625	2.00	1.375
		2.00	1.50	2.125	1.75	1.875	1.50	1.50	2.125	2.00	2.25	1.50	2.125	1.75	1.25	2.00	1.50	2.00	2.00
		1.375	2.00	2.00	1.50	2.50	1.00	1.75	2.125	2.25	1.875	1.375	1.875	2.00	2.00	2.25	1.875	1.875	2.375
		1.50	1.625	2.00	1.625	1.375	2.00	1.125	1.625	1.875	1.25	2.00	2.00	2.375	1.50	1.60	2.75	1.75	1.75
		2.00	1.625	1.875	1.875	2.00	1.75	1.875	1.50	2.00	1.75	2.00	2.00	1.50	1.625	2.00	1.75	2.25	2.25
		2.50	1.75	2.125	1.625	1.50	2.25	2.00	1.50	1.75	1.625	2.00	2.125	2.00	1.75	2.375	2.125	1.25	2.50
		1.75	1.875	2.00	1.50	1.75	1.50	2.25	2.00	1.75	2.00	1.75	1.50	1.875	2.125	1.50	1.875	1.875	1.875
		1.625	1.875	1.875	1.50	1.375	2.25	2.25	1.50	1.875	1.50	1.875	1.625	2.25	2.25	2.25	1.50	2.25	2.50
		2.00	1.50	1.50	1.875	2.00	1.75	1.25	2.00	1.50	1.975	2.00	2.00	1.50	1.25	1.25	1.625	1.625	1.125
		2.50	1.25	1.375	1.625	1.75	1.875	1.50	1.75	2.00	1.625	1.75	2.00	1.75	2.25	2.00	2.25	1.75	2.125
		2.00	2.00	1.75	1.25	1.00	1.875	2.125	1.875	1.625	2.00	1.875	1.75	2.375	1.625	2.00	2.00	1.50	2.00
		2.00	2.125	2.00	2.00	1.25	2.00	1.875	1.875	1.75	2.00	1.625	2.00	2.25	1.625	2.125	1.625	2.50	1.25
		1.75	2.00	2.50	2.50	1.75	2.50	1.75	1.50	1.75	2.125	2.00	1.875	2.50	1.125	2.00	2.00	1.875	2.00
		1.50	1.75	2.00	1.125	1.625	2.50	1.50	1.50	1.875	1.375	1.75	1.75	2.00	1.50	2.375	2.125	1.625	1.625
		2.50	2.00	1.75	1.50	1.00	1.875	2.00	1.625	1.625	1.25	1.50	2.125	1.75	1.75	2.125	1.00	2.50	2.00
		2.50	1.25	1.875	1.75	1.50	2.375	1.25	1.50	2.50	1.375	1.625	1.75	2.25	1.875	2.25	2.25	2.00	2.125
		2.75	1.25	1.375	1.875	2.00	1.75	2.25	1.50	2.00	1.75	1.375	2.25	1.625	2.375	1.125	1.50	1.75	1.125
		2.375	2.00	2.00	1.75	1.75	2.00	1.875	1.75	1.875	2.00	1.50	2.25	1.25	1.875	2.00	1.75	1.875	2.00
		2.25	1.125	2.125	1.50	2.25	2.125	1.75	2.00	1.75	1.50	2.00	1.875	2.00	2.25	1.625	2.50	1.875	2.00
		2.50	1.75	2.25	2.125	1.50	2.00	2.125	1.375	2.00	1.625	2.00	2.25	1.75	2.00	1.50	2.00	1.75	1.875
		2.125	2.00	1.50	2.25	1.50	1.875	1.75	1.25	2.00	1.625	2.00	2.375	1.875	1.60	1.625	2.25	2.00	1.50
		2.00	1.75	1.50	2.375	1.25	1.75	2.00	1.875	2.25	1.75	2.125	1.25	1.625	1.625	1.75	2.00	2.125	1.625
		2.00	1.50	1.75	1.25	1.25	1.50	1.50	2.00	2.375	1.50	1.75	2.50	2.375	1.75	2.00	1.60	2.50	2.00
		2.00	1.50	1.75	1.25	2.00	1.75	2.00	2.00	2.25	1.25	2.00	2.00	1.75	2.00	2.125	1.75	1.875	1.50
		2.25	2.00	1.875	1.375	1.125	2.25	1.75	2.125	1.50	2.25	2.00	1.875	1.50	2.125	2.25	2.60	1.75	1.75
		1.75	1.375	2.75	2.00	1.125	1.375	1.75	1.625	1.25	1.875	2.00	1.625	1.625	1.375	2.75	2.00	2.125	2.125
		2.00	2.25	2.00	1.75	1.00	1.125	2.00	1.75	2.00	1.375	2.00	1.50	2.00	2.125	1.60	1.75	2.00	2.00
		1.875	2.00	1.625	1.25	1.25	2.00	2.00	2.00	1.75	2.125	1.625	2.00	2.00	2.375	1.875	1.875	1.875	1.875
		2.25	2.125	1.50	1.50	1.625	2.375	1.625	1.50	1.875	2.00	1.625	1.75	2.625	2.125	2.00	1.50	2.00	1.75
		2.00	1.75	2.00	2.125	1.50	2.75	2.00	1.50	2.00	2.375	2.00	1.75	1.75	2.00	2.00	2.00	1.875	1.50
		1.875	1.50	2.25	1.75	1.75	2.50	1.50	2.00	2.25	1.50	2.125	2.00	2.25	1.50	1.875	1.625	2.125	2.00
		2.00	1.875	1.875	1.625	1.25	1.50	1.75	1.75	2.00	1.50	1.625	2.25	1.625	1.50	1.75	1.625	1.625	2.50
		2.00	2.125	2.00	2.00	2.50	2.25	1.50	2.00	2.00	1.50	1.50	2.00	2.00	2.00	2.125	1.60	2.125	1.25
		2.25	2.00	2.00	2.25	1.00	2.00	2.00	2.00	1.50	2.25	2.00	2.00	2.00	1.50	2.00	1.50	3.00	1.125
		2.125	1.875	1.625	1.625	1.125	1.75	2.125	2.00	2.25	1.75	1.875	1.75	1.625	2.00	2.00	1.75	2.125	2.125
		2.25	1.50	1.25	1.75	1.75	1.50	1.50	2.00	2.25	2.25	1.75	1.875	2.00	1.50	2.00	2.75	2.50	2.00
	Totals.....	100.75	86.875	95.750	80.125	83.00	95.125	90.125	90.125	95.60	89.125	88.75	97.625	96.375	89.125	90.375	91.625	98.875	92.75

		No. of section.		In centimillimeters.		In thousandths of inch.		No. of section.		In centimillimeters.		In thousandths of inch.		No. of section.		In centimillimeters.		In thousandths of inch.			
Recapitulation and reduction:	Maximum measurements.	B'	3.50	1.8779	Y'	2.50	0.9842	Y'	2.375	0.9350	Y'	2.375	0.9350	Y'	3.25	1.2705	Y'	2.75	1.0826		
		B''	2.25	0.8858	Y''	3.00	1.1811	B''	2.125	0.8366	B''	2.25	0.8858	B''	2.50	0.9842	B''	3.00	1.1811		
		B'''	2.75	1.0826	B'''	2.75	1.0826	B'''	2.50	0.9842	B'''	2.50	0.9842	B'''	2.50	0.9842	B'''	2.50	0.9842		
	Highest.....		3.50	1.8779		3.00	1.1811		2.50	0.9842		2.50	0.9842		3.25	1.2705		3.00	1.1811		
Minimum measurements.	B'	1.125	0.4129	B'	1.125	0.4429	B'	1.125	0.4429	B'	1.25	0.4921	B'	1.25	0.4921	B'	1.00	0.3937	B'	1.00	0.3937
	B''	1.00	0.3937	B''	1.00	0.3937	B''	1.00	0.3937	B''	1.25	0.4921	B''	1.125	0.4429	B''	1.25	0.4921	B''	1.25	0.4921
	B'''	1.375	0.5413	B'''	1.00	0.3937	B'''	1.375	0.5413	B'''	1.25	0.4921	B'''	1.125	0.4429	B'''	1.00	0.3937	B'''	1.00	0.3937
	Lowest.....		1.00	0.3937		1.00	0.3937		1.00	0.3937		1.25	0.4921		1.125	0.4429		1.00	0.3937		
Average measurements.	B'	2.015	0.7033	Y'	1.712	0.6740	Y'	1.802	0.7094	Y'	1.783	0.7010	Y'	1.928	0.7590	Y'	1.833	0.7210	Y'	1.833	0.7210
	B''	1.738	0.6842	Y''	1.66	0.6535	Y''	1.803	0.7093	Y''	1.775	0.6988	Y''	1.783	0.7019	Y''	1.968	0.7748	Y''	1.968	0.7748
	B'''	1.915	0.7539	Y'''	1.902	0.7489	Y'''	1.90	0.7480	Y'''	1.853	0.7685	Y'''	1.967	0.7622	Y'''	1.855	0.7303	Y'''	1.855	0.73



TABLE I.—Measurements of fineness of wools—Continued.

		CALIFORNIA.																	
		RAMS, 2 YEARS OLD.																	
Catalogue number of samples..		634.			635.			636.			637.			638.			639.		
Number of section.....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
		2.00	1.25	2.25	1.50	2.50	1.625	1.50	2.00	2.00	1.50	2.00	1.875	2.00	1.50	1.75	3.50	1.50	2.00
		1.25	1.875	1.50	2.00	2.00	1.875	2.00	2.00	2.25	1.50	1.875	1.50	2.00	3.00	1.50	1.50	1.375	2.75
		1.75	1.375	1.375	1.25	1.75	2.125	1.625	2.125	2.50	1.75	2.50	1.50	1.875	2.00	2.75	2.00	1.50	1.875
		1.50	1.875	2.00	1.75	1.50	2.125	2.25	1.875	2.00	2.00	1.75	1.50	2.00	2.75	2.00	2.50	2.00	1.50
		1.625	1.50	2.00	2.00	1.875	2.00	1.625	1.75	2.125	2.25	2.125	1.625	1.75	2.25	2.50	2.00	1.875	1.50
		2.25	1.50	1.50	1.00	1.625	2.375	2.375	2.25	1.50	2.125	2.00	2.00	2.00	2.00	1.50	1.625	1.875	1.50
		1.625	1.125	2.00	1.75	2.00	1.50	1.875	1.75	1.75	2.50	1.50	2.125	2.00	2.00	2.00	1.50	1.50	1.75
		2.25	1.125	2.00	1.75	1.875	1.50	1.625	1.875	1.50	1.625	2.00	1.875	1.375	1.75	2.50	1.75	1.50	1.50
		1.00	1.50	2.50	1.25	1.625	1.625	2.00	1.50	1.875	1.625	2.00	1.875	1.375	1.50	1.375	2.00	1.25	2.00
		1.375	1.50	1.75	2.00	1.50	2.125	2.00	1.625	1.875	2.00	1.50	1.875	1.875	1.50	1.50	1.50	1.50	1.50
		1.875	1.75	2.00	2.00	1.50	1.75	1.625	1.75	2.25	2.00	1.25	1.875	2.00	2.375	1.50	2.25	2.00	2.00
		1.50	1.50	2.00	1.625	1.50	1.375	1.50	1.25	2.00	1.25	2.00	1.875	2.00	2.25	1.75	1.50	1.50	1.25
		1.75	2.00	1.75	1.75	1.625	1.50	1.50	2.25	2.00	1.625	1.875	1.75	1.50	2.00	1.875	1.625	1.50	1.50
		1.125	1.50	1.875	1.25	1.50	2.00	2.25	2.00	1.625	1.625	2.50	1.625	2.50	2.25	1.75	1.75	1.50	1.625
		1.50	1.50	1.50	1.875	2.00	1.50	1.25	2.50	1.875	1.50	2.375	1.875	2.00	1.875	1.50	1.50	1.875	1.75
		1.50	1.375	2.00	1.375	2.00	1.75	1.75	2.375	1.75	2.375	1.875	2.375	2.00	1.25	1.625	2.00	1.50	1.375
		1.75	1.50	1.50	1.50	1.875	1.375	1.50	2.125	1.50	2.00	1.875	2.125	1.625	2.00	1.875	2.00	1.875	1.75
		1.50	1.875	3.00	1.50	1.875	2.50	1.25	1.75	1.50	2.25	1.75	1.875	2.50	2.25	1.375	2.00	1.50	1.50
		2.00	1.50	2.25	2.00	1.625	1.50	1.25	1.875	1.375	2.375	2.00	2.00	1.625	1.75	2.00	1.625	1.50	1.75
		1.375	1.625	1.875	1.75	1.625	1.50	1.875	1.50	2.375	1.875	1.625	2.00	2.25	2.25	2.00	1.25	1.025	2.00
		2.00	2.00	2.00	1.625	1.50	1.50	1.25	3.50	2.125	1.875	1.875	2.25	1.50	2.375	1.50	1.875	1.50	2.00
		1.375	1.50	1.875	2.125	1.50	1.50	1.625	1.50	2.00	1.50	2.75	2.00	1.625	1.875	1.75	1.50	2.50	1.375
		2.00	1.25	1.125	2.25	1.75	1.375	1.75	1.25	2.00	1.50	2.25	2.00	2.00	3.75	1.50	1.875	1.50	1.50
		1.75	2.00	1.375	1.50	1.625	2.00	1.125	1.50	2.50	1.75	1.50	2.125	1.25	2.125	1.75	1.50	1.875	1.375
		1.50	1.625	1.50	2.00	1.625	1.75	1.50	1.50	1.75	1.50	2.25	1.50	2.50	1.50	1.50	1.50	2.00	1.50
		1.50	1.375	2.00	1.25	1.50	1.625	1.625	1.50	1.625	1.625	1.875	1.75	1.50	1.875	1.75	1.50	2.00	2.00
		1.50	1.50	2.00	1.75	1.625	2.00	1.50	1.25	1.50	2.00	2.00	1.875	2.125	2.25	1.625	2.00	1.875	1.50
		1.75	1.625	1.50	1.75	1.75	1.75	2.00	1.875	1.50	2.00	1.625	1.875	2.25	1.875	1.875	1.375	1.25	1.50
		2.00	1.50	1.50	1.875	1.50	2.00	1.125	1.625	1.375	1.75	1.875	1.50	1.875	1.50	1.50	1.50	2.375	1.375
		1.50	1.75	1.75	1.875	1.50	1.875	1.50	1.75	3.00	2.00	1.875	1.75	2.00	1.50	3.75	2.00	2.25	2.25
		2.375	1.875	2.00	1.50	1.375	2.00	2.00	1.50	2.50	2.125	1.50	1.875	2.00	1.50	1.75	2.00	1.875	2.00
		1.625	1.50	1.75	1.875	1.75	1.50	2.00	2.25	1.625	2.25	1.655	1.50	2.00	1.75	1.50	2.375	1.25	1.50
		1.75	2.00	1.75	1.50	1.25	1.625	1.75	2.25	1.25	2.00	2.00	2.00	2.00	1.50	1.75	1.50	2.25	1.625
		1.50	1.50	2.00	1.50	1.50	1.75	1.75	1.75	1.75	3.75	1.75	2.00	1.625	3.00	1.50	3.75	1.875	1.25
		1.50	1.80	1.75	1.375	1.75	1.875	2.125	1.625	2.00	1.375	2.00	1.75	2.50	2.50	1.50	1.50	1.25	1.875
		1.50	2.00	1.75	1.375	2.25	1.375	1.375	1.625	1.50	1.75	2.25	1.50	1.50	1.75	1.625	2.00	1.50	1.50
		1.50	1.50	2.00	2.00	1.50	1.50	1.50	2.00	1.75	1.50	2.00	1.75	2.125	2.00	1.75	1.50	1.50	1.25
		1.25	2.00	2.375	1.50	1.375	1.75	1.50	1.50	1.875	1.75	2.375	1.50	2.00	2.25	2.50	1.875	1.50	1.50
		1.375	1.75	1.00	1.25	1.375	1.50	1.625	1.375	2.25	1.875	2.25	1.75	1.875	2.125	1.875	1.875	2.00	2.375
		1.50	2.25	2.00	2.00	1.625	2.00	1.875	1.625	2.125	2.125	1.375	1.375	1.625	2.375	1.50	1.25	1.50	1.50
		1.50	1.75	1.875	1.50	2.00	1.625	1.50	1.75	2.00	1.75	1.625	2.00	1.50	3.00	2.00	2.00	1.75	1.75
		1.50	1.375	1.875	1.75	2.00	2.625	2.00	2.00	2.00	1.75	1.50	1.875	1.50	1.875	3.25	2.50	2.50	1.50
		2.00	1.50	1.375	1.625	2.125	1.50	1.625	2.125	1.625	1.875	1.625	1.50	3.50	3.00	2.50	1.50	1.50	1.625
		1.25	1.50	2.00	1.375	2.00	1.50	1.50	2.00	1.50	1.50	1.875	1.625	4.50	3.50	1.50	1.75	1.50	1.50
		2.50	1.50	2.00	1.875	2.00	1.625	2.25	2.125	1.50	2.00	1.875	3.125	1.75	1.50	1.50	1.50	1.75	1.75
		1.25	1.50	1.50	2.00	1.50	1.50	1.50	2.00	1.625	2.00	1.625	1.875	2.00	1.875	1.375	2.00	2.00	1.75
		1.25	1.75	1.25	2.00	1.625	1.25	1.75	1.375	2.00	1.875	1.75	1.50	1.50	1.50	2.125	1.75	1.50	1.50
		1.50	1.50	2.125	1.625	1.50	1.50	1.50	1.50	1.75	2.25	2.375	2.25	2.00	2.00	1.875	2.00	1.75	2.375
		1.50	1.50	2.00	1.125	1.625	1.50	2.00	1.625	1.375	2.125	1.875	1.50	1.625	1.50	2.50	1.875	1.625	1.50

		No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:																			
Maximum measurements.	B'	2.50	0.9842	B'	2.25	0.8858	B'	2.375	0.9350	B'	2.50	0.9842	B'	4.50	1.7716	B'	3.50	1.3779	
	B''	2.25	0.8858	B''	2.50	0.9842	B''	3.50	1.3779	B''	2.75	1.0620	B''	3.75	1.4763	B''	2.50	0.9842	
	B'''	3.00	1.1811	B'''	2.625	1.0334	B'''	3.00	1.1811	B'''	2.50	0.9842	B'''	3.75	1.4763	B'''	2.75	1.0826	
Highest.....		3.00	1.1811		2.625	1.0334		3.50	1.3779		2.75	1.0626		4.50	1.7716		3.50	1.3779	
Minimum measurements.	B'	1.00	0.3937	B'	1.00	0.3937	B'	1.125	0.4429	B'	1.375	0.5413	B'	1.375	0.5413	B'	1.25	0.4921	
	B''	1.125	0.4429	B''	1.25	0.4921	B''	1.25	0.4921	B''	1.375	0.5413	B''	1.25	0.4921	B''	1.25	0.4921	
	B'''	1.00	0.3937	B'''	1.25	0.4921	B'''	1.00	0.3937	B'''	1.25	0.4921	B'''	1.375	0.5413	B'''	1.25	0.4921	
Lowest.....		1.00	0.3937		1.00	0.3937		1.00	0.3937		1.25	0.4921		1.25	0.4921		1.25	0.4921	
Average measurements..	B'	1.615	0.6358	B'	1.643	0.6468	B'	1.735	0.6330	B'	1.85	0.7283	B'	2.047	0.8059	B'	1.835	0.7224	
	B''	1.008	0.6330	B''	1.875	0.6594	B''	1.822	0.7173	B''	1.945	0.7657	B''	2.08	0.8188	B''	1.665	0.6515	
	B'''	1.818	0.7157	B'''	1.735	0.6830	B'''	1.81	0.7125	B'''	1.785	0.7027	B'''	1.867	0.7359	B'''	1.675	0.6594	
Average.....		1.68	0.6614		1.684	0.6629		1.789	0.7143		1.86	0.7322		1.998	0.7866		1.721	0.6775	
Measurements above average..		68			66			63			80			70			69		
Measurements below average..		82			84			87			61			80			81		



TABLE I.—Measurements of fineness of wools—Continued.

		CALIFORNIA.																	
		RAMS, 2 YEARS OLD.						EWES, 2 YEARS OLD.											
Catalogue number of samples..	Number of section .....	640.			620.			627.			628.			629.			630.		
		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
		2.50	2.50	1.50	1.875	1.75	1.50	1.50	2.125	2.00	1.50	1.50	1.50	1.625	1.25	2.50	1.75	1.75	1.50
		1.875	2.25	1.75	2.00	1.875	1.50	1.50	2.125	1.875	1.125	1.50	2.00	1.625	1.50	1.50	1.875	1.875	1.875
		1.875	2.75	2.50	1.50	1.50	1.50	1.625	2.25	1.50	1.875	1.25	1.50	2.00	1.75	1.75	1.75	1.50	1.50
		2.50	2.00	1.50	1.625	1.50	1.75	1.50	1.875	2.50	1.625	1.50	2.125	2.50	1.50	2.125	2.00	1.50	1.625
		2.125	2.00	2.375	1.50	2.00	1.25	1.75	1.50	1.25	2.00	1.75	2.00	1.625	1.50	1.625	1.50	1.625	1.75
		2.50	1.875	1.75	1.625	1.50	1.625	2.125	2.00	1.50	2.00	2.00	2.00	2.00	1.50	2.00	2.00	1.50	1.50
		1.625	2.625	1.625	1.375	1.625	1.625	2.125	1.50	1.75	1.875	1.25	1.50	1.875	1.375	2.75	1.875	1.60	1.625
		1.625	2.75	1.75	1.50	1.50	1.50	2.00	1.625	2.00	1.875	2.00	2.00	1.75	1.625	1.625	1.625	1.625	1.50
		2.00	2.125	2.50	1.625	1.50	1.50	1.625	2.00	2.375	1.875	2.00	2.125	2.125	1.75	1.50	1.50	1.75	1.50
		1.625	2.00	2.00	2.125	3.50	1.50	1.375	1.875	1.50	1.50	1.75	1.75	2.00	1.875	2.50	2.00	1.875	1.50
		2.625	2.00	1.00	1.75	1.625	1.50	1.50	1.125	1.50	1.875	1.50	1.625	1.375	2.50	1.50	1.625	1.50	1.50
		1.50	1.50	2.00	1.50	1.50	1.125	1.50	1.875	1.375	1.75	1.00	1.50	1.50	1.50	2.125	1.25	1.625	1.25
		2.00	2.50	1.75	2.50	1.75	1.75	1.50	1.625	1.50	1.875	2.00	2.375	1.50	2.00	1.50	1.50	1.375	1.25
		2.375	2.125	2.00	2.00	1.50	1.75	2.50	1.625	2.50	1.375	1.50	1.875	2.25	2.00	1.875	2.00	1.375	1.25
		2.375	1.50	2.375	2.00	2.00	1.75	1.50	2.00	1.50	2.00	1.875	2.125	1.625	1.875	1.625	1.25	1.25	1.25
		2.00	2.00	1.75	1.75	1.75	1.375	2.00	1.50	1.625	2.125	1.50	1.25	1.75	1.875	1.75	1.625	1.50	1.875
		1.875	2.375	1.875	1.50	1.375	1.75	2.00	1.625	2.50	1.875	1.75	1.875	1.75	1.25	1.625	1.75	1.375	1.625
		1.75	2.25	1.75	1.50	1.375	1.75	1.50	1.50	2.50	1.625	1.50	1.875	1.75	1.50	1.50	1.50	1.50	1.60
		2.25	2.50	2.375	1.75	1.375	1.75	2.125	2.375	1.50	1.50	1.50	2.00	1.50	1.50	2.00	1.875	1.125	1.75
		1.625	2.375	2.50	2.00	1.875	1.75	1.375	1.875	1.50	1.75	1.50	1.75	1.50	1.50	1.875	1.625	1.625	1.875
		2.50	2.25	2.125	1.375	2.25	1.875	1.75	1.50	1.75	1.625	1.75	1.625	1.50	1.50	1.625	1.50	1.125	1.625
		2.25	1.875	1.50	2.375	1.875	1.875	1.875	2.125	1.75	1.625	1.50	2.25	1.375	1.25	1.50	1.375	1.50	1.50
		2.125	1.875	1.60	1.375	1.50	2.00	2.375	1.875	2.375	1.75	1.00	1.875	1.625	2.00	1.875	1.875	1.875	1.50
		2.625	2.375	2.00	1.625	1.75	2.00	1.875	1.875	2.00	1.875	1.50	1.375	1.625	1.25	1.75	1.625	1.125	1.875
		1.75	2.50	1.75	1.50	1.75	1.875	1.50	1.50	1.50	1.60	1.50	1.60	2.00	2.00	1.375	1.375	1.375	1.50
		2.00	1.625	1.875	1.75	1.50	1.50	2.00	1.875	2.00	1.375	1.50	1.875	1.75	1.75	2.00	1.875	1.50	1.625
		2.375	2.00	1.875	2.00	1.625	1.50	1.50	1.625	1.625	1.75	1.50	1.50	1.875	1.875	1.50	1.60	1.60	1.50
		1.75	2.00	2.50	2.00	1.75	1.875	1.875	2.00	2.00	1.165	1.60	1.75	1.875	1.50	3.625	1.50	2.00	1.60
		1.625	1.50	1.875	2.60	1.50	1.75	2.00	2.125	1.375	1.50	1.75	1.875	1.50	1.75	2.00	1.875	1.75	1.625
		1.875	1.50	1.625	1.75	1.875	1.375	2.375	1.625	1.50	1.75	1.50	1.50	1.375	1.75	1.875	1.60	2.00	2.00
		2.375	2.00	1.75	1.50	2.00	1.375	1.375	1.50	2.00	1.25	1.125	1.625	1.60	1.50	1.875	1.60	1.60	1.125
		2.875	2.00	1.625	2.00	1.50	1.50	2.00	1.50	2.00	2.00	0.875	1.875	2.25	1.25	1.50	1.75	1.25	1.875
		1.625	1.625	2.00	2.00	1.875	1.50	1.25	2.00	2.00	1.25	1.25	2.25	1.50	1.50	1.875	1.625	1.50	1.625
		2.00	1.75	2.25	2.00	1.50	2.00	1.875	1.875	1.875	2.50	1.60	1.625	1.875	1.60	1.875	1.625	1.875	1.75
		2.125	2.00	1.875	2.00	1.75	1.625	2.50	2.50	3.00	2.00	1.125	2.00	2.00	2.00	2.00	1.625	1.50	1.875
		2.125	2.25	2.25	1.60	1.50	1.25	2.00	1.75	2.00	2.375	1.125	1.375	1.625	1.50	1.625	2.00	1.625	1.625
		1.75	1.875	1.60	2.00	1.50	1.875	2.00	2.00	1.75	1.875	1.50	1.625	1.50	1.375	2.125	1.875	1.60	1.50
		2.00	2.00	1.625	1.75	1.625	1.625	1.50	2.00	1.25	1.625	1.50	2.00	1.625	1.375	1.875	1.50	2.00	1.75
		1.625	2.50	1.75	1.50	1.50	2.00	2.60	1.875	1.75	1.75	1.50	2.00	2.00	1.625	2.25	2.00	1.875	1.375
		1.875	2.00	1.75	1.50	1.625	1.875	1.25	1.50	1.75	1.25	1.625	2.00	2.00	1.875	1.875	2.00	1.50	1.50
		1.75	2.00	2.375	1.50	1.75	1.625	1.60	2.00	2.00	1.375	1.75	1.50	1.625	2.00	2.125	1.625	2.00	2.00
		2.00	1.625	1.75	1.625	1.50	2.00	1.625	2.375	2.75	1.625	2.50	1.50	1.50	1.60	1.625	1.625	1.75	1.625
		1.25	2.125	2.00	1.875	1.75	2.00	1.50	1.50	2.00	1.50	1.50	1.125	2.00	1.125	1.75	2.00	1.75	1.75
		2.00	2.00	2.00	1.625	2.00	1.75	1.50	1.375	2.375	2.00	1.50	2.00	1.75	1.625	2.00	1.875	1.125	1.375
		2.00	3.00	2.125	2.50	1.50	1.625	1.75	1.50	2.50	1.50	1.875	1.75	1.50	2.625	1.625	1.375	1.625	1.875
		1.875	2.75	2.00	1.625	1.00	2.00	8.00	1.50	1.50	1.60	1.625	1.625	1.875	1.875	1.50	1.50	1.50	1.50
		1.625	2.375	1.625	1.875	1.625	1.625	1.875	1.375	2.00	1.80	1.375	2.50	1.50	1.50	1.60	1.625	1.625	1.25
		1.375	2.00	2.25	1.50	1.75	1.50	1.50	2.00	2.00	1.875	2.00	1.875	1.60	1.875	1.875	2.00	2.00	2.00
		2.75	2.125	1.75	1.375	1.50	1.50	1.25	1.875	2.00	2.00	1.875	1.50	2.25	1.25	1.575	1.25	1.875	1.50
		1.50	2.25	2.625	2.50	1.50	1.50	1.50	2.00	2.75	1.50	1.50	2.00	1.75	2.25	1.875	1.50	1.125	2.125
	Totals .....	100.00	105.25	97.50	88.00	82.25	80.875	87.50	89.125	96.875	84.25	76.00	89.00	87.75	77.50	94.625	86.50	77.00	78.875

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:																		
Maximum measurements.	B'	2.875	1.1318	B'	2.50	0.9842	B'	2.00	1.1811	B'	2.50	0.9842	B'	2.50	0.9842	B'	2.25	0.8858
	B''	3.00	1.1811	B''	3.50	1.3779	B''	2.50	0.9842	B''	2.50	0.9842	B''	3.00	1.1811	B''	2.00	0.7874
	B'''	2.625	1.0334	B'''	2.00	0.7874	B'''	3.00	1.1811	B'''	2.50	0.9842	B'''	3.625	1.4271	B'''	2.125	0.8366
Highest .....		3.00	1.1811		3.50	1.3779		3.00	1.1811		2.50	0.9842		3.625	1.4271		2.25	0.8858
Minimum measurements.	B'	1.25	0.4921	B'	1.375	0.5413	B'	1.25	0.4921	B'	1.125	0.4429	B'	1.375	0.5413	B'	1.25	0.4921
	B''	1.50	0.5905	B''	1.00	0.3937	B''	1.125	0.4429	B''	0.875	0.3445	B''	1.125	0.4429	B''	1.125	0.4429
	B'''	1.50	0.5905	B'''	1.125	0.4429	B'''	1.25	0.4921	B'''	1.125	0.4429	B'''	1.375	0.5413	B'''	1.125	0.4429
Lowest .....		1.25	0.4921		1.00	0.3937		1.125	0.4429		0.875	0.3445		1.125	0.4429		1.125	0.4429
Average measurements.	B'	2.00	0.7874	B'	1.78	0.6929	B'	1.75	0.6889	B'	1.685	0.6633	B'	1.755	0.6909	B'	1.73	0.6811
	B''	2.105	0.8287	B''	1.645	0.6476	B''	1.783	0.7019</									



TABLE I.—Measurements of fineness of wools—Continued.

		CALIFORNIA.																	
		EWES, 2 YEARS OLD.																	
Catalogue number of samples.		631.			632.			633.			641.			642.			643.		
Number of section.....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
Actual measurement in centimillimeters.	2.125	1.75	1.625	2.625	2.25	1.50	1.75	1.75	1.50	1.625	2.50	1.50	1.00	1.75	2.125	2.125	2.375	1.50	
	2.00	1.50	1.625	1.50	1.625	1.75	2.00	1.625	2.00	1.50	2.00	1.625	1.125	1.50	2.00	1.50	2.50	1.50	
	1.875	1.125	2.00	1.625	1.50	1.625	1.50	2.00	2.25	1.50	1.875	2.00	1.50	3.25	2.00	1.625	2.50	1.00	
	1.625	1.75	2.125	1.50	2.00	1.875	2.50	2.50	2.50	1.25	2.125	1.375	1.50	3.00	2.00	1.50	2.125	2.25	
	1.875	1.875	1.875	1.75	1.625	1.75	2.25	2.625	2.75	1.50	1.875	2.00	1.25	1.50	2.00	2.50	2.375	2.50	
	2.00	1.50	1.75	2.125	1.50	2.00	2.00	1.875	1.50	1.625	2.125	1.50	2.00	2.00	2.25	1.50	1.75	3.625	
	2.125	1.25	1.875	2.375	1.75	1.875	1.75	2.00	2.00	2.00	1.75	1.50	1.125	2.00	1.75	1.50	2.375	3.00	
	2.125	1.625	1.75	2.125	1.875	1.75	2.25	2.125	1.50	1.50	1.625	1.75	1.25	2.00	1.75	2.00	2.25	2.00	
	1.375	2.00	2.00	1.50	1.875	2.25	3.00	1.875	2.25	1.50	1.50	1.50	1.625	1.50	1.875	2.125	2.00	2.625	
	1.50	2.00	1.625	2.00	1.875	1.75	1.50	2.00	2.50	1.875	1.50	1.75	1.00	1.50	2.00	2.50	2.125	2.00	
	1.625	1.375	1.875	2.125	2.50	1.50	1.75	2.00	1.50	1.875	2.00	1.75	1.625	1.75	1.00	3.00	2.50	2.50	
	1.875	1.625	2.00	3.25	2.00	2.125	2.00	1.875	2.00	1.50	2.50	2.00	1.00	2.125	1.125	2.50	2.125	1.875	
	2.00	2.00	2.25	1.75	1.875	1.75	4.00	2.00	1.50	1.875	2.00	1.50	1.25	3.00	1.375	2.25	2.00	2.00	
	1.625	1.625	2.125	1.75	2.00	1.50	2.25	2.00	1.625	2.00	1.625	2.00	1.50	3.00	1.50	1.50	2.50	2.25	
	1.125	2.00	2.375	2.25	2.00	1.75	1.75	2.00	1.25	2.125	1.50	1.75	1.50	1.50	1.50	2.50	2.50	1.50	
	1.875	1.50	1.625	1.875	1.50	2.125	1.75	2.00	1.375	2.00	1.50	1.50	1.25	1.50	2.00	2.50	2.75	2.00	
	1.625	1.50	1.875	1.50	1.875	2.50	2.00	2.25	1.75	1.875	2.00	1.375	1.50	1.625	2.00	3.00	1.75	1.50	
	1.375	1.375	1.875	1.875	2.00	1.50	2.00	2.00	2.50	1.50	2.125	1.50	1.00	1.625	2.00	2.00	1.625	1.00	
	1.50	1.375	2.00	1.75	3.25	1.50	2.00	3.125	2.50	2.50	1.75	1.625	1.00	1.50	1.625	1.25	1.50	2.00	
	2.00	1.625	1.75	1.625	1.75	1.875	2.00	2.00	2.00	2.625	1.75	1.375	1.50	1.00	1.50	1.25	2.00	2.25	
	2.375	1.875	2.125	2.625	2.50	2.00	1.75	2.00	2.50	1.75	1.625	2.00	1.625	1.125	1.625	2.50	2.00	1.50	
	2.00	1.50	1.50	2.375	1.375	1.875	2.25	1.75	1.50	1.50	2.00	1.50	2.00	1.50	2.00	2.50	2.75	1.75	
	1.625	1.50	2.50	2.00	1.50	2.00	2.125	2.00	2.00	1.50	1.50	1.75	2.00	2.00	2.625	2.375	2.50	1.25	
	1.25	2.00	2.25	1.75	1.625	2.50	1.50	1.625	1.50	1.625	1.625	2.00	1.00	2.00	1.50	2.25	1.875	1.875	
	2.50	1.625	1.375	1.625	1.50	2.00	2.125	1.375	2.00	1.50	1.50	1.50	1.25	1.875	1.50	2.75	3.50	2.625	
	2.00	1.625	2.25	1.75	2.125	1.50	2.00	1.625	1.50	1.50	2.125	1.625	1.50	1.50	1.50	3.375	2.75	2.00	
	2.00	1.50	1.75	2.00	1.375	2.00	2.00	2.00	1.75	1.125	2.375	1.50	1.25	3.00	1.00	1.50	1.625	2.25	
	1.50	1.50	1.50	2.00	1.875	2.125	2.00	2.50	2.00	1.00	1.50	1.25	1.50	2.625	1.25	3.125	1.875	1.60	
1.625	2.00	1.625	2.00	2.00	1.625	1.50	2.00	2.00	1.50	1.875	1.375	1.50	1.75	2.00	2.50	2.00	2.00		
1.50	1.50	1.50	1.75	1.875	2.50	1.75	1.75	1.75	1.50	2.00	2.00	1.50	1.50	1.75	2.00	1.75	2.20		
1.625	1.625	2.00	2.00	1.50	2.125	2.50	2.00	1.50	1.75	1.625	1.25	1.75	3.50	2.00	1.60	2.25	2.50		
1.25	1.75	1.25	1.375	1.125	1.375	2.00	1.875	1.50	1.25	1.25	1.75	1.00	1.50	1.00	2.50	2.25	2.25		
1.875	1.875	2.125	1.50	1.625	2.00	2.50	2.25	2.25	1.50	1.50	1.75	2.00	2.00	1.75	2.625	2.00	2.75		
1.375	1.50	2.00	1.625	2.00	1.875	1.50	2.00	2.50	1.75	1.625	1.50	2.00	1.75	1.75	2.75	2.375	2.00		
1.75	1.75	2.00	1.875	1.875	2.00	1.75	2.125	1.50	2.125	1.625	1.875	1.50	2.00	1.50	2.25	2.00	2.25		
2.125	2.00	1.875	2.00	1.875	1.625	2.00	2.00	2.25	2.00	1.875	1.50	2.00	1.50	1.625	2.25	3.00	2.25		
1.375	2.125	2.00	2.00	2.125	1.50	1.50	2.00	2.50	1.50	1.50	1.375	1.50	1.625	2.00	1.50	2.50	1.875		
2.50	1.625	1.625	2.00	2.00	2.00	1.75	2.00	1.50	1.50	1.50	1.50	1.50	2.125	2.50	2.00	2.00	2.375		
1.375	1.50	1.75	2.00	2.125	1.625	2.25	2.25	1.75	1.625	1.50	1.125	1.375	1.625	1.875	1.50	3.00	1.50		
1.625	1.125	1.75	1.75	1.50	1.375	2.50	1.875	2.00	1.50	1.875	1.25	1.25	3.00	1.50	1.75	2.50	1.625		
2.75	2.125	2.00	1.375	1.625	1.50	2.75	3.50	2.50	1.875	1.875	1.50	1.50	2.00	1.625	1.75	2.50	1.50		
2.00	1.875	3.00	1.75	1.625	1.375	2.00	2.00	1.50	1.50	1.75	2.00	2.00	2.00	2.00	2.00	2.00	1.625		
2.00	1.50	1.75	1.875	1.50	1.625	1.50	2.00	1.625	1.25	2.00	2.00	1.50	1.875	2.25	1.625	1.75	2.00		
1.50	1.625	2.00	1.625	1.625	1.375	1.75	1.625	1.50	2.125	1.875	1.25	2.00	1.75	1.50	2.125	2.50	1.50		
2.125	1.375	2.00	1.75	1.375	1.625	1.875	1.875	2.00	2.00	1.50	2.125	1.375	2.00	1.75	3.25	2.25	1.50		
1.625	2.625	1.50	1.75	2.00	2.125	2.50	1.50	1.25	1.25	1.50	1.75	2.50	1.625	1.625	3.00	1.75	1.50		
1.50	1.625	2.50	1.50	1.375	1.875	2.25	1.50	1.75	1.75	2.00	1.50	1.375	1.50	2.50	2.875	1.625	1.625		
1.375	1.50	1.50	2.00	1.75	1.875	1.75	2.00	1.75	1.50	2.00	2.00	1.00	1.50	1.75	2.25	3.00	1.50		
1.50	1.50	2.00	1.625	1.50	1.50	1.875	3.25	1.50	1.50	2.125	1.50	1.125	1.625	2.00	2.50	2.875	1.50		
1.50	2.00	2.00	1.50	1.75	1.625	1.75	3.50	1.50	2.00	2.00	1.375	2.00	1.875	2.50	1.125	1.875	1.75		
Totals.....	88.375	83.625	94.00	94.625	91.25	90.375	100.125	103.125	93.375	77.500	90.75	82.00	74.750	96.25	88.625	108.125	113.00	92.875	

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:																		
Maximum measurements.	B'	2.75	1.0826	B'	3.25	1.2705	B'	4.00	1.5748	B'	2.625	1.0334	B'	2.50	0.9642	B'	3.375	1.3267
	B''	2.625	0.9807	B''	3.25	1.2705	B''	3.50	1.3779	B''	2.50	0.9842	B''	3.50	1.3779	B''	3.50	1.3779
	B'''	2.50	0.9842	B'''	2.50	0.9842	B'''	2.75	1.0826	B'''	2.50	0.9842	B'''	2.50	0.9842	B'''	3.625	1.4271
Highest.....		2.75	1.0826		3.25	1.2705		4.00	1.5748		2.625	1.0334		3.50	1.3779		3.625	1.4271
Minimum measurements.	B'	1.125	0.4429	B'	1.375	0.5413	B'	1.50	0.5905	B'	1.00	0.3937	B'	1.00	0.3937	B'	1.125	0.4429
	B''	1.125	0.4429	B''	1.125	0.4429	B''	1.375	0.5413	B''	1.00	0.3937	B''	1.00	0.3937	B''	1.50	0.5905
	B'''	1.25	0.4842	B'''	1.375	0.5413	B'''	1.25	0.4921	B'''	1.125	0.4429	B'''	1.00	0.3937	B'''	1.00	0.3937
Lowest.....		1.125	0.4429		1.125	0.4429		1.25	0.4921		1.00	0.3937		1.00	0.3937		1.00	0.3937
Average measurements.	B'	1.768	0.6660	B'	1.893	0.7452	B'	2.002	0.7881	B'	1.55	0.6102	B'	1.495	0.5885	B'	2.162	0.8511
	B''	1.672	0.6582	B''														



TABLE I.—Measurements of fineness of wools—Continued.

CALIFORNIA.																		
EWES, 2 YEARS OLD.																		
Catalogue number of samples..	644.			649.			650.			651.			652.			653.		
Number of section.....	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
1.50	1.625	1.50	2.00	2.125	2.00	1.50	1.625	2.25	2.75	2.50	2.00	2.50	1.625	2.375	1.75	2.00	1.75	
1.875	1.75	3.00	2.375	2.125	1.625	2.25	2.00	2.00	2.00	2.375	1.625	2.00	2.115	1.625	1.25	2.00	2.125	
2.125	1.875	1.625	1.875	2.00	1.625	1.50	1.50	2.25	2.25	2.00	2.375	2.00	2.50	2.00	1.875	2.125	2.25	
1.625	1.50	1.50	2.00	1.875	2.50	1.75	1.50	2.00	1.875	2.50	2.125	2.00	2.00	2.00	1.875	2.25	2.00	
1.125	1.625	1.60	1.50	1.875	2.00	2.125	2.25	2.25	2.50	2.50	1.875	2.00	2.00	1.50	2.25	2.25	2.00	
2.50	1.50	1.375	2.125	2.125	2.25	2.25	1.875	2.25	2.125	2.875	2.00	1.625	1.50	1.75	2.50	2.125	1.60	
1.50	1.875	1.50	2.00	2.25	2.375	1.625	1.875	2.25	2.00	2.50	2.50	1.875	2.25	1.875	1.50	2.125	2.25	
1.50	1.75	1.625	2.00	2.00	2.00	1.75	2.00	1.75	2.375	1.75	2.00	1.625	2.25	1.375	1.75	1.875	2.50	
1.50	2.00	1.875	2.00	2.00	2.375	2.00	2.125	2.00	2.25	1.625	1.875	2.00	2.00	2.00	2.00	2.00	2.25	
2.125	1.50	1.50	2.50	2.125	2.125	3.00	2.125	1.625	2.375	2.50	2.375	2.50	1.875	1.75	2.125	2.00	2.25	
2.125	1.50	2.25	1.75	1.50	2.125	2.00	1.50	2.00	2.00	1.75	2.00	2.00	2.00	1.875	2.25	1.75	2.125	
1.75	2.625	2.00	1.875	2.125	2.00	2.00	2.00	2.25	2.375	1.50	2.25	2.25	2.125	1.50	2.25	2.00	2.50	
1.50	1.375	1.50	1.875	2.875	2.25	1.875	2.50	2.875	2.00	2.125	2.00	2.875	1.75	1.875	1.375	2.50	2.50	
2.00	1.625	1.50	2.00	2.50	2.375	1.75	1.875	1.50	2.00	1.75	2.50	2.00	1.875	2.00	1.625	1.625	2.25	
2.25	1.50	1.375	2.00	2.00	2.00	2.00	3.00	1.75	2.00	3.50	2.875	1.50	1.875	2.00	1.875	2.00	2.125	
2.00	1.125	1.875	2.00	2.00	2.50	2.00	1.875	2.00	2.00	2.00	2.00	2.25	1.50	1.50	2.875	2.50	2.125	
1.75	1.125	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.375	2.50	2.125	2.00	2.00	2.25	2.375	2.125	
2.125	2.00	1.60	2.375	2.50	1.75	2.00	2.50	2.60	2.00	2.625	2.60	1.875	1.75	1.875	2.00	2.50	2.25	
2.50	1.50	1.375	2.00	2.00	1.50	2.00	2.00	2.60	2.50	1.75	2.625	2.25	2.25	1.50	1.625	2.25	3.00	
1.50	1.75	1.50	2.25	2.00	2.00	2.00	1.625	2.00	2.25	2.00	1.625	1.75	2.00	2.375	1.75	2.375	2.50	
2.00	2.00	1.125	1.625	2.25	1.875	1.50	2.50	2.00	2.375	1.375	2.25	2.125	2.00	2.50	1.875	1.875	2.125	
1.675	1.875	1.125	2.00	2.60	2.00	1.75	1.875	2.00	2.00	2.125	2.00	2.00	1.875	2.875	2.00	2.00	3.00	
2.00	1.50	1.75	2.125	2.25	2.00	1.875	1.50	2.25	2.00	1.75	1.875	1.75	1.875	2.00	1.75	1.875	2.375	
1.50	1.25	1.50	2.00	2.00	2.375	2.00	2.00	2.60	1.875	1.75	1.875	1.625	2.25	1.50	1.75	2.125	2.00	
1.50	1.625	1.60	2.50	2.00	2.50	2.00	1.875	2.25	2.00	1.875	2.375	2.00	2.00	1.50	2.50	1.60	2.00	
1.75	1.75	1.60	2.25	2.875	2.00	2.25	2.00	2.00	2.00	2.50	1.50	2.00	2.375	1.50	2.50	1.75	2.50	
1.625	2.125	1.50	2.375	2.25	2.00	2.00	2.00	2.75	2.00	2.00	2.125	2.875	2.125	1.875	1.875	2.50	1.875	
2.00	1.875	1.60	2.00	2.00	2.375	2.125	2.50	2.00	3.00	2.00	2.625	2.00	1.875	1.75	2.00	2.00	2.125	
1.60	1.50	1.75	2.25	2.25	2.375	2.25	2.125	3.00	1.75	2.00	2.50	1.75	1.625	2.125	2.00	3.00	3.00	
1.50	1.50	1.25	2.125	1.875	2.00	2.00	2.00	2.50	2.25	1.625	1.875	1.75	1.875	2.25	2.00	1.875	2.00	
1.50	1.625	1.875	2.00	2.125	2.00	2.25	1.625	2.00	2.50	2.00	1.875	1.50	1.875	2.00	2.00	1.50	2.375	
1.75	1.75	2.25	2.00	2.25	1.625	1.875	3.50	2.00	2.00	2.50	2.125	1.875	1.75	1.875	2.00	2.125	2.125	
2.50	1.75	1.50	2.125	2.125	2.00	1.875	2.60	2.50	2.00	2.50	1.875	2.00	1.875	2.125	1.875	1.875	2.50	
1.875	1.50	2.00	2.00	2.00	2.00	2.125	2.00	2.00	2.25	2.375	2.875	1.50	2.00	1.75	2.00	2.00	2.625	
1.625	2.125	1.60	2.00	1.60	2.00	1.75	1.625	2.125	2.25	2.00	1.75	1.75	1.875	2.00	2.00	1.875	2.75	
1.75	2.00	2.00	2.00	1.75	2.50	1.50	2.00	1.50	2.875	2.00	1.50	1.775	2.125	1.50	1.60	2.50	2.50	
1.75	1.875	2.00	2.50	1.875	2.50	2.75	2.00	2.25	2.00	1.875	1.875	2.50	2.25	1.625	2.875	2.125	2.875	
2.00	1.625	2.00	2.125	1.75	2.50	2.00	2.00	1.875	1.875	1.625	2.25	1.875	2.25	1.875	1.875	2.00	2.50	
2.00	1.625	1.75	1.875	1.625	1.875	2.00	2.75	1.625	1.875	2.00	2.25	2.50	2.50	1.75	2.125	2.50	2.60	
2.00	1.625	1.875	1.875	2.25	2.125	2.60	3.50	2.25	2.875	2.50	2.50	2.00	2.875	2.00	2.875	2.00	2.625	
1.25	1.75	1.75	2.125	2.375	2.375	2.125	1.50	3.875	2.75	1.875	2.50	1.875	2.125	1.50	2.00	2.00	2.375	
1.50	1.875	1.625	2.50	2.00	2.00	1.75	1.50	2.00	2.00	2.00	1.625	2.00	1.875	1.875	2.25	2.00	2.50	
1.50	1.625	1.25	2.375	2.00	2.125	2.00	2.00	2.60	2.25	2.625	2.50	2.50	2.00	2.00	1.75	2.125	2.875	
2.25	1.625	1.25	2.125	2.00	2.50	2.375	2.00	2.50	1.625	2.375	2.00	2.125	1.375	2.00	1.75	1.375	2.50	
2.00	1.625	1.125	2.125	2.50	1.50	1.75	2.50	2.00	2.75	2.00	1.625	2.00	2.00	2.00	2.00	2.00	2.00	
1.50	1.875	1.50	2.00	1.75	2.00	1.875	2.25	2.25	2.00	2.125	2.875	2.00	1.375	1.50	2.125	1.625	2.875	
1.75	1.50	1.60	2.50	2.375	2.125	2.00	1.625	1.50	2.125	2.00	2.00	2.50	1.875	1.625	1.75	1.625	2.125	
2.25	1.625	1.75	2.125	2.00	2.125	2.00	1.875	1.50	2.00	1.75	1.875	2.00	1.50	1.875	2.125	2.00	2.50	
1.50	1.875	1.25	1.625	2.50	2.50	2.50	2.50	2.00	2.50	2.00	2.50	2.00	2.00	2.125	2.00	2.375	2.00	
1.50	1.875	2.00	2.375	2.00	1.625	2.00	2.00	1.875	1.875	2.50	1.50	1.875	2.00	1.625	2.125	2.00	2.00	
Totals.....	89.875	84.875	81.25	105.125	104.60	105.875	99.875	102.375	104.875	107.25	104.25	100.50	100.75	87.50	92.25	96.00	101.50	116.50

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:																		
Maximum measurements.	B'	2.50	0.9842	B'	2.50	0.9842	B'	3.00	1.1811	B'	3.00	1.1811	B'	2.875	1.1318	B'	2.875	1.1318
	B''	2.625	1.0334	B''	2.50	0.9842	B''	3.50	1.3779	B''	3.50	1.3779	B''	2.50	0.9842	B''	2.50	0.9842
	B'''	3.60	1.1811	B'''	2.50	0.9842	B'''	3.375	1.3267	B'''	2.675	1.1218	B'''	2.50	0.9842	B'''	3.00	1.1811
Highest.....		3.00	1.1811		2.50	0.9842		3.50	1.3779		3.50	1.3779		2.875	1.1318		3.00	1.1811
Minimum measurements.	B'	1.125	0.4429	B'	1.50	0.5905	B'	1.50	0.5905	B'	1.50	0.5905	B'	1.50	0.5905	B'	1.25	0.4921
	B''	1.125	0.4429	B''	1.50	0.5905	B''	1.75	0.5413	B''	1.375	0.5413	B''	1.375	0.5413	B''	1.875	0.5413
	B'''	1.125	0.4021	B'''	1.50	0.5905	B'''	1.375	0.5413	B'''	1.50	0.5905	B'''	1.375	0.5413	B'''	1.50	0.5905
Lowest.....		1.125	0.4429		1.50	0.5905		1.375	0.5413		1.375	0.5413		1.375	0.5413		1.25	0.4921
Average measurements.	B'	1.797	0.7074	B'	2.102	0.8375	B'	1.967	0.7322	B'	2.145	0.8444	B'	2.015	0.7933	B'	1.92	0.7559
	B''	1.698	0.6685	B''	2.08	0.8183	B''	2.047	0.8059	B''	2.085	0.8208	B''	1.95	0.7677	B''	2.03	0.7992
	B'''	1.625	0.6397	B'''	2.117	0.8334	B'''	2.097	0.8263	B'''	2.13	0.8385	B'''	1.845	0.7263	B'''	2.33	0.9173
Average.....		1.766	0.6716		2.099	0.8263		2.01	0.8031		2.12	0.8246		1.93	0.7598		2.00	0.8228
Measurements above average..		60			68			50			60			80				74
Measurements below average..		81			82			100			81			70				76



TABLE I.—Measures of fineness of wools—Continued.

		CALIFORNIA.																	
		EWES, 2 YEARS OLD.																	
Catalogue number of samples..		654.			655.			656.			658.			659.			660.		
Number of section .....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
		2.00	1.625	1.50	1.875	1.75	2.00	1.875	2.00	2.125	1.875	3.00	1.60	1.625	1.875	2.00	1.875	1.75	1.50
		1.625	2.00	1.50	1.625	1.50	2.00	1.875	2.00	2.00	1.875	2.25	2.00	2.00	2.375	2.00	1.75	2.00	2.00
		1.875	1.375	2.125	1.875	1.875	3.00	2.125	1.875	2.00	2.00	2.00	1.60	2.125	2.50	1.75	1.875	2.00	2.00
		1.875	1.875	1.875	2.00	1.75	2.00	2.125	2.00	1.625	2.125	2.00	2.25	1.875	2.25	2.00	2.50	1.50	1.50
		2.375	1.75	2.00	2.625	2.00	2.125	2.00	2.00	2.00	2.00	2.125	2.50	1.75	2.50	2.25	1.75	2.50	2.25
		2.00	1.625	1.50	1.75	1.50	2.00	1.75	2.00	1.875	1.875	2.00	2.00	1.875	1.625	2.00	2.00	1.625	2.00
		1.625	2.00	1.625	2.125	1.875	1.50	2.00	2.00	2.375	2.375	2.25	2.50	2.00	1.75	2.125	1.875	1.75	1.875
		1.50	1.25	2.125	1.625	2.125	1.875	3.00	2.50	1.875	1.75	2.375	1.75	1.50	2.375	1.625	1.875	1.50	1.75
		1.875	2.00	1.625	1.375	2.375	2.00	2.00	2.375	2.375	1.625	1.875	3.00	2.00	2.25	2.375	2.00	2.50	2.00
		2.00	2.125	1.50	2.00	1.875	1.875	2.00	2.00	2.00	2.125	2.00	2.50	2.00	2.50	2.00	1.50	2.00	2.00
		1.50	1.75	1.875	2.00	2.00	1.875	2.00	1.875	2.00	2.75	2.50	1.875	2.25	1.75	1.50	1.875	2.00	1.25
		1.625	2.25	2.00	2.50	1.875	2.00	2.50	2.25	3.00	1.50	2.50	2.375	1.50	1.875	1.75	1.50	1.50	2.00
		1.50	2.00	1.875	2.00	1.75	1.75	2.00	2.50	2.00	1.75	2.25	2.25	2.00	1.875	3.00	2.00	1.50	2.00
		1.875	2.625	2.00	2.125	2.00	2.50	1.75	2.00	2.50	2.00	2.00	2.50	2.00	2.25	1.625	1.25	1.875	
		1.75	2.125	1.875	2.00	2.625	2.00	2.60	2.375	2.375	1.75	2.00	2.00	2.25	2.375	2.375	1.50	2.00	2.00
		1.50	2.50	2.00	2.50	2.00	1.50	2.50	2.00	2.50	2.50	1.875	1.875	2.50	2.375	2.50	1.50	1.50	1.625
		1.625	1.375	2.125	2.00	2.50	2.00	2.00	2.25	2.00	2.00	1.75	2.25	2.125	2.25	2.00	1.75	1.50	1.75
		1.625	1.50	2.00	2.125	1.875	3.00	1.625	2.00	2.125	1.875	2.50	2.00	2.25	2.375	2.50	2.00	1.625	1.50
		1.50	1.75	2.125	1.50	1.50	1.875	2.00	2.50	1.875	2.00	1.50	2.00	2.00	1.875	1.875	1.625	1.875	2.125
		2.00	1.50	2.25	2.00	1.75	1.50	1.50	1.875	1.875	2.00	1.75	2.00	2.25	2.00	2.00	1.50	2.00	2.00
		1.75	1.875	1.75	1.75	1.875	2.00	1.875	3.50	1.875	2.125	2.25	2.25	1.625	2.375	2.625	2.00	2.50	1.625
		1.875	1.50	2.375	1.875	2.125	2.25	1.875	2.00	1.625	3.00	2.50	2.25	1.75	2.375	2.00	1.875	2.00	1.875
		2.375	1.75	2.375	2.00	1.60	2.00	2.00	2.00	2.375	2.00	2.00	2.00	2.00	2.00	2.50	1.875	2.00	2.125
		1.375	1.50	1.75	1.75	1.50	2.25	2.50	2.00	2.50	2.00	2.00	2.125	1.875	2.50	1.625	1.875	1.75	2.375
		2.00	2.00	1.875	2.00	1.875	2.00	1.50	2.25	1.50	2.50	1.75	1.875	1.625	1.75	1.50	2.00	1.75	2.00
		2.00	1.50	1.875	2.125	1.875	2.375	2.25	2.50	2.00	2.00	1.875	2.00	2.00	2.50	1.75	1.50	1.875	1.50
		2.125	2.00	3.125	2.25	2.00	2.00	2.00	2.00	1.00	1.50	1.75	2.025	2.25	2.125	1.875	1.875	2.00	1.875
		1.50	2.00	2.00	1.875	2.00	2.00	2.00	2.125	1.75	2.125	1.875	2.00	2.00	2.25	1.75	1.625	2.00	2.50
		1.875	1.25	1.75	1.50	1.50	2.125	1.875	2.125	1.875	2.00	1.50	2.125	2.125	2.50	3.00	1.75	1.75	1.875
		2.375	1.50	1.875	1.50	2.00	2.125	2.125	1.75	2.00	2.75	1.75	2.00	2.00	1.625	1.50	2.125	1.50	1.625
		1.50	2.25	2.125	2.125	1.50	1.875	2.50	3.00	2.00	1.875	2.00	2.00	2.00	2.00	2.75	1.875	1.75	2.375
		1.875	2.00	1.50	2.50	2.50	2.00	2.00	2.00	2.00	2.125	2.75	2.00	2.00	1.875	1.50	2.00	2.00	2.00
		1.50	1.50	2.00	2.00	2.00	1.875	1.50	1.875	1.875	2.00	2.50	1.875	2.125	2.00	1.875	2.00	2.25	2.625
		2.375	2.00	1.875	2.00	2.00	1.50	2.00	1.875	2.00	2.00	2.00	2.00	2.00	2.00	2.25	1.75	2.00	2.00
		1.875	2.50	1.875	2.125	1.825	1.50	1.875	1.75	2.00	2.00	2.25	2.50	1.75	1.875	1.75	1.875	2.00	2.50
		1.875	1.50	1.50	1.625	2.00	1.625	2.00	2.00	2.125	1.75	2.75	2.00	1.50	2.00	2.375	1.625	1.375	1.75
		1.75	1.50	3.375	1.75	1.50	2.00	1.875	1.75	3.00	2.00	1.875	2.25	2.00	2.025	1.125	1.75	2.00	1.50
		1.50	1.375	2.00	2.125	1.625	1.375	2.00	1.75	2.025	2.00	2.00	1.875	2.125	2.50	2.375	1.75	1.875	1.875
		1.50	2.00	2.00	1.625	1.50	1.50	1.625	2.00	2.125	2.25	1.875	2.00	2.025	1.125	1.875	2.00	1.625	2.00
		2.00	1.625	3.375	2.00	2.00	2.375	2.00	1.625	3.00	2.00	2.125	2.00	2.375	2.25	1.875	1.50	1.625	1.625
		1.875	1.75	1.50	2.00	1.50	2.00	2.00	1.50	1.625	2.125	2.50	2.00	1.75	1.875	1.875	2.50	2.00	2.00
		2.00	1.50	1.75	2.00	1.75	1.875	2.25	2.50	2.125	1.875	2.125	2.125	2.00	2.125	2.125	2.00	1.875	1.00
		2.00	1.75	1.875	2.125	1.875	1.75	2.125	1.625	2.00	2.00	2.50	2.00	2.00	1.875	2.50	2.00	1.875	1.625
		1.75	1.625	2.125	2.00	1.50	1.50	2.00	2.00	1.625	2.00	3.00	3.00	2.00	2.00	1.875	2.00	2.00	2.00
		1.875	1.50	1.50	2.00	1.875	1.75	1.625	2.00	2.00	2.25	2.125	2.50	1.50	2.125	2.125	2.125	2.00	1.75
		2.00	2.00	2.50	2.25	1.875	2.00	2.125	2.00	2.00	2.00	2.00	2.00	2.00	1.50	1.50	2.00	2.00	2.00
		2.625	2.00	1.75	2.625	1.875	2.75	2.00	2.00	2.375	2.125	2.375	2.00	1.625	2.125	1.50	1.875	3.00	1.625
		1.875	1.875	1.875	2.00	2.00	2.375	2.00	2.00	2.00	2.00	2.00	2.375	1.875	2.50	2.375	1.75	2.50	2.00
		1.75	2.00	2.00	1.875	2.00	2.00	2.00	2.00	2.50	2.375	2.00	2.00	2.25	1.50	2.375	1.375	1.50	2.00
		2.00	2.125	1.50	1.625	1.625	2.375	2.50	2.75	2.50	2.125	2.125	3.00	2.00	2.50	2.50	1.625	1.625	2.125
	Totals .....	91.25	91.25	98.75	98.625	92.625	90.875	100.25	106.625	168.50	100.125	108.50	106.00	97.375	106.375	105.75	92.875	92.250	97.125

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:																		
Maximum measurements.	B'.	2.625	1.0334	B'.	2.625	1.0334	B'.	3.00	1.1811	B'.	3.00	1.1811	B'.	2.625	1.0334	B'.	2.50	0.9842
	B''.	2.625	1.0334	B''.	2.625	1.0334	B''.	3.50	1.3770	B''.	3.00	1.1811	B''.	2.625	1.0334	B''.	3.00	1.1811
	B'''.	3.375	1.3287	B'''.	3.00	1.1811	B'''.	3.00	1.1811	B'''.	3.00	1.1811	B'''.	3.00	1.1811	B'''.	2.75	1.0620
Highest .....		3.375	1.3287		3.00	1.1811		3.50	1.3770		3.00	1.1811		3.00	1.1811		3.00	1.1811
Minimum measurements.	B'.	1.375	0.5413	B'.	1.375	0.5413	B'.	1.50	0.5905	B'.	1.50	0.5905	B'.	1.50	0.5905	B'.	1.50	0.5905
	B''.	1.25	0.4921	B''.	1.50	0.5905	B''.	1.625	0.6397	B''.	1.375	0.5413	B''.	1.50	0.5905	B''.	1.25	0.4921
	B'''.	1.50	0.5905	B'''.	1.375	0.5413	B'''.	1.375	0.5413	B'''.	1.00	0.3937	B'''.	1.375	0.5413	B'''.	1.00	0.3937
Lowest .....		1.25	0.4921		1.375	0.5413		1.375	0.5413		1.00	0.3937		1.375	0.5413			



TABLE I.—Measurements of fineness of wools—Continued.

Catalogue number of samples.		CALIFORNIA.																	
		EWES, 2 YEARS OLD.																	
		661.			662.			663.			664.			665.			666.		
Number of section.....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
Actual measurement in centimillimeters.		2.00	1.50	1.75	1.625	1.75	1.50	1.50	1.50	1.50	1.875	1.625	2.125	1.75	2.00	1.75	1.25	1.875	2.00
		1.625	1.75	1.625	1.75	3.00	1.75	1.875	1.75	2.25	2.125	1.875	2.125	1.875	1.75	2.125	2.00	1.50	1.50
		1.625	1.625	2.00	2.00	1.625	2.00	1.875	1.875	1.875	2.125	1.875	1.75	2.00	2.125	2.00	1.50	1.875	2.00
		1.50	1.50	1.625	2.125	2.00	2.125	1.50	2.50	1.75	1.875	2.25	2.25	1.75	1.875	1.875	1.875	1.50	1.625
		1.75	1.50	1.75	2.25	1.75	1.75	1.25	1.75	2.00	1.75	2.50	2.00	1.875	2.375	1.625	1.60	1.75	2.50
		2.00	2.00	2.00	2.60	2.375	1.875	1.50	2.00	1.50	2.125	2.00	1.50	2.125	2.50	1.75	2.00	1.875	2.00
		2.125	2.00	1.50	2.125	2.25	1.50	2.00	2.00	1.375	2.25	1.875	2.125	2.125	2.50	2.00	1.50	1.75	2.375
		2.25	2.00	1.875	1.75	1.50	1.75	1.875	1.75	2.00	2.50	1.75	2.00	2.50	1.50	1.50	1.50	2.50	2.125
		1.875	1.75	2.50	1.25	2.00	1.625	2.00	2.50	1.875	2.00	2.00	1.875	2.50	2.125	1.00	1.125	1.75	2.50
		2.00	1.75	1.875	1.75	2.50	1.50	1.50	2.00	2.25	2.00	2.50	2.00	2.25	2.00	1.625	1.00	1.50	2.00
		2.00	2.125	1.625	1.50	2.00	2.00	1.125	2.125	1.875	2.00	2.75	2.25	2.375	2.00	2.25	1.875	1.625	1.50
		2.50	1.875	1.875	1.50	2.00	1.75	1.75	1.75	1.625	2.125	2.125	1.625	2.00	1.875	1.875	1.875	2.00	1.625
		1.625	1.75	2.00	1.875	1.75	2.00	1.60	1.50	1.75	2.25	2.00	1.75	1.60	1.75	1.75	2.00	1.75	1.75
		2.125	1.75	1.50	1.875	1.875	1.875	1.875	2.50	1.50	2.00	2.00	2.50	2.125	1.50	1.75	2.125	1.50	1.50
		1.50	2.25	1.50	1.625	1.625	2.00	2.00	2.25	2.25	2.25	1.875	1.75	2.00	2.25	2.00	1.25	1.50	1.50
		1.50	2.00	1.25	1.75	1.50	1.75	1.75	1.875	2.125	2.25	1.50	2.25	2.25	2.375	1.875	1.50	1.50	1.625
		2.125	2.25	2.00	1.75	1.625	1.625	2.00	2.125	2.25	2.125	2.125	1.875	1.75	1.625	1.75	1.625	2.00	2.00
		2.25	1.50	1.50	2.50	2.125	1.50	1.75	1.875	1.875	2.375	2.00	2.25	1.75	2.00	2.25	2.00	1.75	2.375
		1.75	1.75	1.625	2.00	2.00	1.50	2.25	2.00	2.00	2.00	2.125	2.00	1.75	2.25	2.25	1.875	2.125	2.50
		2.50	2.00	2.00	1.50	1.875	1.50	1.875	2.125	1.50	1.50	2.25	2.125	1.50	1.75	1.875	1.75	1.75	2.25
1.875	2.00	1.375	1.375	2.50	1.625	1.75	2.00	1.625	2.00	2.375	2.25	2.00	2.00	2.25	2.00	2.00	2.00		
1.625	2.50	2.125	1.625	1.625	2.00	1.625	1.875	1.625	1.625	1.50	2.125	1.75	1.875	2.125	1.50	1.75	2.125		
2.00	1.75	3.00	1.50	2.00	2.125	1.25	2.125	2.125	1.75	1.875	1.875	2.125	2.00	2.00	1.625	1.50	1.50		
2.00	1.875	1.75	1.50	1.75	1.50	2.00	1.875	2.25	1.625	1.50	2.00	2.25	1.50	2.00	1.875	1.875	1.75		
2.25	1.75	2.60	1.75	2.00	1.75	1.75	1.50	2.25	1.75	3.00	3.00	1.875	2.125	2.00	1.25	1.50	2.00		
1.875	2.00	1.75	2.00	2.00	1.625	1.25	1.625	1.875	1.50	1.75	3.125	2.00	2.125	1.875	2.00	1.75	2.125		
3.00	1.75	2.00	2.00	1.75	1.50	1.25	2.125	2.00	1.875	1.50	2.25	2.125	2.25	1.625	1.50	1.75	1.75		
2.875	1.50	1.75	1.25	1.75	1.75	1.125	2.625	1.75	1.375	2.00	2.00	1.50	1.75	2.25	1.375	1.50	2.25		
2.50	1.875	1.875	1.375	1.875	1.625	1.625	1.875	1.625	1.25	1.50	2.00	1.625	1.75	2.50	1.875	1.50	2.375		
2.00	1.875	1.625	2.00	2.00	2.00	1.75	2.00	1.75	1.50	2.00	1.875	2.00	2.125	1.50	2.25	2.50	1.50		
1.625	2.00	1.625	1.75	1.375	1.875	1.25	1.75	1.50	1.75	2.125	2.125	1.875	2.00	1.875	1.125	1.375	1.625		
2.00	1.75	2.25	2.125	1.875	1.00	1.125	2.125	1.75	1.50	2.125	2.25	2.50	1.75	1.50	1.875	2.25	1.75		
2.25	1.50	1.50	2.00	1.625	1.125	1.375	2.00	1.75	1.625	2.00	2.375	2.60	2.00	1.125	1.50	2.00	1.875		
1.75	1.75	1.50	1.50	1.50	1.50	1.50	1.875	1.875	2.00	1.625	2.25	1.625	2.50	1.50	2.00	2.375	1.50		
2.00	1.50	2.00	1.875	1.625	2.00	1.125	1.875	2.25	1.00	1.50	2.50	2.25	1.375	1.75	1.50	1.375	2.00		
1.625	1.625	1.625	1.75	1.75	1.75	1.125	2.00	2.00	1.75	1.875	2.00	2.125	2.50	2.25	1.25	2.25	1.625		
2.25	2.125	2.00	1.75	2.25	1.50	1.60	1.625	2.50	1.625	1.75	1.875	1.625	1.875	3.00	1.375	2.00	2.625		
2.00	1.50	1.75	1.625	1.625	1.875	1.875	1.75	2.375	2.125	2.00	2.50	1.60	1.625	3.25	1.75	1.625	1.375		
2.125	2.25	1.875	2.125	1.75	1.60	1.75	1.75	1.625	2.00	2.00	2.00	1.60	2.00	2.375	1.25	2.25	1.375		
2.00	1.625	1.875	1.50	1.50	1.625	1.375	1.625	1.50	2.50	2.00	2.00	1.50	1.75	2.00	1.625	2.375	1.625		
1.875	2.00	1.625	2.25	2.00	2.25	1.50	2.00	2.00	1.625	1.50	2.125	1.50	1.875	1.75	2.00	2.50	1.625		
2.25	1.875	2.00	1.50	2.00	2.50	2.375	1.50	1.50	1.875	2.125	2.00	1.625	2.25	1.625	1.75	1.75	1.875		
2.00	2.00	2.00	1.75	2.50	1.50	1.60	1.875	2.125	1.125	2.00	2.00	1.50	1.625	1.75	1.125	2.50	2.50		
2.125	1.625	2.25	1.875	1.75	2.60	1.25	1.75	1.75	1.625	2.75	2.50	1.75	1.625	2.00	2.00	1.75	1.25		
2.00	1.50	1.875	1.60	1.375	2.00	1.125	2.00	1.875	2.00	2.50	1.875	1.875	2.50	1.625	1.25	1.625	1.75		
2.00	1.75	2.00	1.50	1.25	1.375	1.00	1.50	1.75	1.375	1.75	1.625	2.00	2.25	2.00	1.375	2.00	1.875		
1.875	1.50	1.75	1.625	1.125	1.875	1.875	2.125	2.00	2.00	2.50	1.75	2.00	2.00	1.75	1.625	1.875	1.125		
2.125	1.875	1.875	1.50	2.00	2.00	1.75	2.00	2.125	1.625	1.875	1.875	2.00	1.60	1.625	2.50	2.50	1.50		
2.00	2.00	2.125	1.75	1.75	1.75	1.75	1.50	1.75	1.50	1.75	2.00	2.25	1.575	2.25	2.00	1.625	2.00		
1.75	2.00	2.00	2.00	1.50	1.75	1.125	1.75	1.625	1.75	1.50	1.875	2.00	2.00	2.125	1.75	1.875	1.50		
Totals .....	100.25	01.250	02.00	87.75	02.50	86.625	70.375	05.750	04.00	92.875	100.250	104.50	05.75	08.50	05.50	80.125	02.375	03.50	

Recapitulation and reduction:	No. of section.		In centimillimeters.		In thousandths of inch.	
	B'	B''	B'	B''	B'	B''
Maximum measurements.	3.00	2.60	1.1811	0.9312	2.50	2.50
Highest.....	3.00	2.60	1.1811	0.9312	2.50	2.50
Minimum measurements.	1.50	1.50	0.5905	0.4921	1.25	1.00
Lowest.....	1.25	1.25	0.4921	0.3937	1.00	1.00
Average measurements..	2.005	1.825	0.7893	0.7185	1.750	1.85
Average.....	1.89	1.840	0.7440	0.7244	1.779	1.793
Measurements above average..	60		61		74	
Measurements below average..	81		89		76	



TABLE I.—Measurements of fineness of wools—Continued.

		CALIFORNIA.																	
		EWES, 2 YEARS OLD.									EWES, 3 YEARS OLD.								
Catalogue number of samples..		607.			608.			645.			646.			647.			648.		
Number of section.....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
		2.00	2.75	2.625	1.75	2.00	2.25	2.25	1.75	2.00	1.50	2.00	1.75	2.50	2.00	1.50	2.25	2.50	2.00
		2.00	1.625	3.50	1.875	1.625	2.375	1.875	1.875	2.375	1.125	1.375	1.50	2.00	2.50	1.75	2.375	2.50	2.00
		2.00	2.50	2.50	1.875	1.75	2.00	2.375	1.875	2.125	1.625	1.50	1.75	2.25	2.00	2.50	1.50	1.75	2.75
		2.50	2.00	3.00	1.50	1.625	2.00	2.25	2.375	1.50	2.00	1.625	1.875	1.50	2.00	3.00	2.00	1.50	2.00
		1.25	2.125	2.50	1.50	1.875	2.25	2.50	1.50	2.125	1.50	1.50	1.50	2.00	2.00	1.875	2.25	2.00	1.875
		1.375	1.625	2.375	2.125	1.75	2.00	1.50	2.25	2.125	1.375	1.25	1.75	1.75	2.00	2.00	2.375	1.75	2.00
		2.375	2.50	2.75	1.875	1.75	2.25	2.25	1.50	1.875	1.25	1.75	1.75	2.50	2.00	3.00	1.50	1.875	1.50
		2.50	1.75	2.75	1.875	1.50	2.00	1.375	2.00	1.75	1.25	1.50	1.50	2.50	3.00	1.625	1.50	2.00	1.875
		1.875	1.625	3.00	2.00	1.75	2.25	1.50	1.625	3.50	2.125	1.75	2.00	2.50	1.875	2.00	3.00	1.875	2.00
		1.625	2.50	2.50	1.75	2.25	1.875	1.375	1.50	2.00	1.875	1.50	1.875	2.375	2.00	1.75	1.875	2.50	2.50
		2.25	2.25	3.60	1.625	2.60	2.375	1.375	1.875	1.50	1.50	1.75	1.50	2.50	2.50	1.875	1.875	2.00	1.875
		2.00	1.875	2.375	1.375	2.00	1.75	1.875	1.625	3.00	1.50	1.75	1.875	2.50	2.00	1.75	2.50	1.625	2.00
		2.00	2.00	2.50	1.875	1.625	1.875	2.00	3.00	1.875	1.75	1.75	1.50	2.00	2.50	2.00	2.00	2.00	2.00
		1.875	2.00	2.00	1.625	2.125	2.00	1.875	1.75	1.625	1.875	2.60	1.50	2.50	2.50	2.50	1.875	1.50	2.00
		1.75	2.00	2.125	2.25	1.75	2.125	1.50	3.25	2.00	1.50	1.75	1.75	1.75	2.00	2.75	1.50	1.50	2.375
		2.75	3.00	1.875	1.625	2.00	2.00	1.75	1.625	1.25	1.875	1.50	2.00	1.75	2.00	2.125	2.625	2.125	2.00
		2.125	2.25	2.375	1.75	2.00	2.00	1.50	1.00	2.50	1.25	2.00	2.00	2.00	2.50	2.00	2.00	1.875	1.625
		2.375	1.75	2.00	1.50	1.875	2.50	2.60	1.50	1.50	1.375	1.50	1.875	3.00	2.25	1.50	1.875	2.00	1.75
		1.75	2.25	2.00	1.50	1.50	2.125	1.50	1.875	2.00	1.50	1.75	1.375	2.50	2.50	1.50	2.375	2.00	2.00
		2.375	2.00	6.375	1.875	1.50	2.00	3.25	2.50	1.875	1.50	1.50	3.00	2.125	1.50	1.875	1.75	1.875	1.875
		2.375	2.50	2.60	1.00	2.00	1.875	1.50	1.875	2.50	2.625	1.50	2.00	2.25	2.50	1.50	2.125	2.00	3.00
		2.25	2.50	2.50	2.00	1.50	2.00	1.50	2.25	1.375	1.75	1.50	1.625	2.00	2.25	1.25	1.75	1.25	2.00
		2.50	2.00	2.75	1.875	1.625	2.25	1.50	2.125	1.50	1.875	2.125	1.50	2.50	2.00	2.00	2.00	2.00	3.00
		2.875	2.375	2.375	1.875	1.75	2.50	1.875	1.625	2.00	1.50	1.75	1.75	2.00	2.50	2.00	1.75	2.50	1.875
		2.625	2.00	2.373	2.25	2.00	2.50	2.00	1.625	1.875	2.00	1.375	1.75	2.00	2.00	1.50	2.25	1.625	2.375
		2.25	2.00	2.00	1.75	1.75	2.00	2.00	1.625	2.625	1.875	1.75	1.625	2.25	2.50	2.50	2.00	2.00	1.75
		2.375	1.875	2.125	2.00	1.625	1.625	2.00	2.25	1.375	1.50	1.375	1.375	3.00	1.75	2.25	2.25	1.50	2.00
		2.125	1.625	2.25	1.50	2.00	2.50	2.375	3.00	1.75	1.875	2.00	1.375	2.00	2.75	2.375	2.00	1.75	2.00
		2.50	1.75	2.50	1.75	1.75	2.375	1.75	2.00	1.375	1.125	1.375	1.625	2.00	1.75	3.375	2.00	1.875	2.00
		1.875	1.875	2.375	1.625	1.625	2.125	1.75	1.875	2.375	1.50	1.625	2.25	2.50	2.25	2.625	2.625	2.50	2.375
		2.50	2.50	3.25	1.50	2.00	1.75	2.00	2.625	2.00	1.50	1.75	1.875	2.00	2.50	2.00	2.00	2.75	2.00
		2.50	2.00	1.875	1.625	1.75	2.25	2.60	1.875	1.50	1.50	1.50	1.50	2.00	3.00	2.00	1.50	2.125	2.375
		3.25	2.25	3.00	1.50	2.125	2.00	2.125	3.00	3.125	1.875	2.00	1.50	2.00	2.25	2.50	2.00	2.00	2.50
		3.50	1.75	2.375	1.875	2.25	2.25	1.625	1.875	1.625	2.125	2.00	1.50	2.25	2.50	1.875	2.25	1.75	2.00
		2.125	2.00	2.50	1.875	2.00	1.75	1.125	2.50	2.00	1.125	1.50	1.375	2.50	2.00	2.75	2.00	1.75	2.00
		2.00	2.00	2.50	1.75	2.00	1.50	1.50	2.125	1.625	1.125	1.875	2.00	2.50	2.00	2.50	2.25	1.875	2.50
		2.00	2.25	3.00	1.75	1.50	2.00	1.875	1.76	1.625	1.875	1.50	1.50	2.00	3.25	2.25	2.125	1.875	2.00
		3.25	2.00	2.60	1.60	1.75	2.50	1.875	2.125	2.25	1.50	2.125	1.50	2.00	2.25	3.125	2.60	2.00	2.50
		2.00	2.375	2.125	1.75	2.00	2.00	1.50	1.625	1.625	1.00	1.50	1.50	2.50	2.125	2.50	1.625	2.00	2.00
		2.00	2.25	2.50	1.875	2.00	2.375	2.25	1.875	1.50	1.50	1.50	1.50	2.00	2.375	2.50	2.00	2.325	2.50
		2.125	3.00	2.25	2.00	2.00	2.25	2.00	1.625	2.125	2.00	1.50	1.625	2.25	2.50	2.50	2.50	2.00	3.00
		2.00	2.50	2.50	1.875	1.75	1.875	2.125	1.875	2.00	1.625	1.50	1.875	2.59	2.25	2.50	1.875	1.875	2.00
		2.00	1.75	2.00	2.00	2.00	2.00	2.00	1.50	1.50	1.625	1.50	2.00	2.50	2.00	2.50	2.125	1.875	2.00
		2.375	2.75	1.875	2.00	1.625	2.00	1.75	2.25	2.375	1.375	1.50	1.75	2.50	2.25	2.75	2.00	1.50	2.00
		2.50	2.00	2.50	1.625	1.50	2.125	2.25	1.50	1.625	1.875	1.375	1.625	2.50	1.625	2.75	2.00	1.50	2.00
		1.875	2.25	2.50	1.50	2.00	1.875	1.875	2.00	2.00	1.375	1.625	2.00	2.00	1.625	2.00	1.50	2.25	2.00
		2.625	1.75	2.875	1.50	2.00	2.25	1.75	2.25	3.00	1.50	1.375	2.00	2.75	2.125	1.75	2.00	1.875	1.875
		2.50	2.125	2.50	1.75	2.00	2.00	1.75	1.75	1.875	1.625	1.50	1.375	2.25	3.00	1.875	2.00	2.00	2.00
		2.375	2.60	2.00	2.00	1.75	2.00	2.00	1.875	2.00	1.625	2.50	1.50	2.25	2.50	2.00	2.00	2.50	2.125
		2.00	2.00	2.75	2.50	2.00	2.50	2.50	1.875	2.00	1.625	1.60	2.00	2.00	2.60	1.75	2.00	2.25	2.00
	Totals .....	112.875	106.875	127.25	88.50	90.875	105.00	94.375	96.875	98.875	80.25	82.50	84.75	112.25	121.375	110.25	103.875	97.50	106.75

		No. of section.			In centimillimeters.			In thousandths of inch.			No. of section.			In centimillimeters.			In thousandths of inch.					
Recapitulation and reduction:	Maximum measurements.	B'	3.50	1.3770	B'	2.50	0.9842	B'	3.25	1.2795	B'	2.625	1.0384	B'	3.00	1.1811	B'	3.00	1.1811			
		B''	3.00	1.1611	B''	2.25	0.8858	B''	3.25	1.2795	B''	2.50	0.9842	B''	3.00	1.1811	B''	2.75	1.0620			
		B'''	6.375	2.5098	B'''	2.50	0.9842	B'''	3.50	1.3779	B'''	3.00	1.1811	B'''	3.375	1.3287	B'''	3.00	1.1811			
	Highest.....	6.375			2.50			0.9842			3.50			1.3779			3.00			1.1811		
Minimum measurements.	Lowest.....	B'	1.375	0.5413	B'	1.00	0.3937	B'	1.125	0.4429	B'	1.00	0.3937	B'	1.50	0.5905	B'	1.50	0.5905			
		B''	1.625	0.6397	B''	1.50	0.5905	B''	1.00	0.3937	B''	1.25	0.4921	B''	1.50	0.5905	B''	1.50	0.5905			
		B'''	1.875	0.7380	B'''	1.50	0.5905	B'''	1.25	0.4921	B'''	1.375	0.5413	B'''	1.50	0.5905	B'''	1.50	0.5905			
	Average.....	1.375			1.00			0.3937			1.00			0.3937			1.50			0.5905		
Average measurements..	Average.....	B'	2.258	0.8889	B'	1.770	0.6968	B'	1.887	0.7420	B'	1.605	0.6318	B'	2.245	0.8638	B'	2.078	0.8181			
		B''	2.138	0.8417	B''	1.818	0.7157	B''	1.937	0.7625	B''	1.65	0.6496	B''	2.427	0.9555	B''	1.95	0.7677			
		B'''	2.545	1.0019	B'''	2.10	0.8267	B'''	1.977	0.7783	B'''	1.695	0.6673	B'''	2.205	0.7893	B'''	2.135	0.8405			
	Average.....	2.32			1.896			0.7407			1.98			0.7598			1.65			0.6496		
Measurements above average..		74			74			67			59			58			45					
Measurements below average..		76			76			83			91			92			105					



TABLE II.—Measurements of strain and stretch of wools.

VERMONT.																
RAMS, 2 YEARS OLD.																
Catalogue number of samples..	423.				525.				534.				543.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	4.00	2.00	5.75	6.50	10.50	5.00	8.00	7.25	4.75	9.50	3.75	9.25	4.00	2.25	7.25	5.25
	4.50	1.75	4.00	2.75	6.50	3.75	6.00	6.00	7.75	7.00	3.50	7.75	5.00	7.75	2.50	2.50
	8.00	5.00	5.00	8.00	3.00	5.00	5.625	2.25	2.625	4.00	3.00	7.00	5.00	7.25	3.50	6.75
	5.50	5.75	4.75	5.25	11.25	5.00	12.625	8.00	4.375	7.25	7.00	8.50	4.25	7.75	3.00	4.00
	5.75	6.375	6.75	5.75	8.375	5.00	4.25	5.50	3.625	6.75	3.75	6.25	4.75	5.00	5.25	7.50
	4.00	4.50	5.25	6.00	7.00	3.00	6.625	4.00	5.375	9.25	4.75	9.75	3.50	2.75	4.00	3.00
	6.00	2.25	4.00	4.50	5.75	6.00	7.50	6.50	10.75	9.00	5.00	9.00	2.25	7.75	5.50	6.25
	5.25	4.50	6.75	6.375	2.75	1.125	10.25	5.75	3.00	9.25	7.00	7.75	7.00	8.00	5.00	4.25
	7.25	6.875	5.25	2.875	5.00	3.25	5.625	4.75	3.00	4.75	2.625	7.50	3.75	9.50	5.75	6.00
	4.00	2.60	6.375	4.00	5.00	7.75	2.625	1.75	5.625	3.50	10.00	6.00	4.00	6.00	4.00	8.00
	5.00	4.25	5.00	2.875	6.375	8.50	12.00	8.75	4.60	8.25	8.75	6.25	4.00	9.75	5.75	11.00
	0.50	5.50	3.75	1.25	5.00	2.25	4.00	2.50	3.25	7.00	2.625	4.25	4.00	8.00	4.75	5.50
	4.25	1.60	5.75	7.125	4.625	10.00	2.625	5.00	8.375	4.75	2.25	3.75	5.50	8.25	3.50	1.50
	4.25	2.00	5.75	5.00	4.00	5.00	7.00	7.00	3.625	4.00	8.00	4.75	3.00	2.50	4.25	9.75
	5.50	6.50	5.25	3.875	10.50	7.00	5.625	5.25	6.75	4.75	8.00	2.75	3.00	2.00	6.75	7.00
	4.50	3.00	4.75	4.00	4.625	5.75	8.25	7.00	4.00	2.50	4.50	6.25	6.00	5.00	3.00	4.75
	5.00	2.00	6.50	5.75	4.375	3.75	7.75	7.00	4.50	1.00	3.625	5.00	2.00	4.00	5.75	8.75
	6.00	2.50	4.875	4.875	2.25	1.25	4.375	5.00	2.75	3.00	3.625	7.25	5.25	6.00	4.75	11.00
	7.50	5.875	5.00	3.00	5.375	7.00	5.50	6.00	3.625	8.00	8.75	6.25	5.00	6.00	4.00	6.00
	7.25	3.75	6.00	3.00	5.50	4.75	7.25	6.50	7.00	2.00	4.25	8.00	2.00	2.00	6.25	9.00
	6.00	1.25	5.50	2.00	7.375	8.00	0.25	7.00	5.00	4.00	3.625	7.75	2.00	1.00	4.75	8.25
	4.25	1.50	5.00	4.875	5.375	6.75	9.00	9.00	4.00	6.50	4.00	1.75	5.75	7.50	3.00	2.50
	5.50	4.875	4.00	2.875	10.25	7.00	5.375	7.00	4.50	3.00	10.25	5.00	4.50	8.00	4.00	7.00
	6.00	3.75	5.50	4.375	4.375	7.00	3.50	6.75	5.375	7.25	3.50	8.25	3.75	9.00	3.75	5.00
	6.00	3.00	5.75	7.00	4.75	6.50	8.25	8.25	4.25	8.25	6.75	8.00	4.00	7.00	5.25	6.00
Totals .....	137.75	92.75	132.625	111.875	146.675	130.50	161.875	140.75	125.375	139.50	127.875	164.00	103.25	150.00	115.25	155.50

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	8.00	123.48	7.125	35.625	12.625	104.86	10.00	50.00	10.75	165.92	9.75	48.75	7.25	111.90	11.00	53.00
Lowest .....	3.75	57.88	1.25	6.25	2.25	34.73	1.25	6.25	2.25	34.75	1.00	5.00	2.00	30.87	1.00	5.00
Average .....	5.41	83.50	4.00	20.45	5.78	89.21	5.61	28.05	5.07	78.25	6.07	30.85	4.37	67.45	6.11	30.55
Tests above average .....	25		25		21		20		16		29		23		25	
Tests below average .....	25		25		29		24		34		21		27		25	

VERMONT.																
RAMS, 3 YEARS OLD.																
Catalogue number of samples..	526.				530.				533.				535.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	6.00	8.25	4.25	9.00	3.25	6.25	3.75	7.75	3.25	7.00	4.00	8.25	5.00	3.25	5.25	7.75
	5.50	8.00	4.00	7.50	3.75	5.50	3.75	6.25	8.00	6.75	6.00	8.50	6.25	7.75	6.00	5.75
	4.50	8.00	6.00	10.00	4.375	6.50	3.625	6.50	7.25	10.00	4.50	7.00	10.00	6.00	4.50	5.25
	0.50	6.50	10.00	9.00	3.75	3.75	3.50	10.25	6.25	6.75	4.00	7.00	8.75	7.75	6.25	7.00
	6.25	9.75	6.00	8.00	5.875	8.25	2.625	6.00	6.00	9.75	4.50	6.00	5.00	7.50	6.125	4.00
	6.00	10.00	6.00	9.00	3.375	5.00	2.625	8.60	5.50	9.75	7.00	9.50	5.00	5.75	4.25	6.50
	6.00	10.00	4.25	8.25	6.50	7.00	4.00	7.00	6.00	8.25	4.50	9.50	7.125	6.25	5.25	1.25
	0.75	9.75	0.00	7.25	4.00	6.50	4.50	9.00	3.75	6.75	2.75	3.25	8.00	6.00	8.25	4.50
	6.00	8.00	7.25	7.00	3.60	8.25	4.25	5.75	6.00	3.75	7.00	8.00	6.25	5.25	4.50	4.875
	6.25	9.00	5.00	2.00	6.375	7.50	6.00	7.25	2.25	5.50	4.25	7.00	5.00	7.75	8.125	8.125
	5.00	9.75	8.75	9.25	4.375	7.00	3.00	3.75	3.00	6.00	6.00	4.25	4.75	6.00	6.00	5.00
	4.75	9.00	4.50	8.25	10.375	8.50	6.00	5.75	4.25	9.25	3.25	5.75	5.00	5.875	6.25	5.25
	4.25	8.00	4.25	8.00	4.75	7.75	5.375	5.75	7.00	3.50	4.00	5.00	5.00	6.00	4.875	4.875
	8.50	10.00	6.00	9.50	4.75	7.75	4.375	5.75	3.50	4.75	5.50	6.25	7.00	5.00	8.00	8.00
	8.00	10.75	6.00	9.25	4.25	7.25	3.375	8.00	2.50	4.50	6.00	9.00	8.75	2.25	6.50	9.00
	7.00	8.75	4.00	9.00	3.625	4.25	4.00	6.00	9.00	5.75	3.75	8.00	8.25	6.75	8.75	5.75
	4.00	6.50	6.75	10.25	3.625	3.00	5.375	3.50	6.00	8.00	6.50	10.00	8.75	2.75	6.25	2.25
	6.00	11.00	4.00	7.00	3.375	4.50	6.00	6.00	10.00	7.00	4.50	7.00	4.00	3.50	6.375	6.125
	5.25	8.25	4.25	8.00	1.00	8.00	6.00	5.75	4.25	3.00	3.25	3.00	5.25	3.00	6.75	7.75
	6.00	7.25	6.00	9.50	2.625	4.25	2.50	3.50	6.00	2.75	6.00	0.75	5.75	8.75	5.25	5.25
	4.00	6.00	11.25	9.00	2.75	4.25	4.375	5.25	6.00	6.00	3.25	5.75	8.50	3.875	5.75	8.125
	7.50	5.75	4.00	8.00	1.50	8.00	3.375	4.00	6.00	2.00	4.50	9.50	6.00	5.875	11.25	4.25
	5.00	6.50	5.50	9.50	4.50	5.25	7.75	6.60	3.00	7.00	3.75	3.00	7.25	5.75	5.25	5.50
	4.75	9.75	7.00	7.75	9.375	8.25	4.825	8.25	4.50	8.50	5.25	2.25	6.50	5.50	6.25	5.00
	6.25	7.00	6.25	6.00	3.25	4.00	3.625	3.75	6.00	10.50	7.00	7.00	5.25	6.75	4.00	4.00
Totals .....	149.00	211.50	147.25	205.50	120.375	150.50	107.375	150.75	132.25	162.75	122.00	160.50	160.375	140.625	151.00	140.875

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	11.25	173.64	11.00	53.00	10.375	160.13	10.25	51.25	10.00	154.35	10.50	52.50	11.25	173.64	9.00	45.00
Lowest .....	4.00	61.74	2.00	10.00	2.50	38.69	3.00	15.00	2.25	84.73	2.00	10.00	3.75	57.88	1.25	6.25
Average .....	5.93	91.53	8.34	41.70	4.50	70.38	6.11	30.55	5.85	90.29	6.69	32.95	6.23	90.16	5.63	28.15
Tests above average .....	29		24		17		35		19		29		23		20	
Tests below average .....	21		26		33		25		31		21		28		24	



TABLE II.—Measurements of strain and stretch of wools—Continued.

Catalogue number of samples..		VERMONT.															
		RAMS, 3 YEARS OLD.															
		537.				540.				545.				554.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.		
		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.		
Actual measurement in grams and millimeters.	4.00	8.875	6.50	7.125	4.625	4.25	6.25	6.00	7.00	9.00	8.00	4.375	5.00	3.875	5.00		
	4.50	0.00	4.375	5.25	7.00	7.00	4.50	7.50	7.25	7.00	8.00	4.125	6.00	5.75	7.00		
	8.00	9.25	5.00	7.00	0.00	5.25	9.75	4.00	0.00	4.50	10.25	7.75	4.50	6.125	5.25	7.00	
	3.875	7.00	5.25	3.50	2.00	3.00	3.875	5.50	7.00	8.00	8.00	5.75	5.00	5.00	7.00		
	3.875	4.50	5.50	8.00	7.00	5.00	7.375	7.00	8.00	8.00	0.25	5.75	4.50	7.00	4.00	6.00	
	5.125	8.75	5.00	5.875	4.60	5.75	4.375	3.25	8.00	3.25	6.25	7.00	4.50	6.50	4.025	7.75	
	4.125	6.125	3.875	8.00	5.50	4.00	12.00	7.00	7.00	6.25	8.50	8.75	3.375	7.00	4.50	5.125	
	4.50	3.00	5.625	8.00	5.75	5.50	10.00	6.625	9.75	8.75	8.50	8.75	5.25	6.875	5.00	7.00	
	6.25	6.75	6.50	8.00	7.50	5.00	0.50	4.00	7.00	5.00	2.75	2.75	4.00	8.00	5.00	6.75	
	6.75	6.75	4.375	5.25	4.625	0.00	12.125	7.00	7.00	2.75	9.75	8.75	2.875	6.25	5.625	6.00	
	7.00	7.00	4.25	8.00	5.375	5.75	3.00	3.00	6.00	5.00	6.00	3.50	2.875	6.25	5.625	7.00	
	4.50	5.125	5.125	8.00	9.125	7.00	3.50	4.00	6.00	2.00	8.50	4.00	4.75	6.00	5.00	6.50	
	4.125	5.75	4.00	7.00	15.50	7.00	7.75	5.00	0.75	5.75	7.75	5.50	7.00	7.00	5.625	7.00	
	5.125	3.50	9.75	8.25	0.50	7.375	8.375	3.00	11.25	9.25	8.00	7.00	4.375	7.00	4.50	7.00	
	4.625	5.00	7.125	6.25	6.625	7.00	5.875	5.00	6.25	7.00	7.75	6.00	4.25	5.75	3.50	6.25	
	0.625	3.125	4.375	7.00	4.00	8.25	14.875	5.00	6.75	4.00	7.25	8.00	5.10	8.00	4.00	7.625	
	4.00	5.875	4.125	0.75	4.00	5.125	4.75	0.00	0.25	3.75	6.50	6.75	0.60	8.00	3.25	4.875	
	5.375	6.75	3.625	6.00	4.625	5.00	12.125	0.75	5.50	4.75	9.00	6.75	5.75	7.125	2.50	4.00	
4.75	0.25	5.125	7.875	4.875	7.00	2.75	4.00	7.75	3.50	8.75	7.75	6.00	7.00	5.25	6.25		
7.25	0.00	6.50	7.50	6.00	7.00	5.25	2.25	9.00	7.00	7.00	0.25	3.75	5.75	4.625	8.00		
5.875	7.60	4.875	7.75	6.125	7.125	10.625	6.00	6.00	3.50	6.00	4.00	5.75	5.25	6.025	7.75		
2.25	4.50	5.375	6.00	16.50	8.00	7.125	4.00	14.50	8.25	6.00	8.00	5.125	5.00	6.50	7.875		
3.50	7.00	7.125	7.75	3.125	5.50	3.625	4.75	7.00	8.00	11.50	5.00	4.25	7.50	4.50	7.25		
5.50	7.25	3.375	4.00	3.125	4.875	5.00	5.75	7.00	8.25	7.50	8.00	3.375	6.25	4.00	8.125		
4.50	7.25	5.25	6.00	8.50	6.00	7.25	4.875	11.75	7.00	7.00	3.75	3.50	5.00	5.75	6.25		
Totals .....	128.00	154.875	133.00	170.125	170.50	150.75	178.625	127.25	186.75	149.75	192.00	159.75	122.125	165.50	108.50	106.25	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....		grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Lowest .....		0.75	150.49	9.25	46.25	16.50	254.67	8.25	41.25	14.50	223.80	11.50	57.50	9.50	146.63	8.125	40.625
Average .....		2.25	34.73	3.00	15.00	2.00	30.87	2.25	11.25	3.25	80.03	2.00	10.00	2.60	58.59	4.00	20.00
Tests above average .....		6.50	100.33	5.25	26.25	6.98	107.73	5.56	27.80	7.67	116.84	6.01	30.05	4.60	70.99	6.04	33.20
Tests below average .....		21	29	28	22	20	30	24	26	19	31	28	23	25	25	26	24

Catalogue number of samples..		VERMONT.															
		RAMS, 3 YEARS OLD.								EWES, 2 YEARS OLD.							
		555.				563.				424.				542.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.		
		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.		
Actual measurement in grams and millimeters.	3.00	1.25	7.25	8.50	10.00	10.00	10.50	8.75	4.375	7.25	4.00	6.00	11.50	4.25	5.50		
	4.25	2.75	3.00	7.00	4.00	6.00	9.75	8.00	4.25	6.00	4.25	6.00	3.50	6.50	6.00		
	5.25	7.75	6.50	6.00	7.00	8.00	4.50	7.00	4.00	6.00	4.25	6.00	3.00	3.25	5.25		
	7.75	5.00	6.50	8.25	10.00	8.00	5.75	7.75	3.875	0.25	3.625	5.75	4.00	6.50	4.375		
	4.00	6.60	12.00	7.00	7.00	8.75	7.00	7.25	5.625	5.50	6.75	7.25	5.625	7.25	6.625		
	2.50	1.50	3.75	4.00	9.25	9.00	3.25	3.00	6.50	8.50	4.75	6.25	3.50	6.75	4.75		
	3.50	4.75	4.00	3.00	5.50	6.25	3.00	5.75	3.625	3.75	6.625	6.25	0.25	8.25	6.25		
	3.75	3.00	6.00	8.50	0.00	9.00	6.50	8.00	3.75	5.00	3.25	5.75	4.25	5.50	4.00		
	10.25	0.25	4.25	3.75	5.00	3.75	3.00	9.00	4.25	5.00	4.25	7.00	4.00	0.00	4.375		
	6.25	7.00	4.00	8.00	15.75	9.00	7.25	6.75	4.00	4.00	5.375	4.50	7.625	8.25	4.00		
	8.25	7.00	4.00	2.75	11.00	8.25	5.50	8.50	4.375	7.00	6.75	5.50	10.625	9.00	6.375		
	3.75	9.75	8.00	9.00	5.76	8.25	8.00	8.50	4.875	7.75	7.25	3.25	7.25	11.25	5.625		
	6.75	7.75	7.50	7.00	4.25	8.25	10.50	7.75	4.00	7.75	5.375	5.25	3.25	6.75	7.00		
	4.00	3.60	4.50	5.50	3.00	4.00	6.25	7.00	4.00	5.75	5.375	5.25	3.375	4.25	7.75		
	11.25	7.75	0.00	2.75	0.50	9.00	6.50	10.00	8.375	4.25	3.375	4.25	0.375	0.75	6.00		
	6.25	4.75	4.50	4.00	5.75	8.75	3.75	5.00	0.625	6.50	5.375	6.25	4.625	6.75	3.25		
	8.00	8.60	4.00	5.00	5.00	8.00	12.00	8.00	4.50	0.60	3.375	2.25	9.25	7.25	3.375		
	7.50	8.25	3.00	7.75	5.00	0.25	0.75	8.00	3.50	5.00	6.375	7.75	5.25	8.25	3.625		
4.00	3.00	6.50	7.75	2.00	9.00	4.25	7.25	4.25	6.75	5.375	6.75	3.375	6.50	3.375			
5.25	8.00	7.00	6.75	3.50	6.00	10.50	0.75	9.375	8.00	9.00	3.75	6.50	2.25	6.25			
4.00	6.00	0.00	7.00	8.50	7.00	12.00	7.50	4.75	8.25	4.375	6.00	7.50	5.75	6.25			
8.00	2.00	7.00	8.75	10.00	9.00	5.00	7.25	4.625	5.50	5.75	6.00	7.375	0.25	3.625			
0.25	6.00	3.00	2.00	0.00	7.75	5.50	7.50	6.00	6.75	4.625	6.25	3.25	6.25	4.375			
3.25	5.00	8.75	3.25	3.50	5.00	3.75	7.25	3.375	4.25	4.25	6.00	6.50	5.50	3.625			
6.50	7.75	9.00	7.00	7.25	8.50	3.75	9.00	4.00	5.00	6.00	6.25	6.75	4.00	4.75			
Totals .....	132.50	134.75	149.00	144.50	175.25	191.00	164.50	180.60	118.875	162.25	127.75	141.50	136.00	166.50	128.125	191.375	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....		grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Lowest .....		12.00	185.22	0.75	48.75	15.75	243.10	10.00	50.00	0.875	144.60	8.60	42.50	10.625	163.99	11.50	57.50
Average .....		3.00	40.80	1.25	0.25	8.00	46.30	3.00	15.00	3.375	52.09	3.25	16.25	3.00	46.30	2.25	11.25
Tests above average .....		5.63	86.00	5.68	27.00	6.795	104.88	7.43	37.15	4.98	76.09	5.87	29.35	5.323	62.16	7.157	35.787
Tests below average .....		23	27	26	24	20	30	20	21	19	31	29	21	24	26	26	24



TABLE II.—Measurements of strain and stretch of wools—Continued.

VERMONT.																
EWES, 3 YEARS OLD.																
Catalogue number of samples.	522.				523.				524.				527.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	4.50	8.50	4.50	9.25	4.00	6.00	5.25	5.875	4.00	3.75	4.25	6.25	5.00	7.00	3.50	7.25
	5.75	9.25	4.25	9.00	6.75	5.50	9.875	7.25	4.00	8.75	4.25	7.00	7.00	9.25	4.125	6.75
	4.75	9.25	5.00	9.25	4.375	5.50	6.00	5.875	4.50	9.00	4.75	5.50	7.25	6.75	4.25	6.125
	5.00	8.00	5.25	9.25	8.00	7.00	4.00	8.00	4.00	6.50	3.25	8.00	5.75	7.00	8.75	6.125
	3.50	9.50	4.75	8.00	10.75	6.00	2.50	4.75	4.25	8.00	4.00	8.00	6.50	8.25	4.00	3.50
	3.50	6.00	4.75	10.00	6.00	7.25	4.00	6.25	4.50	9.50	2.75	3.75	4.625	5.00	4.375	6.50
	5.50	8.50	3.25	8.00	3.625	7.50	7.00	7.00	3.50	10.00	4.00	7.00	8.75	7.00	3.00	6.75
	8.00	9.00	6.50	10.75	4.25	6.00	7.50	8.00	4.00	9.75	3.00	5.00	4.75	6.75	5.00	7.00
	5.25	8.25	5.25	6.50	4.375	6.00	4.00	6.00	4.00	4.00	5.00	9.00	3.50	8.00	3.625	6.00
	4.50	8.00	4.75	9.00	5.50	5.00	5.00	7.25	7.00	4.75	4.00	8.75	2.75	4.625	5.00	5.75
	4.25	8.00	11.00	7.00	4.875	6.50	6.125	8.00	3.50	8.00	4.50	9.00	8.00	8.00	4.00	8.00
	7.00	9.00	4.00	8.00	4.50	8.00	4.00	5.75	4.75	8.00	6.00	9.00	4.875	8.00	7.25	7.25
	3.50	7.25	4.75	6.75	5.625	8.00	4.00	6.00	4.00	6.50	6.25	6.50	3.00	5.50	6.50	6.00
	3.50	7.75	4.00	5.00	5.875	6.50	3.875	7.00	8.00	7.50	4.00	8.00	7.25	7.25	6.375	9.00
	4.25	7.50	3.75	8.75	7.25	6.00	3.125	7.50	3.25	6.00	4.00	8.00	3.75	4.50	7.00	6.125
	4.00	4.75	8.50	8.25	5.50	7.00	4.375	7.50	2.75	6.50	3.75	8.50	4.50	4.00	3.50	6.00
	5.75	8.75	7.50	6.50	5.75	6.00	4.00	8.00	5.75	8.75	3.25	5.25	5.375	4.00	4.875	6.25
	9.00	9.00	4.00	8.75	4.75	6.00	5.25	9.00	4.75	8.50	6.50	8.50	4.125	4.60	4.25	6.25
	3.50	7.25	4.00	8.00	4.375	6.25	4.375	7.50	5.25	8.50	4.50	7.75	5.25	5.00	5.375	7.00
	5.75	4.75	4.50	7.50	6.875	7.25	6.875	8.00	4.00	9.00	3.75	7.50	6.375	10.375	7.00	7.00
	6.00	4.00	5.75	8.25	3.25	7.00	4.50	8.00	4.00	4.00	6.00	5.50	4.00	6.125	7.50	7.50
	6.00	5.25	8.00	7.00	4.50	3.50	5.625	7.00	3.50	7.25	6.50	7.75	8.00	2.75	7.00	7.00
	8.50	9.00	3.50	6.00	6.75	7.00	4.625	7.00	4.25	8.50	3.50	7.00	7.50	5.25	5.25	5.25
	4.00	4.00	4.25	7.75	6.00	6.00	5.75	8.00	6.00	10.00	3.50	6.00	4.50	7.125	4.625	6.00
Totals .....	130.25	189.75	129.50	196.50	140.50	161.50	126.625	171.00	111.50	197.75	107.00	170.75	127.375	100.75	127.25	161.375

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Recapitulation and reduction:																
Highest .....	11.00	109.78	10.75	53.75	10.25	158.20	0.00	45.00	8.00	123.48	10.00	50.00	10.375	160.13	9.25	46.25
Lowest .....	3.25	50.16	4.00	20.00	2.50	38.50	3.00	15.00	2.75	42.44	3.00	15.00	2.25	34.73	3.50	17.50
Average .....	5.30	80.26	7.73	38.65	5.34	82.42	6.65	33.25	4.37	67.45	7.49	37.45	5.09	78.56	6.50	32.50
Tests above average .....	19		31		22		27		19		31		20		27	
Tests below average .....	31		19		28		23		31		19		30		22	

VERMONT.																
EWES, 3 YEARS OLD.																
Catalogue number of samples.	528.				529.				531.				532.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	4.70	5.00	5.50	5.60	4.00	8.00	4.75	9.75	5.00	6.00	3.50	6.00	4.00	2.00	5.50	6.00
	4.00	5.00	6.75	7.75	6.75	6.75	6.25	9.75	4.75	8.75	3.75	8.50	4.375	2.50	7.00	8.00
	3.25	9.60	5.25	4.25	6.00	6.00	0.00	9.00	5.25	8.75	2.75	8.50	8.75	6.00	5.375	6.75
	8.75	7.75	3.375	6.50	4.75	7.75	4.75	7.00	5.00	9.00	4.75	9.00	4.50	4.25	4.00	3.25
	4.25	7.25	3.625	8.50	5.50	9.50	0.25	10.00	4.25	8.50	4.00	10.00	6.25	8.50	8.875	7.125
	2.00	1.00	3.25	2.50	6.00	8.00	6.25	8.75	2.00	7.75	4.75	11.00	9.125	5.25	8.00	7.25
	11.00	7.00	4.25	6.25	5.75	7.00	4.00	6.75	4.75	8.00	3.00	8.00	5.75	6.00	5.375	4.75
	5.625	8.00	6.50	7.50	3.25	7.00	4.00	9.00	3.00	6.25	5.00	10.00	8.675	8.00	10.25	8.25
	3.00	2.75	8.50	6.25	3.75	7.50	8.25	8.75	3.25	8.00	5.00	9.00	4.50	8.00	6.25	7.00
	6.50	6.50	4.00	9.00	3.60	9.75	4.25	7.00	4.25	8.25	4.00	12.00	9.00	7.00	6.375	7.375
	4.00	8.25	6.625	6.50	4.00	9.75	4.00	9.00	6.25	9.60	3.00	8.00	4.375	3.00	7.50	7.00
	3.625	5.00	4.375	6.50	4.75	6.00	4.00	10.00	4.50	10.00	4.25	10.00	6.25	5.125	7.125	7.00
	6.50	6.25	7.75	6.50	5.75	9.00	5.75	11.00	3.25	8.75	3.50	8.75	7.25	7.00	6.375	4.00
	2.375	4.75	12.60	3.00	4.60	8.75	5.25	8.50	2.00	7.50	5.75	6.25	4.625	7.50	8.50	7.50
	6.75	8.25	4.375	6.25	4.75	9.75	6.00	8.75	1.75	3.25	3.00	10.25	4.50	6.125	5.00	5.25
	3.50	8.25	3.75	5.25	3.75	8.75	4.50	11.00	4.25	7.00	3.75	11.00	6.625	9.00	6.375	6.375
	4.00	4.75	4.00	6.00	4.00	8.25	6.25	11.00	8.50	9.50	7.50	11.00	5.375	6.75	5.125	6.50
	4.25	8.25	4.75	7.00	6.25	10.60	4.50	9.00	2.75	9.75	2.00	6.50	4.125	4.50	6.25	4.75
	2.375	7.75	7.25	7.00	6.75	9.25	4.00	5.50	6.75	8.25	3.00	7.00	7.125	8.00	8.25	6.50
	4.60	9.25	3.875	1.00	3.25	5.75	7.00	8.75	6.00	10.00	4.00	10.00	9.25	6.25	6.00	7.00
	6.625	2.00	3.75	1.00	3.25	6.50	5.75	8.50	4.25	10.75	3.00	8.00	5.50	7.00	5.25	4.00
	5.25	6.25	3.00	2.50	5.00	8.25	9.00	7.75	2.75	9.00	8.00	9.25	6.125	3.75	4.125	7.50
	2.625	4.25	3.875	7.00	7.00	10.25	2.75	2.00	3.50	9.75	4.75	10.25	6.75	4.75	5.375	7.00
	6.00	8.00	7.375	6.00	3.00	10.00	5.25	9.75	4.00	9.00	5.00	11.00	5.875	3.125	5.125	5.00
	8.00	4.75	3.00	3.75	5.25	9.75	6.00	8.00	4.25	10.50	5.25	9.00	8.50	7.00	5.875	5.00
Totals .....	114.50	153.75	129.25	133.75	117.50	214.75	134.75	214.25	100.25	214.75	101.25	228.25	133.675	144.875	150.75	156.125

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Recapitulation and reduction:																
Highest .....	12.50	192.03	0.50	47.50	9.00	133.91	11.00	55.00	7.50	113.70	12.00	60.00	10.25	158.204	9.00	45.00
Lowest .....	2.00	30.87	1.00	5.00	2.75	42.44	2.00	10.00	1.75	27.01	3.25	16.25	4.00	61.74	2.00	10.00
Average .....	4.95	76.40	5.79	28.95	5.45	81.12	8.58	42.00	4.03	62.20	8.66	44.30	6.25	96.460	5.95	29.75
Tests above average .....	19		23		20		31		24		27		20		31	
Tests below average .....	31		22		30		19		26		23		26		19	



TABLE II.—Measurements of strain and stretch of wools—Continued.

Catalogue number of samples..		VERMONT.															
		EWES, 3 YEARS OLD.															
		536.				538.				539.				541.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.		
		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.		
Actual measurement in grams and millimeters.	6.00	7.75	5.50	6.00	6.25	7.00	6.25	7.50	5.25	9.875	4.50	8.25	3.75	9.00	4.60	8.50	
	5.00	8.00	9.00	7.00	2.625	2.25	4.00	2.50	8.375	10.00	3.00	7.25	8.50	8.50	0.00	8.00	
	8.00	10.00	7.00	7.75	3.625	5.75	3.75	7.75	3.375	8.00	4.25	7.75	4.75	8.25	3.25	7.00	
	6.00	9.00	4.75	8.00	4.625	5.50	7.625	9.00	2.50	4.875	3.50	8.50	4.25	9.50	2.75	5.00	
	6.25	11.00	6.75	8.50	3.625	1.00	6.375	4.75	6.00	8.875	4.25	7.50	5.60	8.50	3.50	10.00	
	6.50	6.00	7.00	8.00	6.75	7.75	5.625	7.75	4.50	10.125	6.00	7.00	8.00	8.50	4.75	6.50	
	0.25	8.00	8.00	8.00	4.00	6.00	7.50	5.25	4.50	9.25	3.00	6.875	4.50	8.75	4.50	9.50	
	8.00	10.25	4.25	8.00	5.50	6.00	6.00	8.25	3.25	8.25	6.50	8.75	0.75	9.00	4.25	9.00	
	8.50	7.75	3.25	8.00	5.625	9.00	4.25	6.25	7.00	8.25	8.00	8.50	0.75	3.00	2.75	3.00	
	5.50	6.75	5.25	6.25	5.625	8.00	3.25	6.00	4.00	9.00	8.25	7.75	8.50	8.50	7.00	3.00	
	4.75	8.75	7.00	5.00	4.50	8.00	6.75	7.25	4.125	9.75	6.25	7.50	5.75	7.75	4.00	7.75	
	5.75	5.00	5.00	7.00	7.50	8.75	5.625	5.75	3.50	7.00	4.50	6.75	5.50	6.00	6.00	7.50	
	4.75	6.75	0.00	6.25	6.25	8.00	3.25	8.00	4.75	8.75	6.25	7.25	6.00	6.00	6.00	7.50	
	6.25	4.75	3.50	1.50	0.00	9.50	6.50	7.00	4.875	8.50	3.00	8.50	8.00	5.00	5.00	0.00	
	9.75	7.50	8.75	8.75	7.25	7.25	3.375	6.00	4.375	8.00	6.25	7.75	5.50	6.75	4.00	2.50	
	7.50	7.25	6.00	6.75	4.25	5.75	3.375	7.50	4.00	8.875	4.25	4.00	7.00	7.00	4.00	6.50	
	8.00	9.00	8.00	0.75	3.00	6.25	6.00	9.75	5.00	8.75	5.75	7.75	6.00	8.00	4.00	9.00	
	0.75	6.00	5.00	5.00	4.75	7.00	3.25	7.75	11.625	9.75	5.00	8.875	5.75	8.50	3.75	3.50	
	8.50	9.00	5.00	10.00	8.00	5.25	3.375	6.75	7.50	7.50	6.875	9.50	3.75	7.50	6.00	7.50	
	4.00	3.00	7.25	10.50	4.375	7.75	4.00	9.25	5.75	9.00	3.375	7.25	3.25	7.00	3.00	5.25	
7.25	8.25	8.00	8.50	3.625	6.25	3.25	6.75	5.00	4.50	2.50	9.25	6.00	8.50	5.75	7.75		
9.25	7.00	7.75	8.75	4.625	7.25	3.25	6.00	7.50	11.00	3.25	6.00	5.50	6.75	6.00	8.00		
8.00	7.75	3.25	5.00	2.625	2.00	4.625	7.75	2.875	6.25	6.25	9.00	3.75	0.00	6.75	0.00		
6.00	5.75	4.00	3.00	3.375	7.25	5.25	7.60	4.375	7.25	4.25	9.50	4.50	9.75	5.50	7.00		
5.25	8.00	6.00	3.00	4.375	5.25	4.75	8.75	6.75	8.125	10.00	9.875	4.00	7.00	4.75	5.00		
Totals .....	171.75	186.25	150.25	174.25	120.625	150.75	120.25	176.75	129.75	209.50	122.00	197.25	136.75	195.75	118.50	173.75	
		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....		0.75	150.49	10.50	52.50	9.00	138.91	9.50	47.50	11.625	179.43	11.00	55.00	9.75	150.487	10.00	50.00
Lowest .....		3.25	50.16	1.50	7.50	2.625	41.21	1.00	5.00	2.60	38.59	4.00	20.00	2.75	42.444	2.50	12.50
Average .....		6.44	89.40	7.25	36.25	4.82	74.39	6.73	33.65	5.04	77.79	8.135	46.75	5.10	78.716	7.39	36.95
Tests above average .....		21		28		20		30		18		27		28		31	
Tests below average .....		29		22		30		20		22		23		27		19	

Catalogue number of samples..		VERMONT.															
		EWES, 3 YEARS OLD.															
		544.				546.				547.				548.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.		
		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.		
Actual measurement in grams and millimeters.	4.125	5.50	6.25	7.00	4.00	8.50	5.25	4.75	6.25	9.00	4.25	6.00	7.00	8.00	6.50	8.00	
	6.50	8.00	6.00	7.25	8.50	7.75	5.25	9.25	4.50	7.375	5.125	6.75	6.75	7.00	8.75	8.00	
	4.375	5.125	4.875	5.25	5.25	9.00	4.25	10.25	4.375	8.125	4.625	8.00	8.50	8.00	4.00	8.00	
	6.375	7.875	4.50	7.00	6.00	8.00	8.25	10.25	6.00	8.00	5.75	6.00	6.00	7.50	5.25	7.75	
	4.625	6.75	3.875	6.75	5.625	9.875	3.25	8.00	6.25	8.00	4.375	6.00	5.25	8.75	6.75	0.00	
	4.375	6.00	3.25	8.125	4.25	7.50	4.00	6.75	4.00	8.00	4.25	4.875	3.75	5.00	5.00	7.00	
	3.60	5.00	9.00	8.00	7.50	11.00	5.75	9.50	2.875	5.125	4.00	7.50	2.75	7.25	4.00	10.00	
	6.25	8.00	5.00	5.50	6.00	4.75	6.375	9.00	5.50	8.00	4.375	8.50	5.00	9.00	6.00	7.75	
	0.875	7.875	4.50	7.50	3.50	4.25	5.375	9.75	4.50	7.00	2.625	7.00	4.00	5.75	2.75	8.00	
	4.25	4.00	3.375	6.875	3.625	7.75	4.00	5.50	3.50	3.125	6.50	8.00	3.00	6.00	8.25	0.00	
	17.00	8.125	5.25	7.875	4.50	7.75	5.00	9.75	4.625	8.00	5.25	2.00	2.75	7.25	3.75	6.00	
	4.75	6.375	3.875	8.00	6.50	10.00	6.60	8.875	3.75	4.00	3.875	7.00	3.00	8.25	6.00	7.75	
	6.00	6.75	3.00	8.00	4.625	8.00	4.375	9.00	3.50	7.125	5.50	8.125	4.00	7.00	3.00	8.75	
	8.875	2.00	6.125	8.375	4.75	5.75	4.00	10.00	6.00	7.00	3.00	6.375	13.00	7.25	8.50	7.75	
	5.625	2.375	3.50	6.125	4.50	8.625	8.00	10.00	3.50	7.00	2.50	4.75	6.00	11.00	5.00	8.50	
	7.875	7.00	4.50	9.00	5.25	8.875	7.00	9.50	4.625	8.25	3.25	6.00	5.75	2.75	5.50	10.00	
	4.625	6.125	4.00	4.625	4.00	11.00	6.00	10.25	5.00	7.25	4.00	7.75	3.25	4.50	8.75	7.25	
	5.00	6.875	6.59	7.875	5.50	8.50	4.25	9.25	4.25	6.75	4.50	7.125	6.00	7.50	4.00	0.00	
	4.00	7.75	4.60	7.00	4.625	5.875	4.625	7.25	5.50	5.875	5.25	6.00	4.00	9.00	3.75	9.25	
	5.375	7.00	6.125	8.00	6.25	8.50	4.50	8.00	5.875	7.50	3.25	5.125	4.75	9.75	6.25	2.00	
6.25	7.00	5.75	6.00	6.25	9.875	4.50	8.875	4.125	5.875	5.875	8.75	4.00	6.25	4.50	0.00		
5.125	8.25	3.625	7.00	6.375	8.25	7.625	8.00	6.50	7.00	3.50	5.25	4.75	7.00	6.00	8.75		
8.50	8.25	6.50	7.00	4.375	7.00	7.50	9.00	6.625	7.00	4.875	7.125	3.25	8.00	7.00	8.00		
4.50	7.125	6.00	8.00	6.75	8.50	6.625	9.125	4.375	0.00	5.50	8.125	5.00	10.25	3.75	0.00		
3.50	6.50	6.50	8.00	4.50	8.50	6.50	9.25	6.125	6.875	5.25	6.875	7.00	7.75	5.25	8.25		
Totals .....	141.75	164.125	128.375	176.125	120.25	204.375	185.75	219.125	117.125	175.25	100.25	169.00	128.50	195.75	140.25	201.75	
		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....		17.00	562.39	9.00	45.00	7.625	117.69	11.00	55.00	6.125	94.64	0.00	45.00	13.00	200.65	11.00	55.00
Lowest .....		8.00	46.374	2.00	10.00	3.50	54.02	4.75	23.75	2.60	35.60	3.125	15.025	2.75	42.44	2.00	10.00
Average .....		5.36	82.73	6.80	34.00	5.24	80.87	8.47	42.35	4.62	69.76	6.88	34.40	5.375	82.06	7.65	30.75
Tests above average .....		17		30		26		31		23		30		22		29	
Tests below average .....		33		20		24		19		27		20		28		21	



TABLE II.—Measurements of strain and stretch of wools—Continued.

Catalogue number of samples..		VERMONT.															
		EWES, 3 YEARS OLD.															
		549.				550.				551.				552.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.		
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.		
		3.375	9.875	3.625	5.50	4.00	6.875	9.375	5.00	3.25	6.50	6.50	7.75	5.75	7.00	6.50	8.00
		5.00	7.25	3.625	5.25	4.625	7.75	5.00	8.00	4.50	8.00	4.25	7.00	6.75	9.50	7.75	9.50
		4.875	0.75	6.625	8.50	0.125	7.75	9.375	7.25	8.75	8.75	4.00	6.75	3.50	1.25	5.25	6.00
		3.50	8.25	6.625	4.00	6.25	8.75	4.00	6.25	7.00	11.00	3.50	4.00	3.50	8.00	10.00	10.00
		3.625	7.00	8.375	5.50	11.625	11.25	5.75	8.50	0.00	8.00	4.25	6.50	6.50	2.50	7.75	8.75
		4.375	5.50	6.50	7.50	5.75	8.75	4.25	9.00	0.00	9.75	6.00	10.00	6.50	6.50	7.00	10.00
		9.625	9.25	6.50	8.75	2.50	4.75	9.00	7.50	6.50	10.00	6.75	7.25	5.75	8.50	4.50	8.00
		4.375	7.25	5.75	5.25	4.625	0.00	6.00	6.00	5.50	8.25	8.25	7.75	10.00	8.50	7.00	10.00
		7.625	8.75	7.25	0.25	8.60	6.75	4.00	4.50	8.75	1.75	6.25	9.25	4.25	8.00	6.50	8.00
		3.50	9.75	6.25	7.50	5.50	8.50	3.50	6.25	7.50	8.50	6.00	9.25	6.00	9.25	6.25	9.00
		7.00	8.50	2.625	7.25	4.50	7.125	16.00	8.00	4.00	8.00	8.25	7.50	8.00	8.00	4.00	5.00
		8.625	9.25	8.00	7.50	4.50	8.50	5.50	6.75	4.50	9.50	6.00	10.00	8.50	8.00	10.25	9.75
		9.375	8.50	7.625	8.00	7.875	8.00	5.50	7.50	0.00	7.50	4.75	9.25	8.00	9.00	7.00	8.75
		7.00	8.75	7.375	8.50	5.60	7.50	6.625	2.50	4.00	8.00	6.00	11.00	6.75	6.00	4.75	10.00
		5.50	7.875	7.50	8.00	4.375	5.50	12.75	7.50	4.75	8.25	6.00	9.00	7.00	5.00	7.75	9.00
		8.25	5.00	6.25	7.75	7.50	7.875	6.375	7.50	5.75	8.25	3.75	8.75	7.75	8.60	6.00	9.00
		8.25	8.875	3.25	4.875	5.00	8.00	5.00	8.75	4.00	9.00	6.50	6.50	7.25	9.00	5.75	4.00
		5.875	0.25	3.75	9.00	6.25	8.00	8.00	2.50	7.75	9.00	4.75	6.00	6.75	9.00	6.00	9.00
		3.625	7.00	5.625	5.25	7.75	6.25	5.75	8.00	4.75	8.00	5.75	0.00	5.75	5.00	6.00	10.00
		4.00	7.25	4.75	5.75	4.50	8.50	5.75	8.50	3.25	7.25	5.75	7.00	3.25	10.00	5.75	8.00
		6.625	6.25	6.50	7.875	8.875	6.75	5.50	5.50	5.00	8.50	4.75	0.00	6.00	8.00	9.50	11.00
		8.25	6.50	4.00	7.875	6.375	7.00	7.00	7.00	4.25	7.00	4.25	6.25	4.75	8.00	7.75	9.50
		5.625	8.00	4.50	6.50	6.25	10.75	4.25	8.50	4.00	8.00	6.00	11.00	8.50	10.00	6.00	9.75
		0.75	6.25	4.25	9.50	5.00	8.00	4.375	6.50	8.75	1.75	4.50	7.25	7.25	9.25	8.50	11.00
		7.00	7.875	4.50	7.875	7.50	9.25	5.25	8.25	7.25	9.75	4.75	8.75	7.50	10.00	11.00	10.00
Totals .....		135.625	193.75	136.625	177.75	148.75	107.125	157.875	173.00	128.75	108.25	126.50	201.75	160.50	184.75	173.50	221.00

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	0.625	148.56	0.675	49.375	12.75	100.79	11.25	50.25	7.00	108.042	11.00	55.00	11.00	169.79	11.00	65.00
Lowest .....	2.625	40.517	4.00	20.00	2.50	38.50	2.00	10.00	3.25	50.162	1.75	8.75	3.25	50.162	1.25	6.25
Average .....	5.44	83.764	7.43	37.15	6.132	94.65	7.40	37.00	5.10	78.72	8.00	40.00	6.88	106.19	8.12	40.60
Tests above average .....	27		28		20		31		23		25		22		31	
Tests below average .....	23		22		30		19		27		19		28		19	

Catalogue number of samples..		VERMONT.															
		EWES, 8 YEARS OLD.															
		553.				556.				557.				558.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.		
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.		
		5.50	8.00	2.50	3.75	5.50	5.50	4.625	7.125	4.60	9.00	3.25	3.00	6.50	6.75	4.25	7.00
		4.00	3.50	7.25	8.00	6.50	8.50	5.125	6.50	9.00	10.75	6.50	6.875	4.00	7.00	3.75	5.75
		5.00	8.75	4.00	3.00	7.625	8.00	8.00	7.00	4.00	6.00	4.375	7.00	3.25	7.00	4.25	4.50
		6.00	6.75	3.00	5.00	11.25	9.50	5.50	6.25	9.50	9.00	3.625	1.125	5.50	9.00	6.00	7.50
		3.50	4.50	2.75	1.50	4.625	7.75	4.50	8.25	7.50	5.25	4.125	7.875	5.00	9.00	3.50	6.00
		4.75	7.00	3.00	2.00	4.875	4.50	7.75	7.00	4.75	8.25	3.375	9.00	2.75	1.50	3.00	5.75
		3.00	2.25	4.50	4.00	3.625	6.00	3.75	2.75	5.75	9.25	3.875	6.75	4.60	7.00	8.75	5.00
		5.00	8.50	6.00	4.25	6.75	6.00	7.50	8.125	7.25	6.00	3.25	6.875	3.75	8.00	3.25	3.00
		4.00	5.75	2.75	2.00	4.75	7.00	5.00	7.00	5.00	7.00	4.125	7.25	4.50	7.75	5.25	8.00
		2.75	5.00	3.25	4.75	7.25	6.875	8.25	7.00	5.00	8.00	3.75	7.875	4.25	6.50	4.00	1.75
		4.25	8.00	2.75	3.00	6.875	6.75	7.00	8.00	2.25	7.25	4.75	6.25	3.00	7.00	4.00	6.00
		5.25	9.00	2.75	8.00	7.25	5.00	4.675	6.75	7.00	7.75	4.50	5.125	5.25	7.75	5.00	9.00
		3.25	1.25	3.75	6.00	3.75	5.25	5.375	8.00	4.00	9.00	5.25	5.875	4.60	8.25	6.50	8.00
		3.00	5.75	4.00	7.75	5.00	6.75	7.50	0.00	6.00	8.75	3.25	6.125	5.25	7.00	5.20	7.00
		3.00	7.75	3.25	3.00	6.50	6.00	5.75	7.00	6.00	16.50	6.00	8.25	3.75	7.00	5.25	6.00
		3.50	2.75	3.00	3.00	5.50	7.00	7.50	8.00	5.25	8.75	5.625	5.125	4.00	7.60	4.00	5.00
		4.50	6.50	3.75	4.50	4.75	7.00	4.75	8.00	8.75	3.25	5.25	7.125	3.00	4.75	4.00	7.00
		3.25	4.00	3.25	7.00	7.375	7.00	5.00	7.00	4.25	9.00	3.75	4.75	4.75	6.00	6.25	8.25
		6.25	6.00	8.75	6.50	4.375	7.00	4.25	5.25	8.75	8.00	6.00	3.25	6.00	4.00	4.75	6.00
		3.25	6.00	4.00	3.75	6.125	6.875	7.25	8.60	4.50	7.00	2.50	7.00	4.25	8.00	4.75	7.00
		3.25	5.00	3.25	3.00	6.50	8.00	7.50	6.125	2.75	8.25	2.50	4.75	4.50	7.50	6.50	7.50
		5.50	5.75	4.00	6.25	5.125	6.00	7.00	8.00	4.75	8.50	2.75	7.50	5.50	7.00	5.25	7.50
		4.00	7.00	4.00	8.00	5.50	6.75	7.875	6.50	4.00	5.00	4.25	7.50	4.25	7.00	2.25	2.00
		3.50	8.00	3.00	2.00	4.00	5.25	5.00	5.75	2.00	6.00	1.75	6.50	4.50	8.75	3.75	7.00
		3.50	7.75	6.75	7.00	5.25	6.00	4.375	7.00	6.25	10.00	6.75	6.00	3.75	8.75	6.25	7.50
Totals .....		102.75	152.50	94.25	112.00	150.625	166.25	151.00	167.875	128.75	104.50	105.875	149.25	109.25	175.75	113.75	155.00

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	7.25	111.90	9.00	45.00	11.25	173.64	9.50	47.50	9.50	148.68	10.50	52.50	6.50	100.83	6.00	45.00
Lowest .....	2.50	33.58	1.25	6.25	3.625	55.95	2.75	13.75	1.75	27.01	3.00	15.00	2.75	42.45	1.50	7.50
Average .....	3.94	68.12	5.20	26.45	6.03	93.071	6.63	33.40	4.69	72.80	6.87	34.35	4.48	68.84	5.61	33.05
Tests above average .....	22		26		23		30		23		29		25		33	
Tests below average .....	28															



TABLE II.—Measurements of strain and stretch of wools—Continued.

Catalogue number of samples..		VERMONT.															
		EWES, 3 YEARS OLD.															
		550.				560.				56L				562.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
		4.25	6.00	3.50	7.00	8.00	3.00	4.50	4.00	3.00	1.25	4.00	8.25	4.375	3.25	6.50	6.00
		4.00	5.00	3.25	8.875	3.50	3.25	5.00	8.00	4.25	5.125	6.00	7.75	12.25	7.50	4.75	9.125
		4.875	6.50	4.00	8.00	3.25	2.00	6.00	8.50	4.50	7.75	5.75	7.875	2.75	3.50	4.25	7.00
		4.50	6.625	4.625	6.00	4.00	2.00	4.00	7.25	6.50	5.50	3.625	6.75	5.00	2.50	8.375	8.25
		3.75	6.00	4.25	8.125	5.00	8.00	3.25	7.00	8.375	8.00	4.75	5.00	5.375	7.25	5.75	6.75
		4.50	7.25	2.25	5.00	7.25	7.25	6.00	8.75	4.75	8.75	3.625	7.875	11.00	7.75	11.75	6.50
		4.50	4.875	3.25	3.75	4.00	7.25	6.50	7.00	4.00	2.50	3.25	5.125	4.375	8.00	12.00	5.125
		3.625	7.50	4.75	7.00	7.00	8.75	4.75	3.00	5.625	6.75	2.25	1.00	6.00	9.00	11.625	6.25
		3.00	6.375	4.625	7.00	6.00	5.25	3.75	10.00	4.50	6.00	5.00	5.25	3.50	6.00	6.25	7.00
		4.375	6.00	5.00	7.875	4.50	9.50	1.75	1.50	5.00	7.375	3.75	6.125	12.25	5.25	4.25	6.50
		4.125	7.125	5.875	8.875	4.00	3.25	3.25	4.75	3.875	6.00	3.00	3.50	4.375	6.25	7.375	8.00
		5.625	6.00	3.00	6.875	5.25	8.50	5.50	8.00	4.75	7.00	3.625	6.125	4.375	5.75	3.375	1.25
		4.00	7.00	6.50	8.00	7.00	8.00	6.75	7.75	3.625	5.125	4.25	5.75	11.375	6.25	3.625	5.50
		5.50	8.00	6.25	9.50	7.25	8.00	3.25	8.50	4.625	7.875	3.625	5.00	4.375	7.50	3.625	7.50
		6.25	8.375	2.875	8.00	3.75	0.00	5.00	9.50	2.50	8.875	4.25	6.00	3.375	2.00	7.625	5.75
		5.00	8.375	3.50	7.00	3.00	4.00	5.00	7.00	3.625	7.75	5.375	7.00	3.625	3.50	12.75	8.75
		3.50	8.00	4.00	7.00	5.25	7.00	8.00	9.00	7.00	7.625	4.50	3.00	2.00	6.25	9.375	8.25
		2.875	6.25	4.25	7.00	3.75	7.75	2.25	5.00	2.50	5.125	3.75	4.00	7.625	6.00	5.625	4.50
		5.50	7.25	3.375	8.50	1.75	4.50	2.50	9.00	4.50	5.00	3.00	2.75	13.375	7.00	4.625	8.50
		5.25	8.875	4.375	8.00	2.25	4.00	4.00	7.00	4.00	2.50	3.625	5.75	7.00	5.00	4.625	6.50
		3.25	5.75	3.25	6.875	2.75	3.75	4.50	6.50	5.50	8.00	2.75	6.00	5.375	6.75	3.625	7.50
		3.875	0.25	4.50	7.00	4.75	9.25	4.50	6.25	5.625	7.00	5.25	6.50	2.375	1.25	7.625	8.25
		3.75	8.00	4.50	7.75	2.75	4.00	5.50	8.00	3.75	5.00	2.875	2.50	5.75	8.75	4.375	8.00
		3.25	6.00	3.25	6.125	4.25	7.25	3.50	8.25	4.25	7.75	4.375	6.25	5.00	7.75	5.25	8.75
		3.00	6.125	3.375	6.00	3.00	5.00	4.00	9.00	4.375	7.875	1.50	2.00	4.625	7.50	8.00	8.75
	Totals .....	110.125	178.00	101.875	181.125	108.25	149.50	123.00	179.50	115.00	159.50	97.75	133.125	151.50	147.00	168.00	174.125

		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Recapitulation and reduction:	Highest.....	6.50	100.33	9.50	47.50	8.00	123.48	10.00	50.00	8.375	129.269	8.875	44.375	13.35	206.44	9.125	45.625
	Lowest.....	2.25	34.728	3.75	18.75	1.75	27.011	1.50	7.50	1.50	23.153	1.00	5.00	2.00	30.87	1.25	6.25
	Average.....	4.24	65.442	7.182	35.91	4.625	71.59	6.58	32.90	4.255	65.674	5.81	29.05	6.39	98.621	6.42	32.10
Tests above average.....		24		19		20		32		22		28		18		29	
Tests below average.....		26		31		30		18		28		22		32		21	

Catalogue number of samples..		NEW YORK.															
		RAMS, 2 YEARS OLD.															
		669.				670.				67L				672.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
		3.75	6.875	4.25	8.875	5.50	9.25	4.00	7.25	6.25	4.50	5.00	4.75	2.375	9.00	3.50	8.00
		2.875	8.00	3.875	3.50	5.25	9.75	3.00	6.25	4.50	8.75	5.25	7.25	3.50	7.50	3.625	9.00
		2.00	4.50	2.50	4.50	4.25	9.25	4.75	8.25	5.00	5.25	3.00	7.00	4.50	8.50	5.375	9.00
		2.50	7.00	4.375	7.50	4.25	7.00	7.50	8.50	6.00	8.25	5.25	9.25	10.75	3.375	8.00	8.00
		2.625	6.75	4.00	8.00	3.50	8.75	3.00	8.00	8.00	8.75	6.50	7.75	3.50	8.00	4.75	9.25
		7.25	6.00	4.00	8.00	4.50	7.50	4.00	10.50	3.25	4.75	3.50	3.25	2.25	7.25	2.50	5.00
		3.50	6.00	2.625	5.25	4.25	8.50	3.50	9.25	4.00	8.00	5.50	8.60	2.125	6.75	4.375	9.50
		2.875	5.75	3.625	8.00	3.25	8.00	6.25	9.50	4.50	6.75	6.25	7.75	2.275	9.50	6.125	9.00
		3.60	7.00	2.375	6.25	3.50	9.00	6.00	10.00	6.00	8.75	5.50	8.00	2.75	8.50	1.75	8.50
		5.375	7.50	2.75	7.75	5.25	10.00	4.00	7.00	6.50	7.75	4.75	8.75	4.00	7.875	3.25	11.75
		8.75	8.375	3.50	4.75	3.00	6.50	3.50	7.00	7.00	7.25	4.00	9.00	4.50	9.00	2.375	6.00
		3.50	4.75	4.50	8.00	3.25	8.75	3.75	8.75	5.25	0.00	5.00	7.00	5.125	9.50	3.375	9.00
		2.50	5.875	3.125	7.00	4.25	0.00	6.75	4.00	3.75	3.50	7.50	9.25	3.50	8.00	1.50	8.25
		0.00	7.00	7.25	8.00	4.25	6.25	5.00	7.00	5.75	5.75	3.75	7.50	3.50	8.00	3.50	7.75
		3.25	7.00	4.00	5.00	3.00	7.75	5.00	8.60	6.50	7.00	7.75	8.75	4.25	6.375	2.125	10.00
		4.25	8.00	3.00	7.00	4.00	8.75	7.00	6.50	4.25	6.00	7.25	9.00	3.25	6.75	6.75	8.00
		5.50	8.125	6.00	7.00	3.50	8.25	4.50	8.00	4.75	8.50	4.75	5.60	3.00	8.50	3.50	8.875
		4.00	8.00	3.00	7.50	3.00	5.25	5.50	8.25	8.00	9.25	3.00	2.75	3.75	7.50	2.00	10.50
		1.75	1.875	4.75	6.25	5.25	10.00	4.00	4.60	4.00	9.50	8.50	7.50	3.625	6.875	4.25	0.00
		3.75	7.50	2.75	5.375	4.00	4.00	3.75	7.00	3.50	6.25	4.00	8.00	3.875	7.125	4.00	8.00
		6.25	5.75	8.50	9.00	4.50	10.00	2.75	7.50	6.75	9.25	6.00	6.60	4.00	9.00	3.875	8.00
		5.25	7.125	6.75	8.75	2.75	7.50	4.00	10.25	6.50	8.50	5.25	7.00	4.50	9.75	3.50	7.50
		4.875	7.50	3.00	0.75	4.50	8.00	6.50	6.50	4.75	8.75	7.00	9.25	3.375	6.00	3.00	6.25
		7.125	8.50	2.125	4.25	3.50	8.75	3.25	7.50	4.50	8.00	6.75	9.00	3.50	8.25	3.50	8.00
		3.50	8.00	5.875	8.00	3.25	9.00	5.75	9.25	5.00	8.75	6.50	8.50	4.50	7.00	2.25	8.00
	Totals .....	97.875	168.75	102.50	170.25	90.50	204.75	117.00	195.75	133.50	186.75	138.00	187.75	88.25	201.25	88.625	210.125

		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Recapitulation and reduction:	Highest.....	8.50	131.19	9.00	45.00	7.50	115.76	10.50	62.50	8.50	131.19	9.25	46.25	6.75	104.18	11.75	58.75
	Lowest.....	1.75	27.01	1.875	9.375	2.75	42.45	4.00	20.00	3.00	46.30	2.75	13.75	1.50	23.15	5.00	25.00
	Average.....	4.01	61.88	6.78	33.90	4.32	66.83	8.01	40.05	5.43	83.81	7.49	37.45	3.54			



TABLE II.—Measurements of strain and stretch of wools—Continued.

Catalogue number of samples..		NEW YORK.															
		RAMS, 2 YEARS OLD.															
		673.				674.				675.				676.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
		4.25	8.75	5.00	8.75	3.50	7.25	4.25	8.00	8.50	8.00	3.50	8.00	6.00	9.25	4.00	8.00
		4.375	9.00	2.375	9.00	4.75	10.00	5.25	9.50	4.00	6.75	5.25	8.00	10.00	7.75	4.00	8.50
		5.50	9.25	3.875	9.00	4.00	10.00	3.50	7.50	5.50	6.00	4.875	8.00	10.00	4.25	4.00	7.50
		3.00	6.75	4.25	9.25	4.00	8.75	4.00	8.75	6.025	6.00	3.00	8.00	4.00	6.75	4.25	7.50
		3.675	8.50	2.875	5.50	5.75	11.00	0.00	8.50	4.25	6.00	5.875	7.00	6.50	7.75	3.75	7.00
		5.25	6.50	5.875	8.00	4.75	8.50	3.50	8.25	6.625	7.75	5.25	7.00	6.00	6.00	8.75	9.00
		4.10	9.25	2.625	10.50	5.75	9.25	5.50	8.50	4.375	7.00	4.00	8.375	5.00	9.75	7.00	6.50
		3.25	7.00	0.00	8.25	4.00	5.00	5.75	8.25	6.00	5.875	3.00	5.75	7.00	8.75	8.75	10.00
		2.625	9.00	2.625	7.25	5.00	7.00	4.25	6.75	6.00	6.125	7.875	7.00	5.00	9.00	4.00	4.75
		2.625	8.25	3.75	10.25	4.50	7.25	5.00	8.25	6.75	7.50	5.75	8.00	5.00	9.00	4.00	4.75
		4.50	9.75	4.375	8.00	3.50	8.25	4.50	4.00	3.50	7.00	4.025	9.00	3.50	9.50	5.00	10.25
		4.375	9.50	3.25	8.00	6.25	9.75	3.50	7.75	4.60	7.00	4.00	7.00	3.75	8.50	4.00	9.75
		3.375	9.50	3.00	6.25	8.25	7.75	0.00	9.25	4.375	8.00	3.50	6.25	5.25	7.25	4.00	9.00
		5.75	8.50	1.75	1.50	6.00	8.00	7.00	8.75	7.00	8.00	3.00	6.25	5.75	8.75	2.75	7.00
		3.50	6.75	4.625	7.75	3.75	4.25	4.25	7.00	3.375	0.00	5.00	8.00	7.50	8.50	5.00	8.75
		1.625	7.25	3.375	3.00	3.00	1.50	5.75	5.00	3.60	6.00	4.875	8.00	6.00	7.75	4.25	8.75
		3.625	6.25	3.625	9.00	5.00	9.00	3.00	8.00	3.50	7.00	4.00	8.00	5.25	10.00	7.00	6.25
		3.75	7.50	3.50	8.00	6.25	7.00	5.50	7.75	5.125	0.00	4.50	8.60	3.25	7.75	3.00	6.00
		3.625	9.00	4.375	8.75	5.75	9.50	2.75	3.75	5.125	4.875	4.125	6.00	4.75	7.00	4.25	8.75
		3.375	8.00	5.00	7.75	3.50	9.00	4.25	10.00	3.375	9.00	0.00	6.00	8.50	5.75	8.25	5.00
		3.25	6.75	4.25	8.50	3.00	9.50	3.75	7.00	3.00	4.75	5.00	6.00	11.00	0.00	7.00	7.75
		3.625	9.00	4.625	8.75	5.00	9.75	6.75	7.75	6.125	3.00	6.00	6.50	3.75	9.75	3.75	8.75
		3.375	9.10	2.50	8.25	3.75	7.25	2.75	6.75	6.50	8.00	4.875	7.50	2.75	8.50	6.75	10.00
		3.10	6.50	4.00	9.75	6.00	11.00	4.75	8.75	7.50	5.875	7.00	6.50	8.50	4.00	7.50	7.50
		3.50	9.50	4.75	9.00	5.00	9.50	4.00	3.50	8.875	7.50	5.875	7.00	6.50	8.50	4.00	7.50
	Totals .....	65.25	207.00	94.75	213.00	119.00	202.00	113.50	191.75	134.00	106.125	120.50	178.50	140.00	211.00	126.00	195.00

		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
	Highest .....	6.00	92.00	10.25	51.25	7.00	108.04	11.00	55.00	9.125	140.84	9.00	45.00	11.00	169.78	10.00	60.00
	Lowest .....	1.025	25.08	1.50	7.50	2.75	42.45	1.50	7.50	2.60	38.59	2.50	12.50	2.75	42.45	4.00	20.00
	Average .....	3.89	58.56	8.40	42.00	4.60	72.30	7.88	39.40	5.09	78.56	6.89	34.45	6.33	82.11	8.13	40.65
	Tests above average .....	21		27		27		29		22		29		19		20	
	Tests below average .....	29		23		23		21		28		21		31		21	

Catalogue number of samples..		NEW YORK.															
		RAMS, 2 YEARS OLD.															
		677.				678.				691.				692.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
		4.50	6.625	6.00	9.50	5.75	8.75	3.50	8.00	4.25	4.125	5.25	6.50	4.50	9.25	6.25	9.875
		4.00	7.50	8.00	10.00	4.00	8.00	4.00	9.00	8.50	6.875	9.75	7.125	7.625	9.75	4.375	6.25
		5.50	6.25	4.00	5.50	4.00	7.25	4.00	9.00	4.375	2.75	4.25	5.125	4.75	8.75	2.00	6.50
		6.50	7.625	8.25	9.00	4.00	7.50	8.00	8.25	6.375	5.50	2.625	4.875	3.50	9.00	3.50	6.50
		3.00	6.50	5.50	7.75	4.00	8.25	3.00	7.25	2.00	2.125	4.625	2.00	3.375	11.00	4.50	8.125
		4.50	7.00	6.375	8.00	0.00	8.50	3.25	5.00	8.00	7.50	5.75	8.125	4.00	7.75	5.50	9.25
		2.375	7.50	3.00	6.375	5.00	5.75	4.00	7.50	2.625	3.50	3.00	2.75	8.75	6.75	2.50	7.00
		1.875	7.00	3.00	6.00	3.75	8.25	4.00	8.25	8.125	5.25	4.25	2.125	4.50	8.25	3.75	10.125
		4.25	5.50	3.125	7.875	5.00	8.25	5.00	7.00	4.25	8.00	3.50	2.50	6.00	5.25	3.375	9.125
		3.25	7.75	2.50	8.50	8.25	5.75	8.50	6.00	3.625	0.00	8.625	7.50	4.375	9.00	4.00	9.875
		4.60	9.25	3.625	8.75	8.25	5.00	3.50	3.75	6.00	8.00	3.125	7.50	5.875	9.50	3.00	9.50
		5.00	9.00	3.25	7.50	6.00	9.00	5.75	7.50	2.00	2.00	10.50	8.125	4.625	9.25	4.50	8.875
		5.625	8.00	5.625	8.75	2.25	7.50	5.00	8.50	4.125	6.00	8.625	3.375	9.00	9.00	6.875	6.00
		0.25	7.00	4.25	8.875	4.25	9.00	4.00	8.00	4.50	7.00	4.75	2.25	4.25	7.50	6.00	9.875
		4.60	7.75	3.25	8.75	3.75	7.75	9.00	8.50	3.50	4.75	5.375	5.00	5.375	8.50	4.375	9.25
		4.375	5.875	4.75	9.50	8.00	9.00	3.75	8.25	4.875	7.875	5.75	4.875	3.50	6.75	3.50	9.25
		3.50	7.875	2.75	8.50	8.75	7.75	6.00	9.50	6.75	2.50	3.75	2.875	8.25	8.50	4.50	9.875
		0.375	9.25	3.00	5.00	4.25	7.25	5.25	8.00	3.50	6.875	0.75	7.00	2.75	8.50	5.75	9.50
		3.50	6.50	4.00	7.75	4.25	8.25	8.25	7.00	8.50	7.25	8.875	7.125	2.625	8.25	2.75	9.125
		5.50	8.00	4.00	5.00	8.25	6.25	7.00	8.75	2.50	2.25	3.375	1.00	3.75	7.75	4.25	10.125
		0.375	9.25	8.25	8.50	6.00	7.25	8.75	7.75	3.25	2.125	8.025	2.875	2.50	8.125	5.00	10.125
		4.375	6.00	3.25	8.875	3.50	7.75	5.00	8.25	7.875	8.00	5.00	4.875	4.625	8.00	3.50	10.50
		4.25	7.125	5.125	6.00	3.50	2.25	4.00	7.25	3.375	7.50	9.50	4.875	4.375	9.25	4.875	10.00
		2.625	7.125	6.375	7.25	3.50	7.00	4.50	8.00	3.125	6.00	5.375	8.125	2.50	9.00	3.75	9.00
		0.375	7.125	3.625	7.875	4.50	8.25	6.50	9.50	5.375	4.875	4.375	4.00	5.50	9.00	8.625	7.75
	Totals .....	112.875	184.375	115.375	198.125	107.25	181.00	116.50	192.75	115.875	131.625	135.375	117.50	115.875	210.625	103.00	219.00

		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
	Highest .....	8.25	127.34	10.00	60.00	9.00	138.91	9.50	47.50	10.50	162.06	8.125	40.625	9.00	138.911	11.00	65.00
	Lowest .....	1.675	28.94	5.00	25.00	2.25	34.73	2.25	11.25	2.00	30.67	1.60	5.00	2.50	38.58	5.25	26.25
	Average .....	4.57	70.54	7.75	38.75	4.43	69.15	7.48	37.40	5.03	77.22						



TABLE II.—Measurements of strain and stretch of wools—Continued.

Catalogue number of samples..		NEW YORK.																		
		RAMS, 2 YEARS OLD.								EWES, 2 YEARS OLD.										
		693.				679.				680.				681.						
Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		
grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
3.75	4.00	6.00	8.75	3.25	9.00	6.00	9.50	3.50	6.75	5.00	8.25	4.00	7.75	5.125	7.25	4.00	7.75	5.125	7.25	
4.00	6.50	3.00	6.00	3.00	2.75	3.50	8.50	4.375	8.00	3.625	8.00	5.375	9.00	4.50	9.00	5.375	9.00	4.50	9.00	
3.25	7.50	5.50	8.00	3.75	9.00	5.25	8.50	5.00	6.25	4.25	6.50	5.25	5.00	4.625	8.00	5.25	5.00	4.625	8.00	
4.25	5.50	6.00	8.00	4.00	10.00	3.25	8.50	5.50	8.25	3.375	1.75	5.00	9.00	3.75	8.00	5.00	9.00	3.75	8.00	
3.75	0.75	5.25	6.00	4.25	10.00	4.75	9.50	3.375	7.50	5.375	9.50	4.25	6.00	6.00	7.75	4.25	6.00	6.00	7.75	
6.75	4.50	5.00	8.00	5.00	9.50	5.50	8.00	4.625	6.75	4.75	10.25	3.00	7.125	6.75	8.00	3.00	7.125	6.75	8.00	
4.00	6.50	6.00	9.00	5.25	9.75	6.00	10.00	5.25	8.25	4.25	7.75	4.00	6.75	4.25	4.75	4.00	6.75	4.25	4.75	
6.00	8.50	7.75	7.25	3.00	8.50	6.00	9.00	6.25	7.00	5.25	9.00	5.00	9.125	4.00	4.875	5.00	9.125	4.00	4.875	
11.25	8.00	9.00	10.00	3.75	9.00	5.25	10.00	5.375	9.00	5.375	4.75	5.00	7.00	4.25	7.25	5.00	7.00	4.25	7.25	
7.75	0.00	10.00	7.50	3.75	0.00	3.00	8.75	4.50	6.00	3.50	6.00	5.375	6.00	4.25	4.50	5.375	6.00	4.25	4.50	
8.00	8.75	4.00	5.00	3.50	0.25	4.00	7.00	4.00	6.75	4.625	11.25	3.75	8.125	4.50	7.00	3.75	8.125	4.50	7.00	
3.00	6.50	6.00	3.00	6.00	10.25	4.25	7.25	3.625	4.50	4.00	10.00	5.625	8.00	3.375	5.25	5.625	8.00	3.375	5.25	
6.75	9.50	5.50	4.75	3.00	4.75	3.50	0.50	5.00	10.00	3.625	8.75	5.00	0.00	5.00	7.00	5.00	0.00	5.00	7.00	
9.00	8.00	5.75	7.00	4.00	10.25	5.75	8.50	3.50	7.25	3.625	8.00	3.00	4.875	5.00	6.25	3.00	4.875	5.00	6.25	
6.00	7.00	5.00	8.50	3.75	9.00	4.00	8.25	4.375	8.00	3.625	3.50	3.625	9.25	4.625	6.00	3.625	9.25	4.625	6.00	
6.50	7.25	6.50	8.50	4.25	9.50	8.00	6.50	5.625	11.75	5.00	10.25	2.60	3.25	4.00	6.00	2.60	3.25	4.00	6.00	
8.75	10.00	5.75	7.50	4.50	8.00	5.75	9.50	5.50	4.00	4.25	9.25	5.75	7.00	4.25	7.25	5.75	7.00	4.25	7.25	
6.00	6.00	4.75	9.00	4.75	9.00	3.25	8.00	4.75	6.25	4.50	8.25	4.625	6.25	5.50	7.60	4.625	6.25	5.50	7.60	
6.00	8.50	0.00	6.00	5.00	9.00	6.00	7.25	3.375	4.75	4.625	7.50	3.625	4.875	4.125	9.00	3.625	4.875	4.125	9.00	
7.00	8.00	4.00	4.50	3.75	8.50	4.00	7.75	3.625	7.75	5.00	8.75	3.50	7.00	5.875	7.25	3.50	7.00	5.875	7.25	
5.00	8.75	4.25	4.75	5.50	8.50	4.00	10.25	5.50	6.75	4.375	7.75	3.25	5.25	9.00	7.75	3.25	5.25	9.00	7.75	
4.00	4.00	5.00	4.00	3.00	6.00	3.50	10.00	4.375	6.25	2.625	5.75	5.00	8.00	4.50	8.125	5.00	8.00	4.50	8.125	
6.00	5.00	6.00	9.00	6.00	8.00	3.25	6.00	8.25	8.50	8.875	8.875	4.50	6.125	5.125	7.875	4.50	6.125	5.125	7.875	
8.00	7.00	8.00	5.75	4.00	8.00	4.75	8.00	4.75	7.25	3.00	2.50	3.25	5.375	5.25	6.25	3.25	5.375	5.25	6.25	
4.50	4.00	5.00	5.00	4.00	9.25	5.00	8.75	4.00	8.00	4.75	5.00	5.25	4.50	4.50	6.125	5.25	4.50	4.50	6.125	
Totals .....	151.75	175.00	144.00	170.75	103.75	214.25	113.00	212.75	118.00	178.50	111.50	184.125	108.50	166.50	122.625	176.875				

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	11.25	173.64	10.00	50.00	6.00	92.61	10.25	51.25	8.375	129.27	11.75	58.75	9.00	138.91	9.25	48.25
Lowest .....	3.00	46.30	3.00	15.00	3.00	48.30	2.75	13.75	2.625	40.52	1.75	8.75	2.50	38.69	3.25	16.25
Average .....	5.915	91.29	0.915	34.575	4.335	66.91	8.64	42.70	4.59	70.84	7.253	36.265	4.623	71.35	6.868	34.34
Tests above average .....	26		23		20		27		24		28		24		30	
Tests below average .....	24		22		30		23		26		22		26		20	

Catalogue number of samples..		NEW YORK.																		
		EWES, 2 YEARS OLD.																		
		682.				683.				684.				685.						
Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		
grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
2.00	7.00	3.75	9.00	4.00	10.00	2.50	6.50	5.375	8.50	7.00	7.00	9.375	7.50	4.00	8.00	2.50	7.00	4.00	8.00	
2.50	4.00	3.00	9.00	4.375	8.25	7.625	8.875	6.625	6.25	5.375	9.00	4.875	7.875	3.25	9.75	3.00	9.00	3.25	9.75	
3.50	9.00	4.00	8.50	3.00	0.75	5.00	8.00	8.00	8.25	5.625	9.25	4.25	8.25	5.00	0.875	4.25	8.25	5.00	0.875	
3.00	5.75	3.75	6.50	2.50	7.00	4.00	8.50	3.375	3.50	4.50	10.25	3.50	6.00	4.375	7.125	3.50	6.00	4.375	7.125	
5.75	11.00	4.25	11.00	11.00	10.25	3.50	4.75	8.50	6.00	5.625	8.50	5.50	7.75	3.625	5.75	5.50	7.75	3.625	5.75	
2.50	6.00	3.50	9.00	6.75	7.00	6.25	9.50	4.75	3.25	4.00	9.25	2.875	7.00	5.625	8.125	2.875	7.00	5.625	8.125	
3.00	10.00	3.00	9.00	3.50	6.00	3.50	10.00	6.375	6.75	3.375	9.50	5.50	8.00	7.625	8.00	5.50	8.00	7.625	8.00	
3.75	8.25	2.75	10.00	4.00	6.875	2.75	7.125	6.625	7.50	3.375	4.50	5.00	7.50	2.625	7.00	5.00	7.50	2.625	7.00	
4.00	8.50	2.00	8.50	4.25	0.75	12.25	9.00	4.25	5.875	3.625	7.00	6.00	8.00	3.50	6.00	6.00	8.00	3.50	6.00	
4.00	8.50	4.50	9.75	6.50	10.00	0.50	8.875	6.375	7.50	4.375	10.00	4.25	7.00	7.75	7.75	4.25	7.00	7.75	7.75	
4.50	8.00	3.25	9.75	6.25	8.75	3.375	7.25	9.25	7.25	3.375	2.75	9.25	9.875	6.50	9.00	9.25	9.875	6.50	9.00	
3.00	7.00	3.50	10.25	3.50	5.50	7.00	9.50	4.375	7.50	5.375	10.00	4.00	7.00	3.50	4.00	4.00	7.00	3.50	4.00	
5.00	8.75	5.25	8.00	4.375	9.75	4.125	8.00	7.75	6.00	3.625	8.50	8.00	9.00	9.00	4.25	8.00	9.00	9.00	4.25	
2.00	2.75	2.75	8.00	6.50	9.00	5.00	10.125	5.25	8.125	2.375	3.50	5.00	8.25	4.00	6.875	5.00	8.25	4.00	6.875	
2.50	8.25	3.50	5.00	4.50	7.75	2.50	8.00	8.25	8.25	5.00	9.00	3.50	7.00	10.50	7.50	3.50	7.00	10.50	7.50	
4.00	8.00	4.00	11.00	3.25	7.25	4.625	10.75	9.50	8.50	5.00	10.00	4.375	9.00	2.50	4.125	4.375	9.00	2.50	4.125	
2.75	4.25	4.00	10.00	6.50	11.00	8.125	10.875	4.75	6.00	4.75	8.50	8.25	7.00	5.75	6.00	8.25	7.00	5.75	6.00	
3.00	8.75	4.00	6.50	5.00	8.75	4.00	8.875	5.375	7.50	2.375	3.50	4.375	9.00	6.00	5.00	4.375	9.00	6.00	5.00	
4.00	10.75	4.00	10.00	3.00	6.00	2.00	6.125	4.375	10.00	5.25	11.00	4.25	9.875	7.625	7.875	4.25	9.875	7.625	7.875	
3.25	9.75	4.00	8.25	9.50	9.00	2.75	7.375	8.00	10.00	4.625	9.50	3.75	9.25	6.00	8.00	3.75	9.25	6.00	8.00	
3.25	10.00	4.25	5.00	8.875	9.00	4.50	10.25	3.025	4.25	5.625	9.00	3.625	8.875	6.25	8.00	3.625	8.875	6.25	8.00	
3.25	8.00	3.50	9.00	4.75	9.875	4.25	10.75	5.50	9.25	3.00	3.50	4.25	9.00	5.375	7.25	4.25	9.00	5.375	7.25	
3.00	7.00	7.50	6.50	8.00	8.25	3.50	8.125	5.00	3.50	3.375	7.50	3.625	9.00	9.375	7.25	3.625	9.00	9.375	7.25	
3.50	8.75	3.00	7.00	7.25	9.00	5.25	0.375	4.25	4.75	4.00	8.50	6.00	9.00	8.75	8.00	6.00	9.00	8.75	8.00	
4.00	8.75	2.75	2.50	8.50	0.25	4.625	10.125	4.375	6.50	8.00	9.75	3.50	9.00	5.50	4.50	3.50	9.00	5.50	4.50	
Totals .....	85.00	196.75	93.75	207.00	138.625	213.00	119.00	219.625	143.875	172.625	110.625	198.75	128.875	205.00	138.625	176.00				

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.							



TABLE II.—Measurements of strain and stretch of wools—Continued.

NEW YORK.																	
EWES, 2 YEARS OLD.																	
Catalogue number of samples.	686.				687.				688.				689.				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	7.00	7.00	6.00	8.00	4.375	8.00	2.50	0.50	6.50	7.75	5.75	8.25	4.75	8.00	6.00	8.50	
	8.25	8.50	4.00	8.00	5.75	0.875	0.00	0.00	4.75	7.50	4.75	7.50	4.75	0.50	8.625	7.50	
	7.00	8.00	3.00	4.75	4.375	8.75	3.375	0.00	0.00	8.00	6.75	7.75	6.50	2.50	10.375	8.25	
	5.50	4.50	3.75	8.50	3.75	0.875	4.00	0.00	6.00	8.00	6.00	10.50	6.00	9.00	6.375	7.25	
	4.00	8.00	4.50	8.50	8.00	7.00	2.00	6.00	5.00	7.50	4.50	5.50	4.25	7.00	9.625	0.00	
	12.75	4.00	5.00	8.50	5.50	7.00	3.50	8.875	6.75	5.00	4.00	8.50	7.00	9.25	8.00	4.25	
	7.00	8.00	5.00	9.25	5.625	0.50	0.50	10.00	7.25	5.00	0.00	11.00	1.75	2.50	7.375	8.00	
	5.75	0.50	5.75	8.50	3.25	8.875	4.00	0.375	0.00	9.00	7.25	7.75	3.875	8.125	3.50	0.00	
	4.25	7.50	3.00	8.00	0.125	0.00	5.00	0.125	8.00	8.75	4.00	9.00	8.00	8.00	4.875	7.50	
	4.50	7.00	4.75	6.50	5.00	8.125	5.625	8.875	5.00	9.00	3.00	2.00	7.625	10.00	1.75	4.00	
	4.25	7.50	4.00	9.00	5.75	0.125	7.75	5.25	9.00	6.00	8.75	6.00	8.75	6.00	8.75	7.75	
	0.00	10.00	7.25	8.50	4.625	7.00	6.625	9.75	7.25	7.50	6.00	8.50	4.625	8.00	8.00	9.00	
	0.00	7.00	4.00	0.00	4.25	9.00	5.625	0.875	0.75	7.50	4.00	8.50	2.875	5.50	6.50	9.00	
	4.00	7.25	5.50	7.60	8.50	7.50	2.125	7.50	5.00	7.75	5.00	11.50	5.875	10.00	2.375	7.00	
	4.25	7.50	4.25	6.00	0.50	10.00	3.125	9.00	0.75	9.75	4.00	8.50	6.25	8.50	8.25	9.00	
	4.25	5.25	7.00	8.00	4.75	9.00	2.50	8.50	3.75	4.00	5.25	7.50	5.625	7.00	4.50	7.00	
	3.50	9.00	0.00	8.75	2.625	5.12	4.625	10.75	5.00	10.25	0.00	10.50	4.375	8.50	4.50	7.125	
	7.00	0.00	3.00	8.75	4.25	8.10	2.375	7.875	7.50	9.00	5.75	0.00	4.375	5.00	2.625	7.00	
	4.00	4.00	7.75	9.00	3.00	0.00	5.00	7.00	5.75	11.00	5.50	10.00	5.00	7.25	6.50	7.00	
5.00	8.50	3.50	8.50	7.00	9.00	4.75	8.75	4.50	6.50	5.75	9.50	4.375	9.25	4.00	5.00		
12.50	5.00	5.25	8.00	0.25	7.60	8.00	7.00	0.50	7.50	4.00	5.00	6.625	0.50	5.00	4.50		
12.00	1.00	7.00	9.75	5.00	8.00	3.25	5.125	3.50	5.25	7.25	9.00	5.75	8.50	6.00	0.00		
6.75	8.00	4.00	0.75	2.375	8.00	7.25	8.125	2.75	2.00	0.00	9.75	10.00	8.75	3.00	2.50		
4.00	11.50	3.00	8.25	2.00	7.00	4.125	9.50	7.25	0.00	6.50	10.00	6.625	10.25	7.25	7.50		
3.00	5.50	3.75	7.00	2.625	0.125	4.50	8.50	6.25	0.00	4.50	10.50	5.00	7.50	5.625	7.00		
Totals .....	120.50	172.00	120.00	204.25	116.25	198.875	109.875	210.75	145.00	187.50	130.50	211.25	129.875	190.125	137.875	175.375	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	
Lowest .....	7.75	119.02	11.50	57.50	8.00	128.477	10.75	53.75	8.75	185.05	11.50	57.50	10.375	160.13	10.25	51.25	
Average .....	2.00	30.87	1.00	5.60	2.00	30.87	5.125	25.625	8.00	46.80	2.00	10.00	1.75	27.01	2.50	12.50	
	4.81	74.24	7.525	37.625	4.53	09.92	8.168	40.065	5.63	86.89	7.98	30.00	5.345	62.50	7.31	26.55	
Tests above average .....	22		29		24		27		28		28		25		28		
Tests below average .....	28		21		26		23		22		22		25		22		

NEW YORK.																	
EWES, 2 YEARS OLD.																	
Catalogue number of samples.	690.				694.				695.				696.				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	3.00	5.00	7.25	8.25	6.375	7.75	3.625	7.875	5.75	7.50	6.00	9.00	7.125	7.375	6.125	8.00	
	5.00	9.75	10.25	10.25	8.25	9.50	4.875	9.00	6.50	7.75	6.00	8.00	5.50	6.00	3.00	4.25	
	5.25	7.00	5.00	0.75	5.50	8.25	3.75	7.75	4.00	3.00	7.00	0.00	7.875	2.125	14.00	9.00	
	5.25	0.75	4.00	7.50	4.125	8.875	4.00	6.25	5.00	6.50	6.00	7.00	12.375	6.00	5.00	6.125	
	3.00	6.00	5.00	10.25	5.625	7.75	6.25	7.125	3.00	2.00	8.75	9.00	7.25	6.375	8.00	7.50	
	4.00	9.00	0.00	9.75	4.50	8.25	4.50	8.125	4.75	8.50	6.75	9.00	4.00	5.125	8.50	6.00	
	6.75	9.75	5.00	10.75	6.00	9.25	5.00	7.625	5.00	6.75	4.00	7.25	5.375	6.00	14.60	7.125	
	6.00	10.75	4.75	7.25	3.625	0.125	5.625	8.00	3.00	2.00	3.50	4.00	4.75	8.00	8.625	7.00	
	8.50	8.75	4.50	7.50	8.375	8.50	4.50	8.75	8.50	5.00	4.25	7.75	15.50	8.00	5.50	7.25	
	5.25	5.00	4.25	9.00	3.875	5.125	7.625	8.00	6.00	6.00	5.00	5.00	4.00	4.125	6.50	7.50	
	4.75	0.75	10.75	8.50	5.60	0.875	5.00	9.125	7.75	6.75	7.00	8.00	8.25	8.00	5.50	4.125	
	3.50	1.60	6.75	9.00	3.75	8.00	4.25	8.00	7.00	9.00	4.25	6.75	4.00	5.00	6.125	7.375	
	6.25	11.00	7.00	10.00	2.625	3.00	6.50	7.50	5.25	0.00	9.00	2.50	0.25	6.25	4.00	6.875	
	5.00	10.25	5.50	11.00	4.75	7.675	3.875	9.125	6.00	6.00	5.75	8.00	3.25	3.00	7.00	7.25	
	0.25	11.25	5.25	10.00	4.375	9.00	4.125	7.875	7.00	7.00	5.00	8.00	4.25	4.00	2.625	6.00	
	4.25	7.50	4.00	9.00	7.625	0.00	4.25	6.50	4.25	7.00	7.00	8.25	6.50	2.875	5.375	7.00	
	4.00	8.00	3.25	7.00	2.50	8.125	7.50	7.125	5.50	4.75	6.25	8.50	4.275	6.50	5.00	5.25	
	5.00	8.00	5.50	8.75	3.50	8.00	4.50	7.875	5.00	8.25	0.75	7.00	8.375	6.00	6.125	7.00	
	3.75	0.75	5.75	10.25	2.00	8.00	5.75	9.875	9.50	8.00	10.00	9.00	2.50	4.875	6.375	7.00	
4.50	0.60	6.00	9.60	5.00	8.00	3.50	6.75	7.00	7.75	3.50	4.25	6.00	5.50	3.50	6.875		
5.25	9.50	7.00	11.00	4.25	8.875	4.75	5.75	7.75	6.50	6.25	6.50	4.875	4.00	4.875	5.875		
0.00	10.25	3.75	9.50	6.625	8.00	6.00	7.50	5.50	3.25	3.50	8.00	6.00	8.00	8.00	8.125		
5.25	10.25	4.75	8.25	6.25	7.50	4.75	10.125	3.50	3.00	6.50	8.00	3.75	4.00	3.00	4.25		
5.25	7.00	3.60	8.75	5.75	10.00	2.875	7.25	7.00	9.00	6.00	8.75	4.375	2.00	7.75	7.00		
5.75	0.25	8.50	10.00	4.125	7.125	6.60	8.00	6.50	8.00	5.00	7.75	2.75	2.25	5.00	6.375		
Totals .....	120.75	210.00	141.75	232.25	119.875	199.75	123.375	197.125	143.50	151.25	144.00	178.75	149.25	190.375	158.00	103.00	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	
Lowest .....	10.75	105.92	11.25	59.25	8.25	127.34	10.125	50.625	10.00	154.35	0.00	45.00	15.50	230.24	8.00	45.00	
Average .....	3.00	46.30	5.00	25.00	2.00	30.87	3.00	15.00	3.00	46.30	2.00	10.00	2.50	38.58	2.00	10.00	
	5.25	81.03	0.03	45.15	4.865	75.09	7.087	30.685	5.75	88.75	6.00	33.00	6.125	94.53	5.667	23.335	
Tests above average .....	17		25		21		29		26		32		17		33		
Tests below average .....	33		25		29		21		24		18		33		17		



TABLE II.—Measurements of strain and stretch of wools—Continued.

Catalogue number of samples..	NEW YORK.								PENNSYLVANIA.							
	EWES, 2 YEARS OLD.								RAMS, LAMBS.							
	697.				570.				574.				577.			
Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	6.625	9.00	2.25	7.50	5.00	7.00	3.00	3.50	3.625	8.25	3.00	4.25	5.00	7.00	7.00	7.00
	7.00	9.25	2.75	10.375	4.75	6.00	4.50	8.75	2.50	5.00	0.75	7.00	4.75	6.75	6.625	7.00
	13.00	9.00	2.75	6.25	4.75	9.00	4.50	9.00	3.50	6.75	3.00	5.25	5.00	4.00	6.50	8.00
	0.25	9.00	2.00	6.875	2.75	2.00	7.00	8.00	4.625	6.25	6.50	8.50	10.375	7.50	8.00	6.50
	7.625	7.75	9.75	9.50	4.25	7.00	6.00	7.25	3.00	6.00	4.375	6.00	5.75	7.25	6.00	5.375
	4.25	8.50	7.00	9.00	4.25	8.00	4.75	7.75	2.75	5.00	4.25	5.50	9.00	9.00	9.00	7.00
	6.25	9.00	5.75	6.25	3.50	7.75	4.00	7.00	2.375	1.50	4.00	7.00	5.375	6.875	4.75	5.00
	3.625	10.00	3.00	9.50	6.00	8.75	5.00	7.00	4.75	8.00	3.625	3.00	8.50	8.00	8.75	8.00
	7.25	8.00	2.75	9.50	4.25	6.00	4.00	8.50	3.50	7.25	1.75	4.25	16.50	9.00	6.375	6.25
	9.50	9.75	2.625	8.00	3.50	9.75	4.75	7.75	3.625	8.50	4.625	6.75	6.00	8.50	7.25	5.375
	5.375	8.50	5.00	9.00	6.00	7.00	4.00	8.75	3.625	8.00	3.625	8.00	0.00	8.00	7.375	5.00
	5.375	8.40	5.50	9.25	5.25	8.00	4.75	8.00	3.625	7.00	3.75	7.75	8.25	7.125	9.50	5.375
	3.25	8.75	5.25	9.00	4.25	8.00	3.50	4.00	3.375	0.00	4.625	7.75	5.00	3.00	7.625	6.25
	5.50	9.75	6.00	10.00	4.25	8.00	3.25	8.00	4.375	5.50	4.00	8.75	6.25	8.00	10.875	5.00
	2.75	8.50	8.25	8.25	6.00	7.25	4.00	7.50	3.625	4.25	2.625	6.25	6.50	6.25	11.375	7.50
	3.00	6.75	7.75	10.00	7.25	9.75	5.25	7.00	4.50	5.50	3.625	0.00	7.50	6.00	7.00	7.50
	5.375	8.50	4.50	9.00	4.00	6.00	4.00	8.75	3.75	4.25	3.625	7.75	9.375	7.00	7.00	3.00
	7.50	7.875	5.00	8.50	4.00	8.75	3.50	9.75	5.375	0.50	1.625	3.50	5.50	5.25	7.75	7.00
	3.125	0.25	6.50	3.25	5.00	9.00	3.50	6.00	3.625	5.00	4.625	7.00	6.00	6.125	7.00	6.50
7.50	9.50	5.625	6.25	3.25	4.00	4.00	5.75	6.50	7.00	2.00	7.00	6.125	8.00	5.25	6.50	
4.25	10.00	3.00	9.75	3.25	4.75	4.75	6.50	4.50	7.25	3.625	7.00	9.50	7.875	7.00	6.00	
10.25	8.75	3.00	7.00	4.00	8.25	4.75	7.75	5.375	4.75	4.00	7.25	6.875	7.09	5.25	4.00	
6.625	7.00	8.50	10.00	4.00	8.00	3.75	5.50	3.625	1.75	2.625	5.25	6.25	5.00	6.75	7.75	
7.375	7.875	7.625	7.75	5.50	9.75	3.25	7.50	3.625	6.75	3.25	5.75	5.625	6.00	8.50	6.375	
3.375	7.875	4.375	10.00	4.00	0.50	3.50	9.25	2.625	4.00	2.25	1.50	10.50	9.00	9.00	8.875	
Totals .....	154.125	213.125	136.50	216.75	109.00	134.25	107.25	183.50	97.375	144.50	91.75	154.00	185.00	173.50	187.00	159.75

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	13.00	200.65	11.00	55.00	7.25	111.90	9.75	48.75	6.75	104.18	8.75	43.75	16.50	254.67	9.00	45.00
Lowest .....	2.00	30.87	6.25	31.25	3.00	46.30	2.00	10.00	1.625	25.68	1.50	7.50	4.75	73.31	3.00	15.00
Average .....	5.82	80.93	8.59	42.95	4.33	66.33	7.30	30.80	3.78	58.54	5.97	29.83	7.44	114.33	6.67	33.33
Tests above average .....	22		27		19		28		19		30		20		28	
Tests below average .....	28		23		31		22		31		20		30		22	

Catalogue number of samples..	PENNSYLVANIA.															
	RAMS, LAMBS.												RAMS, 2 YEARS OLD.			
	578.				580.				779.				582.			
Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	12.00	9.00	4.00	6.00	14.75	8.25	7.25	9.00	4.625	5.25	5.25	10.00	3.75	8.75	2.75	9.75
	9.75	3.75	6.00	5.50	9.25	10.50	10.00	10.00	6.375	10.00	6.625	7.50	3.00	13.75	4.50	10.75
	5.00	4.75	6.00	6.50	8.00	7.00	9.50	9.75	5.25	6.00	4.75	8.00	5.00	10.00	3.00	10.00
	6.50	5.75	11.50	8.25	7.00	10.50	6.25	9.25	6.75	7.75	7.00	7.25	3.25	5.75	3.00	7.75
	9.75	8.00	10.00	8.25	8.50	8.50	3.75	4.75	7.25	8.00	3.50	7.125	3.00	8.75	3.00	8.75
	9.00	9.50	4.00	2.00	8.25	8.50	5.25	5.75	4.25	5.75	8.50	5.75	4.50	0.25	2.00	11.00
	7.50	7.50	6.50	7.75	7.50	9.00	5.00	7.00	4.50	6.00	5.375	9.125	4.50	9.00	4.25	9.00
	6.75	9.00	6.00	7.00	5.50	6.75	5.25	6.25	6.375	9.00	4.625	5.00	3.75	10.00	4.00	9.25
	6.00	8.75	11.00	4.00	5.75	2.25	5.00	7.00	5.625	7.75	4.375	3.00	3.00	9.50	2.50	5.25
	10.00	6.00	5.00	4.00	7.00	4.25	6.00	4.00	5.625	8.00	5.375	7.75	5.50	10.00	4.50	7.00
	5.25	6.50	7.00	7.25	6.00	7.00	6.00	8.50	6.00	8.00	3.375	7.00	2.75	7.00	4.00	9.50
	7.00	9.00	4.75	4.00	7.00	11.00	5.75	8.75	7.00	8.25	8.00	8.125	2.75	4.00	3.25	10.25
	5.00	5.00	4.50	4.50	8.00	8.50	11.25	9.75	4.00	0.75	4.50	4.25	2.75	11.75	3.25	9.25
	11.50	7.75	5.00	4.00	7.25	7.50	8.00	5.25	7.75	10.00	4.00	7.75	2.50	9.25	3.00	10.00
	6.00	7.25	3.50	5.00	6.00	9.50	13.25	8.25	6.00	0.00	3.00	6.25	4.25	8.25	3.25	10.00
	5.00	7.00	5.25	4.00	4.00	3.75	3.25	4.50	5.75	7.75	5.50	6.50	5.50	10.25	2.25	6.50
	6.00	7.25	7.25	9.00	5.75	2.00	7.50	8.50	8.00	8.25	5.50	6.00	2.50	8.50	2.50	8.50
	4.50	7.00	4.75	2.00	7.75	8.75	6.00	8.00	5.00	8.75	8.50	9.00	3.00	10.75	2.50	11.50
	8.00	7.50	4.50	6.00	6.00	7.00	10.75	7.00	4.75	8.00	3.50	10.75	3.00	7.50	2.75	10.25
12.50	9.00	11.00	8.75	8.00	8.75	3.75	4.75	4.00	7.75	5.50	7.25	6.00	10.25	3.00	7.00	
6.00	7.00	5.00	7.00	8.50	9.00	7.25	9.00	0.375	8.00	4.00	5.75	6.00	9.00	3.00	10.50	
7.00	8.75	5.50	7.50	8.00	7.00	8.25	6.00	5.625	9.00	3.625	6.00	5.00	9.00	5.75	9.50	
6.00	5.75	6.50	6.25	5.50	9.00	6.00	7.75	3.625	6.25	5.00	7.75	2.75	4.00	3.00	7.00	
6.25	7.00	8.75	7.00	5.75	8.75	6.75	8.00	7.00	8.00	3.75	7.125	3.75	6.50	2.50	9.75	
6.25	7.00	6.50	5.50	6.50	0.00	7.75	6.00	8.25	9.00	6.00	7.00	2.50	3.00	2.75	8.75	
Totals .....	184.50	180.75	159.75	147.00	131.75	192.00	174.75	182.25	144.75	194.75	128.75	178.00	90.25	210.75	80.25	226.75

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	12.50	192.93	9.50	47.50	14.75	227.00	11.00	55.00	8.50	131.19	10.75	53.75	6.00	92.61	13.75	62.75
Lowest .....	3.50	54.02	2.00	10.00	3.25	50.16	2.00	10.00	3.00	40.30	3.00	15.00	2.00	30.87	3.00	15.00
Average .....	6.89	106.31	6.50	32.80	7.13	110.05	7.49	37.45	5.47	84.43	7.46	37.30	3.41	52.63	8.75	43.75
Tests above average .....	18		28		23		29		25		27		17		29	
Tests below average .....	32		22		27		21		25		23		33		17	



TABLE II.—Measurements of strain and stretch of wools—Continued.

PENNSYLVANIA.																
RAMS, 2 YEARS OLD.																
Catalogue number of samples..	583.				584.				585.				586.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	5.375	8.00	1.025	4.25	2.50	7.00	2.50	4.75	3.00	8.00	3.00	7.125	1.25	7.50	2.50	6.00
	2.25	7.75	2.025	8.00	2.25	8.50	2.75	6.00	4.75	8.00	3.375	7.00	4.00	8.00	3.375	7.50
	2.25	7.00	2.375	0.75	2.50	6.00	1.75	8.50	2.25	7.50	1.875	6.00	3.25	0.25	2.625	8.25
	5.25	10.25	2.375	7.75	2.50	8.50	1.75	2.75	2.00	6.00	1.75	5.875	2.375	7.50	4.875	8.25
	2.50	0.75	3.75	0.00	2.50	9.25	2.00	11.00	2.625	7.25	2.625	7.125	3.375	8.75	4.625	8.75
	2.75	7.00	1.75	0.00	2.75	7.50	1.75	3.00	1.875	3.125	2.625	8.00	8.25	6.50	4.00	6.75
	7.25	4.025	0.50	2.00	10.00	3.00	0.00	2.50	4.875	1.675	4.75	3.375	7.25	2.00	4.25	4.25
	2.625	7.25	2.025	8.50	3.00	8.00	2.25	0.00	4.875	2.25	7.00	2.00	8.25	4.875	5.25	5.25
	1.50	1.75	2.00	7.60	2.00	7.25	3.00	6.25	2.00	8.00	1.875	4.00	2.375	6.50	8.625	7.25
	2.625	1.75	2.025	8.50	3.00	0.00	2.75	8.00	2.125	8.00	2.625	6.25	3.00	6.75	8.625	5.75
	2.625	7.75	2.125	8.75	3.00	10.25	2.00	6.75	2.00	4.00	8.25	6.50	2.00	5.00	4.625	7.75
	2.625	8.00	3.375	6.00	2.00	9.00	3.25	10.75	2.00	2.75	3.50	6.50	2.375	7.00	2.25	5.60
	4.00	4.50	3.25	7.60	3.75	7.25	2.25	4.50	7.50	8.00	1.875	6.00	4.00	8.75	3.75	8.00
	4.50	7.75	2.50	7.00	2.75	7.00	2.75	6.50	8.125	7.00	2.00	6.50	2.00	6.75	2.00	8.25
	2.625	7.75	2.125	8.75	3.00	0.25	2.00	4.00	3.50	4.50	1.875	5.00	4.375	10.00	2.25	3.25
	2.375	8.00	2.00	8.75	2.50	8.75	4.00	10.50	2.625	8.25	3.875	7.875	3.375	6.75	8.75	6.75
	1.75	3.00	5.625	5.00	2.00	2.75	3.00	8.00	1.50	3.50	8.00	6.125	2.50	7.25	3.875	7.75
	4.00	9.00	3.00	0.00	3.00	8.75	2.50	10.00	1.00	4.00	3.25	7.00	5.25	7.00	2.625	8.25
	2.75	0.00	2.00	8.25	2.50	0.00	2.50	9.75	2.00	7.00	3.00	6.25	3.625	7.00	5.875	8.25
	3.75	9.00	3.50	0.75	2.25	7.25	3.25	7.60	2.25	7.00	3.00	6.75	2.375	5.50	4.00	8.00
	4.375	10.50	3.50	5.60	2.50	0.25	3.00	5.75	2.375	6.125	2.25	5.50	2.625	8.00	2.50	6.25
	3.00	8.25	3.375	10.00	2.50	0.75	2.00	7.25	2.50	8.125	3.25	6.375	3.875	5.00	4.375	9.00
	2.00	4.50	1.75	7.75	3.00	0.00	2.00	0.50	2.875	6.125	3.125	4.75	2.375	6.00	3.00	7.75
	2.00	1.75	2.00	2.00	2.50	8.25	2.00	4.50	2.00	6.50	3.00	8.75	3.375	7.00	3.375	5.75
Totals .....	65.675	130.75	67.875	179.25	64.25	210.75	64.00	182.50	69.875	155.75	67.125	154.50	78.25	180.00	84.625	190.50

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	4.625	71.24	10.50	62.50	4.00	61.75	11.00	55.00	7.50	115.70	8.25	41.25	5.375	82.90	10.00	50.00
Lowest .....	1.375	21.22	1.75	8.75	1.75	27.01	2.75	13.75	1.00	15.44	2.75	13.75	1.25	19.30	3.25	16.25
Average .....	2.675	40.62	6.38	31.00	2.57	39.67	7.69	38.45	2.74	42.29	6.21	31.65	3.20	50.30	6.99	34.95
Tests above average .....	15		14		20		28		22		20		27		27	
Tests below average .....	32		36		30		22		28		21		29		23	

PENNSYLVANIA.																
RAMS, 2 YEARS OLD.																
Catalogue number of samples..	587.				780.				781.				575.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	2.00	10.00	2.25	7.25	3.75	6.75	5.625	7.25	3.00	9.75	5.25	8.00	2.50	5.50	4.125	7.75
	2.25	7.75	2.25	0.75	8.00	8.00	4.00	7.00	3.00	10.23	4.00	10.00	3.00	0.25	2.75	6.875
	2.25	7.00	8.00	0.00	10.375	7.00	4.375	6.00	3.75	8.25	2.75	10.00	3.00	7.00	2.75	6.75
	5.25	10.25	2.00	6.75	5.625	7.25	4.125	4.50	3.25	10.00	4.50	6.25	5.00	9.00	7.00	7.00
	2.50	0.75	3.75	10.50	6.25	7.25	6.125	7.25	4.00	10.00	4.00	6.50	8.00	1.625	7.75	
	2.75	10.75	2.00	9.75	4.00	7.00	3.125	6.00	5.00	9.00	3.50	0.75	3.375	1.75	7.75	
	2.25	10.25	2.75	7.00	4.50	8.25	4.00	0.00	1.375	11.00	3.75	6.75	5.00	7.50	8.25	8.50
	2.00	10.00	4.50	9.60	3.25	3.00	8.00	7.00	5.50	8.75	3.25	9.25	7.50	4.00	7.00	
	3.25	11.00	3.00	8.00	4.625	7.00	4.60	0.75	5.00	10.00	5.25	9.75	5.25	9.60	9.75	
	2.00	6.00	2.50	7.75	4.50	7.875	4.625	4.00	6.00	10.75	3.25	10.25	8.50	2.50	6.00	
	2.00	8.50	2.50	3.75	15.75	7.50	3.375	5.00	3.00	8.00	2.50	9.75	5.00	7.00	2.25	6.00
	2.25	10.75	3.00	6.50	15.50	7.25	3.875	7.00	6.00	8.75	3.25	10.25	8.50	2.50	6.00	
	2.75	9.50	2.00	10.50	9.00	6.125	8.00	7.75	6.25	9.00	4.75	11.00	8.25	1.375	6.25	
	3.25	9.75	2.75	11.00	0.50	0.75	3.00	5.25	3.00	9.59	4.00	8.75	5.625	8.875	2.50	6.00
	1.00	8.50	3.75	9.75	3.75	8.875	3.50	3.00	4.00	8.50	2.25	10.00	2.50	5.75	10.00	
	3.25	12.00	2.75	9.00	4.625	6.50	8.625	6.75	4.00	8.25	4.00	10.00	4.25	6.875	1.875	8.75
	3.00	8.00	5.25	9.50	3.00	5.60	4.00	3.875	7.25	0.75	3.00	10.125	1.75	5.25	1.025	6.50
	2.50	8.75	8.25	11.00	7.875	7.00	10.00	7.00	2.00	8.00	2.75	7.25	1.75	7.00	7.75	7.00
	3.00	0.50	2.25	6.25	4.875	7.00	5.50	6.00	3.50	10.00	7.125	9.00	8.25	7.75	2.50	6.00
	3.75	8.00	4.25	11.75	5.25	5.25	12.375	8.25	3.75	0.00	4.25	10.25	5.375	8.875	1.375	5.50
	1.75	5.50	3.25	8.25	5.125	9.00	6.00	7.00	3.75	10.00	4.50	11.75	2.25	7.50	2.00	7.25
	2.25	7.50	3.25	8.00	3.625	6.50	4.00	8.375	6.00	8.75	2.00	10.00	2.75	7.00	2.50	8.00
	3.00	11.25	2.75	10.00	2.625	2.00	2.25	8.50	4.00	7.75	3.375	11.00	10.75	7.75	3.00	8.00
	3.25	9.50	4.00	9.00	4.00	7.00	6.875	7.00	8.00	7.75	3.375	11.00	10.75	7.75	3.00	8.00
	3.25	0.75	2.75	10.00	3.50	6.00	4.50	8.75	3.00	10.00	3.375	12.00	2.50	6.75	2.00	7.00
Totals .....	67.75	232.50	73.75	221.50	145.875	167.625	134.375	161.25	118.875	230.00	96.75	245.875	102.125	167.875	88.00	180.125

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	5.25	81.03	12.00	60.00	15.75	243.09	9.00	45.00	8.75	135.05	12.00	60.00	13.00	200.65	8.75	48.75
Lowest .....	1.00	15.44	3.75	18.75	2.25	31.73	2.00	10.00	2.00	30.87	5.00	25.00	1.375	21.23	3.00	15.00
Average .....	2.83	43.68	9.08	45.40	5.61	86.60	6.53	32.00	4.263	65.70	9.510	47.50	3.80	58.65	6.00	34.60
Tests above average .....	23		28		17		32		17		29		15		28	
Tests below average .....	27		22		33		18		33		21		55		22	



TABLE II.—Measurements of strain and stretch of wools—Continued.

PENNSYLVANIA.																
EWES, LAMBS.																
Catalogue number of samples..	576.				772.				773.				774.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	4.25	7.25	4.00	7.75	3.50	8.75	5.00	7.125	5.25	8.00	6.75	9.00	4.25	8.50	2.75	3.75
	2.75	0.75	3.25	8.25	6.50	9.50	2.25	5.50	5.25	9.50	4.75	8.00	5.25	7.75	5.00	9.75
	6.75	8.50	4.75	7.00	4.00	8.25	3.50	5.75	7.00	8.75	5.75	7.50	4.25	9.00	5.00	10.00
	4.25	8.00	2.00	6.00	5.00	7.25	2.625	2.125	7.25	8.00	5.75	8.00	3.00	7.00	5.00	6.25
	10.00	8.75	0.00	8.75	4.75	7.50	4.375	4.75	4.00	4.75	6.00	9.75	7.00	9.25	6.00	7.25
	2.00	4.00	3.00	8.75	3.25	8.00	4.50	7.00	4.75	8.00	4.00	7.00	6.00	8.00	3.75	8.00
	2.50	7.00	3.75	7.00	6.00	8.00	3.375	4.75	4.25	6.00	5.50	7.50	5.00	8.00	4.50	7.00
	3.50	2.50	5.75	9.00	3.625	8.75	5.625	7.50	0.50	8.75	5.00	9.00	5.50	7.00	2.25	7.25
	4.75	8.75	6.75	8.75	6.00	8.00	4.25	9.25	9.25	8.25	4.00	7.75	3.25	6.00	3.50	6.50
	4.00	6.50	3.00	7.50	3.375	7.25	6.625	6.00	3.75	8.75	3.50	8.00	5.50	8.25	3.75	7.00
	2.25	0.00	3.25	9.25	4.625	7.00	4.625	7.00	4.25	6.00	5.00	7.50	3.75	4.50	3.75	4.25
	6.75	8.50	0.00	8.00	4.50	4.75	4.50	4.00	5.25	7.75	5.75	8.00	4.00	8.00	3.75	8.50
	3.50	5.00	4.25	7.25	6.25	8.75	3.625	4.125	6.00	7.75	6.00	7.00	6.50	7.50	3.00	4.00
	4.00	7.75	4.25	7.50	3.625	7.25	6.00	8.375	6.00	6.00	6.00	7.75	4.00	7.00	3.25	9.00
	3.25	7.00	5.00	10.25	3.25	5.00	7.375	7.00	3.50	8.00	6.00	7.00	6.00	6.50	4.00	5.75
	4.00	10.00	5.75	9.00	3.375	7.50	5.25	6.00	3.25	8.00	4.00	4.75	6.00	7.75	4.00	8.00
	3.50	4.75	4.75	8.25	4.625	7.00	5.75	7.25	3.50	7.50	4.75	7.75	7.00	7.50	3.75	6.50
	4.25	7.25	4.00	5.75	8.00	7.25	5.625	6.375	5.00	7.50	8.00	8.50	4.00	8.00	3.00	6.00
	4.00	10.25	3.00	6.00	6.375	8.00	7.75	7.50	5.75	8.50	4.25	8.00	3.75	7.00	3.75	7.00
4.50	9.00	4.25	8.00	5.625	8.75	2.375	2.00	5.00	7.00	4.00	8.25	6.00	7.50	4.50	6.25	
4.00	7.00	4.00	9.00	3.375	6.25	7.50	8.25	6.25	9.00	3.00	6.75	3.25	4.50	5.75	9.25	
3.25	6.50	3.00	6.50	2.375	7.25	6.00	3.00	6.00	7.50	5.00	8.75	7.00	7.00	6.00	8.00	
2.75	7.25	3.75	8.00	3.00	9.125	6.25	7.00	8.00	9.00	3.75	5.75	3.00	6.50	4.00	7.00	
4.50	7.00	4.00	5.75	5.00	6.75	3.625	1.75	6.00	8.00	4.00	8.75	3.75	4.00	3.50	5.00	
7.50	9.75	3.00	6.00	4.50	0.50	4.25	0.25	5.75	8.00	4.75	8.00	10.50	9.50	4.75	0.75	
Totals .....	106.75	188.00	104.50	191.75	114.50	168.375	123.625	146.625	136.75	197.25	121.25	194.00	127.50	181.50	102.25	177.00

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	10.00	154.35	10.75	53.75	8.00	123.477	9.50	47.50	9.25	142.77	9.75	48.75	10.50	162.06	10.00	50.00
Lowest .....	2.00	30.87	2.50	12.50	2.375	36.66	1.75	8.75	3.00	40.304	4.75	23.75	2.75	44.44	3.75	18.75
Average .....	4.23	65.20	7.60	38.00	4.75	73.47	6.08	33.40	5.10	79.84	7.83	39.15	4.00	70.99	7.17	35.85
Tests above average.....	21		26		21		32		24		29		10		26	
Tests below average.....	29		24		29		18		26		21		31		24	

PENNSYLVANIA.																
EWES, 2 YEARS OLD.																
Catalogue number of samples..	775.				776.				777.				778.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	9.75	8.00	14.25	9.50	3.25	7.50	3.25	8.75	6.00	6.50	5.625	6.75	6.00	4.75	2.75	8.00
	9.50	7.75	7.25	6.50	3.375	7.75	4.00	8.00	3.00	0.25	5.00	8.125	5.00	7.75	2.25	8.50
	10.75	8.50	8.00	1.75	6.625	10.00	4.00	8.00	3.625	6.75	4.00	4.875	3.375	9.25	4.75	5.00
	6.25	8.25	6.75	7.75	3.75	8.875	2.25	5.75	4.50	7.00	4.25	5.25	4.375	9.25	5.00	6.25
	3.75	5.00	5.50	4.75	2.50	5.50	2.25	6.875	5.25	7.00	7.00	7.25	3.25	9.75	3.25	8.75
	8.25	8.75	10.25	7.75	3.00	8.00	5.625	8.00	4.625	6.00	5.50	8.75	1.75	8.25	5.25	8.50
	7.50	8.00	4.75	6.00	4.50	9.75	1.75	7.75	6.50	8.00	8.125	7.875	6.50	9.75	3.875	9.50
	9.75	6.25	6.25	8.00	2.25	7.50	3.50	7.50	5.00	4.375	4.00	4.25	4.00	8.75	2.00	5.75
	6.50	7.00	6.25	8.50	3.50	10.00	2.75	7.25	2.125	6.00	0.125	8.00	8.75	9.00	2.375	7.00
	6.00	8.25	8.00	8.00	3.50	9.75	4.25	9.00	4.375	7.00	4.375	7.00	3.00	9.00	3.00	8.00
	5.00	7.25	4.00	8.00	3.25	7.50	3.25	7.75	4.125	7.00	4.50	9.00	9.25	9.00	3.00	9.00
	5.50	9.50	8.25	8.00	4.00	8.50	4.375	8.00	2.25	5.375	1.125	6.00	3.25	7.125	6.25	8.50
	10.25	8.00	8.00	7.50	3.75	7.00	2.00	5.75	3.625	7.50	4.125	0.00	3.50	9.00	6.25	8.75
	7.00	8.75	8.75	8.75	3.875	9.50	3.25	9.00	2.50	5.75	0.00	8.03	0.25	8.00	2.50	8.00
	3.00	2.00	5.25	7.75	2.50	8.75	2.375	9.00	2.50	2.00	6.25	9.00	2.625	7.75	3.00	9.25
	5.25	5.00	7.25	8.00	3.375	7.50	3.50	8.00	3.875	7.00	3.25	8.00	7.00	8.00	2.625	8.75
	6.00	2.50	11.00	7.75	2.00	5.00	2.25	7.00	7.375	7.25	4.75	5.00	3.00	7.00	3.25	8.25
	5.25	6.00	7.00	8.00	2.75	7.00	4.50	6.00	5.50	5.50	4.60	5.50	4.50	5.50	3.25	9.75
	6.00	6.50	7.00	5.75	6.50	8.25	4.00	5.75	3.50	6.00	4.875	8.00	2.50	7.25	2.75	7.00
7.00	6.00	11.00	8.00	2.50	5.75	4.00	8.00	6.00	8.00	3.00	6.50	4.00	7.75	4.00	9.00	
3.50	7.75	0.00	9.00	2.25	7.75	3.50	5.75	4.25	4.00	4.625	7.00	2.75	7.25	4.50	8.75	
6.00	6.75	6.00	9.00	4.75	9.50	8.75	7.25	7.00	8.50	2.875	7.00	3.75	8.00	4.00	7.00	
10.75	9.00	15.75	8.50	3.75	8.00	5.75	7.75	7.00	8.00	5.00	0.25	3.50	7.25	2.00	9.25	
0.00	6.75	12.50	9.00	2.25	8.875	4.25	7.75	6.875	8.00	5.25	6.25	2.50	5.50	2.50	6.25	
5.00	5.50	5.00	9.00	3.00	8.00	3.00	5.875	5.625	8.00	4.00	6.50	2.25	6.50	2.50	8.75	
Totals .....	160.50	173.00	200.00	194.50	88.75	201.50	94.375	185.50	117.00	162.75	123.625	168.125	111.625	195.375	88.125	201.50

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	15.75	243.09	9.50	47.60	8.75	135.05	10.00	50.00	8.125	125.41	9.00	45.00	9.25	142.77	9.75	48.75
Lowest .....	3.00	46.30	2.00	10.00	1.75	27.01	5.00	25.00	2.125	32.788	2.00	10.00	1.75	27.01	4.75	28.75
Average .....	7.30	114.06	7.85	36.75	3.66	56.49	7.74	33.70	4.81	74.24	6.62	33.10	3.90	60.20	7.94	39.70
Tests above average.....	19		32		21		30		23		27		19		31	
Tests below average.....	31		18		29		20		27		23		31		19	



TABLE II.—Measurements of strain and stretch of wools—Continued.

PENNSYLVANIA.																
EWES, 3 YEARS OLD.																
Catalogue number of samples.	581.				588.				589.				590.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>
	4.25	7.135	5.50	6.00	2.25	6.125	3.875	7.09	3.25	10.25	2.75	9.00	3.25	9.00	1.25	4.00
	2.75	6.50	5.125	7.00	2.75	7.75	3.125	7.50	2.25	9.75	3.25	8.00	3.375	7.75	1.625	8.00
	3.375	7.00	5.625	8.00	2.75	7.00	2.25	4.25	2.75	9.00	6.75	8.50	3.00	8.25	2.00	8.00
	2.625	7.00	5.125	7.625	3.25	9.75	2.50	5.625	3.75	11.00	4.25	8.00	2.00	7.25	2.375	7.75
	4.50	8.25	4.00	7.25	3.25	7.25	2.50	6.25	2.75	10.00	4.50	4.00	4.75	8.00	1.00	3.00
	2.625	6.00	3.375	8.00	2.50	7.25	3.25	7.00	2.00	9.00	3.00	8.00	3.75	7.50	1.625	7.50
	4.75	4.75	4.375	5.75	3.50	7.50	3.50	7.00	3.00	4.00	3.00	8.75	3.00	9.25	1.75	6.75
	3.625	6.875	3.50	7.25	2.50	4.00	3.00	8.25	3.25	7.25	3.50	9.25	2.00	7.00	2.00	6.75
	3.00	8.00	3.75	8.00	3.00	8.25	3.625	6.75	4.00	6.75	3.00	7.00	3.625	6.75	2.375	6.25
	4.375	7.00	2.75	8.25	2.25	7.00	3.25	5.25	4.00	6.75	3.00	6.50	3.375	7.25	2.375	7.50
	4.25	8.25	2.50	7.625	2.25	4.00	3.00	4.50	2.75	8.25	3.25	7.00	2.625	7.75	2.625	8.00
	6.00	8.75	2.50	8.00	4.00	7.25	3.25	7.00	4.00	9.75	3.25	7.50	2.625	4.50	1.625	5.75
Actual measurement in grams and millimeters.	4.625	7.00	6.125	9.00	2.25	8.00	4.375	7.25	2.00	7.00	3.75	8.00	2.00	6.25	1.75	8.75
	6.50	8.00	4.50	9.25	2.25	6.75	2.50	7.25	3.75	8.50	2.25	7.00	2.375	7.75	1.25	3.25
	4.75	5.00	4.375	8.25	3.75	7.50	3.625	7.00	3.00	8.00	4.00	6.75	1.625	3.25	2.625	7.00
	4.50	8.25	4.00	9.00	3.50	5.75	2.75	8.00	3.50	8.00	3.50	8.75	2.625	7.50	3.50	7.50
	4.875	8.00	4.875	9.25	3.875	6.75	3.00	8.75	2.75	9.00	2.75	8.00	2.00	4.50	3.25	8.00
	3.625	7.25	4.25	9.625	2.75	5.75	2.75	5.00	3.25	8.25	4.00	8.75	2.25	10.00	2.00	6.25
	3.625	8.50	2.25	5.00	3.25	8.75	3.75	8.00	3.25	7.25	3.25	10.00	2.625	7.00	1.75	6.25
	3.50	7.875	4.25	8.25	2.50	6.50	2.25	7.125	2.50	6.00	3.00	8.25	2.50	8.75	2.875	7.50
	4.625	7.125	5.125	6.75	3.00	6.75	3.00	4.00	2.50	8.25	3.00	8.75	1.625	6.75	2.75	8.50
	3.25	7.125	4.00	7.00	3.00	6.875	3.50	9.00	5.00	8.00	2.00	9.00	2.50	9.25	2.25	6.00
	4.00	7.00	4.50	8.25	3.50	7.75	3.375	7.75	5.00	8.00	3.00	4.25	2.50	9.50	1.625	6.00
	3.00	4.00	3.375	8.00	3.00	7.00	3.50	8.25	8.25	7.75	3.50	8.75	2.00	2.50	2.625	8.25
	5.50	7.00	3.50	8.125	8.00	8.125	2.25	8.00	2.50	8.25	2.25	2.75	2.375	7.25	1.625	8.25
Totals	108.50	177.625	104.25	193.00	73.625	109.375	79.00	171.00	79.00	202.75	80.75	188.50	66.125	171.25	52.90	171.75
	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:	<i>grams.</i>	<i>grains.</i>	<i>mm.</i>	<i>per ct.</i>	<i>grams.</i>	<i>grains.</i>	<i>mm.</i>	<i>per ct.</i>	<i>grams.</i>	<i>grains.</i>	<i>mm.</i>	<i>per ct.</i>	<i>grams.</i>	<i>grains.</i>	<i>mm.</i>	<i>per ct.</i>
Highest	6.50	100.32	0.875	49.375	4.875	75.24	0.75	48.75	5.75	88.748	11.00	55.00	4.75	73.313	10.00	50.00
Lowest	2.25	34.73	4.75	23.75	1.50	23.15	3.00	15.00	2.00	30.87	2.75	13.75	1.00	15.435	2.50	12.50
Average	4.10	64.21	7.45	37.25	3.05	47.08	6.81	34.05	3.20	49.89	7.83	39.15	2.36	36.425	6.86	34.80
Tests above average	27		26		25		81		24		32		27		32	
Tests below average	23		24		25		19		26		18		23		18	

PENNSYLVANIA.																
EWES, 3 YEARS OLD.																
Catalogue number of samples.	591.				592.				593.				594.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>
	4.50	7.00	3.50	9.00	2.50	10.00	3.00	9.00	1.625	7.125	1.75	8.75	2.375	8.50	2.375	5.50
	3.375	4.75	3.00	7.50	3.25	9.50	3.00	10.00	1.50	7.125	1.675	9.125	2.375	8.25	3.00	9.75
	4.00	8.00	3.75	7.75	3.25	6.50	3.00	7.00	2.375	8.00	3.375	10.00	1.625	4.50	2.625	8.25
	2.625	6.75	2.00	6.75	2.00	2.25	3.25	8.00	2.125	8.00	1.675	8.00	1.625	3.75	2.625	6.00
	4.375	9.125	3.125	7.00	2.75	5.00	3.25	10.00	1.75	8.75	1.50	6.75	1.75	3.00	1.75	7.25
	3.75	9.25	2.75	7.00	2.50	7.00	2.25	9.00	1.75	9.75	1.50	7.75	2.25	4.00	1.75	7.00
	3.75	7.00	4.625	9.25	2.75	5.25	4.50	8.50	1.75	6.00	1.75	9.00	2.50	7.00	3.875	7.00
	6.75	8.00	3.625	7.875	2.75	9.50	3.25	12.00	1.25	5.00	1.75	6.75	2.625	9.50	2.375	6.75
	4.375	8.00	3.75	6.125	3.00	8.00	3.50	10.25	2.75	7.25	2.375	7.50	2.625	7.75	3.00	9.25
	3.625	7.00	2.25	8.75	3.00	2.00	2.75	8.00	2.00	0.25	2.25	8.875	2.50	8.75	2.50	8.00
	3.625	8.00	2.375	8.00	3.25	6.00	2.75	7.00	2.00	7.00	2.00	7.50	2.00	2.50	2.625	0.25
	2.875	7.50	3.00	7.25	3.00	8.50	4.00	10.00	2.25	9.75	1.625	8.125	3.00	6.00	2.625	5.75
	2.25	5.75	3.50	7.75	3.25	8.75	3.00	9.00	2.25	7.875	2.50	10.00	3.875	7.25	8.875	6.75
	3.00	9.00	3.50	8.00	2.25	5.00	2.75	7.50	1.75	7.50	8.50	9.50	1.75	4.25	2.625	8.50
	4.00	8.00	2.875	7.25	2.50	8.00	3.50	8.00	2.625	9.25	2.375	8.25	2.00	5.25	2.875	0.25
	2.50	5.00	3.625	7.75	3.00	8.25	2.00	8.00	1.875	9.25	2.25	6.875	2.375	6.25	1.375	3.00
	3.00	8.25	3.375	8.25	2.00	6.00	4.00	8.50	2.75	8.125	1.75	7.375	1.00	6.50	2.25	9.00
	2.125	8.25	4.00	8.00	2.25	9.00	3.75	8.25	2.00	9.00	3.25	8.375	8.25	8.75	3.00	7.50
	4.50	7.00	3.875	5.25	2.25	7.00	1.75	3.50	1.625	8.00	2.125	9.00	2.625	7.50	3.875	8.50
	3.00	6.50	4.00	8.00	2.50	5.50	3.00	7.25	1.75	7.625	2.625	6.875	2.00	6.25	3.625	8.25
	3.00	8.00	2.75	6.00	3.50	8.25	3.50	10.00	1.625	7.00	3.25	9.00	3.25	7.00	1.00	2.00
	2.75	8.50	4.00	7.00	4.00	10.25	3.00	8.25	1.50	8.00	2.375	7.50	2.00	6.25	2.625	8.00
	3.125	8.50	3.50	8.125	2.50	7.00	3.00	10.00	1.50	7.00	2.25	8.50	2.50	0.50	1.75	4.50
	4.25	8.00	3.25	8.00	3.00	9.25	4.50	9.25	1.75	9.75	2.25	7.00	2.375	4.50	2.625	7.75
	4.00	8.00	2.875	8.00	2.50	8.00	2.75	7.00	2.125	9.00	2.25	8.25	2.375	7.50	8.25	7.25
Totals	89.375	168.125	81.875	182.625	68.50	178.75	79.00	210.75	40.25	200.875	57.625	193.875	53.125	153.25	63.75	174.50
	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:	<i>grams.</i>	<i>grains.</i>	<i>mm.</i>	<i>per ct.</i>	<i>grams.</i>	<i>grains.</i>	<i>mm.</i>	<i>per ct.</i>	<i>grams.</i>	<i>grains.</i>	<i>mm.</i>	<i>per ct.</i>	<i>grams.</i>	<i>grains.</i>	<i>mm.</i>	<i>per ct.</i>
Highest	6.75	104.18	9.25	46.25	4.50	69.455	12.00	60.00	3.50	51.02	10.00	50.00	3.625	55.95	9.50	47.50
Lowest	2.25	31.73	8.00	15.00	1.75	27.01	2.00	10.00	1.25	19.29	5.00	25.00	1.00	15.435	2.00	10.00
Average	3.43	62.94	7.32	36.60	2.95	45.38	7.79	38.95	2.14	33.03	7.09	39.95	2.44	37.66	6.55	32.77
Tests above average	25		26		23		31		21		28		26		28	
Tests below average	25		22		2											



TABLE II.—Measurements of strain and stretch of wools—Continued.

Catalogue number of samples..		PENNSYLVANIA.												RAMS, MISCELLANEOUS SAMPLES.			
		EWES, 3 YEARS OLD.															
		505.				596.				597.				504.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
Actual measurement in grams and millimeters.	3.50	9.50	2.75	6.75	1.125	4.25	2.00	4.00	1.00	3.00	3.25	8.25	8.00	9.50	3.50	4.00	
	2.75	8.00	4.00	8.75	1.75	5.25	2.25	7.25	0.75	6.00	1.625	4.25	9.125	8.50	7.25	5.00	
	4.25	11.00	4.00	9.00	1.375	4.00	2.50	7.75	1.25	4.75	1.375	3.75	11.50	9.00	10.25	8.00	
	3.50	10.60	4.25	10.50	1.50	7.00	2.50	7.00	1.25	6.75	1.625	8.00	9.00	7.00	5.75	5.125	
	2.25	9.25	3.25	9.50	2.50	7.00	3.50	9.00	1.50	8.00	2.625	8.50	8.25	7.00	3.25	4.75	
	4.50	8.75	4.50	0.75	1.50	5.75	1.75	6.50	1.50	7.25	2.00	7.00	10.375	8.00	6.75	7.00	
	4.00	9.00	4.75	10.00	2.625	7.75	1.875	6.00	2.25	8.75	1.00	6.00	4.50	8.25	6.00	7.00	
	3.00	6.50	4.50	10.25	2.875	7.00	1.875	0.00	2.25	8.25	1.625	3.25	4.625	8.00	5.50	6.25	
	3.00	8.75	3.00	9.50	2.00	6.875	1.625	4.00	1.75	9.50	1.625	7.75	4.625	6.875	4.75	4.125	
	4.00	9.75	4.00	8.75	2.50	8.00	2.25	7.75	1.625	6.25	2.50	8.75	6.50	9.125	7.25	7.50	
	4.25	10.60	3.50	9.25	1.50	6.00	2.50	8.00	2.375	7.50	1.625	1.75	7.00	8.50	4.50	6.875	
	3.25	10.50	3.25	6.25	1.625	5.75	3.00	8.125	1.25	6.75	1.25	2.50	4.00	5.50	9.75	6.75	
	3.00	9.75	4.00	8.25	1.75	4.875	2.50	8.00	1.625	5.50	2.00	7.00	6.75	8.00	5.25	5.00	
	2.75	9.50	3.50	8.00	2.50	8.00	2.25	7.00	1.025	10.00	1.25	2.25	9.75	8.00	5.75	4.25	
	3.50	9.50	4.25	10.00	2.375	6.50	3.00	9.00	1.75	4.00	3.375	7.75	8.00	8.50	5.75	7.25	
	4.00	10.75	3.75	10.00	2.025	8.75	2.625	8.00	1.00	6.00	1.375	1.00	5.25	4.00	5.00	3.00	
	3.50	8.50	4.00	10.00	3.00	0.00	2.50	7.875	1.375	9.25	3.625	7.75	9.75	5.75	9.75	7.125	
	4.00	10.00	5.25	9.50	1.625	7.00	3.375	8.00	2.375	8.25	3.00	6.75	5.50	6.25	9.75	7.25	
	4.00	10.00	3.00	6.75	1.875	5.00	1.75	4.75	1.625	5.75	3.00	6.25	8.00	6.75	3.50	6.75	
	4.50	11.00	3.75	10.75	3.50	8.50	3.25	8.00	2.625	8.25	3.375	7.00	5.75	8.25	5.75	8.00	
4.50	9.75	3.75	8.00	1.125	4.00	2.50	6.125	1.50	4.00	2.375	3.75	7.50	6.50	6.125	0.00		
3.75	9.75	4.00	8.00	2.75	8.25	2.50	2.00	1.50	7.25	1.625	6.00	4.50	7.25	4.00	4.25		
3.50	10.00	3.00	9.50	1.75	4.00	2.625	6.00	2.375	6.60	2.00	5.50	5.00	6.00	4.875	7.875		
4.00	0.50	3.25	9.50	1.50	4.00	3.00	7.50	1.75	7.00	2.50	7.00	5.875	5.50	6.25	9.50		
3.00	9.00	3.50	6.00	2.50	7.75	2.125	5.50	2.00	8.50	1.875	6.50	5.25	8.00	5.75	8.875		
Totals .....	90.25	238.00	94.75	221.00	52.75	160.25	61.625	169.125	41.875	172.50	83.00	144.25	175.375	184.00	152.00	150.50	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....		grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Lowest .....		5.25	81.031	11.00	55.60	3.50	54.02	9.00	45.00	3.625	55.95	10.00	50.00	11.50	177.50	9.50	47.50
Average .....		2.25	84.73	6.75	33.75	1.125	17.36	2.00	10.00	0.75	11.575	1.00	5.00	3.25	50.16	4.00	20.00
		3.70	87.108	9.18	45.90	2.29	35.35	6.59	32.95	1.89	29.17	6.33	31.65	6.50	101.10	6.87	34.35
Tests above average.....		27		32		26		28		20		28		20		20	
Tests below average.....		23		18		24		22		30		22		30		21	
Catalogue number of samples..		PENNSYLVANIA.															
		RAMS, MISCELLANEOUS SAMPLES.															
		509.				572.				573.				579.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
Actual measurement in grams and millimeters.	5.50	6.50	3.00	7.00	4.25	7.75	10.00	7.00	6.00	6.75	4.75	5.25	10.25	9.00	4.375	3.50	
	4.625	6.25	3.00	8.50	4.75	8.75	4.75	8.75	6.25	6.00	1.50	7.50	7.75	6.375	6.50	5.00	
	4.625	7.25	3.50	4.875	5.00	9.50	4.00	7.00	4.50	6.50	4.50	5.25	5.62	6.25	4.75	9.75	
	3.00	5.25	2.75	5.25	4.00	3.00	6.75	9.00	12.25	8.00	5.00	5.75	3.00	4.75	3.50	5.75	
	4.375	6.00	2.875	6.875	4.25	7.75	6.00	12.25	3.00	5.75	6.75	5.50	7.00	5.375	5.00	5.00	
	3.375	6.00	4.00	7.00	5.25	8.50	3.25	6.00	10.00	3.50	9.50	8.75	9.625	6.00	6.50	8.00	
	5.25	8.00	3.25	6.875	4.75	8.50	4.75	7.75	18.75	9.00	8.00	6.50	8.375	8.75	2.50	6.00	
	4.00	5.00	3.50	5.00	4.00	4.75	7.00	8.00	10.00	10.00	6.00	6.00	7.00	4.00	4.00	4.625	
	2.625	5.25	4.25	4.25	4.00	5.50	10.00	10.00	4.25	3.75	10.25	8.00	4.50	5.75	6.625	7.00	
	2.375	6.00	3.875	6.00	0.50	7.75	4.25	8.00	8.00	1.00	4.50	7.00	4.00	4.00	3.625	7.00	
	3.00	6.00	3.375	3.125	8.00	8.50	3.25	7.00	19.25	9.50	4.75	7.25	2.625	2.75	1.00	2.75	
	4.00	7.25	2.625	7.00	4.00	6.00	6.75	9.75	3.50	4.25	11.25	7.00	6.625	5.75	4.50	6.25	
	4.875	7.00	4.625	6.00	4.00	8.25	5.75	10.00	7.50	7.00	9.25	6.00	6.375	4.75	6.375	6.00	
	3.00	6.00	3.00	3.00	4.75	8.75	4.00	4.00	9.00	7.50	10.50	9.75	4.75	7.50	3.625	6.25	
	3.825	6.00	3.875	6.50	4.00	5.25	4.50	5.75	12.25	8.25	6.00	8.25	4.50	7.50	6.25	7.75	
	3.635	6.50	4.00	5.00	8.25	8.75	4.50	7.50	9.75	7.25	4.50	6.35	3.625	2.75	3.75	2.00	
	6.25	7.25	3.625	5.75	4.25	7.00	9.25	8.00	4.75	5.00	4.00	8.00	2.625	1.75	3.50	1.00	
	2.75	3.75	4.75	7.75	4.00	7.25	4.75	8.00	5.00	7.00	4.00	6.00	5.75	7.00	3.375	5.00	
	2.625	4.00	2.50	7.00	5.00	9.75	4.75	8.00	5.00	7.00	3.75	7.00	4.375	4.00	5.375	9.00	
	4.625	7.00	2.00	3.00	3.25	6.00	4.00	8.75	4.00	6.50	8.50	4.00	4.625	4.25	7.50	6.75	
2.50	5.50	2.25	4.25	4.25	8.75	8.75	9.50	5.00	8.50	5.00	1.50	4.75	6.75	4.625	6.75		
4.50	8.00	3.50	6.25	5.00	7.75	8.75	9.50	6.75	8.75	5.75	4.75	3.375	3.75	5.25	6.50		
3.50	0.00	8.875	6.00	4.75	8.25	3.25	6.25	4.50	7.00	8.00	3.00	7.75	6.75	3.625	5.50		
2.75	5.25	4.00	7.00	5.75	7.00	4.75	10.00	5.00	5.75	12.25	6.00	6.75	6.00	3.375	7.00		
Totals .....	94.625	159.00	85.875	144.375	125.00	181.50	144.25	193.75	190.25	153.50	167.00	158.00	133.375	139.00	114.375	142.75	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....		grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Lowest .....		6.25	06.47	8.50	42.50	10.00	154.35	10.00	50.00	19.25	297.12	5.75	48.75	10.25	158.20	9.00	45.00
Average .....		2.00	30.87	3.00	15.00	3.25	50.16	2.50	12.50	3.50	54.02	1.00	5.00	2.625	40.52	1.00	5.00
		3.61	55.72	5.97	29.85	5.39	83.19	7.51	37.55	7.33	113.14	6.23	31.15	4.96	76.56	5.61	28.20
Tests above average.....		24		32		15		30		21		29		20		30	
Tests below average.....		26		18		35		20		29		21		30		20	



TABLE II.—Measurements of strain and stretch of wools—Continued.

PENNSYLVANIA.																	
EWES, MISCELLANEOUS SAMPLES																	
Catalogue number of samples..	565.				566.				567.				568.				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	10.50	8.00	0.375	8.25	4.75	5.00	3.00	2.75	4.50	6.00	4.375	5.75	4.75	4.00	6.50	0.75	
7.875	7.75	5.25	6.75	9.00	6.75	4.00	4.25	4.00	7.50	6.00	6.50	11.00	8.00	6.25	4.75		
4.60	8.00	2.625	2.00	2.75	1.75	5.25	2.50	3.125	6.50	7.00	7.00	6.75	4.25	3.75	2.00		
12.025	7.25	6.50	7.00	3.00	4.00	4.00	4.00	5.75	8.75	7.25	4.875	7.00	11.25	6.00	4.50	6.00	
3.625	4.00	5.625	5.75	0.25	9.00	4.00	2.50	3.50	7.00	5.875	7.25	6.00	8.00	5.75	6.00	6.00	
4.50	8.75	7.25	2.75	3.50	3.00	6.50	0.25	3.50	6.125	7.125	5.25	8.25	8.25	6.00	8.00	6.00	
2.50	8.50	9.025	6.25	4.25	2.50	3.25	3.00	3.375	4.00	5.125	7.00	7.00	6.00	6.00	5.00	6.00	
3.75	8.50	6.25	6.50	4.00	7.00	0.00	4.25	3.50	8.00	4.00	8.00	4.75	4.25	5.75	7.00	6.00	
3.625	6.75	5.375	8.50	0.00	7.00	0.00	2.75	5.50	7.625	8.125	6.50	9.00	4.50	6.00	4.00	4.00	
7.625	8.00	8.00	8.00	4.25	8.00	7.50	8.00	6.625	7.00	4.00	5.00	3.75	6.50	6.25	9.00	6.00	
8.625	7.75	12.50	6.00	3.75	9.50	6.50	8.00	4.625	6.00	6.75	7.00	6.00	5.00	5.25	7.00	7.00	
5.375	6.00	6.00	7.00	3.75	9.00	3.60	2.50	6.25	5.25	3.875	7.125	5.75	7.50	6.00	5.75	7.00	
10.50	7.75	5.625	7.00	6.00	6.00	7.25	7.25	2.50	7.875	6.50	6.00	4.75	4.75	6.00	7.00	7.00	
7.375	8.00	2.625	2.50	9.50	8.50	4.50	4.75	3.875	6.00	7.00	6.00	7.00	3.00	9.75	7.25	7.25	
0.00	8.75	0.375	7.00	3.75	6.00	4.25	4.00	6.50	3.875	4.375	6.00	6.00	7.00	4.50	4.75	4.75	
5.00	6.25	0.25	8.00	6.25	8.25	3.00	3.00	2.50	4.50	3.75	4.75	3.50	6.50	4.75	9.00	9.00	
8.00	7.75	4.00	7.75	5.25	2.00	6.50	9.50	4.825	4.825	3.25	6.50	6.25	6.00	4.75	8.75	8.75	
5.50	4.75	10.50	7.75	4.00	5.25	4.50	8.75	4.625	7.25	4.00	3.00	8.50	6.00	5.00	5.75	7.00	
7.60	9.00	7.50	8.75	3.75	6.00	7.25	9.00	3.75	6.00	4.00	6.50	6.25	5.00	6.50	8.25	8.25	
4.00	0.00	8.75	5.75	4.50	3.25	7.75	10.00	5.50	6.50	2.50	6.00	5.75	5.75	9.75	7.00	7.00	
8.625	7.25	4.50	8.25	7.25	8.50	9.50	8.50	4.75	8.50	7.25	7.25	7.25	6.00	6.00	8.50	8.50	
7.00	7.25	4.375	7.75	4.00	6.00	3.00	1.00	9.50	8.00	3.75	7.00	3.50	6.50	6.00	8.00	8.00	
9.50	7.75	5.00	7.75	4.50	8.75	6.00	6.00	3.00	6.00	2.625	6.00	6.25	8.50	6.00	4.25	4.25	
4.625	8.00	10.625	7.00	3.00	2.00	6.00	7.00	4.625	5.00	3.50	6.25	6.25	7.00	6.50	4.00	4.00	
6.375	8.75	8.25	7.00	4.25	3.00	5.00	6.50	3.25	5.25	3.875	4.75	5.75	2.25	10.25	5.50	5.50	
Totals .....	134.625	182.50	168.50	168.25	121.25	144.00	132.50	140.75	111.125	156.625	122.75	150.625	171.25	146.50	152.75	157.75	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	
Lowest .....	12.25	189.07	9.00	45.00	9.50	146.63	10.00	50.00	6.50	146.63	8.50	42.50	13.50	208.37	9.00	45.00	
Average .....	2.50	38.50	7.00	10.60	2.75	42.45	1.00	5.00	2.50	38.50	4.00	20.00	3.50	54.02	2.00	10.00	
	6.46	99.71	7.015	35.025	5.75	88.75	6.70	28.50	4.68	72.23	6.33	31.65	6.48	160.02	6.25	31.25	
Tests above average.....	22		29		18		26		19		25		14		23		
Tests below average.....	28		21		32		24		31		25		30		27		

PENNSYLVANIA.																	
EWES, MISCELLANEOUS SAMPLES																	
Catalogue number of samples..	571.				738.				737.				738.				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	8.25	6.25	2.00	4.25	6.25	7.00	6.00	8.00	6.75	7.875	4.50	6.75	3.00	6.00	2.125	3.75	
5.875	4.00	2.625	6.25	6.25	7.75	6.00	9.00	3.75	7.60	3.00	6.60	3.00	3.125	3.00	7.125		
3.00	4.75	2.625	3.75	6.00	8.00	4.00	7.75	6.50	3.875	3.625	7.75	3.25	4.875	6.50	8.25		
3.50	3.25	2.625	6.75	6.00	5.50	6.00	0.50	4.75	6.25	3.75	7.75	1.875	3.375	3.25	6.125		
2.625	4.25	3.00	7.00	6.25	8.00	6.00	8.00	7.75	8.00	2.00	8.75	1.25	3.00	3.00	7.00		
4.75	6.25	3.375	7.75	6.25	2.00	4.25	8.00	4.75	0.00	2.25	6.50	2.00	2.125	2.00	4.00		
3.875	4.25	1.625	1.75	5.00	6.00	5.75	8.00	3.00	5.75	5.75	8.75	4.00	5.00	4.00	8.00		
2.625	4.25	6.00	7.75	8.50	8.00	5.25	9.00	2.875	4.25	2.625	6.75	4.00	4.00	2.75	8.25		
3.625	6.60	4.00	4.00	7.00	6.75	5.00	6.00	2.75	5.00	3.25	8.60	3.00	1.75	2.25	6.00		
5.75	7.25	2.625	5.75	6.75	8.25	5.50	8.00	4.00	7.25	2.625	5.25	4.25	4.00	8.50	6.875		
2.625	7.50	2.00	6.00	7.25	6.00	5.50	3.50	3.50	7.25	6.50	8.75	2.625	3.375	2.75	5.125		
2.00	5.00	2.375	2.75	4.25	5.00	4.00	3.50	4.25	6.60	3.875	10.00	1.625	4.75	3.50	8.00		
4.875	6.25	2.00	3.25	4.25	5.25	6.25	8.00	5.50	10.375	5.50	8.60	4.50	4.25	4.25	8.00		
2.625	2.00	3.75	4.25	5.50	7.75	3.00	3.00	3.50	6.00	4.50	9.00	4.50	4.75	1.25	4.00		
2.875	5.75	3.00	6.00	6.25	8.00	5.25	8.00	4.00	5.00	2.00	5.00	4.975	4.50	2.60	6.125		
2.75	8.25	2.625	3.75	5.75	7.75	6.00	8.00	4.00	8.25	3.875	9.00	2.75	3.50	2.25	6.00		
4.00	7.75	6.00	5.75	10.00	5.75	4.00	2.875	4.25	5.00	2.50	3.50	5.00	2.50	2.50	7.75		
2.00	8.25	3.875	6.25	6.00	7.00	6.60	8.00	6.625	5.50	3.00	8.50	5.60	7.00	2.00	6.00		
2.00	8.25	0.25	7.50	6.00	7.75	5.00	8.00	3.25	0.25	4.375	8.75	4.50	4.00	2.375	4.875		
3.875	8.60	2.00	7.75	5.00	3.50	5.00	9.00	4.75	6.625	3.625	6.50	5.125	4.375	3.60	6.25		
2.625	8.50	3.50	8.00	6.75	7.00	4.00	3.75	3.00	7.625	4.00	8.00	4.50	0.25	3.375	6.00		
2.00	2.00	2.625	4.75	7.00	8.00	5.00	5.00	9.00	9.00	3.00	7.25	3.25	5.00	3.25	7.00		
2.25	7.75	1.625	3.75	5.25	2.00	5.00	5.75	4.75	6.50	3.00	5.50	3.75	8.00	2.875	7.00		
3.25	8.50	1.625	5.00	5.00	4.00	4.00	3.50	7.00	8.50	4.375	8.75	3.25	7.00	2.25	6.00		
2.625	8.00	6.25	6.25	9.75	8.75	7.50	4.00	4.375	7.00	3.625	9.50	2.25	6.00	4.75	7.00		
Totals .....	78.75	146.60	74.125	135.00	153.00	164.25	131.50	171.75	105.75	167.875	92.625	196.75	88.625	115.00	75.75	150.375	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	
Lowest .....	6.25	90.466	8.50	42.60	9.75	160.49	10.00	50.00	9.00	138.01	10.375	51.875	5.50	84.89	8.25	41.25	
Average .....	1.625	28.08	1.75	8.75	2.00	46.30	2.00	10.00	2.00	80.87	8.875	19.375	1.25	19.29	1.75	8.75	
	3.66	47.25	6.63	28.15	6.69	87.82	6.72	33.69	3.968	61.24	7.203	34.465	3.23	49.82	6.488	27.44	
Tests above average.....	19		20		27		33		25		25		25		25		
Tests below average.....	31		21		23		18		25		25		25		25		



TABLE II.—Measurements of strain and stretch of wools—Continued.

Catalogue number of samples..		WISCONSIN.															
		RAMS, YEARLING.															
		747.				748.				749.				750.			
Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.		
grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.		
3.00	2.75	3.00	2.00	5.50	5.00	8.75	8.00	6.00	4.75	5.50	5.25	3.75	6.25	5.00	4.00		
3.00	3.00	3.00	3.00	3.25	3.00	3.50	8.75	6.75	9.00	3.75	2.50	3.00	4.00	4.00	6.00		
3.00	3.00	3.25	6.00	3.625	6.75	3.625	2.75	4.00	6.00	4.00	8.00	4.00	6.00	2.00	7.00		
4.75	6.75	4.00	7.50	6.50	6.25	4.00	6.00	5.00	6.25	6.25	7.75	2.75	3.75	5.25	2.75		
2.75	3.00	3.50	4.00	2.875	3.75	6.875	9.25	6.50	9.50	4.25	7.50	3.00	4.75	2.75	5.75		
2.50	4.00	3.00	2.25	3.50	3.125	3.625	5.625	4.25	8.25	5.75	8.75	2.75	5.00	3.00	4.00		
3.75	4.50	3.25	3.50	3.25	2.00	4.25	5.75	4.00	7.25	3.75	4.50	3.00	7.00	4.00	7.25		
4.00	7.00	3.00	3.00	2.50	4.00	4.625	7.25	4.00	7.00	6.00	3.75	3.25	6.00	3.75	6.50		
3.50	7.00	2.75	2.75	4.625	4.00	4.50	4.25	6.50	8.50	4.25	7.25	3.00	4.00	6.25	7.00		
0.00	3.00	4.00	2.50	3.75	5.25	6.50	8.125	6.50	7.00	5.75	5.25	3.00	4.00	3.75	5.00		
2.00	2.75	2.00	2.75	3.625	3.875	7.50	6.50	6.25	8.00	6.25	5.00	3.25	6.75	3.00	5.00		
4.00	0.25	3.50	5.00	4.50	2.00	7.50	7.00	6.50	8.00	6.50	8.00	5.00	3.50	2.50	6.00		
3.75	3.00	3.00	5.00	3.50	2.75	3.50	3.00	7.50	8.25	5.25	3.00	2.75	2.50	4.75	5.25		
4.25	9.00	3.25	6.25	2.50	3.50	6.625	7.875	4.00	4.00	5.50	7.25	6.00	8.50	3.50	6.25		
3.00	3.00	3.00	5.00	2.375	4.50	8.50	8.375	5.50	3.25	3.00	3.00	3.75	4.00	2.75	4.75		
4.00	4.00	2.75	3.00	2.50	2.875	6.125	6.625	4.00	2.50	0.25	8.00	3.00	6.25	2.75	5.25		
3.50	4.00	4.75	6.25	3.75	3.00	5.75	7.00	6.50	6.75	5.00	7.25	3.00	6.00	3.25	3.50		
3.25	4.25	2.25	2.50	2.75	3.25	9.00	8.50	5.50	8.50	3.00	3.00	4.75	6.00	3.00	4.25		
4.50	6.25	3.25	3.75	3.25	3.25	4.50	7.50	6.00	7.00	6.00	6.50	7.75	5.50	3.75	2.75		
3.50	5.00	3.25	3.50	3.00	3.625	5.75	8.875	5.50	3.50	5.75	6.00	3.75	3.75	3.50	6.00		
2.75	2.25	2.75	2.50	4.25	8.25	5.00	6.75	5.50	7.50	6.75	7.00	4.00	4.50	5.00	5.25		
4.00	4.75	2.50	2.00	2.00	3.00	4.00	7.125	6.50	6.75	6.00	6.50	2.50	4.00	2.75	5.00		
3.25	2.75	2.00	4.25	2.00	3.00	6.25	8.00	4.00	7.75	7.75	6.00	3.25	3.00	4.00	2.50		
3.25	2.75	2.50	3.00	2.75	3.00	7.60	8.00	5.75	7.50	4.00	5.25	3.75	5.75	3.25	2.50		
3.75	3.75	3.50	6.00	2.00	2.875	2.75	2.00	5.00	6.50	3.00	4.00	3.00	4.00	3.00	5.00		
Totals .....		88.50	107.75	77.00	97.25	82.125	94.875	140.50	168.875	137.50	160.25	129.25	149.00	91.00	124.75	92.50	126.25

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest.....	0.00	92.61	9.00	45.00	9.50	146.66	9.25	46.25	7.75	119.62	9.50	47.50	7.75	119.62	8.50	42.50
Lowest.....	2.00	30.87	2.00	10.00	2.00	30.87	2.00	10.00	3.00	48.30	2.50	12.50	2.00	30.87	2.50	12.50
Average.....	3.31	51.09	4.10	20.50	4.373	70.58	5.275	26.375	5.395	82.34	6.365	31.825	3.67	56.65	5.02	25.10
Tests above average.....	20		19		17		24		30		31		21		23	
Tests below average.....	30		31		33		26		20		19		29		27	

Catalogue number of samples..		WISCONSIN.															
		RAMS, 2 YEARS OLD.															
		751.				724.				728.				729.			
Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.		
grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.		
3.50	3.00	4.00	9.00	7.375	8.75	6.00	7.00	6.00	7.00	4.75	5.75	7.00	8.25	3.25	4.875		
2.875	2.25	3.25	2.875	3.00	2.00	3.25	3.875	5.50	8.25	6.50	9.00	13.00	7.125	4.50	5.00		
4.50	2.00	5.00	7.00	4.625	6.75	3.75	2.125	6.00	5.00	4.25	4.00	5.60	7.125	9.125	7.00		
5.875	7.00	3.625	7.00	3.75	6.60	4.25	4.00	5.75	7.00	6.25	8.75	6.875	6.25	4.625	7.00		
3.25	6.00	4.25	8.00	5.00	7.75	4.375	6.125	5.75	7.25	4.75	7.60	6.25	8.00	7.00	6.25		
4.00	4.00	3.00	5.375	4.60	4.00	3.00	3.25	5.00	8.00	6.00	7.25	6.625	7.00	5.60	5.125		
5.875	4.00	3.75	5.125	4.25	7.00	2.875	4.00	7.00	9.75	7.75	8.25	4.375	4.25	6.00	5.75		
8.00	3.50	4.50	4.125	3.25	1.25	4.625	0.25	5.50	8.00	7.75	9.75	4.375	8.25	5.625	7.00		
4.375	4.125	3.50	4.25	5.625	6.00	4.00	4.875	5.00	7.75	6.00	9.25	4.125	5.00	4.875	8.25		
2.75	4.00	2.25	4.50	3.50	3.00	4.50	5.125	4.00	9.75	4.25	5.25	4.75	5.50	5.25	8.00		
4.25	2.50	5.00	7.25	3.00	3.00	5.25	4.00	5.00	8.50	5.00	6.75	7.50	7.50	5.25	7.25		
3.625	4.00	3.875	3.00	2.625	2.00	3.25	4.00	5.50	8.50	6.00	9.75	6.50	6.00	3.75	5.00		
1.875	2.375	3.25	2.00	5.25	6.375	3.25	3.125	5.50	8.50	3.75	4.50	7.50	6.75	3.625	6.625		
3.50	4.875	2.50	2.25	3.75	8.00	3.25	3.625	4.50	8.75	5.00	8.25	5.00	6.75	4.75	7.25		
3.875	3.875	4.25	4.00	3.25	5.00	3.25	3.00	3.50	5.25	4.50	9.25	5.00	6.75	6.25	7.25		
2.25	3.00	7.50	7.125	2.875	5.00	3.75	6.00	4.00	10.00	4.00	4.00	5.625	6.50	4.50	9.00		
3.875	3.125	2.75	6.875	3.00	3.00	3.25	3.00	5.25	8.25	6.50	8.25	8.25	8.00	6.25	7.00		
6.25	2.00	3.875	5.25	3.50	4.00	4.875	7.50	5.50	10.25	4.50	8.50	3.25	5.00	3.75	6.125		
2.375	6.00	3.50	4.25	2.75	6.00	3.375	7.00	4.50	5.25	6.75	7.75	2.75	5.75	5.50	6.00		
4.75	3.875	7.00	7.875	5.25	5.125	6.50	6.00	4.25	7.50	4.00	6.25	4.625	4.00	4.25	5.125		
7.00	4.125	5.375	5.00	4.625	7.00	3.75	5.00	5.00	8.50	6.00	9.00	4.875	4.00	8.75	8.50		
2.25	4.75	4.25	6.75	3.25	6.00	3.00	3.875	4.50	4.75	5.25	7.75	4.50	6.50	6.375	6.50		
3.00	8.25	6.50	6.875	4.25	4.00	4.00	4.50	3.50	1.50	5.00	6.50	5.50	7.00	3.50	6.75		
3.00	3.60	2.25	5.00	3.25	6.875	6.00	3.75	5.75	9.75	4.50	3.75	6.125	8.00	4.375	6.25		
3.00	3.00	4.50	3.25	3.75	3.00	3.00	2.75	5.75	6.50	6.00	9.00	5.25	7.25	4.125	6.125		
Totals .....		06.375	98.125	105.60	133.00	07.125	123.375	98.75	113.625	125.50	188.25	133.25	186.00	142.125	159.60	132.50	167.125

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest.....	8.00	123.48	9.00	45.00	6.00	92.61	8.00	40.00	7.75	119.62	10.25	51.25	13.00	200.65	9.00	45.00
Lowest.....	1.875	28.06	2.00	10.00	2.876	44.38	1.25	6.25	3.59	54.021	1.50	7.50	2.75	42.45	4.00	20.00
Average.....	4.038	62.33	4.623	23.15	3.918	60.47	4.74	23.70	5.18	79.951	7.49	37.45	6.49	84.74	6.53	32.65
Tests above average.....	21		21		21		24		24		31		23		27	
Tests below average.....	29		29		29		26		26		19		27		28	



TABLE II.—Measurements of strain and stretch of wools—Continued.

WISCONSIN.																
RAMS, 2 YEARS OLD.																
Catalogue number of samples..	733.				734.				735.				739.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	5.25	5.75	2.625	2.75	4.25	7.125	5.25	8.00	5.50	6.50	4.25	7.00	5.25	7.75	6.75	8.25
	4.00	12.75	4.375	10.00	13.125	8.00	8.00	7.50	5.025	8.125	4.50	4.50	4.00	4.75	7.00	10.00
	4.25	5.75	3.00	8.25	5.00	7.50	4.00	5.50	4.875	6.00	4.375	6.125	3.00	4.00	5.25	5.50
	1.00	0.75	2.625	6.00	4.00	6.00	6.25	8.00	4.625	9.00	8.00	6.75	8.75	7.10	4.00	3.50
	6.50	4.75	3.00	8.75	5.375	7.00	4.25	7.50	4.75	6.50	5.025	7.00	4.00	5.25	6.00	7.25
	3.625	2.00	4.625	7.25	6.00	8.00	7.25	6.875	3.50	2.00	3.375	2.50	10.75	8.50	5.00	7.75
	4.375	2.00	6.25	7.00	7.25	8.75	8.75	9.00	3.875	2.125	3.75	6.875	5.00	8.00	5.50	7.25
	6.625	7.00	3.375	2.50	0.25	0.60	8.25	7.00	5.375	6.00	0.375	8.50	5.25	8.50	5.00	8.25
	3.375	3.75	1.375	1.00	0.25	5.875	4.50	7.75	2.625	3.00	4.75	6.25	0.50	7.75	6.75	8.50
	5.625	3.25	3.625	5.00	10.25	8.875	5.25	5.25	5.00	7.875	5.75	6.875	4.50	4.25	6.00	6.25
	2.75	3.25	2.75	6.75	4.00	8.00	5.50	7.50	4.375	3.00	4.50	8.00	4.00	8.50	4.25	6.75
	3.375	2.00	5.00	7.00	0.25	8.25	6.00	7.50	6.00	7.875	7.625	6.25	4.00	6.25	4.75	4.75
	2.625	2.50	4.75	7.75	10.50	9.00	4.75	7.50	2.75	1.875	8.375	8.125	5.25	7.75	4.00	8.50
	4.25	8.00	2.25	4.25	0.25	6.875	5.75	5.75	5.50	6.25	5.50	6.75	3.50	5.50	6.75	8.00
	4.375	6.00	4.375	5.25	7.00	0.50	4.25	6.75	7.25	8.50	7.75	8.875	6.00	8.00	3.75	7.75
	2.75	6.75	4.50	7.00	8.25	6.25	3.50	0.00	9.875	7.00	3.75	4.00	4.00	9.50	5.80	7.75
	5.00	8.00	3.625	8.25	5.00	7.00	11.00	7.50	3.00	7.00	2.75	1.50	4.00	5.25	3.50	9.00
	4.00	3.00	6.50	7.75	4.00	6.875	5.875	6.75	6.375	8.875	3.625	7.125	5.50	9.75	8.00	0.00
	3.375	5.50	3.625	8.23	5.50	7.75	4.00	5.75	5.00	8.25	3.875	6.75	5.00	7.25	8.00	8.50
3.625	7.00	3.625	7.00	4.25	9.25	7.25	7.75	5.00	7.50	3.625	6.125	5.75	8.75	7.00	6.60	
4.00	6.50	5.375	8.00	6.625	10.50	5.75	7.00	5.00	6.00	4.75	5.00	4.00	6.50	5.00	8.75	
5.50	6.75	3.50	3.50	5.00	9.00	4.00	7.875	4.625	2.125	7.875	7.75	5.75	4.00	6.00	8.50	
4.00	1.00	4.50	6.00	2.25	6.875	6.25	9.25	4.75	5.875	8.00	7.50	5.00	8.75	4.75	5.00	
6.00	8.00	3.75	8.25	7.25	8.875	4.50	7.75	3.625	3.00	3.625	8.25	6.25	8.25	5.00	6.60	
6.375	6.00	3.625	4.00	4.50	7.50	4.25	8.00	7.00	7.25	4.625	8.00	7.25	8.50	7.50	7.50	
Totals .....	100.625	113.00	76.625	150.50	152.875	194.625	142.375	161.00	124.875	147.50	135.50	101.875	132.25	168.75	140.50	180.25

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Highest .....	6.625	102.25	10.00	50.00	13.125	202.56	10.50	52.50	9.375	144.70	9.00	45.00	10.75	165.92	10.00	50.00
Lowest .....	1.00	15.435	0.75	3.75	2.25	34.73	5.25	26.25	2.75	42.445	1.875	9.375	3.00	48.304	3.00	15.00
Average .....	4.07	61.84	5.27	26.35	5.01	81.22	7.57	37.55	5.208	80.383	6.158	30.94	5.40	84.27	7.10	35.50
Tests above average .....	22		28		21		22		19		33		22		31	
Tests below average .....	28		22		29		28		31		17		28		19	

WISCONSIN.																
RAMS, 2 YEARS OLD.																
Catalogue number of samples..	752.				753.				754.				755.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	5.00	8.25	4.75	8.00	8.75	10.00	4.75	9.00	4.00	10.50	5.00	10.00	4.00	10.00	6.00	7.00
	4.75	5.50	3.50	8.00	4.50	7.25	3.50	5.00	4.25	10.75	4.25	7.75	4.875	8.00	7.50	8.00
	0.50	10.00	4.00	8.50	4.75	9.50	6.00	8.50	4.50	0.75	6.125	9.00	8.50	10.00	3.625	7.00
	7.75	8.00	4.00	9.50	5.25	8.75	5.00	10.75	4.00	10.125	5.00	7.75	8.875	9.00	5.50	7.25
	3.25	7.00	3.50	8.25	7.00	11.75	4.75	7.00	4.875	9.75	5.00	10.00	4.00	8.125	4.50	8.00
	8.00	9.00	4.50	8.75	8.00	6.50	4.00	6.25	3.00	8.75	8.375	8.00	4.25	7.25	2.625	6.125
	3.00	9.00	3.25	7.25	4.75	7.00	4.75	9.00	8.75	8.00	3.00	8.00	8.625	7.75	2.75	5.875
	5.00	8.75	3.50	8.50	4.25	8.25	5.00	7.75	4.50	10.75	4.50	9.875	4.875	7.00	3.00	7.00
	4.00	8.75	4.75	9.75	5.00	8.00	6.50	9.00	4.25	8.125	4.50	9.00	4.25	8.875	5.00	7.50
	4.25	7.00	4.00	8.75	3.75	9.00	5.00	6.75	4.50	11.50	5.50	8.125	4.50	8.125	5.25	7.00
	4.00	7.00	4.50	9.75	4.25	8.75	4.00	11.00	3.50	9.00	2.50	7.125	7.75	9.50	3.125	7.00
	4.75	9.75	5.50	10.00	9.00	9.25	4.25	6.75	4.50	8.75	3.75	6.875	4.625	8.75	3.625	10.00
	5.00	9.00	5.00	8.75	6.00	8.75	5.00	9.50	2.75	9.50	3.75	8.00	4.875	9.125	5.00	9.125
	4.75	7.50	3.00	8.00	8.00	8.00	5.00	9.25	3.50	6.25	3.875	7.00	6.50	0.00	5.75	8.25
	9.00	9.25	4.75	9.75	9.25	8.75	4.00	8.75	3.50	8.00	4.00	8.875	4.875	9.25	6.625	8.60
	4.50	8.50	8.00	9.50	4.00	8.00	5.00	7.00	4.00	8.00	3.25	8.00	4.25	6.125	2.75	7.50
	7.50	9.75	5.00	9.50	4.50	9.25	5.00	7.75	5.00	10.75	2.25	6.50	6.50	7.25	1.875	7.00
	7.50	10.25	4.25	8.75	4.25	9.00	5.00	9.00	4.50	9.00	3.50	8.125	8.75	6.00	2.375	6.25
	4.50	9.25	4.00	8.50	8.25	8.25	8.00	10.00	4.50	9.50	4.625	7.75	4.25	7.125	2.50	7.875
5.00	6.75	5.00	9.75	5.00	8.50	4.00	9.00	3.50	10.00	3.625	8.00	4.375	6.75	3.00	7.00	
6.00	9.00	4.00	9.75	6.00	7.75	3.50	6.50	2.50	9.00	2.50	8.00	5.875	8.125	3.375	7.50	
4.00	8.25	8.60	9.25	4.00	6.75	8.75	10.25	4.00	7.875	2.25	4.50	5.00	6.875	0.25	7.25	
6.25	9.25	4.50	10.00	4.25	4.25	4.75	9.25	5.75	10.25	3.50	7.60	2.00	5.00	3.25	8.875	
9.75	9.00	9.00	10.00	7.25	9.00	6.00	9.00	5.875	8.75	2.375	7.50	4.50	7.50	4.625	8.50	
4.75	8.50	4.00	8.75	3.50	7.00	4.00	7.75	3.625	10.25	2.625	8.00	2.75	8.875	2.625	8.00	
Totals .....	143.75	212.25	118.75	225.25	139.50	206.25	128.50	209.75	102.125	232.875	94.625	107.25	121.625	192.375	102.50	188.875

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Highest .....	9.75	150.49	10.25	51.25	9.75	150.49	11.75	58.75	6.125	91.54	11.60	57.50	8.50	131.19	10.00	50.00
Lowest .....	3.00	48.30	5.50	27.50	3.50	54.02	4.25	21.25	2.25	91.73	6.00	30.00	1.875	28.94	3.00	15.00
Average .....	5.23	81.09	8.75	43.75	5.36	82.73	8.00	41.50	5.935	90.25	8.668	43.015	4.483	69.19	7.625	38.125
Tests above average .....	13		24		16		28		26		25		22		23	
Tests below average .....	37		19		34		22		24		23		28		27	



TABLE II.—Measurements of strain and stretch of wools—Continued.

Catalogue number of samples..		WISCONSIN.															
		RAMS, 2 YEARS OLD.															
		756.				757.				758.				759.			
Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.		
	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	3.00	3.50	2.50	8.25	3.00	7.125	5.25	7.50	4.625	9.00	7.75	7.25	4.00	7.25	6.50	7.00	
	4.00	8.00	4.00	7.75	5.875	6.25	5.50	7.25	6.625	8.25	9.50	6.25	15.50	7.75	6.50	6.50	
	3.50	7.00	3.00	7.50	5.50	6.00	4.25	7.25	4.625	8.00	5.50	8.25	7.00	7.50	7.25	5.25	
	3.00	8.50	2.75	4.00	8.75	10.50	7.625	8.00	5.375	7.25	4.375	5.50	6.50	7.50	6.50	4.75	
	3.00	9.00	3.25	8.00	7.50	9.25	4.50	6.00	3.375	7.75	3.375	5.75	8.75	8.00	3.75	4.00	
	5.00	9.00	5.00	10.75	4.75	8.125	5.75	7.00	3.375	6.75	5.50	7.00	8.25	7.00	10.25	7.25	
	3.75	8.00	3.00	8.50	4.75	7.00	5.25	4.00	3.625	6.00	6.00	2.25	3.00	4.75	6.25	5.00	
	3.00	3.00	3.50	8.75	4.00	7.50	5.00	7.00	3.625	6.00	6.00	2.25	3.00	4.75	6.00	7.00	
	4.75	9.75	3.00	9.75	5.375	8.875	4.875	7.75	4.75	5.25	0.75	11.50	9.25	8.25	5.50	6.50	
	6.00	9.00	4.25	9.00	7.00	8.00	4.00	0.00	3.375	8.00	4.25	8.75	6.25	7.50	7.25	5.00	
	3.75	10.00	3.25	8.25	3.75	3.00	5.00	6.25	5.625	5.75	3.25	8.25	6.75	8.75	7.00	7.25	
	5.60	9.00	4.00	7.00	4.75	9.00	3.25	7.125	8.625	7.50	4.625	10.25	7.00	8.00	10.00	8.00	
Actual measurement in grams and millimeters.	3.75	5.75	4.00	9.50	2.50	4.25	4.50	6.00	6.00	4.75	3.375	5.00	5.00	9.00	7.00	6.00	
	5.75	8.25	3.75	8.25	3.25	5.75	5.125	6.00	3.00	5.25	4.375	8.25	4.25	4.00	5.50	5.00	
	4.25	7.00	3.00	7.50	5.25	7.50	4.00	6.50	6.00	4.25	9.00	10.00	5.25	5.00	7.25	7.00	
	4.25	0.00	3.50	7.00	6.25	9.00	6.25	8.00	4.375	8.25	4.375	6.25	10.00	5.00	7.00	6.00	
	4.00	10.00	4.50	9.00	6.00	7.75	6.625	6.00	6.50	9.50	3.625	6.25	5.75	7.75	4.75	6.50	
	3.75	10.00	4.75	9.25	2.875	8.50	6.00	8.875	6.50	8.00	4.625	5.75	6.25	6.50	0.875	8.00	
	4.25	7.00	4.25	10.25	4.25	7.00	6.50	9.00	5.375	5.50	8.25	8.75	5.50	5.25	4.25	6.75	
	2.25	3.25	2.50	6.00	4.025	6.00	4.125	7.50	5.375	8.50	4.375	8.25	3.25	5.25	5.75	7.00	
	3.00	9.60	5.00	8.25	0.375	7.00	3.50	7.375	4.375	9.00	4.00	8.75	10.50	7.25	8.50	6.75	
	4.25	9.00	3.25	5.50	4.125	6.00	6.50	7.00	5.50	8.00	4.50	9.25	6.50	5.75	4.25	5.25	
	3.75	7.25	3.50	8.00	5.25	7.875	0.375	8.25	4.50	7.00	3.50	6.75	7.25	7.75	18.50	7.75	
	2.50	5.25	3.50	8.50	4.75	6.25	4.50	6.25	4.75	7.00	4.375	7.25	8.25	7.75	10.25	8.50	
	3.00	6.50	3.25	6.00	4.625	2.75	7.875	8.00	4.75	6.00	3.375	8.00	5.75	7.50	4.75	7.00	
	Totals .....	97.00	191.50	90.25	200.50	124.125	171.25	132.125	175.875	127.375	177.00	129.00	186.00	171.125	173.00	175.375	160.00

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Recapitulation and reduction:	6.00	82.61	10.75	53.75	8.75	135.05	10.50	52.50	9.50	148.63	11.50	57.50	10.50	254.67	9.00	45.00
Highest .....	2.25	84.73	3.00	15.00	2.50	38.59	2.75	13.75	3.00	46.30	2.25	11.25	3.00	46.30	4.00	20.00
Lowest .....	3.745	67.80	7.84	39.20	5.155	79.10	6.94	34.70	5.13	79.18	7.20	36.50	6.93	106.90	6.60	33.30
Average .....																
Teats above average.....	28		31		24		30		21		24		21		23	
Teats below average.....	24		19		25		20		29		26		29		21	

Catalogue number of samples..		WISCONSIN.															
		RAMS, 2 YEARS OLD.															
		760.				761.				725.				727.			
Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.		
	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	4.50	7.00	8.00	6.25	4.00	4.00	4.00	2.00	9.75	8.125	5.25	3.125	5.25	10.00	3.75	5.00	
	8.125	6.50	4.50	8.00	6.00	7.75	6.50	5.25	4.625	5.25	8.625	3.50	8.00	6.00	5.75	10.25	
	5.25	7.875	6.25	6.50	4.75	8.50	5.00	3.75	7.00	3.00	3.375	6.125	3.50	7.25	4.25	8.00	
	3.75	5.75	6.25	7.00	3.50	1.50	6.50	6.00	3.625	5.00	3.00	2.75	6.25	8.875	3.25	7.50	
	6.25	7.75	6.25	8.25	3.00	2.00	3.50	0.00	7.00	5.75	4.375	7.00	4.00	7.00	4.25	0.00	
	7.25	8.00	2.50	4.25	4.00	5.25	5.00	3.75	6.00	5.00	6.375	7.75	8.375	7.00	8.25	9.00	
	4.375	7.75	5.25	9.00	6.00	7.00	4.50	5.75	4.00	2.00	8.625	2.50	4.50	7.00	5.50	7.00	
	3.00	4.75	3.25	6.25	5.50	5.25	3.00	3.00	4.625	7.875	5.25	6.00	4.25	7.00	4.375	4.75	
	8.50	7.00	4.00	4.75	4.00	4.00	3.25	3.00	3.375	5.875	4.50	6.25	3.75	8.00	4.375	0.00	
	5.75	5.25	2.75	6.25	3.00	2.00	2.75	1.50	4.625	5.75	10.75	6.625	4.50	7.25	3.625	8.50	
	4.50	5.50	4.25	7.75	2.75	2.00	5.25	6.75	2.875	4.25	6.375	7.125	4.00	5.25	5.375	8.25	
Actual measurement in grams and millimeters.	2.75	6.875	0.75	7.875	6.00	4.75	4.00	5.25	11.25	6.875	9.125	7.00	3.375	6.375	4.50	8.00	
	3.625	8.25	3.00	8.25	4.75	6.50	3.00	1.50	6.25	4.25	4.25	7.00	5.75	8.75	3.25	6.25	
	5.00	6.875	3.625	8.75	4.75	6.50	2.25	2.25	2.25	4.00	5.375	6.25	4.00	6.75	4.75	10.25	
	3.75	3.75	2.50	7.00	5.00	6.50	4.00	7.00	7.00	6.00	2.25	1.00	6.00	6.50	8.50	0.875	
	3.75	7.875	3.375	7.25	6.00	4.00	8.00	3.25	4.625	7.00	3.75	6.00	4.625	6.00	5.50	6.00	
	4.00	7.50	2.75	7.75	5.00	4.25	8.00	5.00	3.00	2.50	5.50	5.75	3.625	7.25	5.50	5.00	
	3.00	7.25	5.125	7.75	4.00	4.00	5.75	5.50	5.00	5.00	6.00	7.50	6.25	7.25	8.00	6.25	
	2.75	6.25	8.75	9.75	4.00	4.00	6.75	4.00	4.50	6.125	5.625	5.125	6.75	7.25	5.50	9.25	
	4.00	8.75	4.50	8.625	4.00	4.75	4.00	6.75	2.50	3.25	5.75	8.00	6.50	7.75	5.50	8.25	
	4.50	4.75	3.50	8.50	5.00	3.75	4.00	2.50	3.75	2.00	4.625	3.875	6.00	4.875	3.50	5.00	
	3.00	8.00	5.50	6.75	2.75	1.00	3.75	2.00	4.50	5.50	9.75	7.25	3.00	8.25	4.00	10.00	
	3.25	8.75	5.00	8.25	4.00	6.75	6.00	6.75	6.625	6.875	7.00	7.25	5.25	7.50	5.00	8.75	
	Totals .....	103.125	102.625	122.25	182.625	110.75	118.00	108.75	109.75	121.25	122.625	137.75	138.875	131.375	182.125	123.60	191.125

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Recapitulation and reduction:	8.75	133.05	9.75	48.75	6.75	104.18	7.75	33.75	11.25	173.64	8.25	41.25	8.50	131.10	10.25	61.25
Highest .....	2.50	38.59	3.75	18.75	2.75	42.45	1.00	5.00	2.25	34.73	2.00	10.00	3.25	60.16	4.75	23.75
Average .....	4.51	69.01	6.91	34.55	4.39	67.70	4.46	22.30	5.18	79.65	5.23	26.15	5.098	78.69	7.47	37.35
Teats above average.....	18		30		22		26		25		30		20		24	
Teats below average.....	32		22		28		24		25		20		30		26	



TABLE II.—Measurements of strain and stretch of wools—Continued.

Catalogue number of samples..		WISCONSIN.															
		RAMS, 3 YEARS OLD.												RAMS, 4 YEARS OLD.			
		730.				732.				740.				738.			
Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.		
<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>		
2.625	6.25	2.875	8.125	7.00	9.50	3.25	8.00	2.25	6.25	4.25	9.00	6.25	8.00	6.25	8.50		
3.50	7.25	3.625	8.25	5.75	7.25	6.00	9.50	2.50	8.00	5.50	7.00	7.75	7.75	5.75	6.75		
4.375	7.00	2.375	6.75	6.00	8.25	4.00	6.75	3.375	7.25	6.25	6.25	11.00	7.00	7.00	6.50		
2.75	2.125	3.125	6.875	4.00	3.00	7.25	9.00	2.625	7.00	2.75	8.125	8.75	7.25	6.00	6.00		
6.125	7.00	3.75	7.25	5.25	7.00	4.75	7.75	7.00	7.00	8.00	8.00	8.00	6.50	8.00	2.25		
2.75	7.125	2.00	5.00	3.60	3.25	4.00	0.50	7.75	7.50	8.125	7.50	11.50	6.75	7.50	1.00		
2.50	1.125	3.50	8.50	3.00	3.50	5.00	9.00	8.875	6.25	3.125	6.00	6.75	7.50	0.25	5.75		
2.625	7.00	2.625	6.00	5.50	6.00	7.00	7.00	2.275	5.75	5.125	7.00	7.50	7.00	6.50	7.50		
2.60	6.00	2.75	7.25	5.50	3.00	6.75	8.50	3.00	5.50	5.50	9.00	6.50	4.00	7.00	6.00		
7.25	8.25	3.25	5.50	6.25	7.75	5.75	8.00	3.375	6.50	4.75	5.875	8.00	9.50	5.50	6.25		
8.50	7.25	3.75	7.125	5.00	6.00	4.50	10.00	3.875	5.25	5.50	7.125	4.00	4.00	5.75	6.00		
8.00	7.25	3.625	2.50	5.50	7.00	4.75	8.00	5.25	6.75	4.625	6.125	12.00	7.25	7.00	4.25		
4.375	7.25	2.25	6.875	4.00	3.00	2.75	8.00	2.75	4.25	2.50	7.00	9.75	4.00	7.25	7.00		
3.375	7.00	2.00	4.00	4.00	6.50	7.25	10.75	2.375	3.00	2.50	5.75	4.75	2.00	7.25	4.00		
5.00	8.00	1.75	6.00	5.25	9.75	3.75	7.50	3.875	8.00	6.00	8.00	6.00	2.00	6.00	4.00		
2.625	8.00	2.875	4.75	6.50	8.75	5.25	8.25	5.625	8.00	4.00	5.00	6.75	5.00	0.00	4.75		
4.25	7.125	3.25	3.875	4.50	6.00	5.25	9.75	2.375	7.25	4.00	8.00	4.00	4.00	9.00	4.00		
2.75	2.875	1.75	5.00	4.50	5.00	6.00	9.00	2.50	8.00	5.50	6.25	8.00	9.00	4.00	3.25		
6.00	7.80	6.00	0.75	5.50	8.75	3.75	6.75	4.375	6.00	5.625	7.00	6.25	4.75	6.25	5.00		
4.75	6.00	1.875	0.50	5.75	10.00	5.75	7.00	5.75	0.00	3.50	6.00	9.75	8.25	6.00	9.00		
2.75	6.00	4.50	7.875	8.25	8.25	5.25	10.25	3.125	8.00	2.75	4.125	0.00	9.00	12.60	8.50		
4.50	6.25	1.875	5.75	5.00	3.75	5.25	8.00	2.625	8.00	7.875	9.25	4.50	3.75	7.50	2.25		
3.25	4.875	4.00	1.25	6.50	16.25	4.00	8.00	5.50	8.00	3.25	3.25	7.00	4.25	5.50	5.25		
3.00	7.25	3.00	8.00	3.75	9.00	4.25	10.75	2.25	6.125	3.50	7.50	5.00	2.50	0.25	2.00		
3.25	7.75	3.875	3.75	4.75	7.25	5.25	8.00	4.00	8.75	5.50	7.25	6.00	8.50	7.00	8.75		
Totals .....	93.875	159.50	74.75	153.875	127.50	165.75	127.75	213.00	92.375	171.875	118.00	171.375	176.75	141.25	175.50	133.50	

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	<i>grams.</i>	<i>grains.</i>	<i>mm.</i>	<i>per ct.</i>	<i>grams.</i>	<i>grains.</i>	<i>mm.</i>	<i>per ct.</i>	<i>grams.</i>	<i>grains.</i>	<i>mm.</i>	<i>per ct.</i>	<i>grams.</i>	<i>grains.</i>	<i>mm.</i>	<i>per ct.</i>
Recapitulation:																
Highest.....	7.25	111.90	8.50	42.50	7.25	111.90	10.75	53.75	8.125	123.41	9.25	46.25	12.50	192.93	9.25	48.25
Lowest.....	1.75	27.01	1.125	5.625	3.00	48.30	3.00	15.00	2.25	34.73	3.00	15.00	4.00	61.74	1.00	5.00
Average.....	3.36	51.86	6.308	31.54	5.105	78.79	7.573	37.875	4.21	64.98	6.86	34.30	7.043	108.74	5.535	26.673
Tests above average.....	20		30		27		30		21		29		20		22	
Tests below average.....	30		20		23		20		29		21		30		28	

Catalogue number of samples..		WISCONSIN.															
		RAMS, 4 YEARS OLD.								EWES, 1 YEAR OLD.							
		731.				741.				742.				743.			
Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.		
<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>		
2.625	6.00	3.00	3.75	4.875	8.875	4.00	2.25	3.50	7.50	4.75	7.50	3.00	1.25	8.00	8.00		
7.50	9.00	2.25	5.625	4.25	7.875	3.00	6.00	3.375	8.25	2.625	6.00	6.75	8.00	5.25	8.00		
4.125	5.125	3.50	6.00	5.00	7.00	6.625	2.00	4.25	7.50	3.25	8.75	4.50	3.00	4.00	7.00		
2.625	5.125	5.75	6.25	4.375	4.00	7.625	7.50	4.00	8.00	2.75	8.75	5.25	6.75	4.50	7.25		
2.125	5.75	4.50	5.125	5.25	8.50	2.75	4.00	2.75	5.25	2.75	6.25	7.00	7.00	4.00	5.00		
3.00	5.125	2.375	4.75	3.25	6.00	2.50	2.75	5.60	8.00	6.25	8.00	6.00	9.00	6.00	6.75		
3.75	6.75	4.00	8.125	7.625	5.875	2.50	2.00	4.25	6.25	5.875	7.00	4.75	6.50	6.00	6.00		
5.625	6.25	6.50	4.875	2.375	3.00	2.625	5.125	2.25	6.25	7.50	8.875	3.50	2.75	6.25	8.00		
3.00	1.00	3.75	2.60	4.25	7.50	5.875	8.875	4.00	8.25	6.00	7.00	8.25	2.00	4.75	7.75		
5.25	5.75	5.125	0.00	5.50	9.00	3.375	4.75	4.625	5.75	8.50	9.00	3.50	0.50	3.50	2.50		
8.50	7.25	4.50	7.60	2.625	5.25	3.00	2.75	2.75	6.50	2.50	8.25	3.50	1.75	7.25	7.75		
4.625	4.875	3.75	4.25	2.25	2.875	3.625	7.00	3.25	7.50	3.00	7.00	6.50	5.50	6.50	5.75		
4.00	3.50	3.00	7.375	2.00	1.50	3.50	6.125	3.25	8.25	4.50	7.25	5.25	8.00	4.50	7.50		
6.125	8.125	2.00	4.00	2.00	3.125	2.75	5.875	5.00	9.00	2.50	8.75	4.75	7.25	4.25	8.25		
6.75	4.75	2.50	2.875	4.00	4.75	3.625	4.875	2.625	4.75	3.50	8.00	4.50	6.25	3.50	5.00		
2.75	3.125	10.625	8.125	2.00	4.875	1.625	2.50	3.375	7.75	4.625	7.00	6.25	8.50	7.00	9.00		
2.75	7.00	2.50	6.00	3.75	2.75	3.00	5.50	5.625	6.00	3.25	6.75	6.75	6.75	6.75	7.00		
4.25	2.875	4.00	6.75	2.75	4.125	7.00	5.75	4.75	6.75	2.00	4.50	4.25	7.00	4.00	7.75		
5.875	7.00	3.50	4.125	3.375	4.00	4.50	6.00	5.75	9.00	3.25	8.00	3.50	7.00	5.00	7.75		
1.50	3.00	6.25	4.125	3.375	1.25	3.875	3.00	3.25	8.00	4.50	9.00	6.00	7.00	10.00	4.25		
3.50	6.00	2.50	6.50	2.625	5.50	3.25	4.50	4.00	7.50	2.25	9.00	4.00	9.75	8.50	7.00		
4.00	6.75	2.125	5.00	2.50	3.875	3.25	4.00	4.75	8.00	2.25	9.00	6.00	7.00	4.75	7.00		
5.50	8.25	2.50	4.125	2.25	2.875	3.50	5.125	3.25	4.00	3.50	8.00	5.25	7.00	3.00	2.25		
Totals .....	109.375	141.125	99.375	135.00	88.875	123.125	91.50	121.75	94.875	179.75	97.875	192.00	131.25	163.00	133.25	162.50	

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	<i>grams.</i>	<i>grains.</i>	<i>mm.</i>	<i>per ct.</i>	<i>grams.</i>	<i>grains.</i>	<i>mm.</i>	<i>per ct.</i>	<i>grams.</i>	<i>grains.</i>	<i>mm.</i>	<i>per ct.</i>	<i>grams.</i>	<i>grains.</i>	<i>mm.</i>	<i>per ct.</i>
Recapitulation:																
Highest.....	16.625	163.99	9.00	45.00	7.625	117.09	9.875	49.375	8.50	131.19	8.875	49.875	10.00	164.40	9.75	48.75
Lowest.....	1.50	23.15	2.00	10.00	1.625	25.08	1.125	5.625	2.00	30.87	4.00	20.00	8.00	48.90	1.25	6.25
Average.....	4.177	64.47	5.52	27.615	3.588	55.38	4.578	22.39	3.255	69.50	7.425	37.126	6.29	81.65	6.51	32.53
Tests above average.....	20		26		20		23		21		30		20		33	
Tests below average.....	30		24		30		22		29		20		30		17	



TABLE II.—Measurements of strain and stretch of wools—Continued.

Catalogue number of samples..		WISCONSIN.															
		EWES, 2 YEARS OLD.															
		698.				699.				704.				708.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
		5.00	8.00	2.75	3.00	5.375	7.75	4.625	9.00	8.25	8.00	4.00	6.75	4.375	9.00	3.375	7.25
		3.50	4.00	5.75	8.00	4.375	7.00	6.50	7.50	2.625	8.125	3.625	5.25	3.375	10.00	3.325	10.00
		4.25	9.00	3.00	6.00	5.25	8.00	5.00	6.75	8.50	7.125	10.625	9.00	4.25	10.50	3.00	9.25
		5.75	5.00	3.00	3.75	2.50	2.00	2.625	4.125	4.625	5.75	4.375	5.25	3.75	9.75	7.625	9.50
		4.50	8.00	4.00	9.00	5.75	6.00	2.375	6.00	6.75	1.875	3.375	6.25	3.75	9.25	3.625	9.75
		4.00	7.25	6.25	8.50	6.50	7.00	4.25	5.75	2.375	6.50	5.00	8.75	4.50	10.50	3.25	9.25
		5.25	7.75	4.75	7.50	2.50	4.25	3.50	6.75	5.25	8.50	3.375	6.75	3.50	7.75	3.625	11.75
		2.75	6.00	4.50	9.00	10.375	8.00	5.25	8.00	6.375	8.125	4.25	7.75	3.50	10.00	4.25	10.75
		3.50	8.75	3.50	5.75	2.625	7.00	5.00	8.00	5.625	4.50	3.375	6.75	3.50	9.00	2.50	6.00
		4.25	5.00	5.50	7.00	4.625	7.875	3.625	6.50	13.00	9.00	5.00	10.25	5.375	7.25	2.75	6.75
		3.75	8.75	4.00	8.50	4.50	6.25	4.25	8.00	7.375	7.25	6.375	7.25	3.50	7.75	4.00	10.00
		4.00	3.00	4.75	8.75	4.25	3.25	3.00	6.00	7.50	8.25	6.625	9.25	2.50	7.00	6.00	7.00
		6.50	8.00	4.75	9.00	2.50	5.00	5.00	4.00	4.375	1.50	3.00	7.25	4.00	8.875	5.25	7.00
		4.75	8.00	3.00	4.00	4.00	7.875	3.00	5.00	4.75	7.00	4.625	3.50	3.75	8.00	4.50	10.75
		3.75	4.00	7.00	9.00	5.00	4.00	5.875	6.00	3.375	8.75	4.625	8.75	3.375	7.75	3.75	9.875
		5.00	7.00	3.75	8.75	2.875	6.00	4.50	5.00	13.625	9.00	12.00	7.25	3.625	7.50	3.375	10.50
		3.00	5.25	3.50	5.00	3.625	6.00	2.50	4.625	6.00	9.75	3.00	9.00	4.00	6.75	5.625	8.125
		3.75	8.00	5.25	8.00	3.00	7.375	3.50	6.00	4.375	9.25	3.50	8.25	3.00	10.25	3.00	6.25
		3.00	7.00	4.00	9.00	4.00	6.00	3.125	7.00	4.50	9.00	2.00	4.50	4.00	10.00	3.25	8.125
		4.25	4.00	3.75	8.00	6.00	9.00	4.25	6.00	4.00	7.00	3.625	7.75	3.50	10.00	3.25	8.50
		3.00	4.00	3.00	6.75	4.25	7.125	3.25	6.875	3.375	8.25	5.75	7.00	3.875	9.125	5.00	9.25
		6.00	6.75	2.25	3.00	3.375	6.75	5.375	5.00	4.375	0.50	4.375	6.875	3.75	10.00	3.50	9.00
		4.50	8.00	2.75	6.00	2.875	2.00	3.00	7.00	3.375	8.50	4.00	3.125	3.50	9.00	3.00	9.50
		3.00	7.25	5.50	8.75	2.50	9.00	3.00	4.75	7.625	0.25	4.50	9.00	3.625	9.50	2.75	7.875
		3.00	4.75	4.00	10.00	4.00	3.00	4.25	7.25	5.00	8.25	2.50	2.125	3.75	7.00	4.00	9.00
Totals .....		104.00	162.50	105.25	180.00	106.625	154.00	100.625	155.875	143.00	189.00	117.625	172.875	93.875	221.50	97.50	211.00

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	7.00	108.04	10.00	50.00	10.375	160.13	9.00	45.00	3.625	210.30	10.25	50.125	6.00	62.61	11.75	53.75
Lowest .....	2.25	34.73	3.00	15.00	2.375	36.65	2.00	10.00	2.00	90.87	1.50	7.50	2.50	38.59	6.00	30.00
Average .....	4.185	64.59	6.85	34.25	4.125	63.67	61.99	30.995	5.213	80.46	7.286	36.19	3.828	59.08	8.65	43.25
Tests above average .....	22		30		25		25		16		30		17		31	
Tests below average .....	28		20		25		25		34		20		33		19	

Catalogue number of samples..		WISCONSIN.															
		EWES, 2 YEARS OLD.															
		709.				710.				744.				745.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
		4.00	4.00	3.50	8.75	3.75	7.00	4.25	4.875	2.50	2.375	2.00	7.25	7.50	9.00	10.50	7.00
		2.25	2.25	4.25	8.00	4.50	7.125	3.625	6.25	3.375	8.75	3.375	6.50	4.50	10.00	7.25	8.00
		3.00	4.00	3.50	7.25	5.00	7.75	4.25	5.25	2.50	8.00	3.25	7.25	3.50	5.00	2.25	2.00
		4.50	6.00	5.50	3.00	3.875	8.00	4.00	5.875	3.25	2.00	4.75	4.00	7.00	7.75	3.75	6.75
		4.00	5.00	4.75	3.00	4.50	6.00	5.25	6.00	4.125	7.00	2.375	5.25	3.00	7.25	4.00	7.00
		6.75	7.00	3.50	2.50	3.625	7.00	3.50	7.00	5.75	8.125	2.50	9.00	5.50	4.50	4.00	8.25
		3.00	3.75	3.50	3.50	5.375	6.875	3.75	0.125	2.25	3.375	1.25	5.125	6.25	9.75	12.00	10.25
		2.75	3.00	2.25	4.00	3.00	3.00	4.25	8.00	1.375	2.00	2.875	8.125	3.25	8.50	7.75	0.00
		4.00	7.50	3.50	3.00	3.50	2.00	7.00	8.50	2.75	6.25	2.625	8.00	4.00	3.25	6.00	9.50
		3.25	7.00	5.50	8.00	2.375	7.50	2.75	7.00	2.50	4.625	3.50	6.75	8.00	7.50	4.00	3.50
		6.00	3.50	3.75	4.75	6.375	9.00	4.625	7.00	4.125	7.875	2.50	3.875	7.00	7.00	6.00	7.50
		5.50	5.50	4.00	5.50	6.50	8.00	3.25	5.75	1.75	7.25	4.50	8.00	6.00	7.75	5.75	8.00
		3.00	4.00	4.25	8.00	4.00	7.00	5.25	8.00	4.125	7.50	3.75	7.00	7.75	10.00	6.00	7.75
		4.00	8.00	3.25	6.00	6.25	8.00	5.75	4.00	3.50	6.50	4.75	7.00	5.25	6.00	4.00	3.00
		3.00	3.25	3.00	3.00	3.75	7.75	2.375	7.00	2.50	7.00	3.50	5.00	4.75	6.50	5.00	8.75
		5.00	10.00	7.00	7.25	5.375	7.875	3.625	4.75	2.00	7.00	5.50	5.00	6.00	8.75	3.00	4.50
		4.50	5.75	5.00	6.00	3.00	3.625	2.50	9.00	3.125	8.00	2.50	2.875	6.75	7.00	6.50	8.00
		3.50	7.00	7.25	8.75	6.00	7.25	5.25	9.875	3.00	8.50	1.50	4.125	4.25	6.50	5.50	6.00
		3.75	6.00	3.50	3.00	4.50	4.125	4.50	8.125	3.50	8.125	4.625	8.50	6.25	9.00	4.00	8.00
		2.75	5.25	3.50	8.00	3.50	5.25	3.625	9.00	2.50	7.00	7.875	7.875	7.75	9.00	6.00	6.00
		3.25	5.60	4.00	3.75	3.75	6.375	6.375	9.00	4.50	8.125	6.625	8.125	4.75	2.00	4.00	7.25
		3.00	8.00	3.50	7.60	3.875	7.60	4.50	7.00	1.75	7.00	4.00	7.50	5.00	3.00	4.00	7.25
		8.00	7.50	5.00	9.00	3.875	6.125	3.00	5.625	2.625	5.00	4.25	8.375	10.25	7.75	5.75	9.00
		3.50	5.60	3.75	4.00	6.00	8.25	3.25	7.00	2.75	4.125	3.625	7.00	3.25	8.50	3.00	2.00
		4.00	8.50	3.00	2.75	3.125	2.25	3.375	6.125	2.375	5.125	2.50	7.00	5.00	8.00	4.00	4.50
Totals .....		100.25	136.75	103.50	137.25	110.00	162.125	104.375	170.125	74.50	156.625	85.875	164.00	144.50	179.25	134.00	168.75

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	8.00	123.48	10.00	50.00	7.00	108.04	9.00	45.00	5.75	88.75	9.00	45.00	12.00	185.22	10.25	61.25
Lowest .....	2.25	34.73	2.25	11.25	2.375	36.60	2.00	10.00	1.25	19.29	2.00	10.00	2.25	34.73	2.00	10.00
Average .....	4.075	62.90	5.48	27.40	4.298	66.34	6.645	33.225	3.208	49.51	6.413	32.065	5.77	89.06	6.96	34.80
Tests above average .....	10		25		19		31		24		32		21		24	
Tests below average .....	34		25		31		19		26		18		29		26	



TABLE II.—Measurements of strain and stretch of wools—Continued.

WISCONSIN.																	
EWES, 2 YEARS OLD.																	
Catalogue number of samples..	716.				762.				763.				761.				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	3.375	5.875	3.75	8.125	3.25	6.25	5.75	6.00	5.375	8.25	6.00	8.75	7.00	3.00	8.25	8.00	
	3.00	6.875	3.00	0.125	3.375	7.00	5.50	7.875	5.625	7.25	4.375	7.00	7.25	8.25	9.00	8.50	
	7.75	7.75	4.625	8.125	4.375	6.75	3.50	6.75	2.25	1.00	3.025	7.25	6.25	9.00	6.50	9.00	
	3.625	7.875	3.75	8.00	3.125	5.00	4.75	8.25	3.50	4.75	4.25	8.00	4.00	1.75	3.25	3.50	
	3.50	7.00	0.625	7.875	5.00	8.00	3.50	4.00	4.00	4.00	4.75	5.50	5.00	8.00	10.00	7.25	
	3.625	6.25	3.125	9.00	3.125	6.00	4.50	8.00	6.25	0.00	0.375	7.50	5.00	8.00	10.25	8.25	
	2.75	7.00	4.75	7.00	4.625	6.50	4.125	8.25	6.50	10.50	4.75	8.00	4.00	6.00	7.00	0.25	
	3.375	7.00	3.625	8.00	3.25	5.25	3.50	6.50	3.375	6.50	5.75	8.50	3.75	3.00	6.00	8.50	
	7.50	6.00	2.50	5.125	3.75	6.00	3.00	8.00	4.375	8.75	2.00	1.75	6.00	3.00	4.00	4.75	
	3.25	3.50	3.375	8.50	3.75	6.125	4.00	8.00	7.375	7.00	4.625	7.00	8.00	6.00	8.00	9.25	
	3.25	0.125	2.75	8.50	5.50	6.00	2.00	4.00	0.25	3.375	5.75	6.25	10.25	4.00	7.25	7.50	
	4.625	8.875	2.50	6.00	5.375	7.00	2.125	5.00	6.00	8.00	8.875	5.25	7.75	8.00	3.25	5.50	
	3.00	1.25	4.00	1.00	2.50	4.125	3.125	5.75	5.625	9.00	3.625	6.25	4.00	7.50	6.75	8.00	
	4.25	8.00	0.00	10.00	3.50	7.00	2.75	7.25	4.375	7.75	4.50	9.00	6.00	6.75	4.50	7.25	
	8.375	9.125	4.50	8.00	0.625	6.50	5.50	7.75	2.625	1.00	3.625	0.25	5.00	3.25	4.50	7.75	
	3.375	8.00	3.375	6.125	2.75	7.00	2.00	5.50	6.935	10.00	2.375	4.00	5.00	6.50	6.00	3.00	
	2.75	4.875	2.50	8.00	0.25	7.25	2.00	4.75	2.625	4.75	5.375	7.00	3.75	3.75	3.50	5.00	
	3.875	8.00	2.625	6.00	4.75	6.00	3.00	7.00	3.50	8.75	7.50	7.25	8.00	7.25	5.50	8.75	
	3.625	4.825	3.00	7.25	4.25	7.75	2.25	4.75	5.50	8.75	3.625	7.00	4.00	1.75	7.75	8.50	
4.00	5.75	3.25	7.125	4.125	7.00	2.875	6.25	3.625	6.00	4.00	8.50	6.25	7.00	8.25	2.25		
3.375	4.00	2.625	6.125	4.875	5.00	3.125	6.00	3.00	0.25	4.375	5.00	3.50	4.75	4.00	7.00		
4.375	9.00	4.25	8.00	3.50	8.60	3.875	7.00	3.25	6.00	5.00	6.00	7.00	8.75	10.00	8.25		
4.625	7.00	2.50	8.00	3.50	7.75	7.125	7.875	5.00	8.00	4.50	7.75	3.25	4.00	9.50	9.00		
2.00	5.50	3.50	0.50	3.00	7.00	2.50	6.00	4.625	7.75	3.625	6.00	6.00	7.00	4.75	8.00		
2.75	3.125	3.625	7.875	3.50	0.125	5.75	0.25	3.75	2.25	5.625	7.75	4.00	5.75	6.00	5.50		
Totals .....	102.00	187.825	90.125	180.375	101.625	162.375	93.625	167.25	114.475	167.75	111.25	160.75	135.00	152.75	154.50	182.25	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	
Lowest .....	8.375	129.27	10.00	50.00	7.125	109.97	9.25	46.25	7.50	115.10	10.50	52.50	10.25	153.20	10.25	51.25	
Average .....	2.00	30.87	1.25	6.25	2.00	30.87	4.00	20.00	2.00	30.87	1.00	6.00	3.25	50.16	1.75	8.75	
	3.843	59.32	6.765	33.83	3.91	60.35	6.50	32.95	4.52	69.79	6.75	33.75	5.70	89.97	6.70	33.50	
Tests above average .....	17		30		20		20		22		20		24		32		
Tests below average .....	83		29		30		24		28		21		26		18		

WISCONSIN.																	
EWES, 2 YEARS OLD.																	
Catalogue number of samples..	765.				766.				767.				768.				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	4.00	6.50	10.50	10.00	6.50	7.00	3.875	8.75	5.00	8.00	2.50	7.25	4.00	10.75	4.00	8.50	
	4.00	8.75	3.75	10.75	2.375	9.75	3.00	6.375	4.125	8.50	2.50	5.00	6.75	8.50	6.25	5.25	
	4.25	10.00	4.00	9.75	4.50	9.875	4.75	7.00	2.50	6.50	2.75	4.25	5.00	9.00	5.25	7.75	
	4.00	7.00	3.50	9.75	4.00	7.00	9.50	9.00	2.25	5.75	6.25	6.50	7.25	8.50	6.00	9.50	
	5.00	6.00	6.50	10.25	4.50	7.00	4.125	8.00	12.75	5.25	5.50	7.00	9.00	9.50	2.75	4.75	
	6.50	8.75	5.00	8.00	3.50	7.75	4.875	9.00	9.125	8.50	3.00	6.125	6.00	9.00	4.00	9.25	
	5.50	10.00	4.75	9.00	5.50	7.75	4.50	6.75	6.125	7.375	3.625	7.25	6.00	8.75	4.00	8.00	
	5.50	8.50	4.75	9.00	8.75	5.00	6.75	0.00	8.00	4.50	8.00	8.00	6.00	7.75	7.00	8.75	
	5.25	10.25	7.00	9.00	6.00	7.00	4.375	7.25	3.50	6.875	3.25	7.00	3.75	7.00	4.75	9.00	
	3.50	7.75	7.25	9.75	4.50	6.75	3.00	8.00	6.25	6.50	2.50	0.875	0.00	4.75	2.00	5.50	
	5.00	9.00	6.50	8.50	5.50	8.75	7.00	8.00	0.50	4.25	3.00	7.00	0.00	8.50	6.00	8.00	
	6.00	9.75	8.00	9.75	4.875	8.875	7.25	5.00	9.875	6.00	8.00	5.875	8.25	6.00	4.50	7.00	
	4.00	7.50	6.50	9.50	7.00	7.75	5.25	7.00	2.875	7.00	2.60	6.75	4.00	5.50	6.00	7.25	
	7.50	10.00	6.00	10.00	4.75	7.75	4.75	5.75	4.25	8.75	5.00	7.875	4.50	7.00	5.50	8.50	
	4.75	11.50	3.00	5.25	4.75	9.00	5.25	8.00	2.50	6.25	4.50	6.75	5.00	8.00	5.00	4.50	
	4.25	9.00	6.25	10.25	2.50	8.00	5.50	7.25	7.75	7.25	7.00	7.00	6.00	8.00	5.50	7.50	
	5.75	9.00	4.25	6.00	3.375	8.75	4.25	6.75	4.625	7.75	3.76	6.00	5.00	8.50	4.25	7.00	
	8.75	9.75	6.50	9.50	0.00	6.25	4.625	7.00	9.50	7.00	6.625	8.00	4.50	8.00	4.00	7.25	
	4.00	10.00	4.00	8.50	4.50	8.00	5.25	6.50	2.60	8.00	2.625	4.25	4.50	6.00	6.00	8.75	
8.00	10.25	5.75	7.50	4.25	9.25	4.50	8.00	8.25	7.00	3.625	7.875	3.50	4.50	8.50	4.75		
8.50	9.25	4.25	16.00	4.50	8.00	6.75	8.00	12.75	8.00	3.375	8.00	12.00	9.75	3.75	8.75		
4.25	9.50	7.50	9.25	8.50	9.00	4.75	7.00	3.625	7.50	4.625	6.00	7.25	8.75	4.50	9.75		
3.50	9.25	6.75	11.00	3.25	5.25	6.25	7.25	7.375	7.875	2.25	5.25	3.75	8.75	4.00	6.50		
6.00	9.00	2.50	7.00	8.25	7.75	5.00	7.75	3.875	7.00	5.25	8.00	6.25	7.75	3.75	9.00		
4.00	9.75	7.00	11.75	3.875	6.75	6.25	7.00	5.875	8.00	3.25	7.00	4.75	9.50	4.75	8.00		
Totals .....	129.75	226.00	137.75	229.00	121.50	183.00	130.875	186.375	134.75	177.375	91.25	166.875	139.00	176.00	116.00	183.75	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	
Lowest .....	10.50	162.00	11.75	58.75	9.50	146.63	9.875	49.375	12.75	106.79	8.75	43.75	12.00	185.21	10.75	53.75	
Average .....	3.00	46.30	5.25	26.25	2.50	38.50	5.00	25.00	2.25	34.73	4.25	21.25	2.00	30.869	8.00	15.00	
	6.35	82.58	9.10	45.50	5.05	77.94	7.03	38.15	4.58	70.69	6.82	34.10	5.10	78.73	7.20	36.00	
Tests above average .....	22		28		26		19		20		31		19		34		
Tests below average .....	28		22		24		31		30		19		31		16		



TABLE II.—Measurements of strain and stretch of wools—Continued.

Catalogue number of samples..		WISCONSIN.															
		EWES, 2 YEARS OLD.															
		769.				782.				783.				787.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
		3.00	7.75	7.625	7.75	4.50	7.00	3.50	7.50	7.75	7.25	7.25	8.25	6.00	8.25	3.50	5.50
		12.625	8.50	4.375	6.25	4.75	5.00	3.50	7.25	5.25	6.875	6.50	8.50	5.50	7.00	5.125	8.00
		6.50	6.75	8.00	8.50	4.00	8.00	4.50	8.00	6.00	8.75	6.00	6.50	4.375	8.125	3.75	6.00
		0.25	7.50	10.50	8.00	3.75	8.00	6.00	8.00	4.00	5.50	5.00	9.00	3.125	7.00	2.875	7.00
		7.625	5.75	3.625	6.25	5.00	8.50	5.25	6.00	4.375	7.875	8.50	8.00	3.375	7.25	3.625	7.00
		6.25	8.00	6.625	8.50	3.25	8.00	2.50	2.00	5.50	5.00	4.25	9.00	6.50	8.00	8.00	8.125
		11.625	8.25	5.00	5.75	3.00	8.25	4.50	8.50	5.00	6.75	5.00	7.00	4.375	7.50	6.50	8.875
		4.25	5.25	7.75	7.75	3.25	2.00	3.50	8.25	6.25	7.875	5.00	8.00	3.25	9.00	4.375	7.25
		6.625	7.25	3.625	8.50	3.25	4.00	3.00	7.00	4.75	7.50	7.00	8.75	3.50	8.00	4.25	8.00
		5.625	8.75	5.50	5.25	4.00	6.00	3.25	5.00	4.00	3.25	4.50	8.50	5.50	8.25	7.00	8.25
		7.625	7.75	5.00	9.00	3.25	6.00	3.25	2.00	7.375	7.875	6.50	9.50	8.00	8.00	5.50	7.00
		8.75	7.50	6.875	6.75	3.75	8.00	3.25	9.00	5.50	8.25	2.75	5.25	2.50	5.125	5.00	8.00
		3.625	5.60	3.125	6.50	3.25	7.75	3.50	5.50	3.75	6.75	4.75	8.50	5.625	7.875	6.00	8.00
		7.50	7.75	6.75	8.00	3.25	7.00	4.00	7.00	6.50	6.50	7.25	7.75	5.00	8.25	5.75	8.00
		6.50	7.50	2.625	1.75	3.25	8.00	5.25	8.00	6.375	7.50	5.25	9.00	4.625	7.50	8.00	8.125
		5.00	8.25	8.375	9.00	3.25	5.00	3.50	6.50	6.00	8.75	6.00	7.25	5.50	9.00	6.00	9.125
		12.875	8.00	5.50	8.50	6.25	8.00	3.75	8.00	5.00	6.75	5.375	7.25	5.00	9.00	9.875	9.00
		5.375	6.75	5.625	2.00	2.25	3.50	3.00	6.00	4.50	7.75	3.25	8.50	6.375	7.00	4.875	7.125
		4.375	8.50	5.00	8.25	2.25	6.25	3.50	1.00	3.25	5.00	6.875	4.875	6.125	6.625	8.00	8.00
		2.625	3.75	5.25	8.25	3.50	5.25	8.75	5.25	3.00	6.75	6.00	7.00	3.50	9.125	4.25	6.00
		4.25	8.60	5.625	7.25	2.50	7.50	4.00	6.00	3.75	8.00	6.75	7.25	5.00	8.875	6.25	6.00
		7.375	6.00	3.75	8.50	2.50	7.00	4.25	5.00	3.75	7.875	6.00	7.50	5.625	9.00	8.50	8.00
		2.00	5.25	7.375	6.00	3.25	8.25	3.25	8.00	5.00	8.50	0.75	8.00	3.875	8.00	3.375	8.00
		10.625	8.75	5.75	7.00	4.00	8.60	6.00	7.00	3.60	7.50	5.75	7.00	2.875	8.00	5.50	4.00
		7.625	4.75	8.375	8.00	3.50	9.00	3.25	4.75	4.25	7.75	4.875	8.50	2.75	4.00	5.375	8.00
Totals .....		163.00	78.25	140.625	177.25	88.75	169.25	97.00	155.50	125.875	178.125	141.75	196.675	111.625	194.25	139.875	186.375

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	12.625	194.86	9.00	45.00	6.25	96.47	9.00	45.00	8.50	131.19	9.50	47.50	9.875	152.42	9.875	49.375
Lowest .....	2.00	30.869	1.75	8.75	2.25	34.73	1.00	5.00	2.75	42.44	1.625	8.125	2.50	38.59	4.00	20.00
Average .....	6.07	93.688	7.11	35.55	3.71	57.26	6.49	32.45	5.35	82.58	7.495	37.475	5.03	77.64	7.61	33.05
Tests above average .....	23		31		20		30		24		30		23		31	
Tests below average .....	27		19		30		20		26		20		27		19	

Catalogue number of samples..		WISCONSIN.															
		EWES, 3 TO 5 YEARS OLD.															
		700.				701.				702.				703.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
		3.875	4.00	8.25	0.125	5.25	7.75	4.75	8.75	7.625	10.00	5.50	8.75	2.75	4.50	3.75	7.00
		4.125	4.00	3.50	4.125	7.00	8.50	3.50	5.75	4.50	8.25	7.00	8.75	7.00	6.75	9.75	8.00
		1.50	7.00	5.75	5.25	8.25	9.00	5.00	8.75	4.875	6.50	4.00	7.75	4.00	9.00	3.75	3.00
		3.75	5.75	7.625	10.00	5.25	7.00	6.75	8.00	4.00	8.25	3.00	9.00	3.25	3.50	6.00	7.75
		3.375	7.00	5.25	8.50	4.50	8.50	7.00	8.00	4.25	6.75	9.25	6.00	4.75	7.75	7.25	7.00
		3.75	5.00	12.25	6.125	4.00	7.00	7.50	9.00	3.50	5.75	7.00	7.25	4.00	5.50	9.50	8.00
		3.00	5.875	4.50	7.50	6.25	9.00	3.75	6.50	4.25	7.75	7.375	10.25	7.25	7.00	6.00	6.00
		4.25	6.75	3.75	2.25	3.00	3.75	6.50	7.75	3.75	7.75	3.50	5.00	4.75	8.00	8.75	7.00
		4.25	9.00	9.875	8.00	6.00	8.00	6.75	8.75	7.25	9.25	4.50	6.25	5.00	5.00	10.25	7.75
		6.00	7.25	3.75	6.125	5.00	8.50	3.50	3.00	6.00	9.00	5.00	9.50	3.50	4.00	6.00	8.75
		5.625	3.00	10.25	7.875	4.50	8.00	3.00	3.00	3.625	9.00	5.375	7.00	4.60	9.00	6.25	9.50
		3.75	8.00	6.50	8.00	3.75	0.00	3.75	8.50	8.00	7.75	3.625	5.50	6.50	8.00	10.50	7.50
		4.00	3.875	6.75	9.00	6.50	7.00	6.00	3.75	4.00	9.25	4.60	6.50	4.00	6.00	7.00	7.25
		5.875	7.75	7.75	8.25	4.00	9.00	4.00	6.50	5.50	8.25	8.25	10.75	5.25	8.75	7.25	5.75
		5.75	7.125	3.50	6.125	3.75	5.00	4.00	7.00	5.625	8.25	5.50	8.25	6.00	7.25	7.75	8.50
		4.25	7.00	4.375	7.00	9.25	9.00	4.50	5.00	5.75	8.25	5.00	7.25	5.50	7.75	5.75	5.75
		5.50	7.125	6.25	8.75	4.25	9.25	3.00	8.00	6.00	8.75	3.75	7.25	5.50	9.25	12.25	8.00
		4.50	8.00	4.75	2.875	3.50	9.00	4.00	8.00	6.60	8.75	5.50	9.50	6.00	7.75	3.00	7.50
		3.625	5.00	7.25	3.75	6.00	8.00	4.00	8.75	3.50	8.50	4.60	8.25	10.00	7.75	3.00	4.75
		8.25	7.25	10.25	5.25	3.75	9.50	4.25	8.50	3.50	8.00	4.50	8.25	6.25	7.25	10.75	9.00
		5.50	4.00	4.375	6.25	4.75	2.60	3.50	7.00	5.875	8.25	4.00	8.25	6.75	8.25	4.00	8.25
		0.25	2.875	5.25	5.75	4.25	8.00	4.00	5.50	6.00	4.25	3.625	6.00	5.75	7.25	6.75	8.75
		8.25	2.00	7.50	6.00	7.25	8.50	5.25	8.00	3.75	6.50	5.00	10.00	5.00	8.00	8.50	7.75
		2.50	3.875	4.00	8.00	4.50	8.00	4.25	7.00	5.375	8.25	6.25	8.875	11.00	7.00	13.25	8.00
		4.50	4.125	14.25	8.00	3.50	9.00	4.00	9.00	4.00	5.00	6.00	8.50	6.00	7.50	9.00	7.00
Totals .....		123.00	153.625	169.50	164.875	129.00	192.75	115.50	177.75	126.00	196.25	132.00	200.125	142.25	174.50	185.50	183.50

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	14.25	219.94	10.00	50.00	9.25	142.77	9.50	47.50	9.25	142.77	10.75	53.75	13.25	204.51	9.50	47.50
Lowest .....	3.00	46.30	2.25	11.25	3.00	46.30	2.50	12.50	3.00	46.30	3.00	15.00	2.75	42.44	3.00	15.00
Average .....	5.81	89.68	6.37	31.85	4.89	75.48	7.41	37.05	5.16	79.64	7.024	30.62	6.553	101.17	7.16	35.80
Tests above average .....	19		25		19		32		24		30		21		32	
Tests below average .....	31		25		21		18		26		20		29		18	



TABLE II.—Measurements of strain and stretch of wools—Continued.

WISCONSIN.																	
EWES, 3 TO 5 YEARS OLD.																	
Catalogue number of samples.	705.				706.				707.				711.				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	7.25	7.75	3.00	9.00	6.25	9.00	7.00	8.00	5.00	6.875	3.00	3.60	7.00	7.00	6.00	6.00	
	2.50	6.125	3.625	8.75	6.00	8.00	6.50	8.25	6.75	5.75	3.25	6.50	3.00	4.00	6.50	7.50	
	7.50	8.50	8.25	5.75	6.50	9.00	6.00	5.00	3.375	6.875	2.375	5.75	7.50	6.00	6.00	8.00	
	8.00	5.00	5.00	9.75	7.25	6.75	10.25	8.75	2.75	5.00	2.375	2.125	5.00	4.50	5.75	5.25	
	7.50	5.75	4.50	9.875	5.75	5.25	4.50	5.00	3.50	3.50	4.75	6.125	12.50	8.00	10.00	8.50	
	5.00	8.50	3.50	7.25	6.25	7.50	0.00	8.50	2.375	5.00	4.50	3.00	5.50	7.50	4.75	4.25	
	4.25	6.75	9.50	5.00	6.75	4.00	4.50	3.00	5.375	6.125	8.00	7.00	8.00	6.50	4.00	6.00	
	4.50	0.75	12.00	6.875	7.00	7.75	6.50	7.00	7.50	6.75	3.25	6.125	3.75	3.75	5.00	6.00	
	4.375	0.75	4.875	9.50	6.25	6.00	6.50	5.00	3.875	3.75	2.625	5.50	7.00	6.00	3.00	2.00	
	7.25	9.00	8.00	8.25	6.50	5.00	4.00	3.00	4.625	7.75	2.75	4.75	6.25	7.00	4.00	5.50	
	3.625	9.75	3.00	5.25	5.00	5.75	7.25	10.00	6.625	7.25	3.75	7.00	6.00	7.00	3.00	3.00	
	8.00	6.75	6.25	8.125	5.00	6.50	6.25	5.75	2.75	4.875	4.625	7.00	10.50	8.00	4.00	6.00	
	10.00	8.00	3.00	8.75	5.50	5.00	3.75	2.50	3.625	7.00	7.00	6.00	8.50	8.00	3.00	6.00	
	2.50	5.50	4.625	7.875	6.00	8.50	4.75	4.00	2.75	1.50	4.75	7.125	8.00	7.00	3.00	2.00	
	6.00	5.75	4.00	8.00	4.25	5.25	4.00	3.00	4.125	7.50	4.50	7.75	5.75	6.75	7.00	8.25	
	5.00	7.50	3.375	6.00	5.25	3.00	5.75	8.50	4.375	8.125	3.50	6.00	6.00	8.00	3.75	6.50	
	7.625	5.50	0.25	7.50	7.25	6.00	4.00	2.75	4.25	6.50	7.00	4.00	5.50	7.00	6.00	8.00	
	7.50	8.50	6.25	10.00	6.50	8.00	7.25	5.50	5.50	7.50	3.625	7.125	5.00	6.00	4.00	4.00	
	6.50	7.25	4.75	9.00	4.25	3.75	5.50	4.00	2.75	7.75	4.625	7.75	7.50	7.50	8.00	8.50	
6.00	9.50	4.50	7.75	5.00	2.75	3.00	3.00	2.625	2.125	5.25	3.00	3.50	3.50	7.75	7.75		
3.625	0.25	3.125	8.875	7.50	7.00	8.25	8.75	4.00	4.00	7.50	6.00	6.50	7.00	7.00	10.25		
6.50	6.00	3.625	7.875	6.50	5.00	8.50	8.50	6.75	7.125	8.25	7.00	8.50	7.50	5.25	7.75		
4.625	9.00	4.25	6.125	7.25	8.50	5.00	6.75	3.50	5.00	2.25	4.00	3.25	7.00	8.50	7.00		
6.125	8.125	3.00	6.875	7.60	7.00	5.00	3.00	8.50	6.00	4.375	2.00	5.50	5.75	8.00	3.25		
8.375	8.25	4.50	7.00	6.75	7.25	3.50	2.00	3.375	7.00	3.50	1.50	6.00	6.25	6.25	8.00		
Totals .....	138.125	182.50	122.75	108.00	150.00	154.50	133.75	130.00	104.625	144.625	107.375	134.125	155.00	163.75	134.50	148.75	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	
Lowest .....	12.00	185.22	10.00	50.00	10.25	158.21	10.00	50.00	8.00	123.48	8.125	40.625	12.50	192.03	10.25	51.25	
Average .....	2.50	38.57	5.00	25.00	3.00	46.30	2.00	10.00	2.25	34.73	1.50	7.50	3.00	49.30	2.00	10.00	
Tests above average .....	5.213	80.54	7.61	38.05	5.795	89.44	5.69	28.45	4.24	65.44	5.575	27.875	5.79	89.87	6.25	31.25	
Tests below average .....	21		27		27		20		22		20		25		23		
Tests below average .....	29		23		23		24		28		21		25		21		

WISCONSIN.																	
EWES, 3 TO 5 YEARS OLD.																	
Catalogue number of samples.	712.				713.				716.				717.				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	4.60	8.00	3.75	7.75	3.50	9.00	2.25	9.25	6.00	8.75	8.50	6.75	6.00	9.75	11.25	6.00	
	2.25	5.00	4.75	6.375	2.00	9.00	2.375	7.875	4.375	7.50	6.25	9.00	4.00	7.75	6.50	9.00	
	3.00	6.00	2.75	4.125	2.25	10.75	3.00	10.00	3.875	10.00	5.75	8.00	7.50	10.00	5.75	0.00	
	4.75	7.60	2.00	4.875	4.375	7.00	6.25	8.25	6.50	10.75	4.875	8.00	6.00	8.75	3.00	8.00	
	3.25	6.00	7.00	7.25	5.00	10.00	6.875	8.25	3.75	9.875	4.00	5.00	6.00	9.50	5.50	8.25	
	3.50	9.00	8.50	7.125	2.50	5.50	2.50	9.25	3.50	10.00	3.50	6.00	3.625	7.50	7.25	8.50	
	4.375	6.875	3.00	8.25	2.25	7.75	2.375	5.00	3.00	8.75	6.75	7.00	3.625	7.50	8.50	7.25	
	2.75	9.25	2.75	6.00	4.00	10.00	3.25	8.75	6.25	8.25	4.75	8.75	5.75	8.875	4.625	7.75	
	3.25	4.875	4.00	6.875	3.00	8.25	5.25	9.875	5.25	8.75	3.75	6.75	6.25	9.75	4.625	7.00	
	3.625	8.00	2.50	6.875	3.25	8.25	2.00	10.25	4.375	7.75	11.50	7.125	8.00	7.00	3.875	7.50	
	4.25	7.75	2.25	9.50	4.25	9.75	3.50	7.875	7.625	7.125	4.75	5.00	5.50	8.50	6.50	8.125	
	7.75	9.00	2.625	10.00	1.375	6.80	4.00	9.00	7.25	10.50	3.625	6.75	11.25	7.25	6.625	9.75	
	4.375	9.75	8.25	7.00	5.375	9.00	3.50	7.25	3.50	8.00	4.50	5.875	6.00	8.75	7.00	9.00	
	3.375	7.50	2.625	9.00	4.00	7.50	4.00	10.125	3.375	8.125	3.375	5.125	7.25	6.75	5.00	8.00	
	2.50	9.875	8.50	8.875	3.75	9.50	3.75	8.50	3.50	7.75	4.00	6.00	5.00	6.50	9.25	8.00	
	3.50	6.125	3.875	6.125	2.25	8.25	1.75	4.50	4.50	8.125	3.625	8.00	5.875	8.50	4.375	7.125	
	3.00	7.00	2.50	8.00	2.375	6.25	4.00	9.00	4.00	7.50	3.875	4.50	5.875	7.875	6.625	10.00	
	1.625	8.125	2.50	8.875	3.375	8.50	1.00	6.75	4.50	7.25	8.25	8.875	6.75	9.25	5.00	8.75	
	2.75	4.25	3.00	8.75	3.25	8.00	2.375	5.00	5.00	5.00	3.25	6.00	4.25	8.75	9.00	0.75	
2.75	3.875	8.00	7.50	2.00	5.75	1.50	8.00	2.625	6.00	4.625	7.125	7.25	7.125	4.00	9.00		
2.00	4.50	3.375	8.75	2.50	7.25	5.875	9.875	3.75	8.00	3.75	5.75	5.875	7.75	6.625	1.00		
3.625	7.00	4.25	9.25	6.50	10.75	2.50	9.75	9.50	7.875	4.125	0.75	6.25	8.50	8.375	8.25		
2.50	4.50	3.375	5.125	4.50	8.50	2.00	7.25	3.375	8.50	5.50	8.00	6.375	8.00	5.50	7.75		
2.875	7.00	5.75	10.50	3.75	9.50	2.75	8.875	4.50	2.50	4.25	6.25	7.25	8.00	2.75	9.00		
3.50	6.00	3.00	9.25	2.375	7.75	3.00	7.75	3.75	7.00	4.625	8.125	5.75	6.00	5.00	6.25		
Totals .....	78.125	173.25	84.375	104.00	83.25	209.25	75.625	212.375	120.50	197.625	120.75	169.50	110.75	210.875	147.00	207.00	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	
Lowest .....	7.75	119.62	10.50	52.50	6.25	90.47	10.75	53.75	11.50	177.40	10.75	53.75	11.25	173.51	10.00	50.00	
Average .....	2.00	36.87	4.125	20.625	1.00	15.44	6.00	25.00	2.625	40.52	2.50	12.50	3.00	41.20	6.00	30.00	
Tests above average .....	3.25	60.16	7.345	36.725	3.178	40.05	8.433	42.165	4.825	74.47	7.313	30.715	5.750	88.83	8.338	41.75	
Tests below average .....	25		20		25		30		15		26		21		26		
Tests below average .....	25		24		25		20		35		24		26		21		



TABLE II.—Measurements of strain and stretch of wools—Continued.

Catalogue number of samples..		WISCONSIN.															
		EWES, 3 TO 5 YEARS OLD.															
		718.				719.				720.				721.			
Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.		
	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	12.00	8.25	3.50	7.00	7.50	8.75	3.00	6.00	7.00	7.50	6.00	7.75	3.50	7.25	4.75	1.875	
	4.50	9.75	4.00	10.25	6.50	7.00	8.00	7.00	3.75	8.50	6.75	11.00	5.00	5.00	9.625	5.50	
	9.00	6.75	9.00	8.25	0.50	7.125	4.00	5.00	4.00	8.50	6.25	8.00	5.75	3.875	8.00	8.625	
	10.00	9.00	5.25	7.60	3.50	7.50	4.25	6.125	3.25	4.75	4.25	9.00	5.50	6.00	8.25	6.00	
	6.00	7.25	3.00	7.50	2.00	4.875	5.50	7.75	4.00	8.00	3.00	3.00	4.25	4.875	4.875	6.875	
	9.00	9.00	3.25	6.00	3.50	4.75	3.875	6.25	5.25	8.00	7.00	7.50	4.625	6.00	0.50	6.75	
	8.00	7.00	6.50	5.00	5.50	6.125	3.50	5.25	6.25	7.75	4.00	0.50	6.00	8.00	6.125	7.00	
	4.50	7.00	5.00	10.25	3.875	7.25	3.50	3.00	8.25	9.50	4.75	9.00	14.00	8.125	4.75	3.00	
	3.50	8.75	3.60	10.00	4.00	3.25	5.75	7.75	6.25	8.00	4.75	10.00	6.00	8.00	4.00	2.25	
	3.60	0.00	6.00	5.75	5.50	8.00	6.25	6.00	4.00	8.00	4.50	9.00	6.50	6.00	8.75	8.125	
	11.25	8.25	6.00	10.00	7.75	7.00	4.625	6.00	5.25	9.25	4.00	2.25	4.625	3.25	5.25	4.25	
	4.00	7.00	4.00	8.25	2.125	3.625	4.25	4.75	5.00	6.25	4.00	9.00	9.25	6.25	4.50	3.00	
	9.00	6.75	9.00	7.50	3.35	7.50	3.875	6.25	8.00	7.75	4.00	8.25	4.875	3.50	5.00	6.25	
	6.50	8.50	6.75	10.00	4.75	6.75	7.375	8.125	6.50	9.00	4.00	9.75	4.375	3.875	4.625	8.00	
	3.50	8.00	5.50	9.00	3.125	3.375	7.00	8.00	5.00	6.50	5.75	9.50	3.625	6.50	4.875	8.00	
	10.50	8.25	6.00	8.50	4.25	2.50	2.50	3.00	8.75	9.25	7.00	8.00	5.75	8.00	6.625	7.25	
	5.00	9.25	8.00	7.00	2.375	8.25	4.625	3.75	4.00	7.75	10.00	7.00	5.50	8.75	9.00	5.75	
	0.25	7.00	4.00	6.75	5.50	7.25	5.00	6.25	4.00	6.75	5.00	7.00	5.375	6.50	3.00	1.875	
	10.50	8.00	4.00	9.00	3.375	6.25	5.50	6.00	8.75	9.00	4.00	8.00	5.50	4.125	8.375	5.875	
	4.50	7.00	5.00	6.00	5.625	7.00	3.50	3.00	4.00	9.50	7.50	8.50	4.375	8.50	8.50	3.125	
	4.00	9.50	8.00	8.00	4.25	6.875	3.00	7.875	4.00	7.75	4.75	8.50	6.75	7.75	6.75	7.375	
	3.75	7.00	4.00	7.50	6.25	7.125	8.25	7.50	5.00	6.50	8.75	6.50	6.625	8.25	5.00	6.875	
	7.50	9.75	3.00	2.25	4.25	6.25	6.50	7.125	10.50	7.00	7.25	9.00	7.125	6.00	4.00	3.50	
	13.00	9.00	4.00	10.50	5.50	5.00	5.75	7.00	3.00	5.00	4.00	0.00	5.00	8.00	7.25	6.125	
	3.50	5.50	4.00	9.00	4.25	8.00	5.00	7.125	4.75	9.75	5.25	7.50	8.25	6.125	7.50	3.875	
Totals .....	175.75	200.50	129.25	195.25	115.50	155.375	125.375	151.875	137.50	195.50	134.50	203.00	146.00	158.125	148.625	137.125	

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Recapitulation and reduction:																
Highest .....	13.00	200.65	10.50	52.50	8.25	127.34	8.75	43.75	10.50	162.06	11.00	55.00	14.00	216.084	8.625	43.125
Lowest .....	3.00	46.30	2.75	13.75	2.125	32.80	2.50	12.50	3.00	40.30	3.00	15.00	3.00	46.30	1.875	9.375
Average .....	6.10	94.15	7.915	39.575	4.818	74.36	6.145	30.725	5.44	84.12	7.97	39.85	5.893	90.96	5.905	29.525
Tests above average.....	10		28		23		29		18		30		19		31	
Tests below average.....	31		22		27		21		32		20		31		19	

Catalogue number of samples..		WISCONSIN.															
		EWES, 3 TO 5 YEARS OLD.															
		722.				723.				770.				771.			
Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.		
	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	7.25	10.25	4.625	7.125	4.75	8.25	6.00	6.00	3.50	7.25	7.25	6.00	4.00	7.00	5.875	8.00	
	6.625	8.50	7.625	9.50	2.50	2.00	8.25	0.75	2.75	7.75	3.00	7.00	5.00	8.75	5.00	9.00	
	7.00	10.25	4.50	5.25	7.00	7.00	3.25	9.00	3.00	7.25	1.50	8.25	3.375	7.75	8.625	8.00	
	4.625	3.75	7.75	8.875	4.50	7.50	4.00	10.00	3.75	3.75	4.25	7.50	3.875	9.125	12.875	8.875	
	6.50	7.875	6.00	8.50	3.75	9.00	3.50	6.50	4.00	6.25	3.50	9.25	8.875	8.75	3.75	8.125	
	5.625	9.25	9.00	10.75	4.75	8.50	3.00	0.00	4.50	6.50	3.75	9.00	4.00	8.50	5.125	7.875	
	6.625	8.50	6.50	10.75	2.50	6.00	3.25	10.00	4.75	8.00	4.00	8.75	7.125	8.00	6.25	8.50	
	4.00	7.25	8.625	7.25	4.00	9.75	6.50	0.75	5.75	7.00	3.25	8.25	3.875	8.75	3.625	7.00	
	5.25	8.125	10.25	11.50	4.00	9.00	4.00	8.50	6.50	9.00	3.25	8.00	5.00	7.25	4.625	7.00	
	6.25	9.25	8.875	10.00	4.00	0.75	4.50	8.00	6.50	6.00	2.75	7.75	4.625	8.00	5.50	7.00	
	7.50	8.25	5.50	7.00	3.25	7.25	4.00	7.00	3.00	4.25	2.50	6.75	12.25	6.75	4.625	7.50	
	6.625	9.25	6.25	9.25	4.00	7.50	4.25	8.25	5.00	6.00	4.625	10.00	13.00	8.00	3.125	8.00	
	4.25	6.75	8.25	8.75	4.25	9.00	6.75	9.00	5.75	8.75	3.875	8.75	3.125	7.00	5.875	8.75	
	5.50	6.50	6.50	9.875	3.50	8.50	4.60	8.00	2.75	4.00	3.50	6.00	3.75	8.00	5.625	9.25	
	9.25	9.25	11.625	11.00	4.00	9.75	3.50	8.50	4.25	8.00	4.00	7.00	7.50	7.50	6.625	7.00	
	7.00	8.25	7.00	9.75	4.50	9.00	5.25	9.00	2.50	3.50	4.50	9.00	2.625	4.25	8.00	8.00	
	7.375	6.00	7.625	8.75	4.75	8.25	4.00	8.25	5.75	6.50	2.25	5.75	5.00	7.50	4.50	9.75	
	7.625	11.00	6.25	7.25	7.50	8.50	3.50	7.25	5.50	7.25	2.25	8.25	4.875	8.00	2.875	8.00	
	3.50	5.50	8.00	9.75	5.25	8.00	4.50	8.00	5.50	7.00	2.00	0.50	5.75	8.375	5.00	7.25	
	4.50	0.50	7.00	8.75	3.50	6.00	3.75	7.25	4.25	8.00	4.00	7.50	6.625	7.00	3.625	8.25	
	3.75	6.625	7.375	10.50	6.60	8.50	3.25	8.50	5.25	6.25	3.25	8.00	4.00	8.00	6.75	8.00	
	5.875	8.00	8.25	9.25	0.50	10.00	6.00	9.00	5.50	7.00	0.25	8.50	3.00	7.00	3.00	6.875	
	8.25	9.00	3.75	6.00	4.00	8.25	3.50	8.25	3.50	5.75	3.00	6.25	3.00	7.00	4.50	8.75	
Totals .....	143.00	197.625	184.25	226.875	113.50	201.75	109.75	212.00	113.75	165.25	92.875	191.75	135.25	191.50	133.75	200.125	

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Recapitulation and reduction:																
Highest .....	11.625	179.43	11.50	57.50	8.25	127.336	10.00	50.00	7.25	111.90	10.00	60.00	13.00	200.65	9.75	43.75
Lowest .....	3.75	57.88	5.25	26.25	2.60	38.580	2.00	10.00	2.00	30.87	3.50	17.50	2.625	40.52	4.25	21.25
Average .....	6.585	101.64	8.49	42.45	4.465	68.915	8.275	41.375	4.13	63.74	7.14	35.70	5.38	83.04	7.83	39.15
Tests above average.....	29		28		20		26		21		25		17		30	
Tests below average.....	21		22		30		24		29		25		33		20	



TABLE II.—Measurements of strain and stretch of wools—Continued.

Catalogue number of samples ..		WISCONSIN.															
		EWES, 3 TO 5 YEARS OLD.												OLD EWES.			
		784.				785.				786.				714.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
Actual measurement in grams and millimeters.	2.375	1.25	4.00	8.25	6.00	7.50	7.00	8.00	8.00	7.50	10.00	7.50	3.25	8.00	4.25	5.75	
	4.375	3.50	6.625	8.00	4.25	7.50	3.00	6.00	7.50	8.25	9.50	9.00	4.125	10.00	5.125	6.00	
	4.375	4.75	3.125	5.00	3.50	4.50	5.00	9.00	9.00	8.00	4.00	6.25	3.75	8.375	2.375	6.00	
	9.50	7.00	4.75	8.00	3.75	7.00	3.75	2.00	4.00	7.50	4.00	8.00	1.50	7.875	2.875	7.125	
	2.00	2.50	3.625	7.75	4.25	5.25	3.75	8.00	10.00	6.50	3.75	8.00	3.50	7.125	3.00	7.125	
	4.625	7.75	4.00	6.25	5.00	6.00	5.00	7.50	4.25	7.50	3.00	2.50	5.75	8.00	4.375	6.125	
	4.50	5.00	4.00	8.75	3.75	6.25	8.00	8.75	5.50	5.00	7.50	8.00	3.75	7.25	4.00	8.00	
	10.50	6.75	5.00	10.00	6.00	8.00	4.00	9.00	4.00	7.75	4.00	8.25	4.25	8.25	4.25	6.875	
	3.625	7.125	4.375	8.00	6.00	6.75	7.50	6.25	6.00	7.50	4.75	8.50	6.00	7.25	2.625	6.375	
	5.625	5.00	5.375	8.125	6.00	5.75	7.00	7.50	5.00	9.25	4.25	6.00	5.875	9.75	3.75	7.875	
	4.375	0.75	4.375	7.75	6.75	6.50	9.25	8.50	4.75	2.00	5.25	8.75	2.25	4.50	4.00	7.75	
	3.625	8.00	3.625	9.125	4.25	10.00	6.75	9.75	4.50	9.25	3.50	7.25	2.125	6.50	4.625	8.00	
	3.375	7.125	6.00	8.125	4.00	9.25	4.25	8.00	6.50	8.50	5.00	10.00	2.25	4.50	5.625	6.50	
	5.00	0.25	4.00	4.125	6.25	7.75	4.00	8.25	4.00	6.00	11.00	9.00	7.25	9.00	3.25	7.125	
	3.625	3.25	5.00	8.50	3.75	7.25	5.75	8.25	0.25	9.00	6.00	9.00	3.125	7.50	2.50	3.50	
	5.25	6.25	4.00	0.25	2.00	0.00	6.50	8.00	4.00	7.75	3.75	6.50	3.25	8.00	2.625	3.875	
	2.25	4.875	4.625	8.25	6.25	7.75	4.00	5.75	6.25	8.75	4.25	9.50	3.875	7.50	3.125	7.25	
	2.50	6.75	2.375	2.50	3.50	5.25	4.75	7.75	10.00	8.00	4.00	5.00	5.25	8.00	2.75	8.00	
	4.00	7.25	4.00	6.00	6.25	8.00	5.00	8.00	4.00	7.00	5.75	9.75	2.25	8.125	4.375	8.00	
	7.625	0.00	2.50	0.50	7.00	7.50	6.75	0.00	3.50	3.00	10.25	6.50	2.75	8.00	2.75	6.50	
5.25	7.125	4.625	4.75	5.00	8.25	7.50	8.75	5.00	10.00	3.75	8.25	6.375	8.25	4.625	8.00		
4.625	7.00	4.00	8.125	3.50	3.25	10.25	7.75	5.00	7.25	3.25	5.25	2.25	7.00	4.00	2.875		
3.625	0.25	3.00	7.75	7.50	6.50	7.00	8.25	3.75	6.75	4.75	9.25	3.75	8.00	3.125	7.125		
3.375	8.25	4.25	5.25	4.50	8.50	7.00	8.50	6.00	9.00	5.00	9.75	5.50	7.00	4.50	8.125		
4.00	5.75	2.25	0.25	3.50	5.75	4.25	8.00	9.75	9.00	4.00	8.00	4.25	8.75	6.50	9.00		
Totals .....	135.00	142.50	105.00	180.875	133.50	175.00	143.00	191.50	140.50	186.00	130.25	195.75	99.00	192.50	95.00	160.375	
		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....		10.50	162.00	10.00	50.00	10.25	158.30	10.00	50.00	11.00	169.78	10.00	50.00	7.25	111.901	10.00	50.00
Lowest .....		2.00	30.869	1.25	6.25	3.00	46.30	2.00	10.00	3.00	46.804	2.00	10.00	1.60	23.132	3.50	17.60
Average .....		4.80	74.08	6.40	22.30	5.53	85.35	7.33	36.65	5.34	82.42	7.64	38.20	3.88	60.886	7.438	37.19
Tests above average .....		12		28		22		32		19		30		22		24	
Tests below average .....		38		22		28		18		31		20		28		26	
Catalogue number of samples ..		WISCONSIN.								MINNESOTA.							
		OLD EWES.				RAMS, 2 TO 3 YEARS OLD.				RAMS, 2 TO 3 YEARS OLD.				RAMS, 2 TO 3 YEARS OLD.			
		715.				502.				503.				504.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
Actual measurement in grams and millimeters.	4.00	6.00	4.00	0.00	4.75	7.25	6.75	8.00	8.125	7.00	3.00	6.00	2.75	1.50	6.00	9.00	
	3.00	2.75	4.50	8.50	5.75	2.00	6.50	7.75	5.25	6.625	6.625	6.125	7.25	10.00	8.75	10.00	
	2.25	3.00	5.00	8.25	4.80	7.00	7.25	4.25	11.50	6.00	8.25	6.00	5.75	10.25	5.50	10.25	
	3.75	6.75	3.00	8.00	8.00	6.00	8.25	10.00	5.00	1.00	4.50	1.00	6.00	10.50	6.50	9.00	
	3.75	5.50	3.50	9.00	5.00	9.00	6.50	9.25	4.625	7.50	6.625	8.25	17.75	13.00	8.00	9.00	
	3.75	9.25	3.00	6.00	8.00	8.25	8.75	6.75	4.75	5.25	7.50	6.00	5.75	9.00	5.00	9.75	
	6.00	9.00	4.00	9.50	7.00	7.50	3.50	4.00	8.875	3.00	3.25	2.00	6.75	9.25	6.75	9.00	
	4.50	6.50	3.00	5.00	4.25	9.00	10.25	7.50	5.375	6.00	6.00	2.50	6.75	9.00	4.00	8.50	
	3.00	8.50	5.50	7.25	6.25	4.25	5.60	4.75	7.375	4.875	5.50	4.75	6.25	7.00	5.50	9.00	
	5.50	9.00	6.50	9.50	5.50	6.00	9.50	7.25	4.625	6.00	5.625	7.00	6.00	9.75	3.50	9.00	
	8.00	5.75	7.25	8.75	5.50	6.60	4.25	4.00	4.50	7.75	6.50	7.75	4.50	6.50	4.75	9.75	
	8.00	8.50	4.00	6.75	7.75	4.75	6.50	8.00	3.625	6.00	5.00	5.25	4.50	8.00	4.50	10.50	
	7.25	6.75	7.25	10.00	4.75	8.00	4.25	6.50	6.00	5.75	4.875	5.25	9.25	9.50	7.00	10.50	
	4.00	7.50	3.00	4.75	8.25	9.00	5.00	9.25	16.50	7.00	4.50	5.00	4.25	11.00	8.00	9.00	
	4.75	5.25	4.00	3.00	5.25	8.00	6.00	5.75	6.875	3.25	9.375	6.00	5.25	10.25	5.00	10.75	
	3.00	8.50	3.75	8.25	4.75	9.75	7.25	9.00	9.00	4.75	7.75	7.75	3.25	8.50	4.25	7.75	
	3.00	2.00	7.00	7.00	8.50	10.25	6.50	3.75	6.625	6.00	3.625	7.25	6.00	9.75	4.75	9.25	
	6.50	8.00	4.00	7.00	8.50	7.00	7.00	3.00	5.00	7.00	6.25	7.25	5.25	8.25	6.25	9.50	
	11.75	11.00	3.00	6.75	4.75	5.25	8.00	7.00	7.00	2.00	5.00	6.50	10.25	10.00	5.25	10.75	
	6.00	9.00	4.00	5.00	11.00	0.75	4.00	5.75	4.75	6.00	8.125	7.00	4.25	10.50	6.25	9.75	
5.00	9.00	7.25	3.00	5.25	5.00	5.00	5.00	5.50	6.00	4.875	7.00	4.50	10.25	4.00	9.75		
3.75	6.00	6.00	5.00	7.25	10.25	7.75	9.00	6.25	8.00	4.00	9.75	7.00	11.00	3.50	9.00		
3.50	2.50	4.25	6.50	8.00	9.00	3.00	7.25	4.125	5.00	6.50	7.50	4.75	9.25	9.00	11.00		
7.25	5.25	4.00	6.75	7.25	8.125	8.50	9.75	5.25	7.75	13.875	9.00	4.00	6.00	5.25	10.00		
4.75	10.00	4.00	3.50	7.50	9.50	6.50	10.50	5.375	6.25	5.375	5.75	5.00	9.50	5.25	9.75		
Totals .....	126.00	171.25	118.50	165.00	163.25	186.50	162.75	180.00	157.375	130.75	154.50	150.625	133.00	224.50	136.50	236.50	
		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....		11.75	181.357	11.00	55.00	11.00	169.78	10.50	52.50	16.50	254.67	9.00	45.00	17.75	273.90	11.00	55.00
Lowest .....		2.25	34.728	2.50	12.50	3.50	54.02	2.00	10.00	3.00	46.30	1.00	5.00	2.75	42.44	1.50	7.50
Average .....		4.89	75.475	6.725	23.625	6.52	100.53	7.33	26.65	6.24	96.31	5.81	29.05	5.79	89.37	9.22	46.10
Tests above average .....		18		28		23		27		19		33		19		31	
Tests below average .....		32		22		28		23		31		17		31		19	



TABLE II.—Measurements of strain and stretch of wools—Continued.

MINNESOTA.																
RAMS, 2 TO 3 YEARS OLD.																
Catalogue number of samples..	505.				506.				507.				508.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	4.50	5.00	5.875	8.75	6.75	7.00	5.00	6.00	5.75	6.00	6.50	7.00	6.625	7.00	5.00	5.25
	6.125	7.875	5.25	9.25	11.00	7.50	6.75	8.00	0.75	8.00	11.25	6.50	3.375	5.00	5.375	6.75
	4.25	6.50	4.00	5.00	8.75	7.25	14.00	7.75	4.00	7.75	5.375	7.00	4.00	4.25	5.375	7.75
	3.75	5.875	7.00	6.25	7.00	9.00	5.00	4.25	5.00	4.25	8.25	6.00	5.625	6.25	4.025	5.25
	5.00	5.25	4.875	9.00	5.00	7.00	10.75	8.00	10.75	8.00	5.625	3.25	5.00	8.00	7.375	6.50
	6.00	8.75	7.00	9.875	5.25	7.50	3.25	5.25	3.25	5.25	5.75	6.50	7.375	7.50	5.25	5.75
	8.00	4.25	6.25	7.75	5.50	9.00	5.50	6.75	5.50	6.75	7.00	7.875	5.25	7.00	3.625	5.75
	5.50	2.25	3.50	7.25	4.75	6.00	7.25	7.00	7.25	7.00	10.50	7.00	4.375	1.75	4.25	5.75
	5.00	7.00	6.875	7.25	9.75	7.00	11.00	9.00	11.00	9.00	9.00	8.00	5.50	4.75	5.75	6.75
	6.25	3.75	4.00	8.00	4.00	7.00	4.75	7.50	4.75	7.50	7.50	7.00	5.50	8.00	6.375	7.50
	4.50	6.00	4.25	8.25	6.00	9.00	4.75	4.50	4.75	4.50	6.00	7.00	6.375	5.25	6.375	1.00
	5.00	6.00	4.75	7.25	4.75	4.50	7.25	7.00	7.25	7.00	5.625	4.875	6.25	6.00	6.00	2.50
	4.25	6.50	5.00	8.50	6.00	8.50	8.75	6.00	8.75	6.00	5.25	5.00	5.00	5.00	6.00	7.25
	5.00	5.25	6.25	9.00	5.00	7.00	5.25	8.00	6.25	8.00	12.625	8.00	7.50	6.25	5.50	6.00
	7.25	8.25	4.375	6.00	5.00	7.50	6.25	6.50	6.25	6.50	6.00	6.00	6.375	7.00	6.00	5.25
	4.25	9.00	4.75	4.875	4.25	4.25	4.00	5.50	4.00	5.50	7.00	6.00	4.75	6.75	6.625	5.50
	4.00	8.00	6.50	9.00	3.25	6.50	4.00	8.75	4.00	8.75	4.00	6.00	2.75	4.00	4.25	5.75
	5.00	7.875	6.00	8.00	3.75	3.00	5.50	8.50	5.50	8.50	11.25	7.25	4.50	3.75	3.375	3.75
	3.50	9.00	5.50	7.75	9.50	8.50	3.00	6.00	3.00	6.00	7.125	5.50	6.50	6.50	6.50	8.75
4.25	7.00	4.75	7.25	6.00	2.50	6.50	6.00	6.50	6.00	7.75	6.00	7.00	6.25	3.50	2.75	
5.25	8.75	7.00	4.75	6.25	6.25	7.00	8.50	7.00	8.50	7.75	7.00	5.375	5.25	5.50	6.00	
6.00	4.25	5.75	7.25	6.00	5.75	5.00	5.25	5.00	5.25	6.625	7.00	3.00	2.00	3.625	6.00	
4.00	5.00	4.75	4.00	4.00	7.00	7.25	8.50	7.25	8.50	10.625	7.50	5.50	6.75	2.625	3.50	
4.25	7.50	4.00	5.50	7.00	7.50	2.75	8.00	2.75	8.00	8.00	8.00	4.625	2.75	3.625	2.75	
5.25	6.25	4.25	4.00	0.75	4.75	3.00	5.75	3.00	5.75	10.25	8.125	8.625	7.75	3.75	5.25	
Totals .....	125.125	161.125	131.50	179.75	151.25	166.75	149.50	172.25	149.50	172.25	101.875	165.375	136.75	140.75	126.25	135.00

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	8.00	123.48	9.875	49.375	14.00	216.08	0.00	45.00	12.625	194.86	8.50	42.50	8.625	133.123	8.00	40.00
Lowest .....	3.50	54.02	2.25	11.25	2.75	42.44	2.50	12.50	4.00	61.74	3.25	16.25	2.625	40.52	1.00	5.00
Average .....	5.13	79.18	6.82	34.10	6.15	94.92	6.78	33.90	6.33	97.70	6.83	34.15	5.26	81.19	5.52	22.60
Tests above average .....	20		28		20		29		32		34		27		28	
Tests below average .....	30		23		30		21		18		16		23		22	

MINNESOTA.																
RAMS, 2 TO 3 YEARS OLD.																
Catalogue number of samples..	509.				510.				511.				512.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	5.25	9.75	5.00	7.00	2.75	6.00	3.00	5.50	4.75	6.75	13.00	7.00	4.50	9.50	12.25	8.00
	5.00	8.50	3.50	9.00	4.75	9.00	3.25	9.50	4.00	4.875	5.00	5.00	3.75	5.00	6.375	9.75
	4.50	9.75	3.75	9.00	4.75	9.00	3.00	7.25	5.25	7.75	8.00	6.75	7.25	8.00	4.50	10.50
	4.00	5.25	6.25	10.00	4.75	6.75	4.50	9.75	2.75	7.00	0.00	7.25	3.875	6.00	2.00	9.75
	4.25	7.75	4.25	10.00	6.00	9.75	6.00	8.75	4.25	7.50	7.25	9.00	7.00	9.00	7.00	0.50
	3.25	8.75	5.25	9.25	4.50	7.50	4.75	8.50	6.00	6.875	6.75	7.25	5.00	8.75	6.00	9.00
	6.00	7.75	4.00	9.00	4.00	8.00	6.25	9.00	7.50	8.50	6.00	8.00	8.00	10.00	5.00	8.75
	4.00	6.25	4.25	10.00	6.75	10.00	7.50	5.25	6.00	5.875	7.00	7.75	4.25	7.75	9.25	0.75
	4.00	9.00	3.50	6.75	3.75	8.75	5.75	7.50	5.00	9.00	5.00	6.50	5.00	9.75	4.50	7.00
	5.50	10.00	4.00	9.00	6.75	8.00	3.75	6.00	4.00	6.50	7.00	8.25	8.50	10.00	8.75	8.25
	3.75	9.50	4.25	10.00	5.75	7.75	3.75	8.75	8.75	8.75	4.75	6.625	10.00	9.25	9.00	0.00
	5.00	9.75	3.00	5.75	5.25	9.00	3.75	7.00	7.25	7.00	6.00	0.00	7.25	8.75	5.50	0.00
	5.25	7.75	4.25	7.00	9.75	10.75	4.75	2.00	3.25	8.00	6.00	8.00	5.75	8.125	3.75	7.75
	5.00	9.75	4.25	6.00	5.75	8.50	5.50	8.25	5.25	7.00	5.00	8.25	4.50	10.00	10.25	10.00
	4.25	8.00	2.75	8.00	6.75	8.00	4.25	8.25	6.875	7.875	6.50	7.50	7.75	10.00	4.25	7.875
	5.50	8.25	5.50	8.75	4.50	8.50	4.00	5.75	10.25	8.875	9.25	6.75	6.25	9.00	9.75	6.75
	6.25	9.00	5.00	9.00	3.75	8.25	6.25	8.50	9.50	5.00	5.75	9.00	8.875	9.75	5.375	6.125
	4.00	10.00	5.75	7.75	4.75	8.50	3.25	9.75	3.25	5.25	6.75	7.875	4.875	6.75	8.625	8.875
	3.25	10.00	2.75	7.50	6.50	9.00	4.50	7.00	4.875	5.50	6.00	4.50	6.375	10.50	8.50	9.875
5.50	10.00	4.00	7.50	6.25	7.00	6.75	8.75	8.50	5.00	5.00	6.75	4.50	9.875	5.75	7.875	
4.25	10.00	4.00	7.50	10.00	8.25	4.75	9.75	4.25	6.00	7.875	8.00	6.25	8.50	5.00	8.75	
4.75	9.00	3.50	10.25	4.75	7.00	4.25	9.00	7.50	7.25	8.75	6.50	7.00	8.00	4.50	7.625	
5.50	9.75	4.25	9.75	4.00	9.00	7.00	6.50	7.00	7.75	6.00	9.00	5.75	8.75	9.00	9.50	
4.75	0.25	4.00	9.00	4.50	9.00	5.50	0.75	10.00	7.00	5.75	6.75	5.50	8.75	6.25	7.50	
Totals .....	117.25	222.75	104.00	212.00	134.00	211.25	121.75	194.25	148.00	169.625	188.375	189.625	145.625	218.50	176.875	213.25

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	6.25	96.47	10.50	52.50	10.00	154.35	10.25	51.25	13.00	200.65	9.75	43.75	12.25	189.07	10.50	52.50
Lowest .....	2.75	42.44	5.25	26.25	2.75	42.44	2.00	10.00	2.75	42.44	4.60	22.50	3.75	57.88	6.00	30.00
Average .....	4.43	68.37	8.70	48.50	6.12	79.03	8.11	40.55	6.33	97.70	7.19	35.95	6.45	99.55	8.63	43.15
Tests above average .....	22		32		21		31		22		24		19		30	
Tests below average .....	28		18		29		19		28		20		31		20	



TABLE II.—Measurements of strain and stretch of wools—Continued.

MINNESOTA.																	
RAMS, 2 TO 3 YEARS OLD.																	
Catalogue number of samples..	513.				511.				515.				516.				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	5.375	7.00	5.00	6.00	5.25	7.00	6.25	7.875	7.75	8.50	4.00	6.50	4.00	4.00	6.00	6.00	8.50
	6.625	5.75	5.50	8.00	9.00	6.00	7.00	7.125	5.50	8.00	6.00	7.50	8.00	7.00	6.25	7.25	8.25
	7.625	7.25	6.875	6.75	8.625	7.75	9.00	7.00	7.00	8.00	8.75	8.50	10.50	4.00	6.00	5.75	6.00
	3.50	4.00	5.625	7.125	9.00	9.00	6.50	8.125	11.75	9.25	5.50	8.00	4.50	7.00	15.00	8.00	8.25
	4.375	5.50	10.875	7.25	5.375	5.00	7.875	8.00	9.00	8.25	5.00	8.00	6.25	6.00	0.25	8.50	0.00
	5.25	6.25	2.625	5.25	10.00	9.00	7.50	8.50	11.00	8.75	4.00	6.25	5.50	6.25	8.00	7.00	8.00
	4.375	7.875	5.625	7.75	9.50	8.125	5.25	7.25	6.00	10.00	8.00	5.75	4.75	0.75	5.75	7.50	7.50
	6.375	7.75	6.625	6.75	4.50	7.00	3.625	7.25	5.50	8.00	6.25	4.25	6.00	8.00	4.00	7.25	7.25
	5.375	7.25	6.625	7.00	4.625	5.00	8.25	8.75	7.00	6.00	9.75	8.75	6.00	7.25	10.00	8.25	8.25
	8.625	6.00	7.75	7.25	4.875	7.00	4.125	7.875	4.25	7.75	3.25	5.00	4.25	6.25	6.00	6.50	6.50
	4.625	4.00	7.50	6.25	6.00	8.125	5.875	7.25	10.00	9.75	10.00	10.00	4.00	5.00	4.75	7.75	7.50
	5.625	6.00	6.875	7.125	10.25	3.25	10.75	6.25	7.50	8.25	6.50	8.25	3.00	3.00	6.25	7.50	6.00
	4.375	6.25	5.625	8.25	6.375	7.50	6.50	6.00	6.75	8.00	7.00	0.50	4.50	7.50	6.25	6.00	8.00
	6.625	9.00	4.375	5.75	5.50	7.875	5.625	8.00	4.00	7.75	10.00	8.75	9.25	6.75	14.00	6.00	8.00
	8.375	9.25	3.625	3.25	4.25	8.00	4.625	8.00	8.75	0.00	4.00	9.25	10.25	6.75	3.25	7.25	7.75
	5.625	7.50	4.75	5.50	8.375	7.00	5.00	7.125	13.50	8.50	4.00	4.50	6.00	9.00	4.00	7.75	7.75
	5.375	6.25	4.00	6.00	4.375	7.00	5.625	8.00	6.25	9.00	5.00	5.25	5.75	8.00	4.50	6.25	6.25
	10.625	8.00	4.625	7.50	7.25	7.00	7.00	7.00	10.00	8.50	11.50	8.00	7.00	10.00	6.00	7.00	7.00
	6.25	7.25	4.25	3.25	8.25	8.25	4.375	6.875	2.75	8.00	5.75	9.00	6.00	6.00	4.00	7.00	6.25
4.50	7.50	3.625	2.00	5.00	7.00	6.50	6.875	7.00	8.00	9.25	10.25	4.50	5.50	5.75	6.25	6.25	
4.375	7.00	4.375	5.25	6.25	8.00	5.50	8.125	8.00	9.50	4.25	7.50	7.00	6.25	6.75	6.25	6.25	
5.625	8.00	4.375	3.75	5.00	8.00	5.00	6.00	6.00	8.75	10.50	7.50	4.00	10.00	3.75	8.25	8.25	
4.375	7.00	4.75	1.60	5.125	9.00	4.60	7.00	8.50	7.00	7.00	8.75	8.00	0.00	6.25	7.00	7.00	
5.625	8.00	4.375	5.75	8.625	9.00	6.00	7.00	8.00	0.00	11.00	8.00	3.00	0.00	8.25	5.50	5.50	
6.25	6.00	4.00	2.25	10.00	9.00	3.50	8.50	4.75	3.00	7.00	10.00	6.50	0.00	4.00	7.60	7.60	
Totals .....	144.675	171.125	131.75	142.50	166.375	189.875	153.25	164.50	186.50	208.23	172.00	194.00	136.50	176.00	102.75	181.75	

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation:	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	10.625	163.99	9.25	46.25	10.75	165.92	9.00	45.00	13.50	208.86	10.50	52.50	15.00	231.32	10.00	50.00
Lowest .....	3.50	54.02	1.50	7.50	3.625	55.95	5.00	25.00	3.25	50.10	3.00	15.00	3.00	46.30	3.00	15.00
Average .....	5.53	85.35	6.27	31.85	6.30	98.627	7.48	37.40	7.17	110.66	8.00	40.30	5.98	92.32	7.15	33.75
Tests above average .....	20		20		20		26		21		26		25		25	
Tests below average .....	30		24		30		24		29		21		25		23	

MINNESOTA.																
RAMS, 2 TO 3 YEARS OLD.																
Catalogue number of samples..	517.				518.				519.				520.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	6.60	9.50	8.625	7.75	4.625	7.75	3.625	4.875	5.25	8.50	7.75	8.75	4.75	2.75	8.625	6.00
	8.625	8.25	4.00	5.50	5.00	7.75	4.875	8.125	4.75	4.50	6.00	8.25	7.00	7.75	0.75	8.25
	6.00	9.00	8.625	8.875	0.375	6.50	5.00	7.50	7.50	8.00	5.25	8.00	6.50	6.60	0.875	6.25
	8.625	8.125	7.25	8.50	4.375	8.25	8.25	7.25	7.50	8.25	7.25	9.75	7.50	6.875	7.50	7.25
	11.25	9.875	6.50	8.75	5.50	8.50	8.00	7.00	5.50	8.75	7.00	7.25	6.00	6.875	8.75	8.00
	13.50	8.00	5.00	8.50	4.375	5.50	6.75	7.125	5.50	7.00	6.50	9.75	6.375	7.25	4.875	6.00
	6.625	7.125	3.75	6.25	4.375	7.75	2.75	8.875	5.50	6.25	6.00	6.00	5.50	3.75	9.875	0.00
	10.375	9.00	12.25	9.25	4.625	4.50	2.625	5.125	5.00	1.75	6.00	4.50	4.625	6.25	8.00	7.875
	6.875	6.875	10.25	9.00	3.00	8.50	4.875	8.00	5.25	6.00	7.25	8.75	7.00	7.875	7.375	8.75
	8.875	9.00	5.00	9.00	3.00	6.00	3.625	7.00	6.00	8.00	6.00	7.50	12.00	8.00	4.375	6.75
	2.00	7.50	6.50	9.00	5.00	7.25	4.50	6.50	6.25	4.00	6.00	6.00	15.00	8.00	4.50	0.00
	4.50	8.75	6.625	6.75	7.50	9.50	3.625	7.50	6.00	4.00	5.00	8.50	7.00	7.00	10.625	8.375
	6.75	8.875	5.75	9.75	6.50	8.25	4.375	9.00	8.25	2.00	4.25	6.625	8.00	8.50	7.00	7.875
	11.25	8.875	5.25	9.25	6.625	3.25	8.875	8.75	5.75	4.25	6.00	13.50	6.125	6.50	7.00	7.625
	9.00	7.75	6.75	8.50	6.625	5.50	8.875	8.75	4.75	4.75	5.00	6.00	5.75	0.00	0.50	7.00
	15.00	9.00	2.50	4.75	2.375	2.875	4.875	7.75	8.25	9.00	6.50	8.25	14.50	8.75	5.25	7.00
	4.125	6.125	4.50	0.00	3.625	7.125	11.00	8.50	5.50	7.00	8.50	6.50	6.50	7.75	6.75	4.125
	6.25	8.00	12.50	10.125	2.00	1.25	16.875	7.75	6.75	4.50	6.50	7.00	8.50	8.00	0.50	7.00
	8.00	8.50	8.25	0.00	0.875	9.00	6.75	7.50	8.75	8.00	6.00	7.50	3.75	6.50	7.00	6.875
12.625	9.00	6.25	9.00	6.25	8.00	4.875	6.25	3.50	1.75	6.75	7.25	8.375	6.25	5.25	6.75	
5.25	9.60	5.875	8.75	6.00	7.00	2.75	2.25	6.25	6.25	8.00	9.00	7.375	0.125	7.00	7.75	
6.50	0.75	6.00	7.75	6.00	8.25	4.875	5.00	6.00	8.75	4.50	4.00	8.50	8.00	10.00	8.00	
5.00	7.50	4.25	6.25	2.625	1.50	6.25	8.00	5.75	4.25	7.25	0.50	10.125	8.75	10.00	7.00	
5.625	9.60	0.25	8.50	3.375	5.25	5.25	8.00	6.50	6.00	7.00	0.50	6.875	8.75	6.75	7.875	
7.625	8.00	7.125	9.875	6.875	8.75	8.625	7.25	6.25	7.00	7.00	8.50	4.00	7.00	12.00	7.00	
Totals .....	197.75	211.375	168.25	209.125	135.50	161.875	137.75	174.875	149.25	160.75	157.75	191.25	180.625	172.375	191.00	179.75

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation:	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	15.00	231.63	10.125	50.625	11.00	169.78	9.50	47.50	9.75	150.49	9.50	47.50	15.00	231.32	0.00	43.00
Lowest .....	2.50	38.586	5.50	27.50	2.375	36.676	1.25	6.25	3.00	46.30	1.75	8.75	8.875	62.09	2.75	13.75
Average .....	7.19	110.97	8.41	42.05	5.48	84.37	6.03	31.05	6.14	84.77	7.01	35.20	7.78	120.95	7.01	33.20
Tests above average .....	20		32		21		33		20		26		10		20	
Tests below average .....	30		18		30		17		30		24		31		24	



TABLE II.—Measurements of strain and stretch of wools—Continued.

MINNESOTA.																
RAMS, 2 TO 3 YEARS OLD.																
Catalogue number of samples.	521.				482.				483.				484.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	6.00	5.00	11.25	8.25	9.00	6.50	6.375	5.25	7.25	7.00	9.25	7.50	5.00	7.75	8.25	0.25
	7.00	3.60	5.75	8.75	4.75	7.00	0.00	6.00	5.25	8.00	7.25	7.25	4.00	4.875	4.00	7.25
	6.00	8.00	8.00	9.75	15.50	8.00	4.00	5.50	3.50	4.50	5.25	6.25	7.50	5.75	6.25	8.00
	5.00	5.50	5.25	6.25	5.00	3.25	9.25	5.50	6.00	0.25	5.25	8.00	7.00	3.00	8.00	7.50
	6.25	1.00	7.00	9.00	5.125	4.00	10.50	7.00	0.00	9.00	3.75	1.50	3.25	7.25	5.00	7.00
	14.25	9.00	9.25	7.75	4.50	4.25	5.00	3.00	5.75	7.25	6.25	4.75	5.25	2.75	5.50	8.00
	6.25	7.75	9.75	5.75	4.625	5.25	5.75	2.60	8.00	1.50	9.00	7.00	4.00	6.75	7.50	3.75
	10.00	9.00	11.00	8.00	4.00	4.75	4.50	3.75	8.00	9.00	12.75	9.00	5.75	6.75	3.75	2.75
	8.50	8.00	5.75	5.00	7.00	6.25	5.00	4.75	4.75	8.00	4.50	6.00	5.00	7.50	4.00	5.00
	10.25	8.00	6.00	9.00	4.75	2.00	6.50	4.00	4.75	8.00	5.25	6.25	5.25	8.25	5.25	2.75
	5.75	0.25	6.75	7.50	4.375	3.125	10.00	7.00	8.00	10.25	8.75	11.00	12.25	0.75	5.25	8.25
	6.50	8.25	7.00	9.25	6.50	6.25	9.50	3.50	5.00	6.75	5.25	6.00	4.25	8.00	4.50	8.75
	7.25	6.75	7.00	4.00	8.50	5.50	5.625	4.50	5.75	9.00	9.75	9.00	4.00	2.75	5.00	8.00
	7.25	7.50	6.25	2.50	7.00	6.25	3.25	3.00	7.50	6.00	5.75	5.25	7.25	2.25	3.75	8.00
	5.50	3.00	8.00	8.00	7.375	7.50	8.50	4.00	5.00	4.75	9.00	7.00	4.875	3.50	6.75	0.00
	7.25	8.50	8.75	7.00	7.25	2.25	8.00	8.00	6.75	0.00	5.00	6.00	0.50	6.875	4.75	6.50
	6.00	1.00	4.25	4.75	4.00	2.875	7.50	5.75	5.00	9.00	7.50	7.00	5.50	1.75	4.25	5.00
	9.75	8.75	5.50	4.00	0.25	4.25	7.75	7.25	8.00	5.00	10.00	7.00	3.00	4.875	4.50	6.00
	6.25	7.50	6.25	5.00	6.00	7.50	5.375	3.25	9.00	7.50	7.25	3.75	6.75	7.375	3.50	6.25
8.25	9.00	7.50	8.00	4.50	4.875	6.50	5.25	7.50	4.50	7.00	9.75	9.00	7.25	3.75	4.75	
3.25	1.50	10.60	7.50	3.75	4.00	4.00	3.25	7.00	5.75	6.75	4.00	5.25	8.50	4.75	8.25	
8.25	8.75	7.50	7.50	7.25	7.00	4.375	6.00	7.75	6.25	5.50	7.00	6.00	4.00	6.00	6.00	
5.50	6.00	7.00	8.25	7.00	4.50	7.50	7.75	8.50	5.25	3.75	1.75	11.25	10.75	5.75	3.00	
6.00	3.25	8.75	7.75	6.125	6.00	11.25	8.00	5.50	9.00	3.75	6.00	4.50	8.25	5.00	8.00	
7.25	0.00	3.25	1.50	8.00	8.00	5.875	3.00	5.75	8.00	0.00	5.00	4.50	8.50	6.50	8.75	
Totals .....	176.51	150.25	183.25	167.50	158.125	131.125	170.875	125.75	161.25	177.50	169.50	169.00	146.875	155.00	131.50	162.75

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	14.25	210.94	9.00	45.00	15.50	239.24	8.00	40.00	12.75	196.79	11.00	55.00	12.25	180.07	10.75	53.75
Lowest .....	3.25	50.16	1.00	5.00	3.25	50.16	2.00	10.00	3.50	54.02	1.50	7.50	3.00	46.30	1.75	87.50
Average .....	7.08	109.28	0.58	32.63	6.38	101.50	5.12	25.60	0.62	102.18	6.03	34.65	5.57	85.97	6.36	31.80
Tests above average .....	21		20		21		26		24		27		18		29	
Tests below average .....	29		30		29		24		26		23		32		21	

MINNESOTA.																
EWES, 2 TO 3 YEARS OLD.																
Catalogue number of samples.	485.				486.				487.				488.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	13.25	8.00	8.00	8.00	4.75	3.00	4.025	3.00	4.75	7.00	6.25	3.50	7.125	3.50	6.625	7.00
	9.50	6.75	5.50	7.25	0.50	4.50	7.625	1.75	6.25	8.00	6.00	6.50	77.50	8.00	9.00	7.125
	7.50	6.00	5.75	5.00	4.75	2.25	5.625	3.75	3.75	6.00	5.25	7.75	8.00	6.00	8.125	7.00
	8.00	7.60	6.00	7.00	4.00	5.75	6.50	2.00	6.75	8.50	5.00	7.00	6.75	7.00	6.25	7.875
	6.25	6.00	7.50	9.00	4.625	5.50	4.00	1.00	5.00	7.00	3.25	5.00	0.375	6.00	5.75	6.00
	6.00	5.50	6.00	3.25	5.50	3.75	5.625	7.25	6.50	8.50	7.25	8.75	5.75	4.875	9.00	6.25
	5.00	8.00	0.75	6.00	3.00	12.25	5.375	6.00	4.75	4.75	3.75	6.75	6.75	7.25	5.75	3.50
	10.50	4.75	7.00	9.00	4.50	2.75	4.625	5.50	4.75	8.25	5.25	3.50	9.50	4.00	6.625	7.00
	7.25	5.75	6.25	8.50	5.00	4.25	3.375	2.75	6.75	9.25	5.25	3.75	11.00	6.25	4.375	3.00
	7.00	0.75	4.75	0.00	4.00	1.25	4.625	5.00	4.00	6.00	5.75	8.25	6.50	8.00	4.875	2.50
	7.75	5.75	7.00	9.00	4.75	1.50	5.00	7.00	0.00	2.75	5.00	9.00	8.00	8.125	5.25	3.75
	5.75	8.25	6.00	8.25	3.375	1.25	4.375	4.00	0.00	5.25	4.75	6.75	4.50	5.875	4.125	5.00
	6.00	5.75	6.00	7.00	3.375	1.25	6.625	3.00	5.00	6.00	5.00	8.00	7.00	6.00	7.00	6.50
	5.75	8.25	12.50	9.25	3.00	1.00	5.00	3.50	4.50	8.25	4.75	8.25	7.50	4.00	7.75	3.00
	6.50	5.50	14.00	8.75	7.50	4.00	2.75	1.00	4.75	8.75	6.00	5.75	7.75	6.00	12.75	6.375
	5.00	3.00	6.50	9.75	4.75	7.25	7.375	3.72	6.00	4.75	4.50	1.00	7.25	4.50	8.375	7.50
	4.75	4.50	6.25	8.25	0.00	7.25	4.25	1.25	5.75	7.00	5.00	9.00	5.375	3.00	7.00	5.25
	6.00	8.00	7.50	5.00	5.25	5.50	4.00	4.00	6.00	8.25	6.25	2.75	7.60	7.00	7.00	5.75
	6.50	7.50	0.50	7.25	3.75	4.75	4.375	3.75	5.00	7.25	4.75	3.00	5.75	3.875	9.25	7.00
9.50	7.00	4.00	6.25	4.375	6.50	3.60	5.50	5.00	8.00	6.00	7.50	7.625	0.50	5.50	2.75	
5.75	7.50	8.00	8.00	3.75	4.75	5.75	2.25	6.00	6.75	4.50	6.00	6.125	7.00	7.50	7.00	
4.00	3.00	5.75	8.00	8.50	5.00	4.75	5.25	3.75	9.25	4.00	3.25	7.00	7.00	4.625	4.75	
15.25	8.75	11.25	9.00	4.625	3.75	5.50	5.00	3.00	1.50	4.75	4.25	0.25	2.25	4.75	5.00	
6.75	8.00	8.00	6.50	4.625	1.25	4.625	7.00	6.00	8.25	3.00	5.00	6.50	7.00	5.875	6.00	
8.25	8.25	0.25	8.25	3.50	5.50	5.00	5.75	6.50	8.00	4.75	6.00	6.375	6.875	13.00	7.75	
Totals .....	181.75	164.00	169.00	189.00	112.50	105.75	124.875	100.00	134.50	173.25	126.00	146.25	188.75	145.875	176.125	130.625

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	15.25	235.88	9.75	48.75	7.625	117.60	12.25	61.25	7.25	111.90	9.25	46.25	17.50	270.11	8.125	40.625
Lowest .....	4.00	61.75	3.00	15.00	2.75	42.44	1.00	5.00	3.00	46.30	1.00	5.00	4.125	63.67	2.25	11.25
Average .....	7.02	108.85	7.07	35.85	4.75	73.31	4.11	20.65	5.21	80.41	6.39	31.95	7.30	112.67	5.53	27.63
Tests above average .....	18		28		18		23		22		28		19		32	
Tests below average .....	82		22		27		27		28		22		31		18	



TABLE II.—Measurements of strain and stretch of wools—Continued.

MINNESOTA.																
EWES, 2 TO 3 YEARS OLD.																
Catalogue number of samples..	489.				490.				491.				492.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	5.50	3.00	5.50	5.25	6.50	2.75	5.50	2.75	5.00	6.00	4.25	8.75	4.375	8.00	6.00	7.50
	6.75	9.00	9.75	4.00	5.75	6.75	9.875	4.75	5.25	3.75	8.25	2.50	4.625	7.00	6.00	9.25
	3.25	2.00	10.60	6.25	4.50	5.25	10.00	5.50	6.50	5.50	3.00	7.125	7.50	7.00	7.00	9.00
	0.75	7.50	8.25	6.50	8.625	6.75	8.625	5.25	6.00	6.50	0.00	6.25	8.00	5.625	6.875	9.00
	9.00	8.00	7.00	3.50	5.625	4.75	6.375	7.00	6.50	5.75	5.25	4.25	7.60	10.25	8.00	9.00
	5.75	4.00	6.50	6.25	5.00	4.25	9.00	6.50	5.25	6.50	6.125	3.125	7.25	9.00	8.25	10.00
	4.75	5.25	10.60	7.60	12.375	7.50	9.625	6.00	7.25	7.00	8.25	5.25	8.875	9.00	6.625	7.00
	10.50	7.00	4.50	1.50	4.75	3.00	11.25	6.25	6.75	6.75	4.75	4.60	8.00	8.50	4.50	6.50
	11.75	9.25	7.25	7.50	19.00	3.75	5.50	8.25	5.25	5.75	4.60	7.60	6.50	7.875	7.375	9.25
	7.00	8.25	7.25	5.25	4.50	8.25	6.50	7.25	3.50	5.75	8.00	5.75	4.00	6.50	7.375	7.875
	7.25	6.00	10.50	8.60	5.00	6.00	9.875	6.75	5.25	7.00	3.00	6.26	6.75	9.25	5.00	8.25
	7.50	3.75	5.50	4.00	7.50	0.25	9.50	6.25	3.75	7.25	5.50	6.50	6.25	8.50	5.375	8.00
	6.00	2.00	8.00	5.10	7.375	7.25	8.50	6.75	4.75	3.75	3.50	8.125	5.00	11.25	5.375	7.125
	5.50	5.75	7.25	6.00	4.625	5.25	3.625	7.75	4.00	4.00	5.00	7.00	5.00	6.75	3.75	6.25
	6.00	6.00	8.50	5.75	4.00	7.00	0.25	8.00	4.25	7.75	4.25	8.75	8.75	10.00	6.50	6.25
	7.50	2.50	5.75	6.00	5.25	7.00	7.00	5.00	4.75	5.75	0.25	8.125	4.25	7.00	0.25	9.75
	10.50	6.00	6.25	2.00	11.50	7.75	4.75	2.00	3.875	5.875	4.00	4.25	5.75	9.50	8.00	10.75
	12.50	7.50	8.25	5.00	4.50	6.25	5.75	7.00	3.00	4.25	4.50	8.25	5.75	0.75	5.875	7.25
	6.00	7.00	4.00	5.50	5.625	6.00	4.75	5.00	5.75	7.25	4.75	6.75	6.00	7.00	0.375	7.25
8.50	6.25	6.75	8.75	6.50	6.50	7.75	6.50	5.25	4.25	4.00	3.50	7.625	10.25	6.625	8.25	
6.25	5.25	8.75	7.75	5.625	3.00	5.875	4.75	6.00	6.00	5.00	7.125	5.00	7.00	4.50	7.875	
10.00	7.50	5.00	7.50	3.75	5.00	6.375	4.00	8.25	8.00	8.25	6.875	10.25	5.50	8.125	8.125	
11.25	8.75	10.25	8.25	4.75	6.60	8.375	6.00	7.00	6.75	6.00	7.00	10.625	4.50	7.875	7.875	
8.00	7.50	7.00	6.00	9.375	7.25	8.25	5.25	3.75	6.00	4.875	7.50	5.00	6.25	6.00	8.75	
6.00	8.00	7.25	6.25	8.375	8.00	6.00	6.75	4.25	6.75	6.00	4.50	7.875	0.875	6.00	8.125	
Totals .....	100.75	158.00	183.00	141.25	161.375	147.00	181.375	150.75	131.375	140.875	125.25	154.75	158.375	210.125	149.875	202.125

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	12.50	192.93	0.25	40.25	12.375	199.00	8.50	42.50	8.25	127.34	8.75	43.75	8.875	130.98	11.25	56.25
Lowest .....	3.25	50.15	1.50	7.50	3.625	55.95	2.00	10.00	3.00	46.39	2.50	12.50	3.75	57.88	0.25	3.125
Average .....	7.48	113.43	5.95	29.75	8.86	103.89	5.06	29.80	5.13	79.18	6.09	30.45	6.16	99.08	8.42	42.10
Tests above average .....	29		29		23		31		21		25		24		23	
Tests below average .....	30		21		27		19		29		25		26		27	

MINNESOTA.																
EWES, 2 TO 3 YEARS OLD.																
Catalogue number of samples..	493.				494.				495.				496.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	6.50	0.75	5.75	6.25	3.75	4.00	5.00	4.875	6.625	8.00	5.00	7.00	8.00	5.00	8.00	8.00
	6.25	8.00	4.75	2.75	5.25	7.00	4.50	5.00	2.50	8.00	4.625	6.00	22.00	8.50	4.00	5.25
	5.00	8.00	7.50	7.00	3.50	2.25	4.50	7.00	4.375	4.75	7.625	5.25	8.75	7.50	8.00	9.00
	5.50	3.75	5.25	7.00	6.375	8.00	3.60	7.60	3.375	6.25	4.75	8.60	18.00	9.50	12.00	8.75
	5.75	6.75	5.25	6.75	6.00	5.00	3.875	4.00	5.25	7.75	8.75	8.25	8.00	8.00	13.00	9.00
	9.50	10.00	4.50	5.75	4.50	7.875	4.50	7.125	6.375	7.00	8.875	6.00	13.00	7.50	6.25	9.00
	7.00	8.50	3.50	6.50	5.375	8.00	8.00	4.125	3.875	5.50	5.50	5.60	7.00	8.00	7.25	6.00
	7.75	10.75	5.50	9.00	3.875	6.50	4.125	8.25	4.50	4.25	4.50	5.50	3.00	2.00	6.60	8.50
	4.75	5.50	3.00	1.75	6.375	0.50	0.25	6.00	4.25	5.25	4.625	4.60	7.00	7.00	7.60	8.50
	8.25	4.00	5.60	9.00	4.25	7.75	4.60	6.375	8.625	7.25	5.375	8.25	21.00	8.00	14.75	9.00
	6.75	11.75	5.00	9.00	5.875	2.125	3.00	7.00	5.625	7.00	3.25	7.75	24.60	9.00	5.00	0.25
	4.00	7.50	5.75	3.50	6.00	8.125	2.875	3.00	6.625	8.125	9.625	6.60	5.75	8.25	4.75	8.00
	7.00	7.25	3.25	6.75	3.75	7.25	7.00	5.75	6.625	9.25	8.375	6.75	8.50	8.75	7.75	8.75
	8.25	7.00	4.00	4.25	3.50	0.00	8.125	7.00	2.875	3.00	8.875	4.00	18.60	7.00	10.00	7.50
	6.50	7.00	3.75	9.25	5.625	7.875	3.00	3.00	7.375	9.75	5.875	7.00	13.00	8.00	12.75	8.25
	5.50	8.00	6.00	7.75	7.00	8.00	4.00	6.625	6.625	8.00	8.625	6.00	7.75	7.00	5.75	7.25
	5.00	6.00	6.75	8.00	5.50	6.25	3.875	5.125	4.375	5.50	9.875	8.75	7.50	9.00	8.00	8.00
	8.00	8.25	7.25	8.75	4.00	8.125	8.50	4.00	6.375	8.25	3.75	8.60	7.60	6.25	5.00	8.00
	6.00	1.75	7.50	8.75	3.75	7.125	7.00	5.00	4.625	8.25	5.875	7.00	14.75	9.00	5.50	5.75
4.00	3.75	3.50	3.25	5.50	7.125	8.25	6.00	8.75	3.50	6.75	7.60	6.75	8.60	8.00	5.60	
5.75	4.00	6.00	10.00	4.875	7.875	4.50	5.625	4.25	6.75	5.00	8.50	12.60	8.50	6.50	9.00	
4.75	4.25	3.25	4.00	5.25	4.00	4.375	7.60	5.00	7.25	3.75	2.75	7.50	9.25	10.75	6.75	
4.50	4.25	4.25	7.00	6.625	7.125	3.875	8.125	5.60	8.25	7.00	4.60	3.75	5.75	12.60	7.00	
6.75	4.75	5.25	8.00	7.25	8.25	3.50	2.00	5.00	5.25	7.00	9.25	12.60	7.00	3.50	8.75	
5.00	8.00	8.25	10.00	4.00	8.50	5.50	8.125	8.375	6.25	5.625	6.00	6.25	7.50	8.50	8.25	
Totals .....	152.60	161.50	127.25	170.00	127.75	166.50	105.125	144.125	133.75	163.875	154.875	161.60	270.25	190.60	198.00	191.00

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	9.50	146.63	11.75	58.75	7.25	111.00	8.50	42.60	9.625	148.50	9.75	48.75	24.50	378.15	14.75	73.76
Lowest .....	3.00	46.30	1.75	8.75	2.875	43.33	2.00	10.00	2.50	38.99	2.75	13.75	2.00	80.87	3.50	17.50
Average .....	5.58	86.13	6.09	33.45	4.65	71.77	6.21	31.05	5.77	89.00	6.507	32.985	9.36	144.47	7.63	38.13
Tests above average .....	23		29		20		30		20		27		17		30	
Tests below average .....	27		21		30		20		30		28		28		20	



TABLE II.—Measurements of strain and stretch of wools—Continued.

Catalogue number of samples..		MINNESOTA.															
		EWES, 2 to 3 YEARS OLD.															
		497.				498.				499.				500.			
Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.		
grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.		
3.75	7.00	2.375	5.25	4.50	8.00	5.50	8.125	7.625	6.00	5.375	9.25	6.75	7.00	6.50	8.00		
5.75	6.125	6.25	5.875	6.00	6.50	6.50	7.875	5.00	6.875	3.625	4.00	5.25	5.25	7.50	8.50		
5.50	9.00	4.00	7.125	10.00	8.00	4.00	1.50	10.375	5.50	5.625	7.50	12.25	9.00	8.75	6.00		
5.125	8.50	4.00	10.00	6.00	7.125	5.00	8.00	5.375	7.50	2.375	2.00	13.25	8.00	4.50	4.00		
5.625	6.75	3.50	7.00	5.25	7.00	4.00	2.00	8.75	8.00	3.625	7.25	7.00	8.00	12.00	6.25		
7.375	7.00	5.50	7.125	4.375	9.00	5.00	8.00	8.75	9.00	4.375	9.00	5.00	7.00	6.50	6.00		
4.50	6.50	2.125	7.25	3.75	7.75	3.00	0.25	4.75	7.75	5.625	10.00	9.75	4.00	7.75	8.00		
5.50	5.50	6.50	3.125	8.75	8.00	3.50	6.00	6.75	7.50	4.625	6.25	11.00	5.75	0.00	5.50		
0.125	8.00	4.25	8.00	6.125	8.00	4.50	8.00	5.00	3.75	3.75	5.25	11.75	7.00	9.50	0.25		
7.875	7.125	2.75	5.00	6.875	7.25	4.625	7.00	6.375	7.75	3.625	7.875	11.50	7.00	3.75	6.00		
3.00	1.00	4.25	5.00	5.00	7.00	4.00	7.00	2.625	3.25	4.50	6.75	8.00	7.50	8.75	6.50		
4.75	8.00	2.25	5.125	4.00	9.125	4.625	9.75	7.50	6.25	3.375	5.25	6.50	6.50	6.25	6.50		
2.25	7.00	8.50	10.75	4.50	0.00	3.75	8.00	10.00	6.75	4.50	8.00	4.50	5.50	6.50	7.75		
5.125	7.50	5.50	6.75	5.375	7.125	5.125	7.875	7.75	7.75	4.625	5.25	15.50	7.75	7.00	9.00		
0.75	6.875	3.375	6.25	6.375	8.25	4.75	8.00	5.00	6.25	5.375	7.125	7.00	5.75	0.75	7.50		
2.25	7.00	0.375	7.125	7.00	8.25	6.50	8.00	6.375	7.00	6.75	8.25	10.25	4.25	5.00	7.00		
5.25	0.75	4.125	8.00	6.00	7.00	4.00	6.00	3.375	6.25	5.00	7.00	6.25	8.00	6.00	5.25		
5.875	0.00	3.00	4.875	8.50	6.00	6.25	8.875	5.625	7.875	5.625	6.00	3.50	8.00	4.50	4.00		
3.875	7.125	2.375	2.50	3.25	6.50	4.50	8.00	6.00	7.75	7.375	7.25	5.00	5.75	5.50	6.00		
3.50	0.00	3.25	5.00	7.00	7.00	4.25	7.00	0.25	4.25	4.375	5.00	7.00	6.00	3.50	4.25		
2.625	6.00	3.50	8.25	5.00	7.00	4.25	8.75	4.375	9.25	4.625	6.25	6.50	6.00	5.00	8.25		
5.00	7.875	4.50	11.50	4.00	8.00	4.00	8.00	10.00	7.875	4.625	8.00	8.50	6.50	5.00	9.50		
8.125	8.00	4.50	7.75	5.00	7.50	7.625	8.25	7.375	6.875	6.375	6.125	3.75	2.50	8.50	0.00		
6.375	7.00	6.50	8.25	4.00	6.50	5.25	6.50	6.00	8.00	5.375	7.50	8.00	8.00	5.00	6.25		
6.375	6.875	3.00	9.75	3.50	6.50	3.50	6.00	5.375	8.00	3.625	6.875	7.75	10.00	6.00	9.50		
Totals .....	125.75	181.00	108.25	174.625	138.125	187.375	120.50	195.75	166.375	172.00	115.75	107.875	200.50	166.00	168.00	170.25	

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Recapitulation and reduction:																
Highest .....	9.375	144.70	11.50	57.50	10.00	154.35	9.25	46.25	10.375	160.13	10.00	50.00	15.50	239.24	10.00	50.00
Lowest .....	2.25	34.73	1.00	5.00	3.50	54.02	6.00	30.00	2.375	30.60	2.00	10.00	3.50	54.02	2.50	12.50
Average .....	4.66	77.92	7.11	35.55	6.17	78.80	7.66	38.39	5.34	82.42	6.85	34.25	7.37	118.75	6.72	38.60
Tests above average .....	24		25		10		29		27		32		21		24	
Tests below average .....	26		25		24		21		23		18		29		26	

Catalogue number of samples..		MINNESOTA.								ILLINOIS.							
		EWES, 2 to 3 YEARS OLD.								RAMS, 1 YEAR OLD.							
		501.				447.				448.				449.			
Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.		
grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.		
5.25	9.50	7.00	11.00	0.25	8.75	3.00	7.00	5.25	7.50	3.00	7.00	9.25	5.00	4.25	4.25		
4.25	8.60	4.25	7.75	3.25	7.00	3.50	3.00	4.25	5.75	3.50	7.25	0.75	2.25	0.00	7.50		
4.25	4.00	5.75	8.25	3.50	8.00	6.00	6.00	2.75	7.50	5.25	8.50	4.25	4.00	5.75	0.00		
4.00	7.75	6.50	7.75	4.25	1.75	2.00	1.75	5.25	5.50	5.00	6.875	4.75	3.75	9.75	0.25		
5.60	10.00	4.00	6.00	4.75	8.00	4.00	7.00	4.00	4.125	5.00	6.75	4.50	3.00	6.25	7.00		
4.00	7.25	3.50	4.50	5.00	10.00	6.00	8.50	3.00	6.50	3.00	7.75	7.00	1.75	6.00	4.00		
5.50	10.00	5.00	7.75	3.00	6.25	4.00	6.50	3.00	5.00	0.25	5.75	7.75	7.75	7.00	9.25		
6.00	9.00	5.00	8.00	3.25	10.00	4.50	7.00	3.25	7.00	3.25	8.25	6.75	7.50	7.00	3.75		
6.00	7.25	6.00	5.75	1.75	4.00	5.50	5.00	1.75	7.00	2.00	3.75	6.25	5.50	11.25	9.25		
5.75	0.50	4.50	7.25	6.00	8.25	3.75	8.00	4.25	6.75	4.00	7.00	9.25	7.00	6.25	8.75		
5.75	9.50	6.00	0.75	3.75	3.00	4.00	6.25	3.50	7.00	4.25	3.50	5.00	2.00	12.75	6.50		
5.75	0.00	6.00	7.75	8.25	7.25	4.50	9.00	1.75	0.00	3.00	6.00	4.75	3.75	4.75	4.75		
6.50	10.50	5.75	10.00	7.00	7.25	5.25	8.50	4.50	6.125	5.00	8.25	5.75	8.75	8.50	7.25		
0.25	10.00	6.25	8.00	5.25	7.50	4.25	4.00	3.25	5.00	3.75	6.50	5.75	7.00	6.25	7.75		
6.00	5.50	4.00	8.25	3.00	6.50	2.25	8.75	1.75	0.50	3.00	6.125	4.50	4.00	11.00	0.00		
0.50	10.00	6.00	8.25	7.75	7.00	3.00	3.00	3.00	6.125	3.125	6.125	0.50	7.00	4.00	7.50		
0.50	9.00	6.25	6.75	2.75	3.75	3.00	4.00	2.50	0.00	3.75	8.00	5.25	3.50	3.50	6.25		
0.75	7.75	7.00	8.25	3.00	3.75	2.25	1.75	2.75	7.50	4.60	6.25	4.25	4.75	7.00	9.00		
5.50	0.00	6.75	7.75	2.50	4.00	2.50	6.25	2.25	6.75	3.50	8.50	5.25	1.75	5.50	8.75		
0.00	0.25	0.25	10.00	8.25	8.00	4.75	6.50	1.75	4.75	4.00	7.75	5.00	7.25	8.00	5.75		
6.25	6.75	8.25	9.75	9.50	8.75	3.50	7.75	5.00	7.00	7.25	6.75	5.00	7.00	4.75	0.75		
6.50	10.00	5.25	6.50	4.25	8.00	4.00	6.50	2.00	5.00	3.00	4.50	6.00	3.75	10.00	4.25		
8.00	7.00	6.00	9.75	3.50	8.25	4.50	8.75	2.25	6.75	3.00	4.50	4.75	5.00	4.75	5.25		
3.50	6.00	6.50	9.00	2.00	1.50	3.50	7.50	2.75	6.00	3.00	5.00	4.25	5.25	4.50	6.75		
6.25	10.75	6.00	6.00	3.00	0.00	3.50	4.00	5.125	7.75	2.75	4.50	3.00	8.50	4.25	8.00		
Totals .....	142.25	207.25	143.75	200.75	109.75	162.50	97.00	145.25	80.875	156.875	94.125	162.625	150.25	121.75	168.00	169.50	

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Recapitulation and reduction:																
Highest .....	8.00	123.48	11.00	55.00	9.50	146.63	10.00	50.00	7.25	111.90	8.50	42.50	12.75	196.79	9.25	40.25
Lowest .....	3.50	64.02	4.00	20.00	1.75	27.01	1.50	7.50	1.75	27.01	3.50	17.50	3.00	46.30	1.75	8.75
Average .....	5.72	83.29	8.10	40.80	4.14	63.00	0.18	30.30	3.50	54.02	6.39	31.95	6.375	98.32	5.83	20.15
Tests above average .....	32		25		20		32		20		27		18		20	
Tests below average .....	18		25		30		18		27		23		32		24	



TABLE II.—Measurements of strain and stretch of wools—Continued.

ILLINOIS.																
RAMS, 1 YEAR OLD.																
Catalogue number of samples	450.				451.				452.				453.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	2.25	5.50	4.00	6.75	5.00	6.00	9.75	6.00	3.25	2.25	3.50	7.75	5.00	3.75	5.00	6.00
	3.00	7.025	3.25	6.875	7.00	9.25	5.50	3.75	3.00	3.75	6.50	7.25	9.00	6.125	7.25	7.875
	5.125	7.50	3.25	6.50	5.00	7.25	4.75	2.50	2.50	3.50	2.625	7.00	5.00	5.75	7.50	4.75
	3.00	7.00	3.75	4.75	5.00	5.50	5.00	4.75	4.025	7.25	2.75	4.50	5.25	7.00	5.00	5.75
	4.375	7.875	3.25	5.875	4.50	6.00	4.75	3.00	2.625	6.25	3.00	8.00	7.25	4.75	10.25	8.00
	3.875	7.00	3.75	5.50	6.50	5.50	11.50	6.50	2.75	3.75	7.25	7.00	5.00	4.00	6.25	4.00
	4.00	4.00	4.50	6.00	7.50	7.00	5.00	4.00	4.50	6.25	3.375	6.50	5.50	4.25	7.25	4.75
	3.00	6.25	3.50	4.00	9.00	8.25	5.00	2.00	5.375	8.50	3.50	7.75	4.00	2.50	4.75	5.125
	3.875	4.00	3.00	8.00	3.00	2.00	5.25	6.25	2.625	7.50	4.00	8.00	8.25	8.00	6.75	1.75
	4.375	6.75	3.00	5.00	6.00	7.00	3.75	5.25	3.50	6.25	4.625	6.50	0.00	5.00	7.00	5.75
	8.00	7.25	4.00	7.00	7.00	6.75	5.50	4.50	4.375	8.50	2.625	3.25	8.50	5.00	6.25	6.75
	2.375	3.25	3.875	5.25	4.00	3.00	5.25	5.00	3.00	6.00	3.625	8.00	6.75	3.75	8.25	3.00
	8.125	6.50	3.00	6.25	10.25	8.25	3.75	2.75	3.375	6.75	6.375	7.25	11.00	7.00	6.75	4.00
	2.50	5.00	2.25	6.00	3.25	4.00	5.00	5.00	3.00	6.00	3.375	7.25	10.00	2.125	7.25	2.875
	3.00	7.00	5.00	8.00	6.25	6.50	6.75	8.00	3.00	5.00	6.25	5.50	12.75	6.75	11.25	2.25
	3.025	7.00	3.75	5.75	7.00	5.75	4.00	4.00	3.625	7.25	4.00	7.25	8.00	5.75	7.00	3.125
	3.75	2.25	3.375	5.75	6.75	8.00	6.00	6.25	3.75	7.00	3.625	5.00	6.50	5.875	6.75	6.50
	4.00	4.50	3.75	7.00	9.50	7.00	5.25	5.25	3.00	8.00	3.375	7.25	6.25	6.00	9.00	2.75
	2.00	3.00	2.625	7.50	3.50	2.00	5.25	3.75	5.375	3.75	3.75	6.25	8.75	7.50	7.00	2.125
	3.25	6.00	3.00	5.00	6.00	3.75	6.00	6.00	5.625	2.50	6.00	8.00	10.50	6.50	7.25	7.25
	2.00	5.00	3.25	7.25	4.75	5.25	4.00	4.00	4.00	0.00	3.375	5.25	8.75	5.00	8.50	3.75
	3.875	4.00	2.25	4.25	6.25	3.50	8.50	6.50	4.625	7.25	2.625	4.00	7.50	5.25	10.00	6.25
	2.00	3.00	2.375	3.00	8.25	6.00	4.25	4.00	2.625	6.00	3.50	7.25	7.50	6.75	4.75	5.125
	3.125	4.00	2.75	6.00	6.25	6.75	6.00	4.75	8.00	7.50	2.75	8.50	9.25	4.50	6.25	3.50
	2.50	4.25	2.375	6.75	9.75	6.50	5.00	4.25	4.625	7.50	4.375	4.75	6.00	7.25	8.25	5.75
Totals	81.00	135.50	83.875	150.00	157.25	143.75	139.25	117.00	96.75	151.78	99.75	100.00	185.25	136.75	163.50	118.75

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest	5.125	79.10	8.00	40.00	11.00	169.78	0.25	46.25	3.00	123.47	9.00	45.00	12.75	199.79	8.00	40.00
Lowest	2.00	30.87	2.25	11.25	3.00	46.30	2.00	10.00	2.50	38.57	2.25	11.25	4.00	61.74	1.75	8.75
Average	3.30	50.98	5.75	28.75	5.93	91.53	6.22	26.10	3.97	60.97	6.24	31.20	7.98	118.91	6.11	26.55
Tests above average	21		27		22		26		19		31		20		27	
Tests below average	29		21		28		24		31		19		30		23	

ILLINOIS.																
RAMS, 1 YEAR OLD.																
Catalogue number of samples	454.				455.				456.				457.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	5.75	6.50	4.50	9.50	6.50	6.75	7.625	6.25	2.50	4.75	2.00	1.75	3.50	4.50	5.75	8.75
	6.00	9.50	9.00	7.00	3.00	2.75	4.25	5.00	4.75	7.00	7.25	6.00	3.00	3.50	3.75	2.75
	7.00	5.00	6.00	8.00	3.50	2.75	3.50	0.75	5.00	7.00	5.00	8.25	2.25	1.75	2.75	2.50
	6.50	6.50	7.00	5.00	3.625	5.75	5.25	8.25	5.50	5.00	3.75	6.00	5.75	6.00	3.25	2.75
	6.00	5.00	3.50	2.25	6.50	1.00	2.625	5.25	2.00	6.00	6.25	8.50	3.75	3.00	4.25	4.00
	6.25	8.00	7.00	3.75	3.375	7.25	3.00	6.75	5.50	4.00	3.00	6.00	4.25	3.75	4.00	3.00
	5.75	5.75	7.25	6.00	4.625	8.25	5.00	3.00	5.25	6.25	2.25	4.00	4.25	7.50	5.00	9.25
	3.75	3.00	9.50	5.00	3.50	4.75	6.00	7.75	2.50	4.50	7.75	6.50	5.25	7.50	4.00	3.00
	6.00	8.00	5.75	5.75	3.00	5.50	6.625	7.75	4.75	5.75	7.00	6.00	3.25	4.00	4.00	5.25
	7.00	6.25	6.25	8.50	4.625	7.25	3.375	5.00	3.00	5.75	2.50	7.00	3.25	3.75	4.25	7.00
	6.00	3.75	6.00	6.00	4.625	5.75	4.625	6.75	5.75	6.00	3.50	7.00	4.00	4.00	3.75	4.00
	4.25	3.00	7.00	5.75	4.75	4.25	4.00	8.00	2.25	3.50	6.00	7.00	3.75	3.00	4.00	5.50
	7.75	6.50	5.50	6.00	7.25	7.25	4.50	5.75	5.25	6.50	4.75	6.00	4.25	4.50	3.25	5.00
	5.75	8.00	7.00	8.00	4.00	2.75	4.00	3.50	2.25	3.25	3.25	7.50	3.50	3.75	4.50	3.75
	5.00	8.00	4.75	7.00	3.75	8.25	3.375	8.25	6.25	3.25	3.25	7.00	3.50	3.50	2.75	2.25
	4.25	7.50	3.50	4.00	4.625	7.00	3.00	7.50	3.50	6.00	5.25	4.00	3.50	2.00	0.00	6.00
	4.75	9.25	4.50	5.75	4.00	6.75	4.625	6.00	6.00	8.00	3.25	8.75	2.75	1.75	4.00	3.50
	6.25	1.75	5.75	7.25	3.625	7.75	4.625	1.75	3.75	8.25	4.25	7.50	3.25	5.25	3.50	4.75
	5.25	7.50	3.75	4.50	4.625	4.00	4.625	8.75	4.25	6.00	5.25	6.00	4.00	7.00	2.00	1.50
	5.00	8.00	3.00	2.00	3.625	2.00	5.00	7.00	5.00	8.75	5.25	6.50	4.00	3.00	3.50	3.00
	6.00	8.75	5.50	5.50	3.25	2.75	4.75	6.75	6.50	6.50	3.00	3.50	3.50	4.00	3.25	2.00
	6.50	8.00	9.00	7.50	3.50	8.25	4.25	4.00	4.50	8.00	3.75	7.00	4.75	7.25	5.00	4.00
	6.00	6.75	5.75	4.50	3.25	4.00	3.625	5.00	4.25	6.00	4.50	6.00	5.00	8.25	3.50	5.00
	4.00	8.00	4.50	7.75	6.375	6.50	4.00	8.00	3.75	3.00	4.75	6.75	3.50	2.00	4.00	5.00
	4.75	7.00	5.25	6.00	3.375	8.00	2.625	7.25	2.75	5.25	3.50	7.50	4.75	7.00	3.00	4.00
Totals	143.60	165.25	148.50	153.25	163.375	135.25	164.875	156.50	108.25	153.75	110.25	157.00	95.25	112.50	98.00	102.50

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest	9.50	146.63	9.50	47.50	6.50	100.33	8.75	43.75	7.75	110.62	8.75	43.75	6.00	92.61	8.25	46.25
Lowest	3.00	46.30	1.75	8.75	2.625	40.53	1.00	6.00	2.00	30.87	1.75	8.75	2.25	34.73	1.50	7.50
Average	5.84	90.14	6.37	31.85	4.16	64.21	5.84	29.20	4.37	67.45	6.22	31.10	5.80	60.04	4.90	21.50
Tests above average	23		27		24		26		24		27		24		19	
Tests below average	27		23		26		22		26		23		26		31	



TABLE II.—Measurements of strain and stretch of wools—Continued.

Catalogue number of samples..		ILLINOIS.															
		RAMS, 1 YEAR OLD.															
		458.				459.				460.				461.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
Actual measurement in grams and millimeters.	10.25	2.25	3.00	0.875	8.00	3.50	5.75	8.00	9.50	4.00	8.00	1.25	9.50	6.50	3.50	4.75	
	3.25	1.00	3.00	1.50	3.50	4.50	11.00	6.50	13.50	4.75	4.00	1.00	5.00	7.25	8.50	7.25	
	3.25	1.75	5.50	2.25	9.25	4.00	3.25	6.25	6.00	6.50	7.00	4.00	4.00	6.25	5.00	2.00	
	3.25	1.00	2.25	3.375	4.25	6.00	8.50	2.00	4.00	2.00	5.25	4.25	3.25	4.50	5.25	5.75	
	3.25	2.75	3.25	1.00	3.25	5.75	4.75	8.00	7.25	1.75	7.75	3.00	3.75	5.00	6.00	7.25	
	3.75	1.50	4.50	2.75	4.25	7.75	4.25	2.00	12.00	4.875	4.00	3.75	7.00	8.25	4.25	3.00	
	3.50	2.50	3.75	4.125	4.25	3.00	8.50	9.00	6.25	5.75	6.50	6.00	3.75	5.75	5.75	5.00	
	4.00	2.75	2.25	1.00	10.00	8.25	8.25	8.00	3.25	1.75	9.25	1.50	7.50	8.00	4.75	6.00	
	3.00	2.875	3.25	1.50	4.25	6.00	2.25	2.50	9.75	6.125	6.00	4.25	4.00	6.00	6.50	4.75	
	4.00	3.00	5.25	1.75	2.50	2.75	6.50	6.50	6.50	6.00	9.50	4.00	5.25	7.25	3.75	6.00	
	4.00	1.00	3.00	5.00	6.00	5.00	10.50	8.25	5.00	3.875	4.00	4.875	5.00	6.00	5.50	8.25	
	3.00	1.00	3.00	2.00	10.00	3.00	4.50	0.00	4.25	3.50	9.75	3.75	8.25	3.75	4.25	4.75	
	12.50	7.75	3.25	3.00	8.25	6.75	5.25	7.25	8.25	3.50	3.25	1.875	5.25	3.00	6.00	3.00	
	4.00	2.25	4.00	1.00	17.50	7.00	10.25	5.25	6.75	3.00	7.00	2.00	4.00	5.75	4.25	4.00	
	4.00	1.50	5.75	8.875	5.25	4.25	5.25	7.00	9.75	7.00	5.00	3.50	4.75	4.75	5.50	4.75	
	7.00	2.50	2.75	1.00	10.00	2.50	3.75	6.00	3.25	2.75	6.25	3.50	4.25	3.75	5.00	8.00	
	8.00	5.00	4.25	2.75	5.25	3.25	2.50	5.00	6.25	1.125	5.75	3.25	5.00	3.75	5.00	7.00	
	2.75	2.00	4.00	1.50	5.00	6.75	13.25	6.75	7.75	1.75	5.00	3.00	4.00	5.25	5.50	8.00	
	2.25	0.75	2.50	0.75	3.60	6.00	7.25	6.75	6.50	5.875	5.75	4.25	5.50	6.00	3.75	3.75	
	5.50	1.75	3.25	1.25	3.50	8.50	5.50	7.75	9.25	7.75	6.00	5.00	4.75	4.50	4.00	4.00	
2.75	3.00	7.50	3.25	3.50	7.50	4.50	7.00	5.50	2.00	4.50	2.125	3.50	2.75	5.00	5.75		
2.50	3.75	3.25	1.25	6.50	1.25	6.00	7.75	14.75	7.75	8.00	2.75	8.00	6.00	3.75	4.00		
8.50	1.00	6.50	3.50	6.00	7.75	8.50	5.25	7.25	6.00	5.75	5.125	4.60	7.00	5.50	7.00		
4.25	1.50	0.125	3.875	6.25	4.25	7.00	5.00	6.50	4.25	6.00	4.00	6.25	5.75	4.00	5.00		
5.00	2.25	4.25	1.125	4.25	4.00	6.75	6.00	9.00	4.25	4.25	2.00	6.50	7.75	3.00	2.00		
Totals .....	117.50	58.375	101.375	58.25	163.75	124.25	163.75	155.75	89.75	107.875	158.50	84.00	132.50	140.50	128.25	131.00	

		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
		grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Recapitulation and reduction:	Highest .....	12.50	192.93	8.875	44.375	19.00	293.26	9.00	45.00	14.75	227.66	7.75	34.75	9.50	140.63	8.25	41.25
	Lowest .....	2.25	34.73	0.75	3.75	2.25	84.73	1.25	6.25	3.25	50.16	1.00	5.00	3.00	46.80	2.00	10.00
	Average .....	4.38	67.60	2.38	11.65	6.55	101.10	5.60	28.00	6.87	106.04	3.84	19.20	5.12	79.03	5.42	21.15
Tests above average.....		15		20		18		20		21		25		20		26	
Tests below average.....		35		30		82		21		29		25		30		24	

Catalogue number of samples..		ILLINOIS.															
		RAMS, 1 YEAR OLD.								RAMS, 2 YEARS OLD.							
		462.				442.				445.				446.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
Actual measurement in grams and millimeters.	7.00	6.00	4.50	4.00	8.00	7.00	5.25	7.125	3.25	2.25	2.625	5.00	8.625	3.25	5.375	5.25	
	5.50	3.00	4.50	4.50	12.60	6.75	5.00	4.75	2.75	7.00	4.625	8.00	3.50	5.75	3.75	2.25	
	3.375	6.25	8.375	6.00	7.75	4.75	4.00	5.00	11.625	8.25	3.25	4.375	4.375	3.25	3.75	4.75	
	5.75	5.00	5.75	5.00	7.25	6.50	3.25	6.00	3.25	3.25	4.25	2.00	4.75	5.25	2.50	2.25	
	5.75	6.25	5.625	6.125	6.75	5.75	3.25	5.00	3.375	4.00	7.25	7.00	4.375	3.25	2.625	1.00	
	4.50	2.50	8.50	5.25	4.00	8.00	11.25	5.00	2.00	1.00	3.75	2.375	3.00	4.00	8.75	8.50	
	8.75	7.25	7.00	6.75	3.00	4.00	4.25	5.25	9.00	6.50	4.375	3.00	3.75	7.00	3.375	2.75	
	7.50	6.75	7.00	7.25	4.00	6.00	3.50	7.75	8.25	5.00	8.25	4.00	4.00	3.00	5.50	2.50	
	5.875	6.125	6.625	5.75	4.25	5.875	6.00	4.50	3.625	5.25	3.375	3.125	3.75	5.25	3.25	7.00	
	6.75	5.25	5.75	4.25	2.75	5.00	4.50	7.25	3.00	8.00	2.75	1.00	5.75	6.00	3.375	6.00	
	4.875	0.00	8.00	6.75	10.75	0.00	5.00	7.125	2.875	8.50	8.625	6.50	5.00	4.75	7.25	7.25	
	5.75	6.375	7.25	8.25	8.25	3.00	8.25	6.875	2.75	4.25	5.25	4.25	2.50	1.75	8.00	7.25	
	5.375	6.00	6.60	8.25	8.00	7.75	3.00	4.875	3.375	5.00	4.25	2.125	7.25	6.50	3.75	7.75	
	5.00	4.50	4.00	3.75	7.125	5.75	7.25	6.00	4.25	4.25	3.25	3.50	7.00	5.25	4.375	7.25	
	5.00	5.25	5.00	5.75	7.00	7.00	5.25	7.75	2.00	3.00	3.00	3.75	3.00	4.00	2.875	4.75	
	5.25	4.60	6.00	5.875	6.50	6.25	6.00	7.00	4.875	3.25	5.00	1.25	2.375	4.00	5.75	8.00	
	5.50	0.00	4.50	5.00	6.50	8.00	2.125	5.875	2.75	3.25	6.75	3.625	5.75	2.375	2.75	2.75	
	7.75	7.00	4.50	6.375	4.25	3.00	3.00	3.50	4.00	3.00	3.50	2.375	8.25	7.00	2.50	2.75	
	4.875	6.875	6.75	5.125	6.75	6.75	6.50	6.50	6.00	6.125	5.25	4.75	4.60	2.75	3.75	6.25	
	4.50	2.25	6.00	7.00	3.55	2.00	4.50	6.25	5.50	5.25	3.75	3.00	3.375	3.50	4.375	4.75	
3.00	3.00	7.625	7.00	5.25	6.75	7.50	5.50	3.00	1.25	4.375	5.00	3.75	5.25	7.625	6.75		
0.625	5.00	7.00	5.75	12.75	5.125	6.25	5.50	3.00	4.00	6.00	4.875	3.75	4.75	6.375	7.25		
5.75	5.25	6.00	5.25	6.25	6.50	3.00	4.75	6.50	3.25	4.75	2.25	2.75	3.25	8.625	5.25		
6.375	0.00	6.25	6.00	7.125	8.00	4.75	5.50	6.375	5.125	2.75	3.25	4.50	2.00	2.75	5.75		
Totals .....	143.125	133.375	156.75	143.50	160.25	140.25	122.125	142.375	114.125	106.00	114.875	102.50	107.50	118.00	110.375	130.50	

		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
		grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Recapitulation and reduction:	Highest .....	8.75	135.05	7.25	36.25	12.75	190.79	8.25	41.25	11.625	170.43	8.25	41.25	8.75	135.05	8.50	42.50
	Lowest .....	3.00	46.30	2.25	11.25	2.125	32.798	1.75	8.75	2.00	30.87	1.00	5.00	2.375	36.67	1.00	5.00
	Average .....	6.00	92.61	5.54	27.70	5.05	87.21	5.83	29.15	4.58	70.69	4.17	20.85	4.36	67.29	4.97	24.65
Tests above average.....		20		20		21		27		19		25		21		27	
Tests below average.....		26		21		29		28		31		25		29		23	



TABLE II.—Measurements of strain and stretch of wools—Continued.

Catalogue number of samples..		ILLINOIS.															
		RAMS, 3 YEARS OLD.								RWK, LAMB.				EWES, 1 YEAR OLD.			
		440.				441.				481.				477.			
Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.		
grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.		
3.00	8.50	8.50	4.50	5.625	8.25	4.625	4.50	8.00	6.00	8.00	9.00	7.375	7.50	6.25	4.00		
4.875	5.50	7.25	1.25	8.625	4.25	5.50	6.75	5.25	8.25	4.25	9.50	8.625	5.00	5.00	3.00		
7.25	3.875	6.25	6.25	8.625	5.75	4.50	4.25	6.00	7.25	5.00	8.50	3.00	2.00	10.75	6.75		
4.25	4.75	8.50	6.25	5.25	6.00	7.50	7.75	6.25	0.75	6.50	9.25	9.375	2.00	9.00	6.00		
6.00	6.00	2.625	5.00	4.50	6.50	8.25	1.50	5.00	7.50	6.00	7.75	4.00	1.50	6.625	5.00		
6.75	2.00	7.25	8.25	3.00	5.75	4.75	3.75	4.80	5.00	3.25	8.50	6.625	6.75	2.75	5.75		
0.75	7.375	3.25	4.00	3.50	6.50	4.625	4.50	3.75	8.00	5.75	9.00	3.75	7.25	2.625	2.25		
4.25	2.00	10.00	6.00	4.00	2.00	4.875	3.00	4.50	6.75	3.75	8.00	7.375	3.00	3.50	1.25		
2.75	2.875	2.75	2.00	6.00	2.25	2.75	3.00	7.00	0.00	4.50	8.50	4.75	5.50	3.25	2.00		
2.75	5.00	2.75	2.00	4.50	1.25	5.00	3.75	4.25	7.75	4.50	0.75	3.625	4.50	8.625	3.25		
8.125	5.00	2.75	4.00	5.00	4.75	3.375	2.00	5.00	0.75	5.50	8.875	3.00	1.50	4.50	1.50		
4.75	2.25	4.00	5.50	6.00	5.75	2.625	1.25	4.50	8.00	3.25	9.00	5.00	3.25	7.00	2.75		
7.625	6.25	4.00	5.50	4.625	4.75	4.50	2.00	3.25	6.00	3.00	6.75	4.00	3.75	6.625	1.50		
2.75	3.00	4.375	6.00	7.00	3.75	4.25	6.00	5.50	7.25	4.25	7.75	6.375	6.00	3.00	2.50		
8.50	2.00	7.00	3.25	4.375	4.00	5.25	4.75	5.75	9.00	4.25	7.875	5.00	5.50	3.25	4.00		
4.625	4.875	5.00	7.00	3.625	1.50	5.375	5.25	3.50	7.75	4.00	8.00	4.625	6.75	5.00	5.75		
3.75	7.00	5.75	5.375	4.00	2.75	10.625	8.00	4.25	6.75	4.25	7.75	5.50	8.00	2.625	2.00		
5.875	5.00	6.875	6.75	8.625	6.00	3.25	3.00	5.75	9.50	3.875	5.00	6.375	2.50	3.00	2.00		
3.00	7.00	3.50	5.00	4.25	4.00	2.625	3.25	7.00	8.75	5.00	8.00	8.50	3.75	5.625	4.00		
4.00	6.875	3.75	3.25	3.375	3.00	3.625	2.50	8.00	8.00	4.00	7.25	5.50	2.00	4.875	2.50		
4.75	3.25	4.75	3.25	9.50	7.00	0.50	5.75	7.50	7.875	4.00	6.75	4.625	4.00	5.625	5.00		
5.75	6.00	3.75	3.25	7.625	3.25	4.375	3.25	8.875	7.75	3.50	7.75	2.625	4.75	2.75	4.75		
4.00	4.25	5.25	5.25	2.625	2.50	8.50	2.75	3.25	8.00	6.55	8.875	3.625	2.25	2.00	1.00		
4.00	5.625	2.00	3.25	5.25	4.50	5.75	4.75	8.875	7.875	5.75	6.50	3.75	4.50	5.625	4.75		
4.75	4.75	3.00	4.00	4.625	1.75	3.75	6.00	5.00	5.50	6.00	7.75	4.50	7.75	3.50	0.25		
Totals .....	126.375	118.00	126.875	109.875	125.125	102.75	117.25	101.25	128.00	103.00	113.125	195.625	181.50	106.25	122.875	98.50	

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	10.00	154.35	7.375	36.875	10.625	163.09	7.75	38.75	8.00	123.48	9.75	48.75	10.75	105.98	7.75	38.75
Lowest .....	2.50	38.50	1.25	6.25	2.625	40.52	1.25	6.25	3.00	46.30	5.00	25.00	2.00	30.87	1.00	5.00
Average .....	5.11	78.87	4.56	22.80	4.80	71.86	4.08	20.40	4.82	74.89	7.75	38.85	5.00	78.56	3.90	19.50
Tests above average .....	20		26		20		24		23		27		20		24	
Tests below average .....	30		24		30		20		27		23		30		26	

Catalogue number of samples..		ILLINOIS.															
		EWES, 1 YEAR OLD.												EWES, 2 YEARS OLD.			
		478.				479.				480.				463.			
Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.		
grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.		
5.75	5.00	4.25	4.00	4.75	4.50	7.00	8.00	3.75	6.25	3.00	4.25	10.25	7.00	7.75	4.75		
5.00	7.00	4.00	4.25	2.625	3.75	2.625	3.00	3.25	6.00	4.00	4.00	6.00	2.00	6.00	6.25		
3.75	3.00	4.00	4.00	3.625	6.50	3.625	5.00	5.50	2.25	3.25	3.00	6.75	6.00	8.00	8.75		
3.75	2.50	8.50	4.00	5.625	7.50	6.375	4.25	5.00	3.00	5.25	3.00	14.25	7.50	6.00	8.00		
3.25	3.75	3.00	2.00	3.50	1.00	3.00	6.25	5.00	7.25	7.50	7.00	10.75	5.00	10.50	5.25		
4.75	5.50	3.75	2.75	6.625	5.00	2.25	1.75	4.00	8.50	4.25	1.25	9.00	5.75	9.00	7.00		
0.00	6.75	3.00	2.00	3.00	1.75	7.50	7.75	3.50	3.00	3.75	2.00	10.25	5.00	5.75	7.00		
4.25	2.50	3.50	3.00	4.50	3.75	2.75	1.50	3.25	6.00	2.75	3.00	11.00	6.00	17.50	8.25		
4.75	3.00	3.75	2.00	5.00	7.25	4.375	6.50	2.60	2.25	4.00	8.75	8.25	6.75	14.00	6.50		
3.75	5.50	4.75	5.00	3.375	9.75	3.00	6.75	3.00	3.00	4.75	3.00	11.25	4.75	10.00	6.25		
4.25	4.00	4.75	3.00	3.50	2.50	2.75	5.25	4.75	7.25	2.50	3.00	7.50	6.50	10.25	7.50		
4.75	4.75	2.75	2.00	4.75	4.25	3.875	1.75	3.50	6.00	5.25	6.00	6.50	8.00	12.75	7.75		
3.75	2.00	3.00	2.00	5.375	5.00	7.25	8.00	4.50	7.75	3.75	8.25	7.00	1.50	10.75	7.50		
3.75	3.25	4.25	3.75	2.375	1.25	3.375	6.50	4.75	7.00	4.75	2.50	5.25	7.00	6.00	9.00		
3.75	1.75	2.00	1.00	2.75	3.75	2.625	3.50	2.75	2.75	4.50	7.75	9.00	7.25	8.75	3.75		
5.00	2.75	3.75	3.00	5.375	8.25	3.875	1.50	2.75	2.00	7.75	5.75	10.25	6.50	6.00	8.25		
5.75	1.50	3.75	7.00	4.00	3.75	3.625	6.75	5.50	7.25	4.75	8.00	12.00	2.50	4.00	7.25		
5.00	3.50	3.25	6.50	3.00	8.00	4.625	6.00	4.50	3.25	4.25	3.00	5.50	8.00	14.75	8.75		
3.00	4.00	3.00	3.00	6.375	8.00	5.25	3.75	5.00	6.00	3.00	2.75	10.00	8.25	8.75	6.00		
5.00	8.00	2.25	2.00	4.25	4.25	2.00	1.25	5.00	9.50	5.75	8.00	6.00	7.50	6.75	7.00		
5.25	1.50	9.00	2.50	4.625	2.75	8.375	7.00	7.00	4.00	3.25	4.75	6.00	9.50	12.25	7.25		
4.25	3.75	3.75	4.25	6.75	7.00	8.00	8.00	4.00	3.00	5.00	2.00	7.00	8.50	4.50	9.00		
3.25	2.00	7.75	4.00	3.00	2.75	4.375	2.75	3.75	3.00	4.00	8.00	4.75	6.75	5.00	6.00		
3.75	4.25	5.00	2.75	3.25	4.75	4.875	6.00	7.25	5.75	5.75	2.00	8.75	6.50	5.00	8.00		
8.00	1.75	2.75	2.00	4.75	4.75	5.875	8.00	5.75	6.00	6.25	5.25	7.00	9.75	7.00	7.50		
Totals .....	100.50	93.25	103.50	81.75	104.75	115.75	100.25	133.75	100.50	128.00	118.00	111.25	210.25	160.75	203.00	184.50	

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	9.00	138.91	7.00	35.00	8.375	129.26	9.75	48.75	7.75	119.62	9.50	47.50	17.50	270.11	9.75	48.75
Lowest .....	2.00	30.87	1.00	5.00	2.00	30.87	1.00	5.00	2.50	38.59	1.25	6.25	4.00	61.74	1.50	7.50
Average .....	4.23	61.82	3.50	17.50	4.22	65.134	4.78	23.00	4.45	68.68	4.70	23.95	8.27	127.64	6.91	34.55
Tests above average .....	21		22		23		25		25		24		23		30	
Tests below average .....	20		27		27		25		25		26		27		20	



TABLE II.—Measurements of strain and stretch of wools—Continued.

Catalogue number of samples..		ILLINOIS.															
		EWES, 2 YEARS OLD.															
		464.				465.				466.				467.			
Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.		
grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.		
2.50	3.00	3.50	3.00	3.25	7.75	3.50	6.25	6.00	7.75	4.25	6.50	4.25	6.50	3.00	3.00	3.00	3.75
0.50	7.00	5.00	6.25	3.75	6.75	4.50	7.75	6.00	4.75	4.25	3.75	2.25	3.75	2.25	7.00	3.00	3.75
5.00	6.00	7.50	4.25	2.50	6.00	3.25	6.00	10.00	3.75	5.25	2.00	6.75	7.25	4.00	4.00	4.75	4.75
4.50	8.50	7.25	7.25	3.75	8.00	3.25	9.00	2.75	2.00	4.00	6.50	3.25	6.50	6.00	6.25	6.00	6.00
4.00	7.75	6.50	4.25	4.75	2.00	6.00	8.00	4.75	6.75	4.75	10.00	3.25	4.25	5.00	2.00	2.00	2.00
3.50	3.25	4.25	7.25	4.00	8.00	4.375	6.00	11.25	8.00	5.50	6.50	3.75	3.00	3.50	3.50	4.00	4.50
3.75	2.00	8.00	7.25	3.25	6.75	2.00	7.75	5.00	0.75	7.00	7.00	5.00	5.00	6.00	0.75	5.25	5.25
4.00	1.50	4.75	6.00	3.375	7.00	2.50	6.50	5.25	4.00	5.75	3.00	4.25	3.00	4.00	4.75	3.25	3.25
3.75	5.75	3.75	6.00	2.50	3.875	6.75	4.00	4.75	11.00	6.00	2.75	3.25	1.75	5.25	5.00	5.00	5.00
2.00	2.75	4.25	4.75	2.75	3.50	1.75	5.00	5.25	4.75	4.75	4.00	3.25	4.25	4.00	4.00	4.00	4.00
2.25	7.50	6.25	4.75	3.00	5.50	2.50	6.125	5.00	7.75	4.50	8.00	6.25	4.25	4.25	4.25	7.00	7.00
4.25	6.75	7.25	4.50	1.75	5.875	3.25	6.875	4.25	8.00	5.00	6.00	6.25	6.75	3.75	6.25	6.25	6.25
6.25	5.25	6.00	4.75	2.50	7.25	2.75	6.00	8.00	5.25	5.00	8.25	5.25	7.60	4.25	6.50	6.50	6.50
6.00	6.00	5.25	7.00	1.50	5.00	7.00	7.00	5.50	8.25	6.50	8.00	3.75	5.00	5.75	4.25	4.25	4.25
3.50	7.75	6.25	7.75	2.75	0.125	3.125	7.75	8.00	8.25	5.50	6.00	5.25	4.50	4.50	4.50	7.00	7.00
4.25	5.25	6.00	7.50	4.60	5.00	4.50	7.00	5.00	6.50	9.00	7.50	3.75	4.00	4.25	4.25	6.00	6.00
5.00	3.75	3.75	3.25	2.00	8.00	4.125	6.25	6.00	4.75	8.00	4.25	3.50	3.25	4.25	4.25	7.00	7.00
5.00	2.00	3.00	2.25	3.60	7.75	3.50	6.00	7.00	2.50	3.75	8.75	3.00	3.50	5.00	6.00	6.50	6.50
6.00	6.50	4.50	4.75	4.75	8.00	4.25	6.75	5.50	9.00	5.50	7.00	4.00	5.00	2.25	2.00	2.00	2.00
6.00	6.75	3.00	4.25	3.00	0.50	4.125	6.875	9.00	9.75	5.00	7.25	4.00	3.75	3.25	4.00	4.00	4.00
8.50	3.25	4.25	7.00	2.75	6.125	2.50	4.75	5.50	8.50	4.50	7.50	5.25	5.75	5.00	5.00	3.25	3.25
3.50	7.00	6.25	7.25	2.50	5.25	3.00	5.25	4.25	9.75	4.75	6.75	4.25	8.00	4.75	6.25	6.25	6.25
6.00	3.50	8.00	8.25	2.375	6.25	2.75	4.00	7.75	7.50	4.50	5.25	3.00	5.75	2.25	2.25	4.75	4.75
6.75	8.00	3.25	3.25	3.875	4.875	2.50	7.00	7.75	6.25	8.00	3.75	5.00	2.00	6.75	4.25	4.25	4.25
2.75	3.00	5.00	3.00	2.75	4.25	3.00	5.25	9.75	9.00	3.25	2.00	3.00	3.25	4.25	6.75	6.75	6.75
<b>Totals</b> .....	110.50	123.75	131.75	135.75	77.375	152.50	86.875	163.875	157.00	166.50	134.25	145.50	103.50	114.25	107.50	123.25	123.25

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Recapitulation and reduction:																
Highest .....	6.00	123.477	8.50	4.25	7.00	108.04	0.00	45.00	11.25	173.64	10.00	50.00	0.75	104.18	7.50	37.50
Lowest .....	2.25	84.73	1.60	7.50	1.50	23.15	2.00	10.00	2.75	42.44	2.00	10.00	2.25	34.73	1.75	8.75
Average .....	4.85	74.875	5.19	25.95	3.29	50.78	6.33	31.65	6.83	89.98	6.24	31.26	4.22	65.13	4.75	23.75
Tests above average.....	24		25		20		27		10		27		25		24	
Tests below average.....	26		26		30		23		34		23		25		24	

Catalogue number of samples..		ILLINOIS.															
		EWES, 2 YEARS OLD.															
		468.				469.				470.				471.			
Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.		
grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.		
3.75	7.00	4.60	6.50	4.00	0.25	4.875	7.00	4.00	5.50	10.00	7.00	4.00	4.00	4.00	6.00		
4.50	8.25	6.75	2.00	4.375	7.00	5.00	0.00	5.625	6.00	9.025	7.25	2.875	4.875	5.125	7.00		
4.00	3.25	4.00	6.25	5.00	7.125	4.375	9.125	5.25	4.00	6.00	6.75	4.00	7.00	7.50	7.00		
4.00	9.75	5.75	9.00	3.875	10.875	6.875	4.75	3.00	8.00	0.50	7.25	4.00	7.00	6.125	7.00		
3.75	9.00	4.00	7.00	4.75	10.00	4.60	7.125	4.00	2.25	7.50	7.25	6.875	0.00	5.025	6.50		
4.00	7.00	5.00	6.00	3.75	7.125	3.25	4.875	5.50	8.00	5.375	8.25	6.375	0.00	10.25	6.00		
2.75	3.50	3.50	6.00	4.375	8.125	3.25	5.125	4.50	7.50	3.00	6.75	8.75	6.75	4.00	4.00		
4.00	6.00	3.00	0.75	3.00	6.875	3.625	8.00	4.50	0.00	3.375	7.75	5.75	6.50	4.875	6.875		
4.25	4.50	4.00	7.25	3.75	6.875	5.125	7.625	3.00	5.00	6.00	6.75	5.75	6.75	4.00	4.00		
4.00	7.00	8.50	3.75	4.00	8.00	3.25	8.00	3.625	7.25	5.00	7.75	6.75	6.75	4.50	1.75		
3.00	7.75	10.25	7.50	4.375	8.00	2.50	6.625	4.50	7.50	7.25	7.75	7.75	7.00	0.875	7.50		
3.00	4.00	10.00	7.25	3.25	7.125	4.25	8.875	6.50	7.50	7.375	6.00	4.125	4.00	4.00	7.00		
10.00	4.50	3.50	4.25	3.625	8.00	0.60	7.875	3.00	2.75	7.375	6.00	7.25	7.50	8.00	2.50		
3.75	5.25	3.50	5.00	3.25	2.875	4.25	5.00	7.625	2.75	5.375	5.00	0.00	7.50	8.00	5.00		
3.25	3.75	4.75	5.25	4.00	7.125	7.125	8.00	6.00	7.25	7.75	8.25	3.75	6.00	12.50	7.00		
7.00	7.00	2.75	6.00	4.00	6.375	6.375	3.875	3.00	4.60	5.25	3.50	6.875	8.00	3.125	3.00		
9.00	5.25	3.00	7.00	3.50	9.00	5.125	10.00	5.00	4.25	5.50	5.50	7.75	4.00	5.00	7.00		
8.75	8.75	5.00	6.50	4.875	10.00	5.60	6.875	3.25	6.00	3.00	1.50	6.875	6.75	8.75	6.00		
4.00	5.00	3.75	7.50	4.875	8.75	4.125	7.25	6.50	8.00	2.25	1.00	7.375	0.00	6.00	6.00		
6.00	6.50	3.25	6.75	6.125	8.00	4.125	6.375	2.75	1.00	3.00	3.75	6.75	8.00	5.75	7.125		
5.00	8.00	6.00	7.75	3.25	5.125	4.875	8.875	3.75	6.00	4.00	4.00	5.375	8.00	5.625	7.50		
7.75	5.75	4.50	9.25	4.75	9.125	5.75	6.875	5.75	6.00	5.50	4.00	4.50	3.00	8.375	7.00		
17.00	6.00	6.25	9.50	4.75	6.00	6.50	9.60	4.25	6.75	3.375	3.75	3.00	2.25	6.25	5.00		
0.00	7.75	6.50	8.00	3.25	9.875	6.00	7.00	4.75	5.25	5.25	0.25	5.625	4.50	4.50	4.75		
3.00	6.25	3.00	5.00	4.125	8.125	4.125	6.00	3.625	7.25	3.25	4.50	5.00	5.60	6.875	6.00		
<b>Totals</b> .....	130.50	156.00	127.00	163.00	102.875	192.75	119.75	182.125	112.25	145.00	138.25	142.00	133.50	147.375	154.00	147.75	

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Recapitulation and reduction:																
Highest .....	17.00	262.89	0.75	48.75	7.125	109.97	10.875	54.875	10.00	154.95	8.25	41.25	12.60	102.03	6.00	40.00
Lowest .....	2.00	30.87	2.00	10.00	2.60	88.69	2.875	14.375	2.25	34.73	1.00	6.00	2.875	44.87	1.75	8.75
Average .....	6.15	79.49	6.38	31.00	4.45	68.63	7.60	37.60	5.02	77.48	6.74	28.70	5.75	68.75	6.00	29.50
Tests above average.....	15		26		21		27		23		30		19		34	
Tests below average.....	85		24		20		23		27		20		20		16	



TABLE II.—Measurements of strain and stretch of wools—Continued.

Catalogue number of samples..		ILLINOIS.															
		EWES, 2 YEARS OLD.								EWES, 3 YEARS OLD.							
		472.				473.				474.				475.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
Actual measurement in grams and millimeters.	8.50	7.00	4.25	5.25	6.00	6.60	3.50	2.00	10.00	5.675	6.00	4.00	7.75	5.50	4.00	8.25	8.25
	11.00	6.00	5.25	8.50	6.25	3.25	9.00	8.75	6.25	7.125	3.625	6.25	4.25	3.00	4.00	7.75	7.75
	0.00	7.00	4.75	8.00	6.75	7.25	5.00	7.00	3.25	4.00	8.00	6.00	6.00	9.00	7.00	8.75	8.75
	8.75	7.00	5.25	3.00	8.50	10.00	5.25	7.50	8.00	5.75	10.00	5.875	9.00	9.75	5.00	0.25	0.25
	0.75	8.00	5.25	6.00	6.75	7.00	6.75	7.00	7.25	8.00	4.875	4.50	3.50	5.00	4.00	8.75	8.75
	3.75	3.25	5.00	7.25	0.75	9.00	8.25	7.25	5.00	4.00	6.75	4.25	4.75	4.75	8.25	11.50	11.50
	0.50	7.25	10.00	7.00	4.00	3.00	5.75	2.00	7.25	5.75	10.75	7.75	9.00	8.50	5.00	7.75	7.75
	5.00	7.50	3.75	6.50	8.75	9.00	4.00	7.50	5.75	3.00	4.50	1.75	5.75	9.00	6.75	8.75	8.75
	6.00	8.00	11.00	8.25	5.00	3.00	4.00	9.00	6.625	6.00	6.25	5.25	9.00	8.75	7.25	9.00	9.00
	6.50	8.00	0.00	8.75	7.50	6.25	4.50	4.50	3.50	2.00	6.00	7.00	5.25	7.25	4.25	6.25	6.25
	8.75	8.25	7.25	7.00	5.25	3.75	3.25	7.75	5.00	8.00	9.00	7.375	8.25	9.25	6.00	0.25	0.25
	11.00	8.00	4.00	7.00	6.00	9.25	6.50	6.75	7.50	6.00	6.00	6.00	6.25	7.00	6.00	8.25	8.25
	5.25	8.00	9.00	4.75	6.00	8.00	4.25	7.00	10.75	6.75	10.25	6.25	4.75	7.75	3.00	8.00	8.00
	11.25	8.25	6.00	8.75	7.50	8.00	5.00	4.00	5.25	6.125	9.75	6.875	3.75	6.00	3.75	8.50	8.50
	8.50	2.50	6.75	8.00	4.75	3.25	6.00	4.00	5.125	6.375	3.50	3.00	5.25	10.00	2.50	5.00	5.00
	4.25	5.25	4.00	1.50	3.00	3.75	4.00	2.50	7.50	1.25	4.50	7.00	6.75	7.00	8.75	6.25	6.25
	4.00	8.50	6.00	4.75	8.75	7.00	5.25	3.00	8.875	3.00	5.00	6.00	4.00	6.00	6.00	10.00	10.00
	7.00	10.25	4.25	8.25	6.00	9.00	6.00	11.00	10.125	6.00	5.50	7.00	3.75	7.50	3.25	6.00	6.00
	8.00	8.00	11.00	9.00	3.50	2.00	5.00	4.00	6.75	7.00	10.25	6.50	3.25	2.50	6.00	8.50	8.50
	5.00	0.50	6.00	8.50	7.50	9.75	0.50	9.00	6.875	5.00	10.375	8.00	4.00	8.75	5.25	8.75	8.75
11.50	7.25	6.00	6.25	6.00	10.00	5.75	6.25	5.75	2.50	7.75	2.75	4.25	5.25	11.50	9.75	9.75	
5.25	6.60	6.50	3.00	4.00	5.50	6.25	5.50	5.125	7.00	7.75	6.00	4.75	9.00	3.75	6.00	6.00	
7.00	6.25	5.00	5.00	6.75	7.75	0.00	7.00	6.25	5.25	6.25	6.00	5.00	2.75	0.25	7.00	7.00	
5.25	8.00	8.00	8.00	4.50	3.75	5.00	8.75	9.375	6.50	4.50	6.125	6.00	8.00	5.25	7.25	7.25	
3.75	4.00	3.00	5.75	8.75	8.25	6.00	8.25	5.00	5.375	3.25	2.00	6.75	8.00	7.75	5.50	5.50	
Totals .....	177.00	160.50	149.75	164.00	151.50	162.75	134.75	157.25	160.125	133.625	171.25	130.50	138.00	175.25	138.50	198.50	198.50

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	11.50	177.60	10.25	51.25	9.00	138.91	11.00	55.00	10.75	165.93	8.00	40.00	11.50	177.50	11.50	87.50
Lowest .....	3.00	46.30	1.50	7.50	3.00	46.30	2.00	10.00	3.25	50.18	1.25	6.25	2.50	38.50	2.50	12.50
Average .....	6.54	100.04	6.67	33.35	5.73	88.44	6.40	32.00	6.75	104.18	5.40	27.30	6.49	84.74	7.48	37.40
Tests above average .....	19		30		23		29		20		32		20		30	
Tests below average .....	31		20		22		21		20		18		30		20	

Catalogue number of samples..		ILLINOIS.												TEXAS.			
		EWES, 3 YEARS OLD.				MISCELLANEOUS EWES.								RAMS, 2 YEARS OLD.			
		470.				443.				444.				610.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
Actual measurement in grams and millimeters.	0.25	8.25	4.75	3.75	3.75	2.25	7.00	7.75	7.00	9.50	9.25	8.00	3.25	5.00	3.00	3.50	
	3.25	5.75	4.50	3.00	3.75	5.00	3.00	5.25	2.50	9.00	4.25	5.00	8.50	5.25	6.50	6.50	
	5.25	6.00	4.25	7.75	3.50	6.00	4.00	8.50	4.25	7.25	5.00	7.50	4.00	7.00	5.25	6.00	
	4.75	9.50	5.00	3.50	4.00	5.00	7.00	8.50	3.75	5.25	7.00	7.75	3.00	4.75	3.50	5.25	
	4.00	8.50	5.75	6.00	8.50	8.25	3.75	7.00	8.25	8.50	6.25	9.00	3.00	8.50	5.25	2.75	
	5.50	7.75	4.00	5.00	3.25	6.50	2.75	2.00	8.50	8.50	4.25	7.00	2.75	7.00	9.75	6.75	
	0.75	4.75	5.50	8.25	5.00	6.25	3.75	3.00	4.75	7.00	3.00	6.00	5.25	7.00	3.00	6.00	
	5.00	7.50	5.25	7.25	3.00	3.75	5.00	7.00	4.25	7.25	4.75	8.00	5.00	8.00	3.50	5.00	
	6.25	9.00	5.25	6.00	7.50	7.50	5.00	7.25	4.25	8.75	6.75	8.00	4.75	7.00	4.00	8.00	
	3.75	5.50	5.25	6.75	3.50	4.50	2.50	5.75	6.00	9.00	6.00	8.25	4.00	4.00	3.25	5.50	
	3.75	7.00	6.00	6.25	4.50	0.50	6.75	8.00	6.00	10.00	3.75	4.00	5.00	6.50	4.75	6.00	
	0.25	8.25	8.25	8.00	4.25	6.75	6.75	11.00	4.00	6.25	6.75	9.00	6.25	3.25	3.00	6.75	
	3.75	2.75	6.25	7.25	3.75	3.00	5.00	6.50	4.00	2.00	5.25	7.60	5.50	5.50	4.25	5.25	
	6.25	8.75	6.00	8.25	4.00	7.25	8.50	4.00	0.00	9.00	5.00	9.25	4.00	2.50	4.00	6.75	
	6.25	7.00	4.00	3.25	5.75	4.00	3.75	7.00	4.25	7.50	7.00	9.00	4.00	3.00	5.00	7.75	
	5.75	7.00	5.00	4.50	4.00	8.25	4.00	7.25	6.00	8.50	4.75	6.25	4.25	2.00	3.00	3.00	
	4.75	6.25	4.25	6.25	3.00	4.00	4.00	7.25	6.00	7.25	5.00	6.60	5.00	7.75	4.00	3.75	
	7.00	0.25	7.75	5.00	5.25	0.75	2.75	3.00	4.25	4.75	2.50	8.00	5.00	8.00	4.75	7.60	
	0.25	7.75	5.75	0.00	3.50	3.75	4.00	0.25	6.00	8.00	7.00	7.25	5.00	0.75	4.25	4.25	
	6.00	6.00	6.25	9.25	4.00	6.00	4.75	6.00	5.00	5.00	7.25	6.25	4.00	7.00	4.25	6.50	
10.00	0.00	3.75	7.75	2.50	5.25	3.75	9.25	5.25	8.00	3.75	7.00	4.25	5.75	4.75	5.25		
5.50	6.25	4.00	7.00	3.50	4.25	7.00	7.25	6.50	7.50	4.00	6.00	4.75	7.75	3.00	2.25		
3.75	7.00	4.25	6.00	3.75	2.75	4.50	8.00	5.00	8.00	5.25	4.00	6.75	8.00	8.00	3.00		
4.60	8.25	6.50	8.25	5.00	7.50	3.75	5.00	5.00	7.75	5.25	8.00	5.25	3.75	4.00	1.25		
0.25	8.00	6.75	5.75	4.75	8.00	5.00	0.25	0.25	7.25	6.00	7.50	4.00	6.00	3.25	4.75		
Totals .....	137.75	170.00	134.25	164.00	108.25	139.50	112.00	170.00	132.00	185.75	136.00	183.00	110.50	145.00	108.25	129.25	

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	10.00	154.35	9.50	47.50	8.50	131.19	11.00	55.00	9.25	142.77	16.00	60.00	9.75	153.43	8.25	41.25
Lowest .....	3.25	50.18	2.75	13.75	2.50	38.59	2.00	10.00	2.50	38.59	2.00	10.00	2.75	42.45	1.25	6.25
Average .....	6.44	83.96	6.86	34.30	4.40	67.91	6.19	30.95	6.36	82.73	7.38	36.00	4.34	66.69	5.49	27.45
Tests above average .....	23		29		18		27		20		30		20		28	
Tests below average .....	27		21		32		23		30		20		30		23	



TABLE II.—Measurements of strain and stretch of wools—Continued.

TEXAS.																	
RAMS, 2 YEARS OLD.																	
Catalogue number of samples..	617.				618.				619.				620.				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	4.25	5.25	6.375	7.00	8.625	5.375	6.375	1.875	3.00	3.25	3.375	2.25	6.00	7.75	0.00	3.25	
	4.50	8.00	5.375	4.875	13.00	6.75	9.00	5.375	8.75	6.25	7.25	5.50	3.00	1.75	3.25	1.25	
	4.25	5.75	5.00	6.875	6.375	4.75	7.25	4.00	4.375	3.25	5.50	5.25	5.75	4.25	3.00	3.25	
	4.875	6.50	3.00	4.875	6.125	4.00	4.875	3.875	2.375	5.00	1.375	1.25	4.75	5.00	9.00	7.25	
	3.75	5.75	3.50	6.00	8.75	5.75	10.50	6.25	3.50	2.75	1.625	1.00	5.75	3.00	11.75	9.25	
	2.25	5.50	4.00	4.75	8.875	7.00	6.50	7.00	3.625	3.50	4.00	7.25	6.75	7.25	6.00	1.00	
	3.50	6.50	3.25	5.25	8.75	5.00	5.00	5.50	4.75	5.00	2.625	3.00	7.00	6.75	7.75	7.75	
	3.00	5.50	4.625	8.00	6.875	7.00	4.00	6.50	6.00	6.50	2.375	3.25	7.00	4.00	7.25	8.25	
	3.75	7.875	4.75	5.00	5.125	3.00	8.125	7.00	2.75	2.75	3.00	2.75	3.00	2.00	6.75	5.25	
	2.75	6.00	3.875	4.75	5.25	5.50	7.125	4.00	3.00	4.00	4.50	6.75	6.50	8.00	4.25	2.00	
	3.50	5.00	6.25	6.50	10.00	5.25	4.00	2.00	4.625	4.75	7.00	7.00	6.00	6.25	6.00	2.50	
	4.00	7.75	6.25	5.75	5.25	2.00	4.00	6.00	3.625	4.50	2.375	7.25	3.75	3.50	6.00	6.00	
	3.25	6.00	4.25	5.00	3.875	5.00	7.75	5.60	4.50	4.75	3.75	3.75	6.75	6.50	3.00	2.00	
	3.25	5.75	4.50	4.00	10.00	4.50	5.00	1.875	1.50	1.00	3.50	2.25	4.00	6.00	4.75	4.00	
	3.75	7.50	5.25	4.75	7.25	5.125	6.00	6.875	3.625	4.50	3.375	1.25	2.00	1.00	4.75	4.25	
	3.00	5.00	3.75	6.50	6.00	5.75	5.00	2.25	4.25	6.25	3.00	1.75	5.75	4.00	8.00	5.00	
	5.375	6.00	3.50	4.875	6.00	2.50	3.00	3.00	4.375	6.00	1.625	1.00	7.25	7.00	4.25	4.75	
	3.25	6.875	6.25	5.75	6.50	5.00	4.00	4.75	5.625	4.75	2.625	2.25	5.75	4.00	5.00	2.75	
	4.875	4.50	4.25	6.00	7.75	6.75	4.00	3.875	3.375	3.00	1.625	3.00	5.75	6.00	6.00	1.75	
3.00	5.50	4.00	6.625	7.75	4.25	3.00	5.25	3.375	4.25	3.875	1.50	5.25	4.00	3.50	2.00		
8.75	6.50	2.875	4.75	6.125	6.25	3.00	2.75	3.375	5.75	4.25	4.75	7.25	3.00	6.00	7.00		
6.50	6.50	2.625	4.00	6.00	6.50	6.25	4.00	4.375	6.00	4.75	3.25	5.25	4.25	3.75	5.00		
3.00	5.00	3.50	5.50	7.00	5.25	3.875	4.875	3.75	5.75	4.00	3.00	6.00	4.00	4.00	7.00		
4.625	5.25	4.00	5.125	6.125	1.25	12.25	7.00	2.625	1.00	5.375	3.00	6.00	7.50	6.50	7.50		
Totals .....	96.75	152.00	111.00	136.75	179.375	120.50	143.875	116.125	96.75	105.75	88.875	85.50	141.75	121.75	147.50	115.50	

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	6.375	98.40	8.00	40.00	13.00	200.65	7.00	35.00	8.75	135.05	7.25	36.25	11.75	261.36	9.25	46.25
Lowest .....	2.25	34.73	4.00	20.00	3.00	46.30	1.25	6.25	1.375	21.23	1.00	5.00	2.00	30.87	1.00	5.00
Average .....	4.16	64.21	5.78	28.90	6.45	99.65	4.73	23.65	3.71	57.26	3.83	19.15	5.79	80.37	4.75	23.75
Tests above average .....	22		20		21		31		21		23		27		24	
Tests below average .....	28		30		29		19		29		27		23		25	

TEXAS.																
RAMS, 2 YEARS OLD.																
Catalogue number of samples..	621.				622.				623.				624.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	4.00	4.00	4.00	4.00	8.75	4.75	5.25	2.25	4.375	3.25	2.25	1.50	4.50	7.75	2.75	7.00
	5.50	3.00	4.75	4.00	6.375	2.25	7.50	3.00	3.625	3.50	3.625	6.50	3.75	7.00	7.125	7.75
	4.00	4.00	5.00	5.00	2.75	2.00	6.75	4.25	3.375	5.75	5.00	6.75	3.50	8.75	4.875	7.875
	3.25	5.25	5.00	5.75	3.75	4.00	4.75	3.25	5.625	6.25	2.625	2.75	6.75	9.25	6.125	7.25
	7.00	3.75	6.00	6.50	6.00	4.25	5.00	1.25	5.025	6.00	4.375	5.25	8.375	8.25	5.00	7.25
	2.00	3.00	4.50	6.00	5.00	7.25	4.25	8.25	4.025	4.00	3.00	3.00	4.75	7.00	5.50	4.50
	2.50	3.00	6.75	6.00	5.75	5.00	5.625	6.76	7.625	5.00	2.25	4.75	4.25	4.75	9.75	7.00
	2.625	4.00	4.50	6.50	4.75	7.75	10.25	8.50	2.625	4.00	3.375	1.75	4.25	5.50	2.25	7.00
	5.50	3.25	6.25	5.50	6.50	7.25	8.375	7.25	5.625	0.75	3.00	4.75	3.25	6.25	2.00	3.00
	4.25	6.50	5.25	5.00	3.375	3.25	6.625	3.00	2.025	2.00	6.375	7.75	3.00	7.00	4.00	6.00
	3.50	6.00	5.25	5.25	3.375	5.75	3.625	1.25	3.375	2.00	3.00	3.25	8.25	6.25	6.25	7.75
	4.00	7.375	3.75	3.00	5.375	4.00	2.75	3.25	5.625	3.00	3.00	4.25	5.50	8.75	4.50	2.25
	6.125	6.00	4.50	5.50	4.00	6.25	6.25	7.25	2.75	4.00	2.625	4.75	5.875	7.00	7.50	7.00
	8.50	7.50	2.75	7.00	6.00	7.00	6.00	7.25	2.75	4.25	3.625	5.50	6.25	7.25	3.50	4.00
	3.25	4.00	4.25	6.00	3.375	1.75	3.00	4.75	2.75	1.25	3.625	4.25	5.25	7.00	2.75	7.75
	10.75	6.75	4.60	2.75	4.50	5.25	5.625	2.50	2.50	5.50	7.625	0.00	9.75	7.50	7.50	8.00
	7.00	6.00	3.75	5.00	1.625	1.25	3.625	3.75	3.75	3.75	3.50	3.00	8.125	6.50	3.00	5.75
	6.60	3.00	3.375	7.50	3.375	1.75	3.375	4.25	4.25	1.25	3.375	5.00	8.00	7.00	3.50	5.00
	4.00	5.25	3.375	7.00	9.00	6.00	3.375	5.00	2.625	1.25	2.00	2.25	4.50	6.50	4.00	8.25
5.00	4.25	4.00	5.875	6.25	4.00	3.625	1.00	5.625	4.75	3.625	4.00	5.00	7.75	4.75	3.00	
3.75	4.75	3.00	4.50	4.625	1.00	6.625	3.75	4.375	4.25	2.625	1.50	7.00	7.00	7.00	7.25	
7.50	6.75	4.50	5.50	5.50	3.00	6.50	2.00	2.75	2.75	3.375	2.00	3.00	5.875	9.00	8.00	
4.75	4.00	3.60	6.25	0.375	6.25	5.375	4.00	4.00	3.75	2.375	2.50	2.50	6.50	8.00	6.60	
5.25	5.50	6.25	4.25	3.375	2.25	4.00	6.75	2.375	2.50	4.625	8.25	4.00	7.00	6.50	8.25	
5.75	7.25	6.25	6.875	5.625	5.00	5.625	6.75	3.375	2.50	7.00	6.25	3.00	5.25	4.00	8.00	
Totals .....	126.25	123.125	114.00	136.50	125.375	108.25	113.75	111.25	98.50	98.50	91.875	107.25	132.375	174.75	131.125	161.375

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	10.75	165.62	7.50	37.50	10.25	158.21	8.50	42.60	7.625	117.69	8.25	41.25	9.75	150.40	0.25	46.25
Lowest .....	2.00	30.87	2.75	13.75	1.625	25.08	1.60	5.00	2.00	30.869	1.25	6.25	2.00	30.87	2.25	11.25
Average .....	4.80	74.90	5.19	25.05	4.78	73.778	4.39	21.95	3.81	58.80	4.02	20.10	5.27	81.34	6.72	33.60
Tests above average .....	21		27		27		22		17		23		21		32	
Tests below average .....	29		23		23		28		33		27		29		18	



TABLE II.—Measurements of strain and stretch of wools—Continued.

TEXAS.																
Catalogue number of samples..	RAMS, 2 YEARS OLD.								EWES, 2 YEARS OLD.							
	605.				605.				606.				607.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	4.375	1.25	7.00	8.00	5.125	0.00	2.00	5.25	6.00	0.00	4.25	6.00	5.00	0.375	5.625	5.25
	4.75	4.75	3.625	4.75	3.25	5.00	4.00	5.875	4.00	6.125	5.375	5.125	4.375	8.00	3.00	0.75
	4.75	3.00	3.00	5.75	5.50	7.00	2.50	4.25	5.50	7.60	3.375	7.00	2.25	4.75	8.875	0.125
	4.625	4.75	3.75	5.25	3.375	3.25	4.75	6.00	4.625	7.00	4.375	3.50	4.50	7.00	5.00	7.125
	2.375	2.25	1.625	2.60	2.75	6.25	3.00	3.75	3.625	7.00	7.50	8.00	0.00	0.50	3.50	0.375
	2.50	2.00	3.00	3.00	3.75	0.25	3.00	4.75	4.375	4.50	4.025	5.50	3.625	5.50	3.50	7.375
	5.375	5.00	4.25	5.25	3.50	8.00	3.25	5.75	3.75	6.25	2.50	4.875	5.75	0.25	8.50	7.125
	4.375	4.00	6.50	6.50	3.875	7.25	4.25	5.375	7.25	3.25	5.375	7.25	3.00	5.75	7.00	6.125
	4.375	4.25	1.75	2.00	2.375	5.875	4.625	6.25	4.00	4.25	4.375	3.00	3.25	4.375	4.25	0.75
	3.375	1.00	4.50	4.75	4.50	3.75	4.625	5.50	4.25	6.25	3.25	3.875	3.375	0.00	0.50	5.00
	3.625	4.25	2.625	4.00	6.00	8.00	3.00	5.00	3.00	4.75	5.25	6.75	4.50	5.00	6.25	4.75
	2.75	2.50	3.375	1.25	5.00	8.00	4.25	8.25	4.625	7.00	2.625	5.75	3.00	0.00	5.50	0.75
	2.25	1.50	3.25	4.00	7.00	7.75	3.00	4.875	4.00	7.00	2.50	4.75	4.875	7.00	7.25	7.00
	1.75	2.25	4.50	3.00	4.00	8.00	7.25	7.00	2.375	8.50	4.625	6.00	4.50	6.25	3.00	0.25
	1.375	2.25	3.625	7.00	3.25	6.75	4.25	8.125	4.00	5.25	6.00	5.50	5.00	8.00	6.50	0.00
	5.375	4.75	4.50	6.00	2.50	7.50	4.375	5.875	5.375	5.50	3.50	6.75	4.00	5.00	4.75	6.00
	5.25	6.25	2.50	1.75	3.00	4.75	2.625	5.25	2.625	2.25	3.625	0.75	5.75	7.75	3.50	0.50
	5.00	4.75	4.00	6.75	2.875	7.00	7.50	6.00	8.00	8.50	7.00	0.75	5.50	5.00	2.00	3.00
	3.00	3.75	2.25	1.00	3.25	8.25	3.00	0.00	4.625	7.50	3.625	6.25	4.25	5.875	4.25	0.00
3.00	7.75	2.625	1.50	4.375	5.25	2.00	7.75	4.00	2.00	3.625	4.25	6.375	6.00	6.125	6.25	
3.00	7.75	4.50	4.75	5.50	6.375	2.25	7.60	3.625	7.00	6.00	7.25	3.00	4.125	6.50	5.875	
2.25	4.00	2.25	1.50	3.625	4.625	8.25	6.25	3.375	7.00	3.625	3.25	4.00	7.25	3.00	0.00	
6.50	3.25	2.00	2.50	2.625	7.875	3.75	8.00	2.625	5.25	4.375	5.00	5.75	7.00	4.75	5.75	
4.00	1.25	2.60	2.50	4.75	7.00	4.00	6.00	5.625	7.00	4.00	2.25	4.00	6.125	5.875	6.00	
1.75	4.00	2.625	5.75	3.75	8.75	4.375	5.875	2.75	6.50	6.625	8.00	3.75	7.00	6.00	5.25	
Totals .....	95.375	87.00	86.125	100.00	96.50	159.50	100.875	161.125	105.125	150.125	107.875	170.125	111.125	154.125	128.50	150.375

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	7.00	105.04	8.00	40.00	8.25	127.36	8.75	43.75	8.00	123.43	9.00	45.00	9.50	146.63	8.00	40.00
Lowest .....	1.375	21.23	1.00	5.00	2.00	30.87	3.25	16.25	2.25	34.73	2.25	11.25	2.25	34.73	3.00	15.00
Average .....	3.63	56.03	3.74	18.70	4.00	61.74	6.51	32.55	4.26	65.75	6.408	32.025	4.792	73.96	6.092	30.46
Tests above average .....	32		27		20		20		24		21		23		25	
Tests below average .....	28		23		27		30		20		10		27		25	

TEXAS.																
Catalogue number of samples..	EWES, 2 YEARS OLD.								EWES, 2 YEARS OLD.							
	608.				609.				610.				611.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	4.00	7.75	3.25	2.25	7.625	7.25	2.25	4.875	4.00	5.50	4.00	8.00	4.00	3.75	3.00	7.00
	4.00	0.00	3.00	3.50	1.875	0.25	3.50	3.875	6.375	7.75	5.50	7.50	5.00	7.00	2.50	3.75
	7.00	7.00	3.25	5.75	4.25	0.75	3.50	6.25	7.50	4.375	6.50	8.25	6.25	2.75	3.00	
	5.50	6.75	4.00	8.00	4.00	6.75	2.25	8.00	6.625	8.75	6.625	6.60	3.00	4.50	7.00	6.50
	3.75	5.00	4.50	7.00	5.75	6.00	2.50	6.00	6.625	8.75	3.625	3.00	6.00	8.00	4.00	8.25
	3.00	4.00	3.00	3.50	7.50	7.25	3.75	7.00	7.50	7.60	3.375	6.75	4.00	7.25	3.75	8.00
	3.00	3.50	2.50	4.75	6.25	4.00	2.375	4.00	5.375	6.25	4.00	6.25	4.00	4.25	2.75	3.75
	6.00	5.00	3.75	5.50	3.50	5.00	4.75	7.75	6.375	9.75	4.625	6.25	8.00	5.25	3.00	6.75
	3.00	4.00	6.00	6.50	4.50	4.50	2.25	4.25	4.25	6.75	4.50	7.50	6.50	7.00	4.00	5.50
	4.00	3.25	4.00	6.00	7.00	0.75	4.25	6.75	5.625	8.25	4.625	8.00	10.25	8.50	3.50	6.25
	6.75	7.25	5.00	9.00	10.00	0.875	4.00	5.25	4.00	12.00	4.50	6.50	5.50	6.00	6.00	4.75
	3.00	1.75	5.00	5.75	4.375	4.875	4.25	8.00	4.25	7.75	4.625	6.00	4.00	5.25	3.50	6.50
	5.25	7.00	5.00	6.75	1.75	4.25	8.50	6.625	4.625	7.25	5.375	14.25	4.00	6.50	4.50	5.50
	5.00	7.00	8.25	7.00	5.375	0.25	8.00	6.25	5.625	4.00	13.25	6.25	3.00	6.25	4.00	7.25
	7.50	6.00	0.00	4.25	2.25	0.00	2.75	5.00	4.75	5.50	4.375	2.50	6.50	6.00	3.50	8.25
	5.25	6.25	5.50	5.75	3.375	7.50	3.875	7.75	5.75	5.75	4.875	2.25	7.00	8.00	5.00	9.75
	7.00	5.75	5.50	6.25	6.375	7.00	2.375	4.875	5.375	8.00	6.375	6.25	3.25	6.00	7.00	6.75
	4.00	6.50	6.50	6.50	6.375	7.25	2.00	7.875	3.375	5.25	3.375	2.25	3.25	3.25	6.00	0.75
	7.50	8.25	6.75	7.00	2.375	3.25	2.60	7.875	3.375	5.25	4.625	6.50	2.60	4.00	5.75	3.75
3.75	7.00	4.75	5.00	6.75	7.75	1.625	4.00	4.00	0.125	4.625	8.50	5.50	6.75	2.50	4.75	
4.00	5.50	4.00	6.00	4.00	6.00	3.00	6.25	4.375	7.00	6.00	6.50	8.50	6.50	3.00	0.00	
3.50	7.00	4.50	7.00	2.25	4.00	2.75	6.125	6.375	7.75	4.375	9.25	3.00	2.50	5.00	7.50	
4.25	7.25	3.00	2.75	2.25	6.75	6.00	7.25	3.75	2.125	6.375	7.75	6.00	7.00	8.25	3.00	
6.00	8.00	6.00	5.75	6.375	6.875	8.375	7.125	6.375	5.50	4.375	7.25	4.75	5.50	6.50	9.00	
3.75	5.25	4.00	6.50	3.00	7.00	3.25	4.00	5.25	8.25	4.625	8.50	5.50	8.00	6.00	7.00	
Totals .....	120.25	151.00	116.00	145.00	118.60	152.125	91.125	145.25	133.75	174.00	120.50	172.75	120.25	149.25	105.75	155.25

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	8.25	127.34	9.50	47.50	10.00	154.35	8.00	40.00	13.25	204.50	14.25	71.25	10.25	158.21	6.75	48.75
Lowest .....	2.50	38.59	1.75	8.75	1.625	25.08	3.00	15.00	3.375	52.00	2.25	11.25	2.50	38.59	2.50	12.50
Average .....	4.72	72.85	5.92	29.60	4.108	64.72	5.048	29.74	6.13	70.18	6.04	34.70	4.52	70.26	6.09	30.45
Tests above average .....	22		28		21		30		22		25		30		28	
Tests below average .....	28		22		20		20		28		25		30		22	



TABLE II.—Measurements of strain and stretch of wools—Continued.

Catalogue number of samples..		TEXAS.															
		EWES, 2 YEARS OLD.															
		612.				613.				614.				615.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.		
		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.		
Actual measurement in grams and millimeters.	5.75	5.00	2.875	6.00	7.375	9.00	5.50	5.25	5.00	0.50	6.00	7.00	3.875	6.50	1.75	3.50	
	4.25	4.875	4.00	6.75	3.625	7.00	4.625	4.50	7.00	7.00	3.50	7.50	6.50	8.75	3.00	5.75	
	4.25	7.00	3.75	8.00	4.75	11.00	5.375	7.50	0.25	3.25	7.00	3.50	4.875	2.625	6.75	6.75	
	5.625	4.50	4.50	4.00	4.375	6.25	5.375	6.25	6.00	7.00	4.00	2.00	3.50	3.00	4.25	8.25	
	3.625	6.125	4.125	7.25	4.625	8.25	6.00	8.75	4.25	7.50	5.75	5.75	6.25	5.875	3.625	5.00	
	3.25	7.125	2.50	3.50	3.375	6.75	3.625	2.25	4.00	5.75	4.00	5.25	3.875	3.25	2.375	4.00	
	6.50	5.00	4.75	7.00	5.375	10.50	4.00	7.25	3.25	5.00	6.00	6.75	3.875	4.50	5.375	7.00	
	2.875	4.875	2.50	4.875	5.00	8.00	5.375	7.75	3.50	5.25	5.25	6.75	2.875	4.00	8.50	8.00	
	5.25	7.00	6.00	5.00	5.375	7.50	3.375	7.50	3.00	5.25	4.00	3.75	5.375	4.875	2.25	3.875	
	6.00	4.00	4.625	6.00	5.50	8.25	5.375	8.00	3.00	4.75	6.00	8.00	0.50	5.00	4.25	6.25	
	4.50	3.00	5.00	7.125	3.625	7.00	5.625	7.00	5.75	7.00	3.50	5.50	2.25	2.25	3.875	5.125	
	5.75	3.00	4.00	3.25	5.625	9.00	6.125	7.75	3.00	5.25	5.50	7.50	5.625	0.50	4.25	6.25	
	4.00	3.125	3.375	7.00	3.375	1.75	7.375	7.75	4.50	4.00	3.25	2.50	4.625	3.50	9.50	7.75	
	3.50	7.00	2.25	6.00	4.75	6.50	3.75	6.125	5.50	4.00	3.75	7.00	2.75	3.50	3.50	3.875	
	3.25	6.00	2.75	4.00	5.375	7.50	5.00	9.50	3.25	5.75	3.50	6.25	10.00	7.875	2.25	3.25	
	5.25	6.875	2.875	6.00	5.375	7.25	4.625	5.00	0.25	7.00	3.25	7.00	2.00	3.25	2.75	3.75	
	5.375	8.00	4.25	7.375	4.375	7.00	3.625	4.50	4.00	6.00	4.50	4.50	6.00	5.50	3.50	4.50	
	3.25	4.875	3.625	7.00	5.25	9.50	4.00	7.75	5.00	7.00	8.50	8.00	4.25	3.75	4.875	3.50	
	8.75	6.00	2.50	6.25	6.375	8.75	3.625	4.25	8.00	8.00	5.50	3.00	3.25	0.00	6.00	7.25	
	4.50	5.75	2.625	6.00	6.25	7.00	3.625	6.75	6.50	8.00	3.00	3.00	3.00	4.75	3.00	3.50	
3.50	7.50	2.50	5.50	4.00	8.25	5.375	7.00	6.00	8.00	5.00	8.25	3.50	4.875	2.00	4.50		
4.25	8.00	4.50	6.00	5.00	6.00	3.625	1.50	8.00	4.00	0.00	7.75	2.25	5.25	2.25	2.875		
4.00	6.125	2.50	5.125	5.00	9.75	4.375	8.00	4.75	5.75	2.75	2.75	2.25	3.75	3.25	4.00		
2.75	2.75	3.125	3.00	7.00	6.60	5.375	8.00	6.00	4.00	4.00	3.75	4.625	4.25	9.375	8.875		
Totals .....	111.00	128.50	90.25	144.00	127.00	193.25	114.375	232.875	123.00	151.75	115.00	145.00	105.50	117.125	99.125	127.75	

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Recapitulation and reduction:																
Highest .....	6.50	100.325	8.00	40.00	7.375	113.63	11.00	55.00	8.50	131.194	8.25	41.25	10.00	154.340	8.25	41.25
Lowest .....	2.50	38.59	2.75	13.75	3.375	62.09	1.50	7.50	2.75	42.44	2.00	10.00	1.75	27.017	2.25	11.25
Average .....	4.03	62.201	5.45	27.25	4.823	74.618	7.12	35.60	4.76	73.47	5.33	29.65	4.092	65.938	4.896	24.48
Tests above average .....	22		30		28		27		23		26		19		21	
Tests below average .....	28		20		22		23		27		24		31		29	

Catalogue number of samples..		CALIFORNIA.															
		RAMS, 2 YEARS OLD.															
		694.				695.				696.				697.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.		
		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.		
Actual measurement in grams and millimeters.	6.75	7.00	3.625	7.875	3.50	8.00	3.25	7.00	1.75	2.50	4.75	8.50	3.625	7.75	5.00	2.25	
	2.875	6.50	2.375	7.00	3.75	8.25	3.25	8.50	6.00	8.25	2.75	8.25	4.375	7.75	3.00	0.25	
	4.125	7.125	5.625	5.00	3.50	8.50	4.00	3.50	3.25	6.75	5.00	6.25	2.75	1.75	4.625	9.25	
	3.25	8.00	2.50	8.125	3.75	8.25	3.00	6.25	3.625	8.75	8.375	8.00	4.375	8.75	4.00	8.75	
	4.75	8.00	4.50	7.75	3.25	8.25	9.75	5.00	5.25	7.00	2.25	6.75	3.00	4.75	4.00	7.75	
	4.00	8.00	3.00	9.00	4.00	9.00	5.00	8.00	4.375	6.25	2.375	7.25	4.00	8.00	3.00	7.25	
	4.00	7.125	5.625	7.00	4.00	9.00	8.75	7.00	3.625	6.75	7.00	4.25	5.00	2.50	3.375	9.50	
	5.75	7.00	3.625	7.00	6.25	8.75	8.50	9.50	5.625	6.25	6.625	8.00	5.00	7.75	4.625	7.00	
	4.375	7.75	3.625	8.00	5.25	7.00	4.50	9.00	8.75	7.25	6.375	5.75	2.375	2.00	6.00	0.00	
	3.75	8.00	3.00	8.00	3.75	5.25	4.00	9.50	2.30	7.00	5.75	5.75	5.625	9.00	4.375	7.50	
	3.00	7.875	2.50	8.125	3.25	6.50	5.50	7.50	4.75	8.00	6.00	5.50	6.625	9.75	3.375	9.50	
	4.75	0.00	5.50	5.00	5.50	4.50	3.50	3.75	10.00	8.50	5.00	6.00	5.875	6.50	6.625	8.25	
	5.50	4.25	2.75	7.00	8.50	6.00	4.75	8.50	5.75	8.00	6.00	6.00	3.625	9.75	5.625	10.00	
	4.00	7.875	2.50	6.25	5.00	8.25	3.25	7.75	8.375	5.50	4.375	7.25	3.625	7.00	2.625	7.00	
	8.375	9.00	3.125	8.00	4.50	6.75	4.00	8.25	5.00	7.50	4.00	6.25	3.625	7.00	2.625	8.75	
	1.75	3.875	3.625	7.00	3.50	9.00	4.50	8.75	1.625	2.50	12.75	7.50	4.375	7.50	6.625	8.75	
	3.50	8.75	3.125	8.00	3.25	6.00	4.00	8.00	8.60	7.50	6.625	4.00	3.625	8.00	3.375	9.25	
	4.125	8.00	3.00	7.625	6.25	8.75	3.50	8.75	4.00	3.50	4.75	6.75	5.375	7.00	4.625	8.50	
	3.00	8.00	3.50	8.00	5.00	8.25	4.50	7.50	5.375	7.25	5.625	7.75	3.375	8.50	2.625	6.00	
	5.00	8.875	3.375	6.875	6.00	7.75	5.50	7.00	6.50	4.75	3.625	4.00	2.625	7.00	4.75	9.00	
4.625	6.50	3.50	8.50	5.25	8.00	5.00	7.50	8.625	5.25	4.625	6.50	2.625	7.75	2.625	2.25		
2.75	7.25	3.00	7.50	4.50	9.00	5.00	7.50	6.625	8.50	9.625	7.50	2.25	3.50	4.00	8.25		
6.25	8.00	3.50	8.875	2.50	8.00	3.00	3.00	9.375	9.00	2.625	5.75	3.375	4.50	6.625	0.50		
6.125	6.00	5.00	7.75	3.25	6.50	7.25	9.75	4.625	8.50	4.625	6.75	3.00	7.50	3.75	8.50		
2.50	7.50	2.75	7.00	3.75	8.25	3.00	8.00	6.875	7.00	5.625	7.75	5.375	6.75	4.375	8.50		
Totals .....	108.625	185.25	88.25	188.25	106.00	187.00	101.25	186.25	134.25	168.25	134.75	163.25	95.50	169.00	103.625	197.50	

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Recapitulation and reduction:																
Highest .....	8.375	129.20	8.00	45.00	6.25	96.47	9.75	48.75	12.75	196.79	9.50	47.50	6.025	102.25	10.00	50.00
Lowest .....	1.75	27.01	3.875	19.375	2.50	38.59	3.00	15.00	1.625	25.08	2.50	12.50	2.25	34.73	1.75	8.75
Average .....	3.94	60.81	7.37	36.85	4.15	64.05	7.48	37.15	5.38	83.04	6.63	33.15	3.98	61.43	7.33	36.65
Tests above average .....	21		29		20		32		19		29		24		32	
Tests below average .....	29		21		30		18		31		21		26		18	



TABLE II.—Measurements of strain and stretch of wools—Continued.

CALIFORNIA.																	
RAMS, 2 YEARS OLD.																	
Catalogue number of samples..	638.				639.				640.				641.				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.			
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.			
	3.50	0.50	3.50	0.875	6.25	6.25	3.00	8.50	0.00	0.875	8.50	7.75	8.25	2.00	4.75		
	4.25	10.00	11.50	6.50	4.00	8.00	2.75	6.25	6.00	7.875	3.375	8.25	8.00	2.50	3.00		
	0.25	7.50	13.25	8.875	4.00	8.375	8.875	8.60	5.00	0.875	5.375	7.75	2.75	2.25	3.25		
	3.50	7.625	8.00	7.25	2.875	6.00	3.25	7.50	3.00	5.00	3.50	8.75	12.75	1.50	3.50		
	3.75	6.00	4.25	5.75	6.00	7.00	5.25	7.50	4.375	8.50	3.75	7.50	12.75	4.75	3.50		
	3.375	8.00	4.625	7.25	5.25	8.00	2.625	6.25	4.00	7.75	5.00	0.00	8.25	3.00	8.00		
	4.75	9.00	0.875	0.00	2.025	7.00	4.125	7.00	7.125	0.25	7.50	0.50	2.75	2.00	4.00		
	4.75	3.50	3.50	8.875	2.25	5.875	3.00	7.75	6.75	8.875	5.625	5.75	4.00	5.50	3.00		
	4.75	8.25	2.875	9.00	8.00	7.00	3.125	7.50	6.375	0.875	3.875	6.50	3.00	12.00	2.50		
	6.25	6.00	8.375	8.00	3.50	8.00	5.00	7.00	6.00	8.00	7.625	8.25	3.00	3.00	4.00		
	2.00	4.00	3.50	6.25	8.60	6.875	7.125	6.00	7.125	8.75	4.625	7.125	2.75	3.25	2.25		
	3.75	9.00	4.25	6.50	2.375	7.00	5.125	8.00	0.50	8.875	3.50	7.00	3.00	12.00	3.00		
	4.125	7.50	3.50	8.875	5.00	8.625	8.00	4.875	6.25	8.00	3.25	6.75	3.00	7.00	3.00		
	5.375	5.75	2.75	8.875	3.00	7.25	8.00	6.50	3.625	8.50	3.375	9.50	3.00	8.75	3.00		
	4.25	6.00	0.375	5.50	5.75	8.00	4.00	7.375	8.375	6.00	6.75	7.75	6.00	12.75	3.00		
	3.35	8.75	3.375	8.00	3.25	7.00	3.50	7.75	6.50	7.75	5.00	0.50	4.25	2.50	5.00		
	5.00	8.00	2.625	8.875	3.50	7.50	3.125	8.00	3.00	6.00	3.75	6.25	3.00	2.25	4.00		
	6.25	9.50	2.625	8.875	3.50	8.50	6.375	8.00	2.75	8.00	5.625	6.00	3.00	2.00	3.75		
	3.25	8.00	4.875	7.00	4.125	6.00	6.00	7.00	5.00	6.75	10.25	9.00	5.00	4.25	5.50		
5.125	7.50	1.75	5.00	3.375	7.00	3.75	8.00	6.875	7.75	7.75	0.00	4.00	4.75	2.25			
3.00	4.00	13.00	8.875	3.00	6.25	3.00	7.875	4.375	0.875	2.75	8.125	3.00	2.25	3.00			
4.00	8.00	2.25	8.25	4.75	6.50	7.75	5.50	0.875	6.25	0.25	0.00	2.75	1.50	4.25			
5.50	5.25	2.50	7.75	2.625	7.50	2.50	8.25	2.25	0.25	3.25	5.00	3.25	3.00	3.00			
13.375	8.375	2.75	7.25	4.25	8.50	4.00	8.00	7.375	7.50	3.50	6.75	4.50	4.25	8.50			
6.25	6.50	7.625	7.75	4.50	8.75	3.875	7.00	5.375	7.00	5.25	7.00	4.00	4.00	2.00			
Totals .....	117.625	179.00	132.50	190.00	100.75	182.75	96.375	183.125	136.50	201.75	129.00	192.75	85.00	78.00	81.50	90.00	
CALIFORNIA.																	
EWES, 2 YEARS OLD.																	
Catalogue number of samples..	627.				628.				629.				630.				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.			
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.			
	7.25	5.25	5.00	4.50	8.75	2.00	2.00	8.75	4.00	9.75	2.75	7.00	5.50	0.00			
	4.00	2.00	3.75	6.60	1.625	7.25	2.00	8.00	4.25	9.25	3.50	9.00	2.25	6.50			
	5.00	4.75	3.00	4.75	1.75	5.50	2.50	8.50	2.25	8.25	3.00	8.50	5.00	0.00			
	5.25	5.75	8.00	4.75	3.625	8.50	2.625	10.25	3.50	10.00	4.00	7.00	4.00	9.00			
	4.25	4.25	4.00	4.25	2.50	1.75	2.50	8.00	2.25	5.25	3.50	9.50	3.25	0.00			
	6.00	5.00	3.00	5.00	1.625	3.75	1.625	7.50	5.50	9.00	3.50	10.00	3.50	4.25			
	5.00	5.50	8.00	2.00	3.375	8.50	5.25	8.00	4.50	3.25	8.00	8.00	3.75	5.00			
	4.50	7.00	3.00	5.75	1.625	6.50	3.25	8.50	2.00	7.50	3.50	6.50	3.00	0.00			
	3.00	1.25	4.00	5.75	4.625	8.75	2.25	7.25	3.00	9.75	3.75	9.00	3.00	0.50			
	3.25	1.75	5.50	5.75	4.625	8.00	1.75	7.50	3.00	8.00	5.25	8.50	3.50	7.00			
	4.00	4.00	5.75	5.25	2.50	7.25	3.25	8.00	3.50	8.25	3.50	8.75	2.00	8.50			
	4.00	6.00	4.00	4.00	4.00	9.25	1.125	7.00	4.00	16.00	3.00	8.50	3.00	10.25			
	4.00	4.75	10.00	5.00	1.375	7.50	2.00	6.00	2.50	9.25	2.75	9.75	5.25	0.75			
	4.75	6.00	3.00	4.75	2.75	8.00	1.375	3.75	3.75	4.00	3.00	7.50	8.75	0.75			
	0.75	5.00	3.25	5.25	1.625	5.00	2.375	10.00	8.25	7.75	4.50	8.00	2.00	2.00			
	4.00	6.00	4.25	5.00	3.00	9.60	1.75	7.75	2.75	9.75	8.75	10.00	5.50	8.75			
	8.75	3.00	3.75	4.25	2.25	6.75	2.625	8.25	3.00	9.25	3.25	8.25	8.50	11.00			
	7.00	6.00	5.00	5.25	2.625	9.00	2.375	9.00	3.50	7.75	4.60	5.25	4.25	8.25			
	4.75	5.50	5.00	4.75	3.875	8.50	1.625	7.25	6.75	9.25	4.00	10.25	8.00	8.75			
5.00	5.25	3.25	5.00	2.625	9.25	2.00	8.50	3.75	16.25	2.75	4.75	8.00	6.50				
5.25	5.00	3.00	5.25	4.375	8.25	1.25	4.25	4.25	6.00	3.00	9.00	3.25	0.25				
9.00	5.00	3.00	4.60	3.375	9.00	5.25	10.25	4.00	9.00	3.25	9.00	3.25	0.50				
3.50	4.25	3.00	5.75	3.25	7.75	1.50	8.75	5.00	10.00	3.00	9.00	3.50	0.00				
4.00	6.25	2.75	2.00	2.00	3.25	1.625	6.50	4.75	9.00	5.50	7.75	4.00	10.00				
7.00	6.00	3.00	4.25	2.00	8.25	2.375	9.00	4.25	8.25	3.25	7.75	3.00	10.75				
Totals .....	124.25	120.50	99.25	118.25	68.25	175.00	58.25	196.50	95.25	212.75	89.75	206.50	99.50	211.25	83.50	213.25	
CALIFORNIA.																	
EWES, 2 YEARS OLD.																	
Catalogue number of samples..	627.				628.				629.				630.				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.			
Recapitulation and reduction:	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	
	Highest .....	13.25	204.51	10.00	50.00	8.00	123.43	8.75	43.75	10.25	159.20	9.575	49.875	6.00	92.608	7.00	35.00
	Lowest .....	1.75	27.01	3.50	17.50	2.25	34.73	4.875	24.375	2.25	31.73	5.00	25.00	3.00	30.57	1.50	7.50
	Average .....	6.00	77.17	7.38	36.00	3.04	60.81	7.32	36.60	5.31	81.96	7.89	39.45	3.33	51.39	3.39	16.89
Tests above average .....	10		29		21		27		21		25		18		20		
Tests below average .....	33		21		29		23		20		25		32		30		



TABLE II.—Measurements of strain and stretch of wools—Continued.

Catalogue number of samples..		CALIFORNIA.															
		EWES, 2 YEARS OLD.															
		631.				632.				633.				641.			
Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.		
<i>Actual measurement in grams and millimeters.</i>		<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>		
5.625	8.75	2.625	10.50	4.00	8.75	3.25	8.00	6.50	8.50	7.625	9.00	3.125	6.50	4.25	7.375		
2.625	5.50	4.625	9.00	8.50	7.25	5.00	6.00	2.50	8.00	4.00	8.75	2.25	2.75	4.00	2.25		
4.375	7.50	2.375	8.75	4.00	8.75	5.25	8.75	8.50	8.25	6.00	9.00	9.00	8.50	4.50	7.00		
4.375	2.25	2.00	4.50	3.50	7.00	4.00	7.00	4.25	7.50	5.00	9.25	3.50	8.00	4.50	8.125		
3.00	5.00	3.625	6.50	5.50	8.00	3.00	1.75	5.375	8.25	3.50	8.75	2.875	7.00	4.50	7.125		
1.25	6.50	6.75	8.25	5.25	9.00	4.75	6.00	4.00	7.75	5.25	9.60	3.625	7.00	4.00	7.50		
6.25	8.875	7.625	8.125	4.00	7.00	3.50	5.50	2.50	8.25	5.00	7.75	2.50	6.75	4.00	8.125		
3.875	5.75	3.625	9.25	3.25	7.00	3.00	9.00	9.00	8.00	5.875	5.00	4.50	9.00	7.00	9.00		
4.00	7.875	4.625	7.75	4.50	6.00	3.75	6.75	7.50	7.75	4.00	8.00	2.50	3.75	7.50	6.625		
5.375	7.75	6.375	10.00	7.00	7.00	3.00	3.75	3.50	8.75	6.00	7.75	2.75	7.50	3.875	7.25		
2.75	7.50	2.75	9.50	3.25	7.50	4.00	7.50	4.00	6.25	4.25	9.00	2.00	5.00	3.00	5.75		
3.625	8.50	2.50	6.00	4.50	8.00	4.00	3.00	8.00	8.00	3.625	10.25	4.75	5.50	8.00	8.50		
5.375	6.50	5.50	0.50	5.50	8.25	6.00	7.75	10.75	9.00	3.50	9.50	7.00	5.50	8.00	8.00		
5.375	6.50	2.625	7.125	5.00	9.00	6.75	6.50	4.00	9.75	4.625	8.25	5.375	7.875	4.25	6.00		
4.00	10.50	3.375	9.875	5.75	6.00	5.50	8.00	4.375	6.875	8.375	9.00	3.25	6.00	4.00	8.375		
2.50	3.25	5.50	7.50	6.00	7.00	5.00	8.50	4.25	8.00	5.50	9.75	6.375	6.125	5.50	7.00		
3.625	8.00	3.00	6.75	5.00	7.00	5.25	7.75	6.375	8.50	3.75	10.00	4.375	8.25	3.375	7.75		
2.625	0.50	3.375	7.50	3.75	10.03	3.00	7.00	6.125	8.00	5.75	9.25	7.25	7.25	3.50	8.625		
4.375	6.50	3.375	7.125	5.50	7.75	5.25	6.25	3.25	6.50	4.00	8.00	6.25	6.875	4.25	8.125		
5.375	8.25	2.00	5.50	6.25	8.50	3.50	8.25	6.50	6.75	4.00	10.75	5.375	6.00	4.00	9.125		
3.00	8.25	3.00	3.00	5.00	4.00	6.25	7.75	4.625	6.00	7.75	7.25	7.25	8.00	5.50	7.00		
3.75	8.25	5.375	7.50	3.00	7.50	5.25	7.25	4.50	7.75	6.75	8.50	3.625	8.00	4.50	8.00		
2.625	8.00	4.00	6.50	6.00	6.25	6.00	5.75	5.50	8.50	2.75	6.25	6.00	8.25	4.375	7.50		
3.625	7.25	2.875	3.75	5.00	6.25	3.00	3.75	5.625	9.50	10.375	9.00	6.25	7.00	4.25	7.00		
2.00	6.75	3.875	6.25	3.60	1.25	5.75	7.25	4.375	4.875	4.00	6.00	4.00	8.75	3.75	8.00		
Totals .....	100.875	176.25	96.375	186.00	117.60	180.00	112.00	164.75	135.875	195.25	129.75	214.125	110.50	172.875	119.375	190.125	

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	<i>grams.</i>	<i>grains.</i>	<i>mm.</i>	<i>per ct.</i>	<i>grams.</i>	<i>grains.</i>	<i>mm.</i>	<i>per ct.</i>	<i>grams.</i>	<i>grains.</i>	<i>mm.</i>	<i>per ct.</i>	<i>grams.</i>	<i>grains.</i>	<i>mm.</i>	<i>per ct.</i>
Recapitulation and reduction:																
Highest .....	7.625	117.688	10.50	52.50	7.00	108.04	10.00	50.00	10.75	165.92	10.77	53.75	9.00	138.911	9.125	45.625
Lowest .....	2.00	30.869	2.25	11.25	3.00	46.30	1.25	6.25	2.60	38.59	4.875	24.375	2.00	30.869	2.75	13.75
Average .....	3.94	60.812	7.24	36.20	4.95	76.40	6.84	34.20	5.812	81.99	8.187	40.985	4.598	70.969	7.26	36.30
Tests above average .....	21		28		25		33		21		27		17		25	
Tests below average .....	29		22		25		17		29		23		33		25	

Catalogue number of samples..		CALIFORNIA.															
		EWES, 2 YEARS OLD.															
		642.				643.				644.				649.			
Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.		
<i>Actual measurement in grams and millimeters.</i>		<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>		
5.00	4.50	6.50	7.75	6.50	8.25	10.375	8.00	7.50	8.25	4.00	9.25	5.00	7.50	2.625	7.50		
3.00	6.00	7.75	8.25	4.375	9.25	5.50	9.25	3.25	8.50	5.75	8.25	4.25	2.75	3.625	7.875		
9.00	8.00	3.00	4.00	6.625	8.50	4.625	6.00	6.00	7.75	4.00	8.00	12.50	3.875	4.25	10.50		
3.00	3.50	3.25	8.75	6.625	8.75	5.625	8.75	3.00	7.75	6.00	8.00	3.50	6.00	2.375	5.50		
3.25	6.25	6.25	7.00	10.375	9.00	4.125	10.00	4.00	9.00	4.00	9.00	3.625	6.50	2.25	8.50		
2.75	2.50	5.00	6.00	7.25	7.50	3.625	6.50	3.75	7.00	4.00	10.50	4.50	7.25	2.25	6.75		
3.50	7.25	3.50	7.00	5.625	6.50	6.25	5.00	2.75	8.00	3.50	8.25	3.375	5.75	3.00	3.875		
2.00	3.50	7.00	4.75	5.50	3.25	6.375	6.50	2.75	7.75	4.00	8.50	5.00	8.125	5.00	6.875		
10.75	8.75	6.00	9.00	10.375	8.00	4.375	7.50	3.75	8.75	6.00	9.25	4.625	9.00	2.75	6.50		
7.00	7.00	3.25	6.50	7.625	4.00	3.375	4.25	3.00	8.75	4.00	5.75	5.625	3.75	3.00	6.75		
5.75	8.25	6.75	8.00	4.375	7.00	11.50	9.25	3.00	5.75	2.00	3.00	2.25	6.50	4.25	9.00		
14.00	7.75	1.75	6.00	8.625	8.25	3.50	8.125	3.50	8.00	9.00	3.00	3.125	5.00	2.50	5.75		
3.50	4.00	2.60	8.60	14.625	9.00	7.625	7.50	4.25	8.00	3.00	8.00	6.00	7.375	3.50	4.875		
2.60	4.00	4.00	7.50	8.00	8.75	3.625	8.00	3.25	8.75	6.50	8.50	5.00	7.00	7.75	8.00		
7.25	6.75	3.60	8.00	6.75	9.75	4.375	8.50	3.25	9.25	4.00	7.75	3.625	4.25	4.25	6.00		
3.60	6.75	2.75	6.00	5.75	6.50	4.375	6.50	3.60	7.75	3.50	9.25	3.25	6.50	3.50	5.00		
5.00	2.00	2.00	0.00	7.625	8.00	8.625	6.50	3.00	8.00	2.75	6.00	4.375	7.875	4.375	6.50		
9.25	7.00	3.00	8.00	5.375	7.50	7.375	7.00	3.60	10.00	4.00	9.75	3.00	3.75	4.50	3.00		
2.75	6.00	13.00	8.25	7.875	8.125	6.50	9.50	4.50	9.25	4.00	7.00	3.00	8.50	4.50	6.50		
6.00	7.00	2.00	8.00	5.625	7.00	6.00	7.25	2.25	7.00	3.50	7.00	2.375	7.00	4.00	7.25		
4.00	6.00	2.60	4.75	8.375	9.125	7.375	6.75	2.75	6.50	3.00	6.00	2.75	7.875	4.125	6.50		
2.25	6.00	5.25	8.00	5.625	9.75	8.75	4.50	3.75	9.00	3.75	5.00	2.50	4.875	3.25	2.625		
4.00	7.25	2.50	7.75	9.75	8.00	4.375	8.25	3.00	8.50	6.50	8.75	4.375	9.00	2.75	5.00		
3.75	4.75	2.25	8.100	6.60	4.25	4.375	8.00	4.00	9.00	5.75	9.25	3.375	8.875	3.375	7.25		
4.50	8.75	3.50	7.00	6.00	9.25	8.00	8.00	4.50	7.60	5.00	6.50	4.00	7.00	4.375	6.75		
Totals .....	127.25	143.50	106.75	177.75	181.25	193.25	145.125	183.875	91.75	203.75	111.50	194.50	94.625	161.875	92.125	165.625	

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	<i>grams.</i>	<i>grains.</i>	<i>mm.</i>	<i>per ct.</i>	<i>grams.</i>	<i>grains.</i>	<i>mm.</i>	<i>per ct.</i>	<i>grams.</i>	<i>grains.</i>	<i>mm.</i>	<i>per ct.</i>	<i>grams.</i>	<i>grains.</i>	<i>mm.</i>	<i>per ct.</i>
Recapitulation and reduction:																
Highest .....	14.00	216.084	9.00	45.00	14.625	225.73	10.00	50.00	9.00	133.01	10.50	52.50	7.75	119.62	10.50	52.50
Lowest .....	1.75	27.01	2.50	12.50	3.375	52.08	3.25	16.25	2.25	34.728	3.00	15.00	2.125	32.798	2.625	13.125
Average .....	4.68	72.23	6.545	32.725	6.52	100.68	7.57	37.85	4.68	62.66	7.96	39.80	3.74	57.73	6.55	32.75
Tests above average .....	18		29		21		28		13		32					



TABLE II.—Measurements of strain and stretch of wools—Continued.

Catalogue number of samples..		CALIFORNIA.															
		EWES, 2 YEARS OLD.															
		650.				651.				652.				653.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.		
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.		
		4.75	8.75	3.00	8.50	2.25	5.875	4.125	5.25	2.375	5.25	2.00	3.25	6.50	8.50		
		5.25	9.00	4.75	9.75	7.50	8.75	5.375	6.00	3.375	5.00	3.875	8.00	4.00	8.00		
		4.25	6.50	5.00	3.75	2.50	0.125	3.50	3.875	9.00	7.25	2.25	4.00	3.50	5.00		
		9.00	8.50	4.50	9.50	4.00	7.00	4.75	4.50	2.25	3.50	3.50	6.00	3.75	7.00		
		4.25	8.25	10.50	10.00	3.50	7.50	3.00	4.25	1.625	2.00	3.75	2.75	4.00	5.50		
		5.00	7.00	3.25	9.50	3.00	7.50	2.875	6.875	2.875	7.25	4.75	7.25	3.25	7.00		
		6.25	7.50	3.50	6.50	2.625	7.25	6.50	6.25	3.00	6.00	2.50	2.75	5.50	9.50		
		4.75	8.00	3.50	8.75	4.125	7.125	3.375	5.50	3.00	6.25	2.75	4.75	3.25	8.00		
		8.75	8.75	4.50	9.75	4.00	7.00	2.675	4.00	2.00	2.75	4.25	5.25	4.75	6.50		
		4.50	7.75	3.50	7.50	5.75	7.25	3.00	5.25	2.50	1.75	3.75	6.25	5.01	8.00		
		6.00	9.75	5.25	8.00	5.25	8.00	4.75	8.00	2.375	5.50	4.75	6.00	7.25	9.00		
		4.00	6.00	6.00	9.25	5.375	9.00	5.50	6.375	4.375	7.25	4.25	7.75	5.25	9.75		
		4.00	6.75	5.25	8.00	4.75	5.625	6.50	7.00	2.00	4.00	2.75	2.75	7.25	9.75		
		5.75	8.75	5.50	9.00	4.00	2.25	5.375	6.00	1.625	4.00	2.25	3.00	4.00	8.75		
		4.50	9.75	4.75	7.75	3.75	5.00	2.50	6.50	2.625	8.00	3.25	1.50	4.00	8.00		
		4.00	8.00	4.75	7.75	4.875	5.00	6.00	7.00	3.50	6.75	3.00	2.25	4.75	8.50		
		2.75	5.50	4.25	8.75	6.25	6.50	5.00	7.50	3.00	7.50	8.25	7.00	5.00	9.75		
		6.00	8.25	6.25	9.50	2.625	5.00	3.00	6.375	2.50	6.875	7.50	0.75	5.00	7.75		
		9.00	4.50	2.75	7.75	3.75	2.675	5.75	7.00	3.25	6.00	3.25	7.125	5.75	10.00		
		4.25	9.00	3.00	8.00	3.125	4.75	7.00	7.00	4.75	7.75	3.00	2.25	3.75	6.00		
		5.00	8.50	3.75	8.50	6.625	7.50	4.00	5.125	6.00	7.00	2.25	1.125	3.50	8.00		
		4.75	8.75	3.00	8.50	5.375	7.00	6.50	8.25	3.00	4.00	5.00	4.125	6.50	9.00		
		6.00	8.75	4.50	8.00	8.00	7.00	4.00	7.50	5.25	7.50	4.75	5.375	4.50	7.50		
		5.75	8.00	6.50	10.00	4.50	7.00	5.25	5.20	5.00	6.00	2.125	3.25	5.25	10.50		
		14.00	10.00	8.75	9.50	4.00	6.00	2.875	3.00	2.50	5.00	4.25	3.25	6.00	9.00		
Totals .....		142.60	200.25	120.25	214.75	110.00	159.875	113.375	143.625	77.25	130.125	94.00	105.75	120.25	203.25		
		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation:		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....		14.00	210.08	10.00	50.00	8.00	123.48	9.00	45.00	8.25	127.34	8.00	40.00	8.25	127.34	10.50	52.50
Lowest .....		2.75	42.45	4.50	22.50	2.25	34.73	2.25	11.25	1.625	25.08	0.75	3.75	3.00	46.80	2.50	12.50
Average .....		5.20	81.186	8.25	41.40	4.47	68.89	6.17	30.85	3.43	52.94	5.49	27.45	4.86	75.911	7.63	38.15
Tests above average .....		15		27		24		27		19		28		24		29	
Tests below average .....		35		23		20		23		31		22		26		21	

Catalogue number of samples..		CALIFORNIA.															
		EWES, 2 YEARS OLD.															
		654.				655.				656.				658.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.		
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.		
		6.50	7.00	4.25	8.25	3.25	6.50	3.50	4.75	8.75	5.25	2.625	9.00	10.00	8.00		
		2.75	1.50	8.50	9.75	2.75	5.25	2.75	6.00	4.25	7.75	2.25	2.25	3.75	8.25		
		4.00	7.25	3.25	5.50	5.25	8.75	3.00	2.00	4.50	2.25	4.625	9.25	3.50	4.00		
		4.75	9.50	3.75	8.25	4.50	4.75	2.25	1.00	3.75	7.75	5.00	9.00	6.60	7.50		
		4.75	8.00	5.00	7.00	8.00	8.00	2.75	3.50	4.25	6.75	6.00	9.25	4.00	6.50		
		4.00	4.50	8.50	4.75	6.25	7.75	5.50	8.75	3.50	3.75	3.625	9.25	6.00	7.00		
		4.00	7.25	6.00	7.75	4.25	2.25	3.00	5.25	5.75	8.50	3.375	8.25	5.25	9.00		
		4.25	8.00	4.00	4.75	3.00	2.00	5.50	7.50	4.50	6.00	13.75	5.50	8.75	6.50		
		3.00	4.25	2.75	1.75	4.00	9.25	3.75	5.50	2.50	2.00	6.375	6.75	5.75	8.00		
		3.00	3.00	4.75	8.75	3.00	1.50	3.00	3.00	13.75	1.00	4.00	6.50	7.00	10.25		
		4.75	6.00	6.50	1.75	3.50	6.00	3.50	7.00	3.75	6.25	2.625	6.25	5.25	7.00		
		7.00	8.50	5.75	8.00	7.00	8.75	3.00	8.00	2.625	3.75	3.375	7.75	6.25	6.25		
		6.75	9.75	3.00	8.75	2.25	1.75	6.00	9.25	5.00	6.50	6.00	4.25	7.25	9.25		
		5.25	1.75	3.25	7.25	2.75	5.50	5.25	7.25	4.00	8.00	5.625	8.75	5.50	7.00		
		3.50	7.50	3.50	8.00	3.50	7.25	2.75	1.00	3.00	6.50	3.625	8.75	4.00	6.00		
		4.25	9.50	7.75	9.00	2.50	6.00	3.00	1.25	6.625	4.25	7.375	6.75	6.25	9.00		
		3.75	5.00	3.00	1.50	3.25	8.00	3.00	2.00	2.25	1.50	3.375	5.75	4.00	7.00		
		4.25	4.75	4.00	6.75	6.50	9.75	6.00	8.00	4.00	8.25	4.375	9.50	4.00	6.75		
		2.75	2.00	4.00	9.50	2.50	2.00	3.25	5.00	5.00	9.00	1.00	1.00	3.00	6.25		
		3.75	3.25	3.25	3.00	3.00	4.75	7.50	8.75	4.375	6.63	3.375	4.25	4.25	6.75		
		7.00	9.50	2.50	2.50	4.00	5.00	3.50	8.25	3.375	7.25	3.375	10.00	6.50	8.25		
		4.00	3.50	5.50	8.75	3.50	7.00	3.00	4.00	4.25	7.00	2.625	6.50	6.00	8.25		
		3.75	7.00	4.25	2.00	4.00	5.25	4.00	8.00	3.00	4.75	4.75	8.25	4.00	7.25		
		6.25	9.00	3.25	3.25	4.00	5.75	3.25	2.00	3.625	7.50	6.25	9.25	5.50	9.00		
		8.50	3.50	3.50	4.25	5.25	8.50	3.00	5.75	4.375	0.75	5.00	6.25	6.75	9.75		
Totals .....		110.00	152.75	108.75	161.75	98.75	147.25	65.00	130.75	99.375	145.25	100.00	173.25	133.00	182.50		
		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation:		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....		8.50	131.94	8.75	48.75	7.50	115.76	9.75	48.75	7.875	114.829	10.00	50.00	10.25	158.20	10.00	50.00
Lowest .....		2.50	38.59	1.50	7.50	2.25	34.73	1.00	5.00	1.00	15.435	1.00	5.00	3.00	46.80	1.75	8.75
Average .....		4.38	67.603	6.29	31.45	3.88	50.87	5.50	27.80	3.99	61.58	6.47	32.35	5.13	70.03	7.05	39.75
Tests above average .....		16		30		19		26		20		20		24		20	
Tests below average .....		34		20		31		24		24		21		26		30	



TABLE II.—Measurements of strain and stretch of wools—Continued.

Catalogue number of samples..		CALIFORNIA.															
		EWES, 2 YEARS OLD.															
		659.				660.				661.				662.			
Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.		
grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.		
3.00	5.75	0.00	6.00	2.75	6.75	3.50	8.25	4.00	6.00	5.25	9.25	4.375	7.75	5.375	7.75		
5.00	5.00	2.00	2.00	6.00	9.50	3.00	8.00	4.75	7.00	8.75	7.25	4.25	10.25	2.75	9.00		
2.375	4.125	3.625	3.50	2.00	0.50	4.625	8.50	5.50	8.00	4.00	9.00	4.375	8.50	3.375	8.25		
3.50	5.00	2.50	2.00	4.00	5.875	2.50	4.875	4.00	3.50	5.00	8.50	5.375	8.00	1.625	4.50		
2.375	2.00	2.50	3.875	3.00	9.25	2.50	5.25	4.00	8.00	4.75	8.00	2.00	3.00	3.00	7.75		
3.875	7.125	3.00	4.25	5.00	8.875	1.75	7.50	6.75	8.00	5.00	9.00	4.50	8.75	1.625	7.00		
2.625	4.125	4.25	7.00	3.50	9.00	4.375	5.25	5.50	7.00	4.50	8.00	4.625	8.50	3.50	9.25		
2.50	5.00	3.25	2.00	4.025	8.25	2.75	6.00	6.50	8.25	5.50	8.25	4.50	9.75	4.375	10.00		
2.375	4.00	2.00	2.125	3.00	8.75	3.75	8.00	5.75	8.00	4.50	8.50	5.75	8.00	2.75	9.25		
2.125	4.875	2.625	2.50	2.60	7.25	3.00	7.00	6.00	7.75	5.00	9.00	1.50	1.00	2.00	7.75		
6.00	7.125	5.00	3.00	1.50	5.00	4.50	9.00	5.75	8.00	5.75	9.00	9.625	8.00	2.00	7.25		
5.75	0.25	2.875	3.125	3.00	7.75	3.25	7.25	3.00	5.00	5.00	10.00	2.375	3.00	3.625	10.50		
3.25	3.00	2.125	4.875	3.025	8.50	1.75	7.25	4.00	3.50	5.00	8.00	1.625	2.00	1.625	4.25		
4.625	4.025	2.125	6.00	5.25	6.75	3.50	8.25	4.00	9.00	4.00	10.00	3.25	3.875	2.50	7.25		
3.50	2.00	3.25	6.125	3.50	9.25	3.25	9.00	4.75	8.75	4.00	8.00	2.25	3.00	3.375	10.25		
2.75	2.75	1.875	3.75	3.00	8.75	3.50	10.00	6.25	8.75	2.75	8.50	2.625	3.75	3.00	8.75		
2.125	4.00	3.00	4.875	4.50	9.50	3.00	8.75	5.75	9.50	8.00	9.00	3.50	8.25	1.625	1.75		
3.50	2.00	2.50	2.75	4.375	9.75	3.00	9.75	5.25	9.00	3.50	9.00	4.00	3.00	3.50	7.75		
2.00	3.375	1.875	3.25	2.375	9.25	3.25	10.125	3.75	3.25	4.00	8.75	3.00	8.125	3.625	10.00		
3.25	4.00	2.00	4.75	4.75	8.50	2.00	8.00	3.00	5.00	3.00	8.00	5.25	5.25	5.00	10.00		
5.375	4.875	2.125	4.25	3.025	9.00	3.025	9.00	5.50	7.25	5.00	7.25	1.25	4.00	3.00	7.75		
1.75	2.00	2.375	6.00	3.25	8.875	3.025	7.625	6.00	8.00	4.00	8.00	3.375	9.25	2.625	4.50		
1.75	3.125	1.875	3.125	2.50	7.75	3.00	10.00	3.25	5.25	3.00	6.75	3.625	0.25	6.625	8.25		
5.25	4.875	3.25	5.00	3.00	8.00	3.00	8.00	3.25	4.50	3.00	8.00	1.625	7.25	3.75	9.00		
5.00	4.00	3.625	8.00	5.00	6.875	2.25	6.75	4.00	0.75	4.75	9.00	2.375	3.00	2.75	10.50		
Totals .....	85.625	105.00	71.625	104.125	91.125	200.00	78.75	202.375	123.25	187.25	112.00	192.00	96.50	164.50	80.00	198.25	

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Highest.....	6.00	92.61	7.125	35.625	6.00	92.608	10.00	50.00	8.75	135.05	10.00	50.00	9.625	148.56	10.50	52.50
Lowest.....	1.75	27.011	2.00	10.00	1.50	23.152	5.00	25.00	3.00	45.30	3.50	17.50	1.25	19.29	1.00	5.00
Average.....	3.145	48.54	4.183	20.915	3.396	52.416	8.046	40.23	4.70	72.54	7.58	37.90	3.53	54.43	7.255	36.275
Tests above average.....	21		23		24		25		26		38		20		33	
Tests below average.....	29		27		20		25		24		12		30		17	

Catalogue number of samples..		CALIFORNIA.															
		EWES, 2 YEARS OLD.															
		663.				664.				665.				666.			
Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.		
grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.		
5.75	7.00	4.00	0.50	6.375	8.25	3.75	0.00	3.25	6.875	2.50	4.875	4.50	7.00	3.25	6.25		
3.75	7.00	3.50	8.00	5.00	9.125	4.50	9.00	4.00	8.00	4.375	7.875	3.375	8.50	6.375	9.00		
7.50	10.00	4.00	7.50	3.50	10.25	3.75	4.875	3.50	7.125	4.00	8.125	2.00	3.50	2.375	7.75		
3.25	8.50	3.75	9.75	7.25	7.00	2.50	8.875	3.025	7.00	3.25	7.00	10.375	9.75	5.50	7.75		
4.00	5.50	4.75	8.00	4.50	7.00	4.00	7.50	2.25	5.00	2.875	6.00	3.625	8.50	2.375	6.25		
6.00	8.50	5.00	7.25	3.375	7.50	4.25	7.00	2.50	3.00	5.00	8.00	1.375	2.00	1.75	7.50		
3.25	5.00	2.75	8.00	3.375	3.875	6.50	8.00	3.25	6.00	3.00	6.00	3.625	8.125	1.375	3.75		
5.25	7.75	3.50	8.09	3.50	5.25	5.35	5.75	2.625	4.875	3.125	7.00	7.625	8.00	6.50	9.00		
3.25	6.00	3.25	8.50	3.00	6.75	4.375	8.75	3.00	4.875	4.25	7.75	5.375	7.75	2.50	9.75		
2.75	7.00	4.00	9.00	4.25	7.50	3.375	6.00	2.875	7.00	2.00	2.875	2.375	4.25	5.625	9.00		
3.25	7.00	5.25	6.50	6.75	6.25	6.00	9.00	3.125	6.75	4.00	7.50	2.50	4.00	4.375	6.25		
3.50	6.00	3.75	8.50	3.50	7.75	4.50	8.25	2.25	3.75	4.625	6.25	8.625	9.25	3.00	7.75		
8.00	7.75	6.25	0.75	4.50	7.75	3.00	6.75	3.625	5.00	5.00	8.00	2.625	7.125	6.375	8.00		
6.75	0.25	4.00	8.50	7.00	0.50	3.625	6.375	3.00	6.125	3.25	8.00	5.50	7.75	3.00	5.75		
4.00	8.00	3.00	9.75	3.00	4.875	4.375	7.00	5.00	8.875	3.125	6.125	5.625	9.00	2.625	10.00		
4.00	6.00	5.00	9.00	4.00	5.00	3.50	0.00	2.25	4.00	2.875	5.00	3.50	7.00	2.25	0.125		
4.00	8.00	5.00	8.25	4.50	9.00	7.00	0.75	2.50	2.25	2.50	5.75	2.75	6.25	2.00	7.00		
4.00	8.00	4.50	0.25	3.25	6.25	10.75	9.00	3.50	6.875	2.625	4.00	3.00	2.50	3.25	8.25		
5.00	7.00	4.00	0.75	3.00	7.875	7.25	5.75	2.25	2.875	2.875	3.125	3.50	10.25	8.375	7.75		
4.00	4.75	3.25	8.00	0.00	6.75	4.00	8.75	2.25	6.00	3.25	7.375	2.625	5.50	5.375	9.00		
0.00	6.00	3.00	8.00	6.625	7.75	5.75	4.875	3.625	5.75	3.00	8.00	2.375	9.00	3.375	4.00		
4.00	6.50	6.25	6.50	0.00	3.50	6.625	8.00	2.375	2.25	3.00	7.00	2.625	0.25	2.625	8.00		
4.00	7.00	4.00	8.25	3.875	8.75	4.00	8.75	4.00	7.00	3.125	8.00	2.625	0.75	2.625	5.75		
8.25	8.00	4.50	11.00	3.50	8.875	5.50	9.00	2.75	3.375	7.00	3.25	7.125	4.00	5.25	9.25		
Totals .....	111.50	178.25	105.50	212.50	116.625	191.125	121.25	192.50	70.75	140.375	85.375	165.25	98.50	160.50	86.125	186.125	

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Highest.....	7.50	115.76	11.00	55.00	10.75	105.92	10.25	15.25	5.00	77.173	8.875	44.375	10.375	160.134	10.25	61.25
Lowest.....	3.00	46.804	3.50	17.50	3.00	46.304	4.875	24.375	2.00	30.869	2.25	11.25	1.375	21.22	2.00	10.00
Average.....	4.34	66.966	7.815	39.075	4.733	73.437	7.673	38.365	3.243	50.05	6.113	30.565	3.09	50.85	7.333	36.665
Tests above average.....	19		30		18		28		23		29		15		29	
Tests below average.....	31		20		32		22		27		21		35		21	



TABLE II.—Measurements of strain and stretch of wools—Continued.

Catalogue number of samples.....		CALIFORNIA.												
		EWES, 2 YEARS OLD.								EWES, 3 YEARS OLD.				
		667.				668.				645.				
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
Actual measurement in grams and millimeters.		7.25	7.75	5.75	7.00	3.875	8.25	4.50	10.50	6.00	6.50	7.50	6.125	6.00
		5.50	9.50	5.50	8.50	4.50	9.00	4.25	9.50	5.125	8.00	4.25	6.00	6.00
		6.00	8.25	7.00	6.75	3.25	8.00	4.00	10.00	3.125	5.00	2.875	6.00	6.00
		4.25	6.00	6.00	10.00	2.50	7.00	3.025	9.00	10.25	6.25	5.25	7.25	6.00
		0.00	5.25	3.25	8.25	3.00	10.25	3.00	8.00	4.00	6.75	3.375	6.25	6.00
		4.75	4.00	0.00	8.00	4.00	9.50	3.375	8.75	3.25	5.125	6.375	6.00	6.00
		5.00	5.25	4.25	8.00	3.375	9.00	4.25	9.50	3.875	7.00	4.50	1.50	1.50
		6.00	4.75	7.50	5.00	2.75	8.75	4.00	10.00	3.50	8.00	6.25	0.00	0.00
		7.00	7.00	3.75	5.00	3.25	10.75	6.50	9.00	9.00	7.25	2.50	4.25	4.25
		5.00	9.00	7.00	8.00	3.50	8.75	2.75	8.00	5.375	6.00	8.25	0.25	0.25
		8.75	8.00	8.50	10.00	4.875	10.25	4.00	9.00	6.875	4.60	4.00	0.50	0.50
		3.75	11.00	8.50	8.75	3.375	9.875	2.025	6.25	3.25	6.75	2.75	3.125	3.125
		3.00	1.50	10.75	9.00	4.25	9.00	2.25	6.25	2.125	5.125	5.875	7.125	7.125
		11.00	10.00	4.50	6.00	2.025	9.00	6.25	9.00	4.75	8.00	4.375	6.00	6.00
		5.00	8.00	0.00	7.25	4.50	10.50	5.75	9.00	4.625	6.50	4.00	1.50	1.50
		5.75	9.00	14.00	7.00	3.25	9.50	4.875	10.75	4.00	5.00	3.75	8.25	8.25
		7.25	10.00	6.00	8.25	2.25	10.00	2.25	8.00	4.50	7.75	4.50	6.675	6.675
		0.00	8.25	2.75	8.50	4.00	10.00	8.25	9.25	4.625	4.00	6.25	6.00	6.00
		9.50	0.00	6.50	8.00	2.75	9.50	5.50	9.75	3.00	4.125	9.75	8.00	8.00
		10.00	6.50	8.00	7.25	2.00	0.00	3.25	8.00	2.25	6.00	4.50	6.75	6.75
8.00	0.50	11.00	10.00	4.125	8.875	3.00	8.75	8.75	7.00	3.75	7.00	7.00		
5.50	8.00	7.00	6.50	4.25	9.75	3.025	8.00	6.75	8.00	4.75	3.00	3.00		
8.25	8.00	5.00	7.75	2.875	9.00	5.50	7.00	7.50	6.875	5.875	3.00	3.00		
7.00	8.00	6.75	7.00	3.25	7.00	3.50	7.25	3.75	6.25	6.50	8.00	8.00		
8.50	9.00	6.00	8.00	4.00	8.25	3.375	8.00	3.875	7.00	4.00	4.00	4.00		
Totals .....	163.00	190.50	165.25	193.75	85.875	224.75	95.75	216.50	118.125	159.75	119.25	144.125		

		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
		grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Recapitulation and reduction:		11.00	169.78	11.00	55.00	6.50	100.325	10.75	53.75	10.25	158.20	8.25	41.25
Highest .....		3.00	45.304	1.50	7.50	2.00	89.869	6.00	60.00	2.125	32.80	1.50	7.50
Lowest .....		6.565	119.828	7.685	38.425	3.633	56.074	8.83	44.15	4.71	72.70	6.08	30.40
Average .....													
Tests above average.....		23		33		21		32		18		28	
Tests below average.....		27		18		29		18		32		22	

Catalogue number of samples.....		CALIFORNIA.											
		EWES, 3 YEARS OLD.											
		610.				647.				648.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
Actual measurement in grams and millimeters.		2.75	9.50	5.00	9.25	7.75	7.25	2.00	4.50	8.25	8.75	3.25	8.00
		6.25	10.25	2.75	7.00	2.625	5.00	3.625	7.75	5.75	8.25	6.75	9.50
		3.00	8.75	2.50	4.50	2.50	5.25	6.00	8.75	3.25	8.50	3.25	6.50
		4.50	10.00	2.25	2.75	6.00	8.25	1.025	2.60	4.25	0.00	4.00	7.75
		8.00	5.25	5.75	8.50	5.875	7.25	6.00	7.50	7.00	7.75	4.50	5.50
		6.75	8.75	8.25	10.25	2.625	8.25	4.25	9.00	2.25	9.00	4.25	8.50
		2.75	5.00	2.50	6.50	1.375	1.75	7.50	8.50	3.00	0.00	3.25	8.00
		2.00	7.75	4.25	9.00	2.00	5.25	4.00	10.00	4.00	7.00	4.50	8.50
		2.25	6.75	6.00	10.00	5.375	6.75	8.50	5.00	6.50	11.00	4.00	5.75
		3.00	7.75	3.00	6.00	8.00	8.00	8.00	7.00	2.75	0.00	6.50	6.25
		2.50	8.00	3.25	8.50	5.625	7.75	3.50	8.50	9.00	8.60	0.25	0.00
		2.50	8.75	3.50	9.00	8.75	9.75	4.75	0.00	5.50	7.00	8.75	0.00
		4.00	9.50	4.25	9.00	4.625	10.00	4.00	2.00	3.50	3.00	4.00	0.75
		5.25	9.50	3.25	9.00	4.625	8.25	6.50	7.75	8.50	6.75	3.00	2.25
		8.00	6.50	3.75	8.50	3.00	9.50	6.00	9.75	8.00	8.75	6.25	6.00
		3.25	9.50	2.25	9.00	8.00	7.50	6.375	0.00	8.00	0.00	4.75	7.00
		3.25	10.00	3.00	8.00	2.625	8.75	3.625	8.00	7.00	9.75	3.00	8.50
		2.50	8.75	3.50	10.25	2.625	7.00	2.625	8.00	10.25	8.00	4.00	7.25
		2.50	8.00	3.25	9.75	4.25	7.75	5.00	7.75	6.50	10.25	5.00	3.00
		3.00	9.50	4.00	9.75	3.625	8.50	4.375	6.50	6.75	9.75	9.00	7.50
2.75	5.50	3.00	8.75	4.375	8.50	2.625	4.75	7.25	0.00	5.75	8.75		
4.00	9.25	2.75	8.00	5.25	7.00	4.875	9.00	4.75	7.25	4.60	7.00		
4.75	8.75	3.00	9.00	5.50	8.25	2.75	5.50	6.00	10.00	11.00	2.25		
3.00	9.50	6.00	8.50	4.625	7.25	2.875	8.25	3.75	6.25	10.00	8.50		
8.00	9.00	2.00	6.00	1.625	1.25	4.625	9.75	3.00	9.00	4.00	6.00		
Totals .....	85.50	209.75	88.00	208.75	101.75	170.00	117.00	177.00	184.75	209.50	132.50	193.00	

		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
		grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Recapitulation and reduction:		6.75	104.18	10.25	51.25	8.50	131.19	10.00	50.00	11.00	169.78	11.00	53.00
Highest .....		2.00	80.87	4.50	22.50	1.025	25.09	1.25	6.25	2.75	42.44	2.25	11.25
Lowest .....		3.47	53.58	8.37	41.85	4.38	67.60	6.94	34.70	5.33	82.27	8.55	40.25
Average .....													
Tests above average.....		17		34		22		38		21		29	
Tests below average.....		33		10		28		12		29		21	



TABLE III.—Extreme and average measurements of fineness of wools.

Catalogue number of sample.	Highest.		Lowest.		Average.		Catalogue number of sample.	Highest.		Lowest.		Average.	
	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.
<b>VERMONT.</b>							<b>NEW YORK—Continued.</b>						
<b>RAMS.</b>							<b>EWES—continued.</b>						
<b>2 years old:</b>							<b>2 years old:</b>						
423	3.25	1.2795	1.00	0.3937	2.157	0.8492	687	3.25	1.2795	1.125	0.4420	1.969	0.7630
525	4.00	1.5748	1.50	0.5905	2.443	0.9618	688	3.00	1.1811	1.125	0.4429	2.117	0.8384
534	3.125	1.2303	1.00	0.3937	1.788	0.7039	689	4.00	1.5748	1.50	0.5905	2.304	0.9307
543	3.625	1.4271	1.25	0.4921	1.861	0.7329	690	3.50	1.3779	1.50	0.5905	2.163	0.8515
Average	3.50	1.3779	1.19	0.4085	2.06	0.8110	694	3.59	1.3779	1.375	0.5413	2.089	0.8224
<b>3 years old:</b>							<b>3 years old:</b>						
626	3.75	1.4763	1.375	0.5413	2.335	0.9192	695	3.50	1.3779	1.125	0.4429	2.337	0.9200
530	3.50	1.3779	1.50	0.5905	2.058	0.8394	696	4.125	1.6240	1.375	0.5413	2.358	0.9283
533	3.75	1.4763	1.00	0.3937	1.983	0.7807	697	3.50	1.3779	1.375	0.5413	2.31	0.9094
535	3.50	1.3779	1.50	0.5905	2.245	0.8838	<b>Average</b> ..... 3.375 1.3287 1.227 0.4850 2.098 0.8259						
637	2.875	1.1318	1.375	0.5413	1.906	0.7503	<b>PENNSYLVANIA.</b>						
540	3.50	1.3779	1.375	0.5413	2.039	0.8027	<b>RAMS.</b>						
545	3.25	1.2795	1.00	0.3937	2.011	0.7917	<b>Lambs:</b>						
554	2.875	1.1318	1.125	0.4429	2.070	0.8183	670	2.825	1.0334	1.00	0.3937	1.694	0.6669
555	3.75	1.4763	1.125	0.4429	2.237	0.8807	674	2.75	1.0826	1.00	0.3937	1.83	0.7204
569	3.875	1.5255	1.00	0.3937	2.23	0.8779	677	3.50	1.3779	1.50	0.5905	2.12	0.8346
Average	3.463	1.3633	1.238	0.4870	2.122	0.8354	678	3.375	1.3287	1.125	0.4429	2.10	0.8267
<b>EWES.</b>							<b>Lambs:</b>						
<b>2 years old:</b>							<b>2 years old:</b>						
424	3.00	1.811	1.125	0.4429	2.014	0.7929	679	3.00	1.1811	1.50	0.5905	2.08	0.8188
542	2.625	1.0334	1.00	0.3937	1.622	0.6355	779	3.00	1.1811	1.50	0.5905	2.05	0.8070
Average	2.812	1.1070	1.062	0.4181	1.818	0.7157	<b>Average</b> ..... 3.125 1.2303 1.188 0.4677 1.979 0.7791						
<b>3 years old:</b>							<b>2 years old:</b>						
622	3.875	1.5255	1.25	0.4921	1.97	0.7755	582	2.25	0.8858	0.875	0.3448	1.39	0.5472
523	3.00	1.1811	1.375	0.5413	1.963	0.7728	583	2.00	0.7874	1.00	0.3937	1.48	0.5820
524	3.50	1.3779	1.50	0.5905	2.07	0.8149	584	2.00	0.7874	1.00	0.3937	1.89	0.5472
527	3.75	1.4763	1.25	0.4921	1.982	0.7803	585	2.125	0.8366	1.00	0.3937	1.51	0.5944
528	3.875	1.5255	1.25	0.4921	1.982	0.7803	586	2.50	0.9842	0.75	0.2953	1.66	0.6535
529	2.75	1.0826	1.375	0.5413	2.00	0.7874	587	2.00	0.7874	1.00	0.3937	1.44	0.5669
531	3.00	1.1811	1.125	0.4429	1.93	0.7598	<b>Average</b> ..... 2.146 0.8448 0.937 0.3689 1.48 0.5826						
532	3.50	1.3779	1.25	0.4921	2.261	0.8901	<b>WETHERS.</b>						
536	3.00	1.1811	1.25	0.4921	2.081	0.8192	<b>2 years old:</b>						
538	3.00	1.1811	1.50	0.5905	2.055	0.8090	780	2.625	1.0334	1.375	0.5413	1.93	0.7598
539	3.00	1.1811	1.00	0.3937	1.863	0.7334	781	3.125	1.2303	1.125	0.4429	2.094	0.8244
541	2.75	1.0826	0.875	0.3448	1.651	0.6499	<b>Average</b> ..... 2.875 1.1318 1.25 0.4921 2.012 0.7921						
544	8.00	1.1811	1.00	0.3937	1.79	0.7047	<b>EWES.</b>						
546	2.75	1.0826	1.00	0.3937	1.749	0.6885	<b>Lambs:</b>						
547	2.75	1.0826	1.00	0.3937	1.794	0.7062	575	3.75	1.4763	1.00	0.3937	1.85	0.7283
548	3.25	1.2795	1.125	0.4429	1.853	0.7295	676	3.00	1.1811	1.125	0.4429	1.81	0.7125
549	3.50	1.3779	1.125	0.4429	2.010	0.7913	<b>Average</b> ..... 3.375 1.3287 1.063 0.4185 1.83 0.7204						
650	3.625	1.4271	1.125	0.4429	1.982	0.7803	<b>2 years old:</b>						
551	3.00	1.1811	1.00	0.3937	2.033	0.8003	772	2.625	1.0334	1.50	0.5905	1.96	0.7716
552	3.00	1.1811	1.25	0.4921	2.103	0.8279	773	3.00	1.1811	1.25	0.4921	1.97	0.7755
553	2.75	1.0826	1.00	0.3937	1.760	0.6964	774	3.00	1.1811	1.00	0.3937	1.89	0.7440
556	3.00	1.1811	1.375	0.5413	2.019	0.7948	775	3.50	1.3779	1.50	0.5905	2.13	0.8585
557	2.75	1.0826	1.375	0.5413	1.941	0.7641	776	2.50	1.0826	1.125	0.4429	1.77	0.6968
558	3.50	1.3779	1.25	0.4921	2.021	0.7950	777	2.50	0.9842	1.25	0.4921	1.85	0.7283
559	3.00	1.1811	1.25	0.4921	1.956	0.7700	778	3.00	1.1811	1.00	0.3937	1.79	0.7047
600	3.25	1.2795	1.25	0.4921	1.934	0.7614	<b>Average</b> ..... 2.911 1.1460 1.232 0.4850 1.91 0.7519						
581	3.25	1.2795	1.375	0.5413	2.151	0.8468	<b>3 years old:</b>						
602	3.125	1.2303	1.00	0.3937	2.020	0.7952	581	2.50	0.9842	1.00	0.3937	1.74	0.6850
Average	3.161	1.2444	1.232	0.4850	1.962	0.7724	688	2.00	0.7874	1.125	0.4429	1.65	0.6495
<b>NEW YORK.</b>							<b>WISCONSIN.</b>						
<b>RAMS.</b>							<b>EWES.</b>						
<b>2 years old:</b>							<b>1 year old:</b>						
609	3.00	1.1811	1.25	0.4921	1.90	0.7480	741	3.00	1.1811	1.00	0.3937	2.017	0.7940
670	2.75	1.0826	1.375	0.5413	1.86	0.7322	742	3.00	1.1811	1.25	0.4921	1.941	0.7641
671	3.25	1.2701	1.25	0.4921	2.066	0.8133	743	3.00	1.1811	1.25	0.4921	2.002	0.7881
672	4.50	1.7716	1.125	0.4429	1.96	0.7716	<b>Average</b> ..... 3.00 1.1811 1.167 0.4988 1.986 0.7818						
673	2.50	0.9842	1.25	0.4921	1.787	0.7085	<b>2 years old:</b>						
674	2.50	0.9842	1.125	0.4429	1.79	0.7047	698	2.50	0.9842	1.125	0.4429	1.804	0.7118
675	3.00	1.1811	1.25	0.4921	1.896	0.7464	699	3.75	1.4763	1.25	0.4921	1.965	0.7736
676	2.50	0.9842	1.125	0.4429	1.92	0.7559	704	3.00	1.1811	1.00	0.3937	1.871	0.7309
677	3.00	1.1811	1.25	0.4921	2.05	0.8070	708	3.00	1.1811	1.00	0.3937	1.845	0.7263
681	3.125	1.2303	1.00	0.3937	1.967	0.7744	<b>Average</b> ..... 2.216 0.8724 1.023 0.4027 1.359 0.6137						
682	4.125	1.6240	1.375	0.5413	2.348	0.9236	<b>WISCONSIN.</b>						
692	2.50	0.9842	1.375	0.5413	1.916	0.7543	<b>EWES.</b>						
693	2.875	1.1318	1.25	0.4921	1.958	0.7700	<b>1 year old:</b>						
Average	3.048	1.1099	1.231	0.4846	1.955	0.7696	741	3.00	1.1811	1.00	0.3937	2.017	0.7940
<b>EWES.</b>							<b>2 years old:</b>						
<b>2 years old:</b>							<b>2 years old:</b>						
679	2.75	1.0826	1.125	0.4429	1.870	0.7385	741	3.00	1.1811	1.25	0.4921	1.941	0.7641
680	3.50	1.3779	1.25	0.4921	2.15	0.8464	742	3.00	1.1811	1.25	0.4921	2.002	0.7881
681	3.00	1.1811	1.25	0.4921	2.030	0.8015	<b>Average</b> ..... 3.00 1.1811 1.167 0.4988 1.986 0.7818						
682	2.875	1.1378	1.00	0.3937	1.754	0.6905	<b>2 years old:</b>						
683	3.50	1.3779	1.00	0.3937	1.083	0.7807	698	2.50	0.9842	1.125	0.4429	1.804	0.7118
684	3.50	1.3779	1.00	0.3937	2.147	0.8452	699	3.75	1.4763	1.25	0.4921	1.965	0.7736
685	3.00	1.1811	1.25	0.4921	1.927	0.7586	704	3.00	1.1811	1.00	0.3937	1.871	0.7309
686	3.59	1.3770	1.25	0.4921	1.06	0.7716	708	3.00	1.1811	1.00	0.3937	1.845	0.7263



TABLE III.—Extreme and average measurements of fineness of wools—Continued.

Catalogue number of samples.	Highest.		Lowest.		Average.		Catalogue number of samples.	Highest.		Lowest.		Average.	
	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.
<b>WISCONSIN—Continued.</b>							<b>WISCONSIN—Continued.</b>						
<b>EWES—continued.</b>							<b>RAMS—continued.</b>						
<b>2 years old:</b>							<b>4 years old:</b>						
709	2.875	1.1316	1.00	0.3937	1.823	0.7177	720						
710	3.00	1.1811	0.875	0.3444	2.066	0.8193	731						
744	2.375	0.9350	1.00	0.3937	1.505	0.6279	<b>General average</b> .....						
745	2.75	1.0826	1.00	0.3937	1.779	0.7093	3.50	1.3779	1.25	0.4921	2.325	0.9153	
749	3.50	1.3779	1.25	0.4921	1.868	0.7354	3.00	1.1811	1.00	0.3937	1.898	0.7472	
762	2.50	0.9812	1.25	0.4921	1.70	0.7047	<b>EWES.</b>						
763	2.50	0.9842	1.25	0.4921	2.02	0.7952	3.25	1.2598	1.125	0.4429	2.112	0.8314	
764	3.125	1.2303	1.25	0.4921	2.103	0.8270	<b>Very old:</b>						
765	3.00	1.1811	1.00	0.3937	1.902	0.7488	714	3.00	1.1811	1.125	0.4429	1.776	0.6992
766	3.00	1.1811	1.00	0.3937	1.96	0.7716	715	4.00	1.6748	1.50	0.5005	2.261	0.8901
767	2.75	1.0826	1.50	0.5005	1.870	0.7385	<b>General average</b> .....						
768	2.75	1.0826	1.25	0.4921	1.88	0.7401	3.50	1.3770	1.312	0.5165	2.010	0.7948	
769	3.50	1.3779	1.375	0.5413	2.03	0.7992	<b>MINNESOTA.</b>						
782	2.50	0.9812	1.25	0.4921	1.82	0.7165	<b>RAMS.</b>						
783	3.00	1.1811	1.375	0.5413	2.15	0.8464	<b>2 to 3 years old:</b>						
787	3.00	1.1811	1.50	0.5005	1.937	0.7625	502	3.00	1.1811	1.375	0.5413	2.096	0.8251
<b>General average</b> .....							503	3.75	1.4763	1.50	0.5005	2.017	0.7940
2.919	1.1492	1.175	0.4625	1.904	0.7496	504	3.25	1.2705	1.50	0.5005	2.127	0.8373	
<b>3 to 5 years old:</b>							505	4.50	1.7716	1.50	0.4921	2.152	0.8472
709	3.00	1.1811	1.125	0.4429	2.014	0.7929	506	3.50	1.3770	1.50	0.5005	2.037	0.8019
701	2.50	0.9812	1.125	0.4429	1.819	0.7169	507	3.00	1.1811	1.50	0.5005	2.22	0.8740
702	2.875	1.1318	1.25	0.4921	1.907	0.7507	508	2.00	1.1811	1.375	0.5413	2.174	0.8559
703	3.25	1.2795	1.125	0.4429	1.957	0.7704	509	2.875	1.1318	1.875	0.5413	1.948	0.7696
705	3.50	1.3779	1.25	0.4921	2.218	0.8732	510	3.50	1.3770	1.375	0.5413	2.14	0.8425
706	3.00	1.1811	1.00	0.3937	1.91	0.7519	511	4.00	1.5748	1.50	0.5005	2.41	0.9488
707	3.00	1.1811	1.00	0.3937	1.859	0.7313	512	4.00	1.5748	1.00	0.3937	2.06	0.8110
711	3.00	1.1811	1.50	0.5005	2.070	0.8185	513	3.50	1.3779	1.00	0.3937	2.18	0.8592
712	3.00	1.1811	1.125	0.4429	1.47	0.7755	514	3.50	1.3770	1.25	0.4921	2.061	0.8114
713	2.50	0.9842	1.00	0.3937	1.849	0.7279	515	3.75	1.3763	1.25	0.4921	2.104	0.8283
716	3.25	1.2795	1.50	0.5005	2.141	0.8429	516	3.75	1.3770	1.00	0.3937	2.03	0.8240
717	3.75	1.4763	1.50	0.5005	2.063	0.8122	517	4.50	1.7716	1.50	0.5005	1.908	0.7511
718	3.50	1.3779	1.50	0.5005	2.139	0.8381	518	3.50	1.3779	1.125	0.4429	2.069	0.8145
719	3.00	1.1811	1.375	0.5413	2.100	0.8291	519	3.00	1.1811	1.50	0.5005	2.045	0.8031
720	3.00	1.1811	1.375	0.5413	2.066	0.8212	520	3.00	1.1811	1.00	0.3937	1.851	0.7598
721	3.125	1.2303	1.375	0.5413	2.262	0.8905	521	3.25	1.2795	1.25	0.4921	1.874	0.7377
722	3.25	1.2795	1.50	0.5005	2.165	0.8523	<b>General average</b> .....						
723	2.50	0.9842	1.25	0.4921	1.890	0.7476	3.507	1.3897	1.307	0.5145	2.079	0.8185	
770	2.875	1.1318	1.375	0.5413	1.94	0.7637	<b>EWES.</b>						
771	3.00	1.1811	1.50	0.5005	2.03	0.7922	<b>2 to 3 years old:</b>						
784	2.50	0.9842	1.375	0.5413	1.96	0.7716	482	3.25	1.2795	1.125	0.4429	2.02	0.7932
785	3.25	1.2795	1.125	0.4429	1.93	0.7598	483	3.50	1.3779	1.50	0.5005	2.00	0.7874
788	3.50	1.3779	1.375	0.5413	1.95	0.7677	484	3.00	1.1811	1.00	0.3937	1.97	0.7755
<b>General average</b> .....							485	3.125	1.2303	1.125	0.4429	1.95	0.7677
3.049	1.2003	1.288	0.5070	1.989	0.7830	490	3.00	1.1811	1.25	0.4921	2.00	0.7874	
<b>RAMS.</b>							487	2.75	1.0826	1.25	0.4921	1.94	0.7639
<b>1 year old:</b>							488	3.00	1.1811	1.50	0.5005	2.23	0.8779
736	3.00	1.1811	1.00	0.3937	1.995	0.7854	489	4.00	1.5748	1.25	0.4921	1.99	0.7831
737	3.00	1.1811	1.00	0.3937	1.87	0.7362	490	3.375	1.3287	1.25	0.4921	2.039	0.8027
738	3.00	1.1811	1.00	0.3937	1.87	0.7362	491	3.375	1.3287	1.25	0.4921	2.06	0.8110
747	3.125	1.2303	1.25	0.4921	1.789	0.7143	492	3.00	1.1811	1.125	0.4429	2.035	0.8011
748	3.25	1.2795	1.00	0.3937	1.995	0.7854	493	3.875	1.5255	1.00	0.3937	2.072	0.8167
749	3.00	1.1811	0.75	0.2933	1.848	0.7275	494	2.75	1.0826	1.00	0.3937	1.796	0.7070
750	2.50	0.9812	1.00	0.3937	1.699	0.6570	495	3.75	1.4763	1.375	0.5413	2.145	0.8444
751	2.625	1.0334	1.00	0.3937	1.717	0.6759	496	4.00	1.5748	1.00	0.3937	2.156	0.8488
<b>General average</b> .....							497	2.50	0.9870	1.25	0.4921	1.917	0.7547
2.938	1.1566	1.00	0.3937	1.844	0.7259	498	3.25	1.2795	1.25	0.4921	1.786	0.7931	
<b>2 years old:</b>							499	3.25	1.2795	1.375	0.5413	2.008	0.7995
721	3.375	1.3287	1.00	0.3937	1.998	0.7866	500	3.50	1.3779	1.25	0.4921	2.05	0.8070
728	3.125	1.2303	1.125	0.4429	2.097	0.8255	501	3.00	1.1811	1.125	0.4429	2.03	0.7992
729	5.00	1.9685	1.00	0.3937	2.405	0.9480	<b>General average</b> .....						
733	3.25	1.2795	1.25	0.4921	2.092	0.8236	3.315	1.3951	1.215	0.4783	2.005	0.7893	
834	3.50	1.3779	1.25	0.4921	2.008	0.8092	<b>ILLINOIS.</b>						
735	3.00	1.1811	1.50	0.5005	2.133	0.8397	<b>RAMS.</b>						
739	4.00	1.5748	1.00	0.3937	2.17	0.8543	<b>1 year old:</b>						
762	3.60	1.3779	1.25	0.4921	2.23	0.8779	447	3.00	1.1811	1.125	0.4429	1.821	0.7169
753	3.50	1.3779	1.00	0.3937	2.184	0.8598	448	2.50	0.9842	1.25	0.4921	1.79	0.7047
754	3.375	1.3287	1.125	0.4429	2.049	0.8066	449	3.00	1.1811	1.375	0.5413	2.09	0.8228
755	3.25	1.2795	1.25	0.5005	2.319	0.7948	450	2.50	0.9842	1.00	0.3937	1.71	0.6732
756	3.00	1.1811	1.25	0.4921	2.069	0.7909	451	3.875	1.3287	1.125	0.4429	2.03	0.7992
757	3.00	1.1811	1.375	0.5413	2.009	0.7909	452	2.50	0.9842	1.00	0.3937	1.595	0.6279
758	3.50	1.3779	1.25	0.4921	1.99	0.7834	453	3.00	1.1811	1.50	0.5005	2.23	0.8976
759	4.25	1.6733	1.25	0.4921	2.129	0.8381	454	3.00	1.1811	1.25	0.4921	1.93	0.7598
760	3.375	1.3287	1.375	0.5413	1.94	0.7637	455	2.625	1.0334	1.125	0.4429	1.77	0.6998
761	3.50	1.3770	1.375	0.5413	2.062	0.8118	456	3.00	1.1811	1.00	0.3937	1.790	0.7070
<b>General average</b> .....							457	3.00	1.1811	1.125	0.4429	1.88	0.7322
3.50	1.3779	1.213	0.4775	2.219	0.8736	458	3.375	1.3287	1.25	0.4921	2.05	0.8149	
<b>3 years old:</b>							459	3.50	1.3779	1.125	0.4429	2.211	0.8822
765	2.75	1.0826	1.375	0.5413	1.938	0.7629	460	3.50	1.3779	1.25	0.4921	1.80	0.7449
767	3.625	1.4271	1.125	0.4429	1.889	0.7436	461	3.00	1.1811	1.25	0.4921	2.03	0.7992
769	2.125	0.8366	1.00	0.3937	1.624	0.5999	<b>General average</b> .....						
782	2.50	0.9812	1.125	0.4429	1.67	0.6574	2.964	1.1748	1.171	0.4810	1.934	0.7614	
710	2.875	1.1318	1.00	0.3937	1.85	0.7283							



TABLE III.—Extreme and average measurements of fineness of wools—Continued.

Catalogue number of samples.	Highest.		Lowest.		Average.		Catalogue number of samples.	Highest.		Lowest.		Average.	
	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.	In centimillimeters.	In thousandths of inch.
<b>ILLINOIS—Continued.</b>							<b>TEXAS—Continued.</b>						
<b>RAMS—continued.</b>							<b>EWES—continued.</b>						
<b>2 years old:</b>							<b>2 years old:</b>						
442.....	3.50	1.3770	1.25	0.4921	1.98	0.7795	607.....	3.00	1.1811	1.25	0.4921	1.886	0.7425
443.....	3.125	1.2303	1.125	0.4420	1.93	0.7598	608.....	3.125	1.2303	1.125	0.4420	1.859	0.7712
446.....	2.50	0.9842	1.00	0.3937	1.85	0.7283	609.....	3.00	1.1811	1.00	0.3937	1.837	0.7232
General average.....	3.041	1.1972	1.125	0.4429	1.92	0.7559	610.....	3.50	1.3770	1.00	0.3937	1.899	0.7436
<b>3 years old:</b>							<b>3 years old:</b>						
440.....	3.00	1.1811	1.375	0.5413	2.072	0.8157	611.....	3.00	1.1811	1.00	0.3937	1.738	0.6921
441.....	4.125	1.6240	1.25	0.4921	2.24	2.8818	612.....	2.50	0.9842	1.00	0.3937	1.835	0.7223
General average.....	3.562	1.4023	1.312	0.5165	2.156	0.8488	613.....	2.50	0.9842	1.25	0.4921	1.899	0.7476
<b>EWES.</b>							<b>General average.....</b>						
<b>Lamb:</b>							<b>3.00 1.1811 1.00 0.3937 1.885 0.7421</b>						
431.....	2.75	1.0826	1.00	0.3937	1.78	0.7007	<b>General average.....</b>						
Average.....	2.75	1.0820	1.00	0.3937	1.78	0.7007	<b>3.00 1.1811 1.068 0.4200 1.75 0.6889</b>						
<b>1 year old:</b>							<b>CALIFORNIA.</b>						
477.....	3.375	1.3287	1.125	0.4429	1.85	0.7283	<b>RAMS.</b>						
478.....	2.875	1.1318	0.75	0.2953	1.918	0.7551	<b>2 years old:</b>						
479.....	3.00	1.1811	1.125	0.4420	1.89	0.7440	634.....	3.00	1.1811	1.00	0.3937	1.68	0.6614
480.....	3.875	1.5255	1.375	0.5413	1.93	0.7598	635.....	2.625	1.0344	1.00	0.3937	1.684	0.6629
General average.....	3.281	1.2917	1.094	0.4307	1.897	0.7468	636.....	3.50	1.3770	1.00	0.3937	1.789	0.7143
<b>2 years old:</b>							<b>637.....</b>						
463.....	3.00	1.1811	1.375	0.5413	2.07	0.8149	638.....	4.50	1.7716	1.25	0.4921	1.998	0.7866
464.....	3.00	1.1811	1.00	0.3937	1.754	0.6905	639.....	3.50	1.3770	1.25	0.4921	1.721	0.6775
465.....	2.50	0.9842	1.00	0.3937	1.611	0.6242	640.....	3.00	1.1811	1.25	0.4921	2.018	0.7944
466.....	4.00	0.5748	1.00	0.3937	1.89	0.7440	<b>General average.....</b>						
467.....	3.00	1.1811	1.125	0.4429	1.62	0.6377	<b>3.278 1.2866 1.143 0.4499 1.821 0.7109</b>						
468.....	3.00	1.2811	1.125	0.4429	1.780	0.7143	<b>EWES.</b>						
469.....	3.25	1.2795	1.00	0.3937	1.838	0.7236	<b>2 years old:</b>						
470.....	3.00	1.1811	1.00	0.3937	1.785	0.7027	626.....	3.50	1.3770	1.00	0.3937	1.674	0.6790
471.....	3.50	1.3770	1.125	0.4429	2.055	0.8262	627.....	3.00	1.1811	1.125	0.4429	1.82	0.7165
472.....	3.00	1.1811	1.125	0.4429	1.901	0.7720	628.....	2.50	0.9842	0.875	0.2445	1.66	0.6535
473.....	3.00	1.1811	1.00	0.5905	2.11	0.8307	629.....	3.625	1.4271	1.125	0.4429	1.73	0.6811
474.....	3.50	1.3770	1.25	0.4921	2.25	0.8858	630.....	2.25	0.8858	1.125	0.4429	1.616	0.6362
General average.....	3.140	1.2385	1.135	0.4468	1.898	0.7472	631.....	2.75	1.0826	1.125	0.4429	1.77	0.6968
<b>3 years old:</b>							<b>632.....</b>						
475.....	3.00	1.1811	1.125	0.4429	1.89	0.7440	633.....	3.25	1.2795	1.125	0.4429	1.842	0.7251
476.....	3.00	1.1811	1.25	0.4921	1.98	0.7795	634.....	4.00	1.6748	1.25	0.4921	1.977	0.7782
General average.....	2.00	0.7874	1.188	0.4677	1.94	0.7637	635.....	2.625	1.0334	1.00	0.3937	1.665	0.6436
<b>TEXAS.</b>							<b>636.....</b>						
<b>RAMS.</b>							<b>3.50 1.3770 1.00 0.3937 1.73 0.6811</b>						
<b>2 years old:</b>							<b>637.....</b>						
610.....	3.00	1.1811	1.125	0.4429	1.801	0.7444	638.....	3.625	1.4271	1.00	0.3937	2.093	0.8240
617.....	2.50	0.9842	1.125	0.4429	1.82	0.7165	639.....	3.00	1.1811	1.125	0.4429	1.706	0.6716
618.....	3.50	1.3770	1.25	0.4921	2.04	0.8031	640.....	2.50	0.9842	1.50	0.5905	2.099	0.8263
619.....	3.00	1.1811	1.125	0.4420	1.93	0.7598	641.....	3.50	1.3770	1.375	0.5413	2.04	0.8031
620.....	3.50	1.3770	1.25	0.4921	2.036	0.8015	642.....	3.50	1.3770	1.375	0.5413	2.12	0.8346
621.....	3.00	1.1811	0.75	0.2953	1.93	0.7598	643.....	2.875	1.1318	1.375	0.5413	1.93	0.7598
622.....	3.375	1.3282	1.00	0.3937	1.98	0.7795	644.....	3.00	1.1811	1.25	0.4921	2.09	0.8228
623.....	3.50	1.3770	1.00	0.3937	1.90	0.7480	645.....	3.375	1.3287	1.25	0.4921	1.875	0.7380
624.....	3.00	1.1811	1.125	0.4429	1.97	0.7755	646.....	3.00	1.1811	1.375	0.5413	1.92	0.7559
625.....	3.00	1.1811	1.00	0.3937	1.84	0.7244	647.....	3.50	1.3770	1.375	0.5413	2.102	0.8275
General average.....	3.237	1.2744	1.075	0.4232	1.933	0.7810	648.....	3.00	1.1811	1.00	0.3937	2.05	0.8070
<b>EWES.</b>							<b>649.....</b>						
<b>2 years old:</b>							<b>3.00 1.1811 1.09 0.3937 1.882 0.7409</b>						
605.....	3.00	1.1811	1.00	0.3937	1.781	0.7011	650.....	3.00	1.1811	1.25	0.4921	1.89	0.7440
606.....	3.125	1.2303	1.00	0.3937	1.688	0.6645	651.....	2.50	0.9842	1.00	0.3937	1.779	0.7008
<b>3 years old:</b>							<b>652.....</b>						
<b>General average.....</b>							<b>3.157 1.2429 1.14 0.4489 1.865 0.7342</b>						
<b>645.....</b>							<b>3.50 1.3770 1.00 0.3937 1.93 0.7598</b>						
<b>646.....</b>							<b>3.00 1.1811 1.00 0.3937 1.65 0.6400</b>						
<b>647.....</b>							<b>3.375 1.3287 1.50 0.5905 2.20 0.9015</b>						
<b>648.....</b>							<b>3.00 1.1811 1.50 0.5905 2.054 0.8086</b>						
<b>General average.....</b>							<b>3.210 1.2073 1.25 0.4921 1.981 0.7799</b>						



TABLE IV.—Extreme and average measurements of strain and stretch of wools.

Catalogue number of samples.	STRAIN.						STRETCH.					
	Highest.		Lowest.		Average.		Highest.		Lowest.		Average.	
	grams.	grains.	grams.	grains.	grams.	grains.	mm.	per cent.	mm.	per cent.	mm.	per cent.
<b>VERMONT.</b>												
RAMS.												
2 years old:												
423.....	8.00	123.48	3.75	57.89	6.41	83.50	7.125	85.625	1.25	6.25	4.00	20.45
525.....	12.625	194.86	2.25	34.73	5.78	89.21	10.00	50.00	1.25	6.25	5.01	28.05
534.....	10.75	165.92	2.25	34.73	5.07	78.25	9.75	48.75	1.00	5.00	6.07	30.35
543.....	7.25	111.90	2.00	30.87	4.37	67.45	11.00	55.00	1.00	5.00	6.11	30.55
General average.....	9.652	149.64	2.563	39.558	6.158	70.61	9.400	47.345	1.125	5.625	5.455	27.28
3 years old:												
526.....	11.25	173.64	4.00	61.74	5.93	91.63	11.00	55.00	2.00	10.00	8.94	41.70
530.....	10.375	160.13	2.50	38.89	4.56	70.88	10.25	51.25	3.00	15.00	6.11	30.55
533.....	10.00	151.35	2.25	34.73	5.85	90.20	10.50	52.50	2.00	10.00	6.60	32.65
535.....	11.25	173.64	3.75	57.89	6.25	96.10	9.00	45.00	1.25	6.25	5.69	28.15
537.....	9.75	150.49	2.25	34.73	6.80	100.33	9.25	46.25	3.00	15.00	5.25	26.25
540.....	16.50	251.67	5.00	80.87	6.80	107.73	8.25	41.25	2.25	11.25	5.60	27.80
545.....	14.50	223.80	5.25	86.03	7.37	116.84	11.50	57.50	2.00	10.00	6.01	30.66
554.....	6.50	140.63	3.50	38.59	4.60	70.09	8.125	40.625	4.00	20.00	6.64	33.20
555.....	12.00	195.22	3.00	46.30	5.63	86.80	9.75	48.75	1.25	6.25	6.58	27.90
563.....	15.75	243.10	3.00	46.30	6.795	104.88	10.00	50.00	3.00	15.00	7.43	37.83
General average.....	12.088	196.57	3.05	47.075	5.87	90.60	9.703	48.82	2.375	11.875	6.311	31.55
EWES.												
2 years old:												
494.....	9.375	141.60	3.375	52.09	4.93	76.09	8.50	42.50	3.25	16.25	5.87	29.35
542.....	10.625	163.99	3.00	46.30	5.323	82.10	11.50	57.50	2.25	11.25	7.157	35.767
General average.....	10.00	154.35	3.188	49.21	5.126	79.12	10.00	50.00	2.75	13.75	6.513	32.565
3 years old:												
522.....	11.00	169.78	3.25	50.10	5.20	80.26	10.75	53.75	4.00	20.00	7.73	38.65
523.....	10.25	158.20	2.50	38.59	5.34	82.42	9.00	45.00	3.00	15.00	6.65	33.25
524.....	8.00	123.48	2.75	42.44	4.37	67.45	10.00	50.00	3.00	15.00	7.40	37.45
527.....	10.375	160.13	2.25	34.73	5.09	78.56	9.25	46.25	3.50	17.50	6.60	32.60
528.....	12.50	192.93	2.00	30.87	4.05	76.40	9.50	47.50	1.00	5.00	5.79	28.95
529.....	9.00	138.91	2.75	42.44	5.45	81.12	11.00	55.00	2.00	10.00	8.58	42.90
531.....	7.50	115.76	1.75	27.01	4.03	62.20	12.00	60.00	3.25	16.25	5.96	29.75
532.....	10.25	158.20	4.00	61.74	6.25	96.47	9.00	45.00	2.00	10.00	6.75	36.25
536.....	9.75	150.49	3.25	50.10	6.44	99.40	10.50	52.50	1.50	7.50	7.25	36.25
538.....	9.00	138.91	2.625	41.21	4.82	74.39	9.60	47.60	1.00	5.00	6.73	36.75
539.....	11.625	179.43	2.50	38.59	5.04	77.79	11.00	55.00	4.00	20.00	8.135	40.75
541.....	9.75	150.49	2.75	42.44	5.19	78.716	10.00	50.00	2.50	12.50	7.89	36.95
544.....	17.00	262.39	3.00	46.30	6.86	82.73	9.00	45.00	2.00	10.00	6.80	34.00
546.....	7.625	117.09	2.50	51.02	5.24	80.87	11.00	53.00	4.75	23.75	8.47	42.35
547.....	6.125	94.54	3.50	38.59	4.32	69.78	9.00	45.00	3.125	15.625	6.88	34.40
548.....	13.00	200.65	2.75	42.44	5.375	82.00	11.00	53.00	2.00	10.00	7.43	37.15
549.....	9.625	143.60	2.625	40.52	5.44	83.76	9.875	49.375	4.00	20.00	7.40	37.00
550.....	12.75	196.79	2.50	38.59	6.132	91.65	11.25	56.25	2.00	10.00	8.00	40.00
5515.....	7.00	108.01	3.25	50.10	5.19	78.72	11.00	55.00	1.75	8.75	8.12	40.00
552.....	11.00	169.78	3.25	50.10	6.89	106.19	11.00	55.00	1.25	6.25	5.29	26.45
553.....	7.25	111.90	2.50	38.59	3.94	68.12	9.00	45.00	1.25	6.25	6.08	33.40
556.....	11.25	173.64	3.625	55.95	6.03	83.07	9.50	47.50	2.75	13.75	6.87	34.35
557.....	6.50	146.63	1.75	27.01	4.69	72.39	10.50	52.50	3.00	15.00	6.81	36.05
558.....	6.50	100.33	2.75	42.44	4.46	68.84	9.00	45.00	1.50	7.50	7.169	35.91
559.....	6.50	100.33	2.25	34.73	4.21	65.44	9.50	47.50	3.75	18.75	6.58	32.90
560.....	8.00	123.48	1.75	27.01	4.625	71.39	10.00	50.00	1.50	7.50	6.81	29.05
561.....	8.375	129.27	1.50	23.15	4.255	65.67	8.875	44.375	1.00	5.00	6.42	32.10
562.....	13.375	204.41	2.00	30.87	6.80	98.62	9.125	45.625	1.25	6.25	6.42	32.10
General average.....	9.781	150.90	2.638	49.73	5.17	79.80	10.001	50.02	2.415	12.075	7.126	35.63
<b>NEW YORK.</b>												
RAMS.												
2 years old:												
609.....	8.50	131.19	1.75	27.01	4.01	61.88	9.00	45.00	1.875	9.375	6.78	33.90
670.....	7.50	115.76	2.75	42.45	4.32	66.891	10.50	52.50	4.000	20.00	8.01	40.05
671.....	8.50	131.194	3.00	46.304	6.43	83.809	9.25	46.25	2.75	13.75	7.49	37.45
672.....	6.75	104.18	1.50	23.15	3.64	54.64	11.75	58.75	6.00	30.00	8.23	41.15
673.....	6.00	92.00	1.625	25.08	4.80	58.56	10.25	51.25	1.80	7.50	8.40	42.00
674.....	7.00	108.042	2.76	42.45	4.69	72.39	11.00	55.00	1.50	7.50	7.88	39.40
675.....	9.125	140.81	2.50	38.59	5.09	78.50	9.00	45.00	2.50	12.50	6.89	34.45
676.....	11.00	169.78	2.75	42.45	5.32	82.112	10.00	50.00	4.00	20.00	8.13	40.65
677.....	8.25	127.81	1.875	28.94	4.57	70.54	10.00	50.00	5.00	25.00	7.76	38.75
678.....	9.00	138.911	1.25	34.73	4.48	69.146	9.50	47.50	2.25	11.25	7.49	37.40
681.....	10.50	162.063	2.00	30.869	6.03	77.210	8.125	40.625	1.00	5.00	4.98	25.00
682.....	9.00	138.911	2.50	38.587	4.378	67.573	11.00	55.00	6.25	31.25	8.603	42.965
683.....	11.25	173.61	3.00	46.304	5.913	91.295	10.00	50.00	3.00	15.00	6.915	34.575
General average.....	8.644	133.417	2.327	35.910	4.66	71.925	9.982	49.76	3.018	15.24	7.58	37.00
EWES.												
2 years old:												
679.....	8.00	92.008	3.00	46.304	4.335	66.909	10.25	51.25	2.75	13.75	8.51	42.70
680.....	8.375	129.265	2.625	40.516	4.59	70.844	11.75	58.75	1.75	8.75	7.293	36.265
681.....	9.00	138.911	2.60	38.580	4.623	71.354	9.25	46.25	3.25	16.25	6.869	34.54
682.....	7.50	115.76	2.00	30.869	3.575	55.175	11.00	55.00	2.50	12.50	8.075	40.875
683.....	12.25	169.075	2.00	30.869	5.133	79.535	11.00	55.00	6.50	32.50	8.053	43.26
684.....	9.50	140.629	2.375	36.657	5.21	80.414	11.00	55.00	4.00	20.00	7.63	38.10
685.....	10.50	162.063	2.25	34.728	6.33	82.266	9.875	49.875	1.00	5.00	7.525	37.625
686.....	7.75	119.618	2.00	30.869	4.81	74.24	11.50	57.50	1.00	5.00	8.193	40.963
687.....	8.00	123.477	2.00	30.869	4.53	69.918	10.75	53.75	2.00	10.00	7.81	39.50
688.....	8.75	135.053	3.00	46.304	6.63	86.897	11.50	57.50	2.00	10.00	7.04	36.55
689.....	10.375	160.133	1.75	27.011	5.845	82.498	10.25	51.25	5.00	25.00	9.03	45.15
690.....	10.75	165.922	3.00	46.304	5.25	81.032	11.25	56.25	8.00	40.00	7.937	39.685
694.....	8.25	127.330	2.00	30.869	4.865	75.059	10.125	50.625	2.00	10.00	8.00	33.00
695.....	10.00	154.340	3.00	46.304	6.75	89.749	9.00	45.00	2.00	10.00	8.967	29.333
696.....	15.50	236.24	2.50	38.58	6.125	94.53	9.00	45.00	6.25	31.25	8.59	42.55
697.....	13.00	200.65	2.00	30.869	5.83	69.829	11.00	55.00	6.25	31.25	8.59	42.55
General average.....	9.711	149.885	2.375	36.657	5.059	78.08	10.531	52.655	3.211	16.055	7.717	38.585



TABLE IV.—*Extreme and average measurements of strain and stretch of wools—Continued.*

Catalogue number of samples.	STRAIN.						STRETCH.					
	Highest.		Lowest.		Average.		Highest.		Lowest.		Average.	
	grams.	grains.	grams.	grains.	grams.	grains.	mm.	per cent.	mm.	per cent.	mm.	per cent.
<b>PENNSYLVANIA.</b>												
RAM.												
Lamb:												
570.....	7.25	111.90	3.00	46.30	4.33	66.831	9.75	48.75	2.00	10.00	7.30	36.80
584.....	6.75	104.18	1.625	25.08	3.78	58.54	8.75	43.75	1.50	7.50	5.97	29.85
577.....	16.50	254.67	4.75	73.31	7.44	114.83	9.60	45.00	3.00	15.00	6.67	33.35
578.....	12.50	102.93	3.50	54.02	6.89	106.34	9.50	47.50	2.00	10.00	6.56	32.80
580.....	14.75	227.66	3.25	50.16	7.13	110.05	11.00	55.00	2.00	10.00	7.49	37.45
779.....	8.50	131.19	3.00	46.30	5.47	84.43	10.75	53.75	3.00	15.00	7.46	37.30
General average.....	11.04	170.398	3.187	49.189	5.84	90.138	9.791	48.955	2.25	11.25	6.917	34.585
2 years old:												
582.....	6.00	92.608	2.00	30.87	3.41	52.63	13.75	68.75	3.00	15.00	8.75	43.75
583.....	4.625	71.384	1.375	21.223	2.675	40.52	10.50	52.50	1.75	8.75	6.33	31.90
584.....	4.00	61.738	1.75	27.01	2.57	39.666	11.00	55.00	2.75	13.75	7.69	38.45
585.....	7.50	115.76	1.00	15.44	2.74	42.29	8.25	41.25	2.75	13.75	6.21	31.05
586.....	5.375	82.06	1.25	19.30	3.26	50.30	10.00	50.00	3.25	16.25	6.99	34.95
587.....	5.25	81.03	1.00	15.44	2.83	43.68	12.00	60.00	3.75	18.75	9.08	45.40
General average.....	5.458	84.242	1.390	20.21	2.014	44.976	10.917	54.585	2.875	14.375	7.516	37.58
WETHER.												
2 years old:												
780.....	15.75	243.09	2.25	34.73	5.61	86.59	9.00	45.00	2.00	10.00	6.58	32.90
781.....	8.75	135.05	2.00	30.87	4.263	65.79	12.00	60.00	5.00	25.00	9.518	47.59
General average.....	12.25	189.07	2.125	32.799	4.936	76.19	10.50	52.50	3.50	17.50	8.049	40.245
EWE.												
Lambs:												
575.....	13.00	200.65	1.375	21.22	3.80	58.65	9.75	48.75	3.00	15.00	6.96	34.80
576.....	10.00	154.35	2.00	30.87	4.23	65.29	10.75	53.75	2.50	12.50	7.60	38.00
General average.....	11.60	177.498	1.638	26.05	4.01	61.89	10.25	51.25	2.75	13.75	7.28	36.40
2 years old:												
772.....	8.00	123.48	2.375	36.66	4.75	76.47	9.50	47.50	1.75	8.75	6.68	33.40
773.....	9.25	142.77	3.00	46.30	5.16	79.64	9.75	48.75	4.75	23.75	7.93	39.15
774.....	10.50	162.06	2.75	42.44	4.60	70.99	10.00	50.00	3.75	18.75	7.17	35.85
775.....	15.75	243.09	3.00	46.30	7.39	114.06	9.50	47.50	2.00	10.00	7.35	36.75
776.....	8.75	135.05	1.75	27.01	3.66	56.49	10.00	50.00	5.00	25.00	7.74	38.70
777.....	8.125	125.41	2.125	32.798	4.81	74.21	9.00	45.00	2.00	10.00	6.62	33.10
778.....	9.25	142.77	1.75	27.01	3.90	60.20	9.75	48.75	4.75	23.75	7.94	39.70
General average.....	9.940	153.512	2.392	36.919	4.896	75.567	9.655	48.275	3.429	17.145	7.393	36.665
3 years old:												
581.....	6.50	100.32	2.25	34.73	4.16	61.21	9.875	49.875	4.75	23.75	7.45	37.25
588.....	4.875	75.24	1.50	23.15	3.04	47.08	9.75	48.75	8.00	40.00	6.81	34.05
589.....	5.75	88.748	2.00	30.87	3.20	49.39	11.00	55.00	2.75	13.75	7.83	39.15
590.....	4.75	73.31	1.00	15.44	2.36	34.43	10.00	50.00	2.50	12.50	6.86	34.30
591.....	6.75	104.18	2.25	34.73	3.43	52.94	9.25	46.25	3.00	15.00	7.32	36.60
592.....	4.50	69.46	1.75	27.01	2.95	45.38	12.00	60.00	2.00	10.00	7.79	38.95
593.....	3.50	54.02	1.25	19.25	2.14	33.03	10.00	50.00	5.00	25.00	7.99	39.95
594.....	3.625	55.05	1.00	15.435	2.44	37.66	9.50	47.50	2.00	10.00	6.55	32.75
595.....	5.25	81.03	2.25	34.73	3.70	57.11	11.00	55.00	6.75	33.75	9.18	45.90
596.....	3.50	54.02	1.125	17.36	2.28	34.73	9.00	45.00	2.00	10.00	6.59	32.95
597.....	3.625	55.95	0.75	11.58	1.89	29.17	10.00	50.00	1.00	5.00	6.33	31.65
General average.....	4.784	73.839	1.557	24.03	2.879	44.44	10.125	50.625	3.159	15.795	7.336	36.68
<b>WISCONSIN.</b>												
RAMS.												
1 year old:												
736.....	9.75	150.49	3.00	46.304	5.69	87.823	10.00	50.00	2.00	10.00	6.72	33.60
737.....	9.00	138.911	2.00	30.869	3.963	61.244	10.375	51.875	3.875	19.375	7.293	36.465
738.....	5.50	84.89	1.25	19.294	3.23	49.822	8.25	41.25	1.75	8.75	5.438	27.44
747.....	6.00	92.608	2.00	30.869	3.31	51.089	9.00	45.00	2.00	10.00	4.10	24.50
748.....	9.50	146.93	2.00	30.869	4.573	70.582	9.25	46.25	2.00	10.00	5.275	26.375
749.....	7.75	119.62	3.00	46.304	5.335	82.344	9.50	47.50	2.50	12.50	6.965	31.825
750.....	7.75	119.62	2.00	30.869	3.67	56.645	8.50	42.50	2.50	12.50	5.02	25.10
751.....	8.00	123.477	1.875	28.95	4.038	62.325	9.00	45.00	2.00	10.00	4.623	23.115
General average.....	7.90	121.933	2.140	33.041	4.239	65.427	9.234	46.172	2.328	11.641	5.611	28.055
2 years old:												
724.....	6.00	92.608	2.875	44.375	3.918	60.472	8.00	40.00	1.25	6.25	4.74	23.70
728.....	7.75	119.62	3.50	54.021	5.18	79.951	10.25	51.25	1.50	7.50	7.49	37.45
729.....	13.00	200.65	2.75	42.45	5.40	84.74	9.00	45.00	4.00	20.00	6.53	32.65
733.....	6.625	102.25	1.00	15.435	4.07	61.84	10.00	50.00	0.75	3.75	5.27	26.35
734.....	13.125	202.58	2.25	34.73	5.91	91.22	10.50	62.50	5.25	26.25	7.51	37.55
735.....	9.375	144.70	2.75	42.445	5.298	80.383	9.00	45.00	1.875	9.375	6.188	30.94
739.....	10.75	165.92	3.00	40.304	5.46	84.27	10.00	50.00	3.00	15.00	7.10	35.50
732.....	9.75	150.49	3.00	40.304	5.25	81.031	10.25	51.25	5.50	27.50	8.75	43.75
733.....	9.75	150.49	3.50	54.02	5.36	82.73	11.75	58.75	4.25	21.25	8.30	41.50
754.....	6.125	94.537	2.25	34.73	3.935	60.735	11.50	57.50	6.00	30.00	8.603	43.05
755.....	8.50	131.194	1.875	28.94	4.483	69.193	10.00	50.00	3.00	15.00	7.625	38.125
756.....	6.00	92.608	2.25	34.73	3.745	57.893	10.75	53.75	3.00	15.00	7.84	39.20
757.....	8.75	135.05	2.50	38.586	5.125	79.10	10.50	52.50	2.75	13.75	6.94	34.70
758.....	9.50	146.93	3.00	40.304	5.13	79.18	11.50	67.50	2.25	11.25	7.26	36.30
759.....	16.50	254.67	3.00	46.304	6.93	109.96	9.00	45.00	4.00	20.00	6.66	33.80
760.....	8.75	135.05	2.50	38.586	4.51	69.61	9.75	48.75	3.75	18.75	6.91	34.55
761.....	6.75	104.18	2.75	42.45	4.39	67.76	7.75	38.75	1.00	5.00	4.46	22.30
General average.....	0.235	142.538	2.632	40.690	4.764	73.53	9.071	49.855	3.125	15.625	6.957	34.785



TABLE IV.—*Extreme and average measurements of strain and stretch of wools—Continued.*

Catalogue number of samples.	STRAIN.						STRETCH.					
	Highest.		Lowest.		Average.		Highest.		Lowest.		Average.	
	grams.	grains.	grams.	grains.	grams.	grains.	mm.	per cent.	mm.	per cent.	mm.	per cent.
<b>WISCONSIN—Continued.</b>												
<b>RAMS—continued.</b>												
<b>3 years old:</b>												
725	11.25	173.64	2.25	34.73	5.18	79.951	8.25	41.25	2.00	10.00	5.23	26.15
727	8.50	131.194	3.25	50.163	5.098	78.686	10.25	51.25	4.75	23.75	7.47	37.95
730	7.25	111.901	1.75	27.011	3.86	81.86	8.50	42.50	1.125	5.625	6.308	31.64
732	7.25	111.901	3.00	46.304	5.105	78.793	10.75	53.75	3.00	15.00	7.875	37.875
740	8.125	125.41	2.25	34.73	4.21	64.98	9.25	40.25	3.00	15.00	6.86	34.30
General average	8.475	130.800	2.50	38.586	4.501	70.80	0.40	47.00	2.775	13.875	6.089	33.445
<b>4 years old:</b>												
726	12.50	192.932	4.00	61.738	7.045	103.738	9.25	40.25	1.00	5.00	5.595	27.675
731	10.625	163.992	1.50	23.152	4.177	64.47	9.00	45.00	2.00	10.00	5.923	27.015
General average	11.562	178.454	2.75	42.485	5.611	86.603	0.125	45.625	1.50	7.50	6.529	27.645
<b>EWES.</b>												
<b>1 year old:</b>												
741	7.025	117.689	1.625	25.082	3.588	55.38	9.875	49.375	1.125	5.625	4.078	22.39
743	8.50	131.104	2.00	30.869	3.855	59.50	9.875	49.375	4.00	20.00	7.425	37.125
743	10.00	154.398	3.00	40.304	5.20	81.649	0.75	43.75	1.25	6.25	6.61	32.55
General average	8.708	134.364	2.268	34.060	4.244	65.504	0.833	40.105	3.188	15.91	6.171	32.855
<b>2 years old:</b>												
699	7.00	108.042	2.25	34.728	4.185	64.50	10.00	50.00	3.00	15.00	6.85	34.25
699	10.875	160.134	2.375	30.647	4.125	63.665	90.000	45.00	2.00	10.00	6.199	30.995
704	13.625	210.297	2.00	30.869	5.213	80.461	10.25	51.25	1.50	7.50	7.238	36.19
708	6.00	92.608	2.50	38.586	3.829	59.084	11.75	53.75	0.00	30.00	8.65	43.25
709	8.00	123.477	2.25	34.728	4.075	62.896	10.00	50.00	2.25	11.25	5.48	27.40
710	7.00	108.012	2.375	30.657	4.298	66.338	0.00	45.00	2.00	10.00	6.645	32.225
744	5.75	88.749	1.25	19.294	3.208	49.514	9.00	45.00	2.00	10.00	6.413	32.005
745	12.00	185.215	2.25	34.728	5.77	89.058	10.25	51.25	2.00	10.00	6.86	34.80
746	8.875	129.265	2.00	30.869	3.843	59.310	10.00	50.00	1.25	6.25	6.765	33.83
762	7.125	109.97	2.00	30.869	3.91	50.85	8.25	40.25	4.00	20.00	6.69	32.95
763	7.50	115.70	2.00	30.869	4.82	69.70	10.50	52.50	1.00	6.00	6.75	33.75
764	10.25	158.20	3.25	50.16	5.79	89.37	10.25	51.25	1.75	8.75	6.70	33.50
765	10.50	162.06	3.00	40.304	5.35	82.53	11.75	58.75	5.25	20.25	0.10	45.50
766	9.50	146.03	2.50	38.586	5.05	77.94	9.875	49.375	5.00	25.00	7.63	38.15
767	12.75	196.79	2.25	31.728	4.53	70.60	8.75	43.75	4.25	21.25	6.82	34.10
768	12.00	185.215	2.00	30.869	5.10	78.72	10.75	53.75	3.00	15.00	7.20	36.00
769	12.625	194.86	2.00	30.869	0.07	93.688	0.00	45.00	1.75	8.75	7.11	35.55
782	6.25	96.47	2.25	31.73	3.71	57.26	9.00	45.00	1.00	5.00	6.40	32.45
783	8.50	131.19	2.75	42.44	6.35	82.53	9.50	47.50	1.625	8.125	7.495	37.475
787	9.875	152.42	2.50	38.59	5.03	77.64	9.875	49.375	4.00	20.00	7.61	38.05
General average	9.25	142.769	2.288	35.318	4.65	71.770	0.437	47.185	2.731	13.655	7.034	33.170
<b>3 to 5 years old:</b>												
700	14.25	210.943	3.00	46.304	5.81	80.675	10.00	50.00	2.25	11.25	6.87	31.85
701	9.25	142.77	3.00	46.304	4.89	75.475	9.50	47.50	2.50	12.50	7.41	37.05
702	0.25	142.77	3.00	46.304	5.16	79.643	10.75	53.75	3.00	15.00	7.924	39.63
703	13.25	204.500	2.75	42.445	6.555	101.174	0.50	47.50	3.00	15.00	7.10	35.80
705	12.00	185.215	2.50	38.586	5.218	80.538	10.00	50.00	6.00	30.00	7.16	38.05
706	10.25	158.205	3.00	46.304	5.795	89.443	10.00	50.00	2.00	10.00	5.69	28.45
707	8.00	123.477	2.25	34.728	4.24	65.432	8.125	40.625	1.50	7.50	5.575	27.875
711	12.50	192.932	3.00	46.304	6.79	89.360	10.25	51.25	2.00	10.00	6.25	31.25
712	7.75	119.618	2.00	30.869	3.25	50.163	10.50	52.50	4.125	20.625	7.845	36.725
713	6.25	96.487	1.00	15.435	3.178	49.051	10.75	53.75	5.00	25.00	8.433	42.165
710	11.50	177.498	2.625	40.52	4.825	74.472	10.75	53.75	2.50	12.50	7.843	38.715
717	11.25	173.54	3.00	46.304	3.759	88.888	10.00	50.00	6.00	30.00	3.858	41.79
718	13.00	185.215	3.00	46.304	0.10	94.151	10.50	52.50	2.75	13.75	7.915	39.875
719	8.25	127.34	2.125	32.89	4.818	74.30	8.75	43.75	2.50	12.50	6.146	30.725
720	10.50	162.06	3.00	46.304	5.44	84.119	11.00	55.00	3.00	15.00	7.07	39.85
721	14.00	216.084	3.00	46.304	5.893	90.596	8.625	43.125	1.875	0.375	5.905	29.825
722	11.625	179.43	3.75	57.88	8.585	101.64	11.50	57.50	5.25	20.25	8.49	42.45
723	8.25	127.34	2.50	38.586	4.465	68.915	10.00	50.00	2.00	10.00	8.275	41.875
770	7.25	111.90	2.00	30.869	4.13	63.74	10.00	50.00	3.50	17.50	7.14	35.70
771	13.00	200.65	2.625	40.52	5.38	83.04	9.75	48.75	4.25	21.25	7.83	39.15
784	10.50	162.06	2.00	30.869	4.89	74.08	10.00	50.00	1.25	6.25	6.48	32.30
785	10.25	158.205	3.00	46.304	5.33	85.35	10.00	50.00	2.00	10.00	7.33	36.65
786	11.00	169.781	3.00	46.304	5.34	82.42	10.00	50.00	2.00	10.00	7.64	38.20
General average	10.57	163.161	2.688	41.021	5.172	79.83	10.011	50.055	3.011	15.055	7.242	36.21
<b>Old ewes:</b>												
714	7.25	111.901	1.50	23.152	3.88	59.886	10.00	50.00	3.50	17.50	7.438	37.19
715	11.75	181.85	2.25	34.728	4.89	75.475	11.00	55.00	2.50	12.50	6.725	33.025
General average	9.50	146.628	1.875	28.940	4.385	67.68	10.50	52.50	3.00	15.00	7.082	35.41
<b>MINNESOTA.</b>												
<b>RAMS.</b>												
<b>2 to 3 years old:</b>												
502	11.00	109.78	3.50	54.02	6.52	100.63	10.50	52.50	2.00	10.00	7.33	26.55
503	16.50	254.67	3.00	40.30	6.24	96.31	9.00	45.00	1.00	5.00	5.81	29.05
504	17.75	273.96	2.75	42.44	5.79	89.37	11.00	55.00	1.50	7.50	9.22	40.10
505	8.00	123.43	3.50	54.02	5.13	79.18	0.875	49.375	2.25	11.25	6.83	34.10
506	14.00	218.08	2.75	42.44	6.15	94.92	9.00	45.00	2.50	12.50	6.78	33.90
507	12.625	194.86	4.00	61.75	0.33	97.70	8.50	42.50	3.25	16.25	6.89	34.15
508	8.625	133.123	2.625	40.52	5.28	81.19	8.00	40.00	1.00	5.00	5.83	27.80
509	6.25	96.47	2.75	42.44	4.43	68.37	10.50	52.50	5.25	26.25	8.70	43.50
510	10.00	154.35	2.75	42.44	5.12	70.03	10.25	51.25	2.00	10.00	8.11	40.55
511	13.00	200.65	2.75	42.44	6.33	97.70	6.75	48.75	4.50	22.50	7.19	35.05
512	12.25	180.073	3.75	57.870	6.45	99.533	10.50	52.50	6.00	30.00	8.63	43.15
513	10.625	163.992	3.50	54.02	5.53	85.35	9.25	46.25	1.50	7.50	6.27	31.35
514	10.75	165.92	3.625	55.95	6.39	93.627	9.00	45.00	5.00	25.00	7.48	37.40
615	13.50	208.367	3.25	50.162	7.17	110.665	10.50	52.50	3.00	15.00	8.06	40.30
616	15.00	231.519	3.00	40.30	5.08	92.319	10.00	50.00	3.00	15.00	7.15	35.75



TABLE IV.—Extreme and average measurements of strain and stretch of wools—Continued.

Catalogue number of samples.	STRAIN.						STRETCH.					
	Highest.		Lowest.		Average.		Highest.		Lowest.		Average.	
MINNESOTA—Continued.												
RAMS—continued.												
2 to 3 years old—Continued:												
517.....	grams.	grains.	grams.	grains.	grams.	grains.	mm.	per cent.	mm.	per cent.	mm.	per cent.
518.....	15.00	231.510	2.50	38.536	7.10	110.97	10.125	50.625	5.50	27.50	8.41	42.05
519.....	11.00	169.781	2.375	36.656	5.40	84.273	9.50	47.50	1.25	6.25	0.93	34.65
520.....	0.75	150.486	3.00	46.30	6.14	94.768	9.60	47.50	1.75	8.75	7.04	35.20
620.....	15.00	231.52	3.375	52.091	7.78	120.08	9.00	45.00	2.75	13.75	7.04	35.20
621.....	14.25	219.94	3.25	50.162	7.08	109.277	9.00	45.00	1.00	5.00	6.53	32.65
General average.....	12.244	188.98	3.10	47.847	6.12	94.46	9.637	48.18	2.80	14.00	7.29	36.45
EWES.												
2 to 3 years old:												
482.....	15.50	239.24	3.25	50.16	6.38	101.56	8.00	40.00	2.00	10.00	5.12	25.00
483.....	12.75	196.79	3.50	54.021	6.62	102.18	11.00	55.00	1.50	7.50	6.03	34.65
484.....	12.25	189.073	3.00	46.304	5.57	85.97	10.75	53.75	1.75	8.75	6.36	31.80
485.....	15.25	235.38	4.00	61.74	7.02	108.35	9.75	48.75	3.00	15.00	7.07	35.25
486.....	7.625	117.69	2.75	42.44	4.75	73.31	12.25	61.25	1.00	5.00	4.11	20.55
487.....	7.25	111.00	3.00	46.304	5.21	80.414	9.25	46.25	1.60	5.00	6.39	31.95
488.....	17.50	270.11	4.125	63.67	7.30	112.67	8.125	40.625	2.25	11.25	5.53	27.65
489.....	12.50	192.93	3.25	50.16	7.48	115.45	9.25	46.25	1.50	7.50	5.95	29.75
490.....	12.375	191.00	3.625	55.05	6.86	105.88	8.50	42.50	2.00	10.00	5.96	29.80
491.....	8.25	127.34	3.00	46.30	5.13	79.18	8.75	43.75	2.50	12.50	6.09	30.45
492.....	8.875	136.98	3.75	57.879	6.16	99.077	11.25	56.25	6.25	31.25	8.42	42.10
493.....	9.50	146.63	3.00	46.304	5.58	86.125	11.75	58.75	1.75	8.75	6.09	33.45
494.....	7.25	111.90	2.875	44.374	4.65	71.77	8.50	42.50	2.00	10.00	6.21	31.05
495.....	9.625	148.558	2.50	38.586	5.77	89.050	0.75	43.75	2.75	13.75	6.597	32.985
496.....	24.50	378.147	2.00	30.87	9.36	144.467	14.75	73.75	3.50	17.50	7.63	38.15
497.....	9.375	144.698	2.25	34.725	4.66	77.024	11.50	57.50	1.00	5.00	7.11	35.55
498.....	10.00	154.346	3.60	54.021	5.17	79.796	9.25	46.25	6.00	30.00	7.66	38.30
499.....	10.375	100.133	2.375	36.656	5.34	82.42	10.00	50.00	2.00	10.00	6.85	34.25
500.....	15.50	239.239	3.50	54.021	7.37	113.75	10.00	50.00	2.50	12.50	6.72	33.60
501.....	8.00	123.477	3.50	54.021	5.72	88.286	11.00	55.00	4.00	20.00	8.16	40.80
General average.....	11.712	180.769	3.137	48.418	6.11	94.305	10.168	50.64	2.51	12.65	6.578	32.89
ILLINOIS.												
RAMS.												
1 year old:												
447.....	9.50	146.63	1.75	27.01	4.14	63.00	10.00	50.00	1.50	7.50	6.16	30.80
448.....	7.25	111.90	1.75	27.01	3.50	54.02	8.50	42.50	3.50	17.50	6.39	31.95
449.....	12.75	196.79	3.00	46.304	6.37	98.32	9.25	46.25	1.75	8.75	5.83	29.15
450.....	5.125	79.10	2.00	30.869	3.30	50.98	8.00	40.00	2.25	11.25	5.75	28.75
451.....	11.00	169.78	3.00	46.304	5.93	91.53	9.25	46.25	2.00	10.00	5.22	26.10
452.....	8.00	123.47	2.50	38.58	3.97	69.07	9.00	45.00	2.25	11.25	6.24	31.20
453.....	12.75	196.79	4.00	61.74	7.38	113.01	8.00	40.00	1.75	8.75	5.11	25.55
454.....	9.50	146.63	3.00	46.30	5.84	90.14	9.50	47.50	1.75	8.75	6.37	31.85
455.....	6.50	100.33	2.625	40.63	4.16	64.21	8.75	43.75	1.00	5.00	5.84	29.20
456.....	7.75	119.62	2.00	30.87	4.37	67.45	8.75	43.75	1.75	8.75	6.22	31.10
457.....	6.00	92.61	2.25	34.73	3.89	60.04	9.25	46.25	1.60	7.50	4.30	21.60
458.....	12.60	192.93	2.25	34.73	4.38	67.60	8.875	44.375	0.75	3.75	2.33	11.65
459.....	19.00	293.26	2.25	34.73	6.55	101.10	9.00	45.00	1.25	6.25	5.60	28.00
460.....	14.75	227.66	3.25	50.10	6.87	106.04	7.75	38.75	1.00	5.00	3.84	19.20
461.....	0.50	146.63	3.00	46.30	5.12	79.03	8.25	41.25	2.00	10.00	5.42	27.10
462.....	8.75	135.05	3.00	46.30	6.00	92.61	7.25	36.25	2.25	11.25	6.54	27.70
General average.....	10.039	154.047	2.601	40.144	5.11	78.87	8.71	43.55	1.76	8.80	5.385	29.925
2 years old:												
442.....	12.75	196.79	2.125	32.798	5.65	87.21	8.25	41.25	1.75	8.75	6.83	29.15
443.....	11.625	179.427	2.00	30.87	4.58	70.69	8.25	41.25	1.00	5.00	4.17	20.85
440.....	8.75	135.05	2.375	36.67	4.36	67.29	8.50	42.50	1.00	5.00	4.97	24.85
General average.....	11.041	170.413	2.133	32.911	4.863	75.058	8.33	41.65	1.25	6.25	4.99	24.95
3 years old:												
440.....	10.00	154.35	2.50	38.59	5.11	78.87	7.375	36.875	1.25	6.25	4.56	22.80
441.....	10.625	163.99	2.625	40.58	4.86	74.86	7.75	38.75	1.25	6.25	4.08	20.40
General average.....	10.312	159.160	2.562	39.542	4.985	76.94	7.562	37.81	1.25	6.25	4.32	21.60
EWES.												
Lamb:												
481.....	8.00	123.48	3.00	46.30	4.82	74.39	9.75	48.75	5.00	25.00	7.77	38.85
1 year old:												
477.....	10.75	165.921	2.00	30.87	5.09	78.50	7.75	38.75	1.00	5.00	3.90	19.50
478.....	9.00	138.01	2.00	30.87	4.20	64.82	7.00	35.00	1.00	5.00	3.50	17.50
479.....	8.375	129.20	2.00	30.87	4.22	65.134	9.75	48.75	1.00	5.00	4.78	23.50
480.....	7.75	119.62	2.50	38.59	4.45	68.68	9.50	47.50	1.25	6.25	4.79	23.05
General average.....	8.968	138.417	2.15	33.184	4.49	68.301	8.50	42.50	1.065	5.32	4.242	21.21
2 years old:												
463.....	17.50	270.11	4.00	61.74	8.27	127.64	9.75	48.75	1.50	7.50	6.91	34.55
464.....	8.00	123.477	2.25	34.73	4.85	74.875	8.50	42.60	1.60	7.50	5.19	25.95
465.....	7.00	103.04	1.50	23.151	3.29	50.78	9.00	45.00	2.00	10.00	6.33	31.05
466.....	11.25	173.64	2.75	42.44	5.83	89.98	10.00	50.00	2.00	10.00	6.24	31.20
467.....	6.35	104.18	2.25	34.73	4.22	65.123	7.50	37.50	1.75	8.75	4.75	23.75
468.....	17.00	262.39	2.60	38.59	5.15	79.49	9.75	48.75	2.00	10.00	6.38	31.90
469.....	7.125	109.97	2.60	38.59	4.45	68.68	10.875	54.375	2.875	14.375	7.50	37.60
470.....	10.00	154.35	2.25	34.73	5.02	77.48	8.25	41.25	1.00	5.00	5.74	28.70
471.....	12.50	192.93	2.875	44.97	6.75	88.75	8.00	40.00	1.75	8.75	5.90	29.60
472.....	11.50	177.60	3.00	46.30	6.54	100.94	10.25	51.25	1.60	7.50	6.67	33.35
473.....	9.00	138.01	3.00	46.30	5.73	88.44	11.00	55.00	2.00	10.00	6.40	32.00
474.....	10.75	165.92	3.25	50.10	6.75	104.18	8.00	40.00	1.25	6.25	5.46	27.30
General average.....	10.698	165.118	2.635	40.069	5.48	84.581	9.299	46.19	1.76	8.80	6.123	30.615



TABLE IV.—*Extreme and average measurements of strain and stretch of wools—Continued.*

Catalogue number of samples.	STRAIN.						STRETCH.					
	Highest.		Lowest.		Average.		Highest.		Lowest.		Average.	
	grams.	grains.	grams.	grains.	grams.	grains.	mm.	per cent.	mm.	per cent.	mm.	per cent.
<b>ILLINOIS—Continued.</b>												
<b>EWES—continued.</b>												
3 years old:												
475.....	11.50	177.50	2.50	38.59	5.49	84.74	11.50	57.50	2.50	12.50	7.48	37.40
470.....	10.00	154.35	3.25	50.16	5.44	83.06	9.50	47.80	2.75	13.75	6.86	34.30
General average.....	10.75	160.101	2.875	44.374	5.465	84.35	10.50	52.60	2.63	13.10	7.17	35.85
<b>TEXAS.</b>												
<b>RAMS.</b>												
2 years old:												
610.....	9.75	150.49	2.75	42.44	4.34	66.989	8.25	41.25	1.25	6.25	5.40	27.45
617.....	6.375	98.40	2.25	31.73	4.10	61.21	8.00	40.00	4.00	20.00	5.78	28.90
618.....	13.00	200.05	3.00	46.304	6.45	99.55	7.00	35.00	1.25	6.25	4.73	23.65
619.....	8.75	135.05	1.375	21.23	2.71	57.26	7.25	36.25	1.00	5.00	3.83	19.15
620.....	11.75	281.356	2.00	30.809	5.70	80.300	9.25	46.25	1.00	5.00	4.75	23.75
621.....	10.75	165.92	2.00	30.809	4.80	74.09	7.50	37.50	2.75	13.75	5.10	25.05
622.....	10.25	158.21	1.625	25.08	4.78	73.778	8.50	42.50	1.00	5.00	4.30	21.05
623.....	7.625	117.00	2.00	30.809	3.81	58.80	8.25	41.25	1.25	6.25	4.02	20.10
624.....	9.75	150.49	2.00	30.809	5.27	81.34	9.25	46.25	2.25	11.25	6.72	33.60
625.....	7.00	108.01	1.375	21.23	3.03	56.03	8.00	40.00	1.00	5.00	3.74	18.70
General average.....	9.50	146.629	2.038	31.456	4.674	72.14	8.125	40.625	1.675	8.375	4.804	24.32
<b>EWES.</b>												
2 years old:												
605.....	8.25	127.355	2.00	30.809	4.00	61.738	8.75	43.75	8.25	16.25	6.51	31.05
606.....	8.00	123.477	2.25	34.728	4.20	65.751	9.00	45.00	2.25	11.25	6.405	32.025
607.....	0.50	146.629	2.25	34.728	4.702	73.903	8.00	40.00	3.00	15.00	6.092	30.46
608.....	8.25	127.355	2.50	38.586	4.72	72.85	9.50	47.50	1.75	8.75	5.92	29.60
609.....	10.00	154.340	1.625	25.08	4.193	64.713	8.00	40.00	3.00	15.00	5.048	29.74
610.....	13.25	201.509	3.375	62.092	5.13	79.170	14.25	71.25	2.25	11.25	6.94	34.70
611.....	10.25	158.205	2.60	38.586	4.52	70.264	9.75	48.75	2.50	12.60	6.09	30.45
612.....	6.50	100.325	2.50	38.580	4.03	62.201	8.00	40.00	2.73	13.75	5.45	27.25
613.....	7.375	113.829	3.375	62.092	4.828	74.518	11.00	55.00	1.50	7.60	7.12	36.60
614.....	8.50	131.194	2.75	42.44	4.76	73.468	8.25	41.25	2.00	10.00	5.98	29.05
615.....	10.00	154.340	1.75	27.017	4.092	63.157	8.25	41.25	2.25	11.25	4.898	24.98
General average.....	9.080	140.140	2.443	37.707	4.484	69.208	9.341	46.705	2.409	12.015	6.10	30.95
<b>CALIFORNIA.</b>												
<b>RAMS.</b>												
2 years old:												
631.....	8.375	129.20	1.75	27.01	3.94	60.81	9.00	45.00	3.875	19.375	7.37	36.85
635.....	6.25	96.47	2.50	38.59	4.15	61.05	9.75	48.75	3.00	15.00	7.43	37.15
636.....	12.75	190.70	1.625	25.08	5.88	83.04	9.50	47.50	2.50	12.50	6.63	33.15
637.....	6.625	102.25	2.25	34.73	3.98	61.43	10.00	60.00	1.75	8.75	7.33	36.65
638.....	13.25	204.51	1.75	27.01	5.00	77.17	10.00	50.00	3.50	17.50	7.88	38.90
639.....	8.00	123.48	2.25	31.73	3.94	60.81	8.75	43.75	4.875	24.875	7.32	36.60
640.....	10.25	158.20	2.25	34.73	5.31	81.96	9.875	49.375	5.00	25.00	7.80	39.45
General average.....	9.359	144.51	2.054	31.702	4.528	69.887	9.554	47.77	3.70	18.50	7.34	36.78
<b>EWES.</b>												
2 years old:												
626.....	6.00	92.008	2.00	30.87	3.33	51.39	7.00	35.00	1.50	7.50	3.36	16.80
627.....	10.00	154.55	2.75	42.45	4.47	68.99	7.00	35.00	1.25	6.25	4.75	23.75
628.....	5.25	81.03	0.75	11.58	2.49	38.43	10.25	51.25	1.75	8.75	7.43	37.15
629.....	6.75	104.18	2.25	34.73	3.70	57.11	10.25	51.25	4.00	20.00	8.39	41.95
630.....	6.00	92.01	2.00	30.87	3.48	53.712	11.00	55.00	2.00	10.00	8.49	42.45
631.....	7.625	117.088	2.00	30.87	3.04	50.312	10.50	52.50	2.25	11.25	7.24	36.20
632.....	7.00	108.04	3.00	46.80	4.95	76.40	10.00	50.00	1.25	6.25	6.84	34.20
633.....	10.75	165.92	2.50	38.59	5.312	81.99	10.77	53.75	4.875	24.875	8.187	40.935
641.....	9.00	138.011	2.00	30.800	4.598	70.969	9.125	45.625	2.75	13.75	7.26	36.30
642.....	14.00	216.064	1.75	27.01	4.68	72.23	9.00	45.00	2.50	12.50	6.545	32.725
643.....	14.625	225.73	3.375	62.08	6.52	100.63	10.00	50.00	3.25	16.25	7.57	37.85
644.....	9.00	138.91	2.25	34.728	4.06	62.60	10.50	52.50	3.00	15.00	7.96	39.80
649.....	7.75	119.62	2.125	32.798	3.74	57.73	10.50	52.50	2.625	13.125	6.55	32.75
650.....	14.00	216.08	2.75	42.45	5.26	81.188	10.00	50.00	4.50	22.50	8.25	41.40
651.....	8.00	123.48	2.25	34.73	4.47	63.89	9.00	45.00	2.25	11.25	6.17	30.83
652.....	8.25	127.34	1.625	25.08	3.43	52.04	8.00	40.00	0.75	3.75	5.49	27.45
653.....	8.25	127.34	3.00	46.80	4.86	75.011	10.50	52.50	2.50	12.50	7.63	38.15
654.....	8.50	131.94	2.50	38.59	4.38	67.603	9.75	48.75	1.50	7.50	6.29	31.45
655.....	7.50	115.76	2.25	34.73	3.88	59.87	9.75	48.75	1.00	5.00	5.56	27.30
656.....	7.375	113.829	1.00	15.435	3.99	61.58	10.00	50.00	1.00	6.00	6.47	32.35
657 (lost).....												
658.....	10.25	158.20	3.00	46.30	5.12	79.03	10.00	50.00	1.75	8.75	7.95	39.75
659.....	6.00	92.01	1.75	27.01	3.145	48.54	7.125	36.625	2.00	10.00	4.183	20.915
660.....	8.00	127.34	1.50	23.15	3.390	62.416	10.00	50.00	5.00	25.00	8.040	40.23
661.....	8.75	135.05	3.00	46.80	4.70	72.54	10.00	50.00	3.50	17.50	7.68	37.00
662.....	9.625	148.56	1.25	19.29	3.53	54.48	10.50	62.50	1.00	6.00	7.285	36.275
663.....	7.50	115.76	3.00	46.30	4.84	66.986	11.00	55.00	3.50	17.50	7.815	39.075
664.....	10.75	165.92	3.00	46.30	4.758	73.437	10.25	51.25	4.875	24.375	7.073	34.365
665.....	5.00	77.173	2.00	30.87	3.243	50.05	8.875	44.375	2.25	11.25	6.113	30.565
666.....	10.375	160.134	1.875	21.22	3.69	50.85	10.25	51.25	2.00	10.00	7.333	36.665
667.....	11.00	169.78	3.00	46.80	6.595	116.326	11.00	55.00	1.60	7.50	7.085	34.425
668.....	6.50	100.325	2.60	30.87	3.633	56.074	10.75	53.75	6.00	30.00	8.83	44.15
General average.....	8.657	133.617	2.22	34.262	4.279	66.013	9.763	48.61	2.577	12.88	7.003	35.01
<b>3 years old:</b>												
615.....	10.25	158.20	2.125	32.80	4.71	72.70	8.25	41.25	1.50	7.50	6.08	30.40
646.....	6.75	104.18	2.00	30.87	3.47	53.50	10.25	51.25	4.50	22.50	8.37	41.85
647.....	8.50	131.19	1.625	25.08	4.36	67.60	10.00	50.00	1.25	6.25	6.91	34.70
648.....	11.00	169.78	2.75	42.44	5.33	82.27	11.00	55.00	2.25	11.25	6.05	30.25
General average.....	8.12	140.763	2.12	32.721	4.47	68.902	9.875	49.37	2.73	13.65	7.36	36.80



TABLE V.—General results of all measurements.

CALIFORNIA WOOLS.

Catalogue number of samples.	Crimp per inch.	Fineness.		Strain		Stretch.		$\frac{D^2 \times S}{D^2}$	18109 $\frac{S}{D^2} = R$	$E = \frac{R}{P}$
		Centimillimeters.	Thon-sandths of inch.	Grams.	Grains.	Milli-meters.	Per cent.			
<b>RAMS.</b>										
2 years old:										
634.....	22	1.68	0.6614	3.04	60.81	7.37	36.85	22.336	25284	65420
635.....	25	1.684	0.6620	4.15	64.05	7.43	37.15	23.415	26507	71351
636.....	20	1.789	0.7143	5.38	83.04	6.63	33.15	26.896	30446	93981
637.....	20	1.86	0.7322	3.98	61.43	7.33	36.65	18.407	20836	56850
638.....	14	1.998	0.7866	5.00	77.17	7.38	36.00	20.04	22682	61467
639.....	20	1.721	0.6775	3.94	60.81	7.32	36.60	21.284	24085	65806
640.....	25	2.018	0.7944	5.31	81.96	7.89	39.45	20.815	23564	59732
General average.....	20.80	1.821	0.7169	4.528	69.887	7.34	36.70	21.847	24730	67384
<b>EWES.</b>										
2 years old:										
626.....	30	1.674	0.6590	3.33	51.39	3.36	16.80	19.013	21516	128070
627.....	26	1.82	0.7165	4.47	68.99	4.75	23.75	21.592	24436	102887
628.....	22	1.66	0.6535	2.49	38.43	7.43	37.15	14.457	15993	43051
629.....	26	1.73	0.6811	3.70	57.11	8.39	41.95	19.78	22387	53866
630.....	26	1.616	0.6362	3.48	53.712	8.49	42.45	21.321	24130	56843
631.....	25	1.77	0.6968	3.04	60.812	7.24	36.20	20.122	22772	62906
632.....	22	1.842	0.7251	4.95	76.40	6.84	34.20	23.342	26417	77241
633.....	20	1.977	0.7783	5.312	81.99	8.187	40.935	21.745	24605	60102
641.....	22	1.665	0.6436	4.698	70.069	7.26	36.30	26.538	30038	75469
642.....	25	1.73	0.6811	4.68	72.23	6.545	32.725	25.019	28318	86520
643.....	22	2.083	0.8240	6.52	100.63	7.57	37.85	23.814	32042	84654
644.....	26	1.706	0.6716	4.06	62.66	7.96	39.80	22.830	25262	79907
649.....	22	2.090	0.8263	3.74	57.73	6.55	32.75	13.582	15370	46932
650.....	20	2.04	0.8031	5.26	81.186	8.25	41.40	20.223	22885	55278
651.....	22	2.12	0.8346	4.47	68.89	6.17	30.85	15.913	18007	58370
652.....	22	1.93	0.7598	3.43	52.94	5.49	27.45	14.733	16672	60734
653.....	20	2.09	0.8228	4.80	75.011	7.63	38.15	17.802	20146	52803
654.....	22	1.875	0.7380	4.58	67.603	6.29	31.45	19.934	22557	71496
655.....	22	1.92	0.7559	3.88	59.87	5.56	27.80	16.840	19059	68560
656.....	16	2.102	0.8275	3.99	61.58	6.47	32.35	14.448	16355	50555
658.....	22	2.05	0.8070	5.12	79.03	7.95	39.75	22.568	25668	56776
659.....	25	2.063	0.8122	3.145	48.54	4.183	20.915	11.823	13375	69890
660.....	20	1.882	0.7409	3.996	52.416	8.046	40.23	15.331	17755	44133
662.....	16	1.89	0.7440	4.70	72.54	7.58	37.90	21.052	23824	62662
663.....	20	1.774	0.7003	3.53	54.48	7.255	36.275	17.946	20316	55998
664.....	20	1.794	0.7062	4.34	66.986	7.815	39.075	21.575	24424	62498
665.....	20	1.984	0.7811	4.758	73.437	7.673	38.365	19.340	21889	57047
666.....	22	1.931	0.7602	3.243	50.05	6.113	30.565	13.915	15755	51537
667.....	20	1.773	0.6980	3.69	56.85	7.333	36.665	18.782	21255	57964
667.....	20	2.32	0.9133	6.665	110.326	7.685	38.425	19.516	20093	57488
668.....	20	1.896	0.7464	3.633	56.074	8.83	44.15	16.170	18301	41453
General average.....	22.1	1.897	0.7468	4.279	66.043	7.008	35.61	19.625	21538	61520
3 years old:										
645.....	22	1.93	0.7598	4.71	72.70	6.08	30.40	20.231	22894	75317
646.....	25	1.65	0.6496	3.47	53.56	8.37	41.85	20.393	23078	55143
647.....	22	2.29	0.9015	4.38	67.60	6.94	34.70	13.333	15087	43478
648.....	22	2.058	0.8066	5.33	82.27	8.05	40.25	20.135	22795	56632
General average.....	22.7	1.982	0.7803	4.47	68.992	7.36	36.80	18.207	20610	66006

VERMONT WOOLS.

<b>RAMS.</b>										
2 years old:										
423.....	20	2.157	0.8492	5.41	83.50	4.09	20.45	18.605	21051	105340
525.....	12	2.443	0.9618	5.78	89.21	6.61	28.05	15.496	17193	61079
534.....	14	1.788	0.7038	6.07	78.25	6.07	30.35	25.374	28714	94609
543.....	16	1.861	0.7326	4.37	67.45	6.11	30.55	20.142	22794	74614
General average.....	15.50	2.06	0.8110	5.158	79.61	5.455	27.28	16.476	18768	68799
3 years old:										
526.....	16	2.335	0.9192	5.93	91.53	8.34	41.70	17.402	19693	47226
530.....	20	2.056	0.8094	4.50	70.38	6.11	30.55	17.26	19535	63944
533.....	20	1.983	0.7807	5.85	90.29	6.69	32.95	23.875	27027	82026
535.....	14	2.245	0.8838	6.23	96.16	5.63	28.15	19.778	22387	79528
637.....	20	1.906	0.7503	6.60	100.33	5.25	26.25	28.628	32403	123442
640.....	16	2.059	0.8027	6.98	107.73	5.56	27.80	26.362	30400	109354
654.....	16	2.011	0.7917	7.57	116.84	6.01	30.05	20.949	38897	112804
655.....	16	2.079	0.8183	4.60	70.99	6.64	33.20	17.028	19274	58056
659.....	16	2.237	0.8807	5.63	86.00	5.68	27.90	18.001	20872	73720
563.....	14	2.23	0.8779	6.795	104.88	7.43	37.15	21.859	24741	66509
General average.....	16.80	2.122	0.8354	5.87	90.60	6.311	31.55	20.858	23664	74677
<b>EWES.</b>										
2 years old:										
424.....	20	2.014	0.7929	4.83	76.09	5.87	29.35	19.447	22013	75004
542.....	20	1.622	0.6385	5.323	82.16	7.157	35.787	32.452	36727	102618
General average.....	20	1.818	0.7157	5.126	79.12	6.513	32.565	24.815	28001	86249
3 years old:										
522.....	20	1.97	0.7755	5.20	80.26	7.73	38.05	21.438	24266	62784
623.....	22	1.963	0.7728	5.34	82.42	6.65	33.25	13.868	15341	46138
524.....	20	2.07	0.8149	4.87	67.45	7.49	37.45	16.460	18641	49775
528.....	20	1.982	0.7803	6.09	78.66	6.50	32.50	27.32	30698	95072
629.....	20	1.982	0.7803	4.95	76.40	5.79	28.95	20.161	22817	78616
629.....	20	2.00	0.7874	6.45	84.12	8.58	42.00	21.80	24673	57514
531.....	20	1.93	0.7598	4.03	62.20	8.86	44.30	17.713	20044	45247



TABLE V.—General results of all measurements—Continued.

VERMONT WOOLS—Continued.

Catalogs number of samples.	Crimp per inch.	Fineness.		Strain.		Stretch.		$\frac{D^2 \times S}{D^2}$	18100 $\frac{S}{D^2} = It$	$E = \frac{R}{P}$
		Centimillimeters.	Thon-sandths of inch.	Grams.	Grains.	Millimeters.	Per cent.			
EWES—continued.										
3 years old:										
532	20	2.201	0.8001	6.25	96.47	5.95	20.75	18.543	20983	70534
536	10	2.081	0.3192	6.44	99.40	7.25	30.25	23.704	26926	74278
538	18	2.055	0.8090	4.82	74.30	6.73	33.65	18.262	20667	61117
539	20	1.863	0.7334	5.04	77.79	8.135	46.75	23.234	26292	56250
539	22	1.651	0.6199	5.10	78.716	7.39	86.95	29.986	33875	91678
541	16	1.79	0.7047	5.36	82.73	6.80	81.00	26.766	30174	85747
544	20	1.749	0.6885	5.21	80.87	8.47	42.35	27.66	31306	73922
547	16	1.794	0.7062	4.62	69.76	6.88	34.40	22.47	25432	73928
548	20	1.853	0.7295	5.375	82.96	7.95	39.75	25.646	28552	71325
549	20	2.010	0.7913	5.44	83.76	7.43	37.13	21.544	24379	65624
550	16	1.982	0.7803	6.132	94.65	7.40	37.00	24.975	28273	76113
551	16	2.033	0.8033	5.10	78.72	8.00	40.00	19.743	22342	55855
551	14	2.103	0.8279	6.88	106.19	8.12	40.66	24.89	28171	69386
552	14	1.769	0.6664	3.94	68.12	5.29	24.45	15.819	17965	67695
553	16	2.010	0.7948	6.03	93.07	6.68	33.63	23.663	26773	70170
556	22	1.911	0.7611	4.69	72.39	6.87	31.35	19.918	22052	64141
557	20	2.021	0.7956	4.46	68.84	6.61	33.05	17.471	19773	59827
558	20	1.956	0.7700	4.24	65.44	7.182	35.81	17.731	20067	55882
559	20	1.984	0.7614	4.625	71.39	6.58	32.90	19.784	22387	69646
560	10	2.151	0.8468	4.255	65.67	5.81	29.05	14.714	16649	57311
561	10	2.020	0.7952	6.39	98.63	6.42	32.10	25.656	28363	76350
562										
General average	18.50	1.962	0.7724	5.17	79.80	7.126	35.63	21.488	24323	66264

NEW YORK WOOLS.

RAMS.										
2 years old:										
669	16	1.90	0.7480	4.01	61.88	6.78	33.90	17.773	20112	56928
670	16	1.80	0.7322	4.32	66.831	8.01	40.05	19.970	22699	55178
671	22	2.066	0.8133	5.43	83.809	7.49	37.45	20.354	23032	61502
671	22	1.96	0.7716	3.54	54.64	8.23	41.15	14.744	16683	46642
672	22	1.787	0.7035	3.80	58.56	8.40	42.00	19.030	21510	41309
673	20	1.79	0.7047	4.69	73.30	7.88	39.40	23.42	26507	67277
674	20	1.898	0.7464	5.69	78.56	6.89	34.45	22.655	25647	69723
675	22	1.92	0.7559	5.32	82.112	8.13	40.65	23.69	26134	64289
676	20	2.05	0.8070	4.57	70.54	7.75	38.75	17.399	19694	60822
677	20	1.967	0.7744	4.46	69.146	7.48	37.40	18.626	20972	56076
678	20	2.346	0.9236	5.03	77.219	4.98	24.90	14.964	16939	67999
691	20	1.916	0.7543	4.378	67.673	8.593	42.965	19.686	21114	49138
692	20	1.958	0.7700	5.815	91.295	6.015	34.573	19.649	22240	64315
693										
General average	20	1.955	0.7696	4.68	71.925	7.58	37.90	19.598	22682	58623
EWES.										
2 years old:										
679	20	1.876	0.7385	4.335	66.909	8.54	42.70	19.798	22368	62244
680	22	2.15	0.8464	4.59	70.844	7.233	36.265	15.884	17564	48426
681	25	2.036	0.8015	4.623	71.354	5.868	34.34	17.840	20293	58332
682	25	1.754	0.6905	3.575	55.175	8.075	40.375	18.593	21040	52106
683	22	1.983	0.7807	5.153	79.535	8.653	43.26	20.966	23734	54864
683	22	2.147	0.8452	5.21	80.414	7.427	37.135	18.083	20463	55097
684	20	1.927	0.7588	5.33	82.266	7.62	38.10	22.966	25466	66682
685	22	1.96	0.7716	4.81	74.24	7.525	37.625	20.126	22783	60546
686	25	1.989	0.7890	4.53	69.918	8.193	40.965	17.593	19699	48593
687	20	2.117	0.8334	5.63	86.897	7.98	39.90	20.099	22749	57016
688	20	2.364	0.9307	5.345	82.498	7.31	36.55	15.303	17317	47404
689	20	2.163	0.8515	5.25	81.032	9.03	45.15	17.954	20316	44997
690	16	2.069	0.8224	4.805	75.060	7.937	39.685	17.897	20192	50873
694	22	2.337	0.9200	5.75	88.749	6.60	33.00	16.845	19071	57791
695	16	2.358	0.9283	6.125	94.53	5.867	29.335	17.621	19942	67970
696	20	2.31	0.9094	5.82	89.629	8.50	42.95	17.451	19750	45985
697										
General average	21.13	2.098	0.8259	5.059	78.08	7.717	38.585	18.386	20814	53936

PENNSYLVANIA WOOLS.

RAMS.										
Lambs:										
570	20	1.694	0.6669	4.33	66.831	7.36	36.80	24.142	27322	74244
574	20	1.83	0.7204	3.78	58.54	5.97	29.85	18.06	20440	69919
577	16	2.12	0.8340	7.44	114.83	6.67	33.35	20.467	23883	89900
578	20	2.10	0.8267	6.89	106.34	6.56	32.90	24.997	28285	86286
580	20	2.08	0.8185	7.13	110.05	7.40	37.45	26.369	29166	77881
579	16	2.05	0.8070	6.47	84.43	7.46	37.30	20.83	23576	63295
General average	18.67	1.970	0.7791	6.84	90.138	6.917	34.585	23.850	27005	78071
2 years old:										
582	22	1.39	0.5472	3.41	52.63	8.75	43.75	29.289	31962	73055
583	22	1.48	0.5826	2.675	40.52	6.38	31.90	12.642	14366	44840
584	22	1.30	0.5472	2.57	39.666	7.69	38.45	21.283	24085	62640
585	16	1.51	0.5944	2.74	42.29	6.21	31.05	19.271	21810	70241
586	22	1.60	0.6535	3.20	50.80	6.99	34.95	18.929	21425	61903
587	22	1.44	0.5669	2.83	43.63	9.98	45.40	21.832	24707	54422
General average	21	1.48	0.5826	2.914	44.076	7.516	37.58	21.285	24096	64120



TABLE V.—General results of all measurements—Continued.

PENNSYLVANIA WOOLS—Continued.

Catalogue number of samples.	Crimp per inch.	Fineness.		Strain.		Stretch.		$\frac{D^2 \times S}{D^2}$	18100 $\frac{S}{D^2} = R$	$E = \frac{R}{P}$
		Centimilimeters.	Thousandths of inch.	Grams.	Grains.	Millimeters.	Per cent.			
<b>WETHERS.</b>										
2 years old:								<i>Grams.</i>		
780.....	14	1.93	0.7598	5.61	86.59	6.58	32.00	19.141	21667	65814
781.....	14	2.094	0.8244	4.263	65.79	9.518	47.60	16.288	18751	39475
General average .....	14	2.012	0.7921	4.936	70.19	8.049	46.245	19.509	22082	54801
<b>EWES.</b>										
Lambs:										
675.....	16	1.85	0.7283	3.80	58.65	6.98	34.80	17.708	20112	57704
578.....	20	1.81	0.7125	4.23	65.29	7.60	38.00	20.658	23938	61535
General average .....	18	1.83	0.7204	4.01	61.89	7.28	36.40	19.159	21192	59576
2 years old:										
772.....	16	1.96	0.7716	4.75	76.47	6.68	33.40	19.784	22387	67027
773.....	16	1.97	0.7755	5.10	49.64	7.83	39.15	21.273	24634	62921
774.....	16	1.89	0.7440	4.60	70.99	7.17	35.85	20.604	23315	65085
775.....	14	2.13	0.8385	7.39	114.06	7.35	36.75	26.062	29495	80260
776.....	20	1.77	0.6968	3.60	56.49	7.74	38.70	18.692	21154	54786
777.....	20	1.85	0.7283	4.81	74.24	6.62	33.10	22.487	25451	70901
778.....	16	1.79	0.7047	3.90	60.20	7.94	39.70	19.48	25146	54271
General average .....	18.86	1.91	0.7519	4.896	75.567	7.333	36.665	21.473	24360	60266
3 years old:										
681.....	16	1.74	0.6850	4.16	64.21	7.45	37.25	21.964	24877	60784
588.....	20	1.65	0.6495	3.04	47.08	6.81	34.05	17.278	19558	45625
589.....	20	1.58	0.6220	3.20	49.39	7.83	39.15	20.51	23214	59294
590.....	25	1.49	0.5866	2.36	34.43	6.86	34.30	17.098	19252	56129
591.....	16	1.77	0.6663	3.43	52.94	7.32	36.60	17.517	19829	54178
592.....	22	1.53	0.6023	2.95	45.38	7.79	38.95	20.163	23817	59046
593.....	22	1.888	0.5464	2.14	33.03	7.99	39.95	17.773	20112	59344
594.....	20	1.48	0.6826	2.44	37.66	6.95	32.75	17.823	20169	61584
595.....	22	1.65	0.6496	3.70	67.11	9.18	45.80	17.273	19546	42584
596.....	22	1.40	0.5747	2.29	34.73	6.59	32.95	17.188	19456	50037
597.....	20	1.41	0.5551	1.89	29.17	6.33	31.65	15.565	17622	50976
General average .....	20.46	1.559	0.6137	2.879	44.44	7.336	36.68	18.30	20780	50652

WISCONSIN WOOLS.

<b>RAMS.</b>										
1 year old:										
736.....	22	1.995	0.7854	5.69	87.823	6.72	33.60	22.675	25896	77001
737.....	22	1.87	0.7362	3.968	61.241	7.293	36.465	18.156	20554	56358
738.....	16	1.87	0.7362	3.23	49.822	5.488	27.44	17.923	16728	60963
747.....	20	1.789	0.7143	3.81	51.080	4.10	20.50	16.547	18732	91373
748.....	16	1.995	0.7854	4.573	70.582	5.275	26.375	18.384	20803	80095
749.....	16	1.848	0.7275	4.395	62.344	6.365	31.825	24.995	28295	88895
750.....	22	1.669	0.6570	3.67	56.645	6.02	25.10	21.08	23859	95654
751.....	20	1.717	0.6750	4.098	62.325	4.623	23.115	21.915	24809	107306
General average .....	19.25	1.844	0.7250	4.237	65.427	5.611	28.055	19.937	22568	80429
2 years old:										
724.....	20	1.998	0.7866	3.918	60.472	4.74	23.70	15.704	17781	75024
728.....	22	2.097	0.8255	5.18	79.051	7.49	37.45	18.848	21335	59968
729.....	20	2.408	0.9480	5.49	84.74	6.53	32.65	15.149	16757	51322
733.....	20	2.092	0.8236	4.07	61.84	5.27	26.35	14.879	16841	65403
734.....	20	2.068	0.8092	5.91	91.22	7.51	37.55	23.452	25937	69073
735.....	20	2.133	0.8397	5.268	80.383	6.188	30.94	18.316	20735	68577
739.....	22	2.17	0.8548	6.46	84.27	7.10	35.50	18.552	20995	59141
752.....	22	2.23	0.8779	6.25	81.031	8.75	43.75	16.891	19105	43669
753.....	20	2.184	0.8598	5.36	82.73	8.30	41.50	17.979	20350	49086
754.....	20	2.049	0.8066	3.935	60.735	8.608	43.05	14.987	16977	39436
755.....	16	2.019	0.7948	4.483	60.193	7.625	38.125	17.596	19629	52122
756.....	16	2.069	0.7909	3.745	67.863	7.84	39.20	23.529	26632	67937
757.....	20	2.009	0.7909	5.125	79.10	6.94	34.70	20.317	22998	60278
758.....	20	1.99	0.7834	5.13	79.18	7.26	36.30	20.727	23462	64635
759.....	16	2.129	0.8381	6.93	106.96	6.66	33.30	24.402	27684	83135
760.....	20	1.84	0.7637	4.51	69.61	6.91	34.55	19.173	21697	62799
761.....	22	2.062	0.8118	4.39	67.76	4.46	22.30	16.554	18731	83997
General average .....	19.765	2.219	0.8736	4.764	73.63	6.957	34.785	15.48	17520	50361
3 years old:										
725.....	20	1.988	0.7629	5.18	70.951	5.23	26.15	20.066	22715	86866
727.....	16	1.889	0.7436	5.098	78.686	7.47	37.35	22.864	25873	69272
730.....	20	1.524	0.5989	3.36	51.86	6.308	31.54	23.147	26291	83073
732.....	22	1.67	0.6574	5.105	78.703	7.575	37.675	27.964	31645	83541
740.....	16	1.85	0.7283	4.21	64.98	6.86	34.30	19.684	22274	64939
General average .....	18.80	1.774	0.6984	4.591	70.86	6.689	33.445	23.341	26416	78973
4 years old:										
726.....	20	2.325	0.9153	7.045	108.738	5.535	27.675	20.852	23598	85254
731.....	22	1.898	0.7472	4.177	64.47	5.523	27.615	18.467	20994	75686
General average .....	21	2.112	0.8314	6.611	86.063	5.520	27.645	20.127	22783	82399



TABLE V.—General results of all measurements—Continued.

WISCONSIN WOOLS—Continued.

Catalogue number of samples.	Crimp per inch.	Fineness.		Strain.		Stretch.		$\frac{D^2 \times S}{D^2}$	18109 $\frac{S}{D^2} = R$	$R = \frac{P}{E}$
		Centimillimeters.	Thousandths of inch.	Grams.	Grains.	Millimeters.	Per cent.			
<b>EWES.</b>										
<b>1 year old:</b>										
741.....	20	2.017	0.7940	2.588	55.38	4.578	22.30	14.111	29060	132814
742.....	20	1.941	0.7641	2.855	59.50	7.425	37.125	10.572	18228	40890
743.....	20	2.002	0.7681	5.20	81.040	6.51	32.55	21.117	23904	73430
General average.....	20	1.986	0.7818	4.244	63.504	6.171	30.855	17.215	19189	63155
<b>2 years old:</b>										
698.....	20	1.804	0.7118	4.185	64.59	6.85	34.25	20.575	28298	68007
699.....	20	1.965	0.7736	4.125	63.665	6.109	30.995	17.093	19387	78782
704.....	20	1.871	0.7386	5.213	80.461	7.238	36.19	23.626	26971	74526
708.....	10	1.845	0.7283	3.828	59.064	8.65	43.25	17.183	19444	44953
709.....	22	1.823	0.7177	4.075	62.986	5.48	27.40	19.615	22266	81014
710.....	20	2.066	0.8133	4.298	65.338	6.045	33.225	16.111	18293	54871
744.....	20	1.595	0.6579	8.208	49.514	6.413	32.085	20.176	22640	71219
745.....	23	1.779	0.7003	5.77	89.058	6.95	34.80	29.17	33015	94870
746.....	20	1.868	0.7354	3.543	59.316	6.765	33.69	17.621	19942	58840
762.....	20	2.62	0.7932	4.52	60.95	6.50	32.95	19.525	23104	67084
763.....	16	2.103	0.7488	5.70	89.97	6.75	33.75	17.723	20666	59424
761.....	22	1.902	0.7488	5.35	82.58	9.10	45.50	23.663	20779	70780
765.....	25	1.96	0.7710	5.05	77.94	7.63	38.15	21.093	23802	58850
767.....	20	1.876	0.7385	4.38	76.80	6.82	34.10	20.822	23564	69104
768.....	16	1.88	0.7401	5.10	78.72	7.20	36.00	23.088	26133	72693
769.....	16	2.05	0.7992	6.07	93.688	7.11	35.55	23.568	26676	75040
782.....	22	1.82	0.7165	3.71	57.20	6.40	32.45	17.92	30282	63502
783.....	20	2.15	0.8401	5.35	82.68	7.495	37.475	18.519	26661	55926
787.....	25	1.937	0.7625	6.03	77.04	7.61	38.05	21.45	24277	65290
General average.....	20.40	1.904	0.7496	4.65	71.77	7.034	35.170	20.518	23225	66086
<b>3 to 5 years old:</b>										
700.....	20	2.014	0.7927	5.81	89.675	6.37	31.85	22.919	25941	81448
701.....	30	1.819	0.7169	4.89	75.475	7.41	37.05	23.646	26707	72246
702.....	20	1.907	0.7507	5.16	79.943	7.224	36.62	22.703	25692	64846
703.....	22	1.957	0.7704	6.555	101.174	7.10	35.80	27.385	31000	86593
703.....	22	2.218	0.8732	5.218	80.538	7.61	38.05	19.971	19207	51654
706.....	20	1.91	0.7519	5.795	89.448	6.80	28.45	25.413	28759	101090
707.....	16	1.850	0.7318	4.24	65.442	6.575	27.575	19.63	22217	79690
711.....	10	2.079	0.8185	5.79	89.366	6.25	31.25	21.433	24255	77617
712.....	16	1.47	0.7755	2.25	50.163	7.845	39.725	24.064	27231	74140
713.....	20	1.849	0.7279	3.178	49.051	8.433	42.165	14.873	16830	39910
716.....	20	2.141	0.8420	4.825	74.472	7.643	36.715	16.812	19060	51905
717.....	16	2.063	0.8122	5.750	88.888	8.358	41.79	21.65	24504	58635
718.....	20	2.139	0.8361	6.10	94.151	7.915	39.575	21.332	24141	60994
719.....	16	2.106	0.8291	4.818	74.56	6.145	30.725	17.381	19225	52555
720.....	20	2.080	0.8212	5.44	84.179	7.97	39.85	20.003	22636	58126
721.....	16	2.262	0.8905	5.893	90.596	5.905	29.525	18.429	20659	72283
722.....	20	2.165	0.8523	6.585	101.64	8.49	42.45	22.470	25443	59936
723.....	16	1.899	0.7470	4.465	68.915	8.275	41.875	19.810	24421	54183
730.....	20	1.94	0.7637	4.13	63.74	7.14	35.70	17.557	19878	55671
771.....	20	2.03	0.7992	5.38	83.04	7.83	39.15	20.680	23648	68392
784.....	22	1.80	0.7710	4.80	74.08	6.40	32.80	19.992	22025	70046
785.....	25	1.93	0.7598	5.63	85.35	7.33	36.65	24.873	28148	76902
786.....	25	1.95	0.7677	5.34	82.42	7.64	38.20	22.469	25432	66575
General average.....	19.913	1.989	0.7630	5.172	79.83	7.242	36.21	20.917	23677	65390
<b>Very old:</b>										
714.....	22	1.776	0.6992	3.88	59.896	7.438	37.19	10.682	22274	61287
715.....	14	2.261	0.8901	4.89	75.475	6.725	33.625	15.905	17328	51525
General average.....	18	2.019	0.7918	4.335	67.68	7.082	35.41	17.211	19478	55008

MINNESOTA WOOLS.

<b>RAMS.</b>										
<b>2 to 3 years old:</b>										
502.....	10	2.096	0.8251	6.52	100.63	7.83	36.65	23.740	26809	73313
503.....	20	2.017	0.7940	6.24	96.31	5.81	29.05	24.524	27752	95533
504.....	16	2.127	0.8373	5.79	89.37	6.22	46.10	20.477	23180	50281
505.....	20	2.152	0.8472	5.13	79.18	6.82	34.10	17.723	20656	58814
506.....	10	2.037	0.8019	6.15	94.92	6.78	33.90	23.714	26835	79160
507.....	16	2.22	0.8740	6.38	97.70	6.83	34.15	20.55	23259	68107
508.....	18	2.174	0.8559	5.26	81.19	5.52	27.60	17.806	20147	72094
509.....	20	1.948	0.7666	4.43	68.27	8.70	43.50	18.079	20661	47496
510.....	20	2.14	0.8425	5.12	79.03	8.11	40.65	17.888	20245	49634
511.....	14	2.41	0.9488	6.33	97.70	7.19	35.95	17.437	19739	54906
512.....	16	2.06	0.8110	6.45	99.553	8.63	43.15	24.389	27526	63790
513.....	23	2.18	0.8562	5.53	85.35	6.27	31.35	18.619	21074	67223
514.....	16	2.061	0.8114	6.39	93.627	7.48	37.40	24.075	27243	72841
515.....	16	2.104	0.8283	7.17	110.665	8.06	40.20	23.014	26825	72767
516.....	20	2.093	0.8240	5.98	92.319	7.13	35.75	21.841	24719	69143
517.....	16	1.908	0.7511	7.19	110.97	8.41	42.05	21.599	25765	85064
518.....	20	2.069	0.8145	5.46	84.273	6.83	34.65	20.468	23082	63930
519.....	20	2.045	0.8051	6.14	94.768	7.04	35.20	23.491	26666	75330
520.....	20	1.854	0.7598	7.78	120.08	7.64	35.20	30.333	41119	118114
521.....	16	1.874	0.7377	7.08	109.277	6.53	32.65	36.504	36504	111794
General average.....	17.16	2.079	0.8185	6.12	94.46	7.29	36.45	22.655	26233	70830



TABLE V.—General results of all measurements—Continued.

MINNESOTA WOOLS—Continued.

Catalogue number of samples.	Crimp per inch.	Fineness.		Strain.		Stretch.		$\frac{D^2 \times S}{D^2}$	18109 $\frac{S}{D^2} = R$	$E = \frac{R}{P}$
		Centimilimeters.	Thousandths of inch.	Grams.	Grains.	Millimeters.	Per cent.			
EWES.										
2 to 3 years old:										
482.....	20	2.02	0.7952	6.38	101.56	5.12	25.60	<i>Grams.</i>	28907	110572
483.....	20	2.00	0.7874	6.62	102.18	6.93	34.65	25.017	29970	86494
484.....	20	1.97	0.7755	5.57	85.97	6.96	31.80	22.964	25986	81718
485.....	20	1.95	0.7677	7.02	108.35	7.07	35.35	29.538	33434	94580
486.....	20	2.00	0.7874	4.75	73.31	4.11	20.55	18.00	21504	104644
487.....	22	1.94	0.7639	5.21	80.414	6.39	31.95	22.149	25069	78465
488.....	20	2.23	0.8779	7.30	112.67	5.53	27.65	23.487	26575	96110
489.....	20	1.99	0.7834	7.48	115.45	5.95	29.75	30.221	34203	114970
490.....	16	2.030	0.8027	6.86	105.88	5.96	29.80	26.40	29880	100270
491.....	16	2.06	0.8110	5.13	79.18	6.09	30.45	19.342	21889	71886
492.....	16	2.035	0.8011	6.16	99.077	8.42	42.10	23.80	26937	63984
493.....	16	2.072	0.8157	5.58	86.125	6.69	33.45	20.690	23417	70006
494.....	16	1.796	0.7070	4.65	71.77	6.21	31.05	23.070	26111	86051
495.....	16	2.145	0.8444	5.77	89.059	6.597	32.985	20.065	22704	68842
496.....	14	2.156	0.8488	9.36	144.467	7.63	38.15	32.218	36467	95588
497.....	14	1.917	0.7547	4.66	77.924	7.11	35.55	20.336	23010	64725
498.....	16	1.786	0.7031	5.17	79.796	7.66	38.30	25.933	29348	76626
499.....	16	2.008	0.7905	5.34	82.42	6.85	34.25	21.19	23983	70012
500.....	20	2.05	0.8070	7.87	113.75	6.72	33.60	28.059	31759	94520
501.....	22	2.08	0.7992	5.72	88.286	8.18	40.80	22.209	25138	61612
General average.....	18	2.005	0.7893	6.11	94.305	6.578	32.89	24.318	27528	83600

ILLINOIS WOOLS.

RAMS.										
1 year old:										
447.....	20	1.821	0.7169	4.14	63.90	6.16	30.80	19.978	22613	73420
448.....	16	1.79	0.7047	3.50	54.02	6.39	31.95	17.478	19784	61893
449.....	16	2.09	0.8228	6.37	95.32	5.83	29.15	23.338	26405	90584
450.....	20	1.71	0.6732	3.30	50.93	5.75	28.75	18.056	20440	71097
451.....	14	2.03	0.7992	5.98	91.53	5.22	26.10	23.024	26054	99824
452.....	16	1.595	0.6279	3.97	60.97	6.24	31.20	24.974	28261	90581
453.....	20	2.28	0.8976	7.38	113.91	5.11	25.55	22.715	25714	100644
454.....	18	1.98	0.7598	5.84	90.14	6.37	31.85	25.095	28897	89159
455.....	16	1.77	0.6968	4.16	64.21	5.84	29.20	21.245	24051	82366
456.....	20	1.796	0.7070	4.37	67.45	6.22	31.10	21.676	24537	78899
457.....	16	1.80	0.7322	3.89	60.04	4.30	21.50	17.99	20361	94703
458.....	18	2.07	0.8149	4.38	67.60	2.33	11.65	16.355	18510	158939
459.....	19	2.05	0.8070	6.55	101.10	5.60	28.00	24.932	28216	100771
460.....	20	2.241	0.8822	6.87	106.04	3.84	19.20	21.887	24775	129038
461.....	20	1.89	0.7440	5.12	79.03	5.42	27.15	22.93	25362	93413
462.....	16	2.03	0.7992	6.00	92.61	6.54	27.70	23.298	26371	95203
General average.....	17.375	1.934	0.7614	5.11	78.87	5.385	26.925	21.859	24741	91873
2 years old:										
442.....	16	1.98	0.7795	5.65	87.21	5.83	29.15	23.059	26010	89535
445.....	14	1.93	0.7598	4.68	70.69	4.17	20.85	19.673	22263	106775
446.....	20	1.85	0.7283	4.88	67.29	4.97	24.85	20.336	23021	92640
General average.....	16.667	1.92	0.7559	4.863	75.058	4.99	24.95	21.107	23893	97962
3 years old:										
440.....	16	2.072	0.8157	5.11	78.87	4.56	22.86	19.044	21550	94516
441.....	18	2.24	2.8618	4.86	74.86	4.08	20.40	15.498	17543	85995
General average.....	16	2.156	0.8188	4.085	76.94	4.32	21.60	17.159	19422	89016
EWES.										
Lamb:										
481.....	.....	1.78	0.7007	4.82	74.39	7.77	38.85	24.340	27548	70910
Average.....	.....	1.78	0.7007	4.82	74.39	7.77	38.85	.....	.....	.....
1 year old:										
477.....	20	1.85	0.7283	5.09	78.56	3.90	19.50	23.796	26937	138139
478.....	22	1.918	0.7551	4.20	64.82	3.50	17.50	18.268	20678	118161
479.....	16	1.89	0.7440	4.22	65.134	4.78	23.90	18.907	21402	89550
480.....	20	1.93	0.7598	4.45	68.68	4.79	23.95	19.115	21640	92460
General average.....	19.50	1.891	0.7468	4.49	69.301	4.242	21.21	20.09	22738	107204
2 years old:										
463.....	16	2.07	0.8149	8.27	127.64	6.01	34.55	30.88	34950	101158
464.....	20	1.754	0.6905	4.85	74.875	5.19	25.95	25.223	28544	109997
465.....	20	1.611	0.6242	3.29	50.78	6.33	31.65	20.283	28890	91299
466.....	20	1.89	0.7440	5.88	89.98	6.24	31.20	26.113	29551	94716
467.....	23	1.789	0.7143	4.22	65.123	4.75	23.75	21.096	23881	100552
468.....	22	1.62	0.6377	5.15	79.49	6.38	31.90	31.498	35652	111761
469.....	20	1.838	0.7236	4.45	68.08	7.50	37.50	21.076	23858	63693
470.....	20	1.785	0.7027	5.02	77.48	5.74	28.70	15.544	17388	61283
471.....	16	2.095	0.8232	5.75	88.75	5.90	29.50	20.661	23711	80378
472.....	18	1.981	0.7720	6.54	100.94	6.67	33.35	27.211	30797	92344
473.....	16	2.11	0.8307	5.73	88.44	6.40	32.00	20.593	23904	72825
474.....	16	2.25	0.8858	6.75	104.18	5.40	27.30	21.333	24142	88430
General average.....	18.667	1.898	0.7472	5.48	84.581	6.1225	30.6125	24.339	27542	89998
3 years old:										
475.....	22	1.89	0.7440	5.49	84.74	7.48	37.40	24.59	27197	72701
476.....	14	1.98	0.7795	5.44	83.96	6.86	34.30	22.202	25120	73254
General average.....	18	1.94	0.7637	5.465	84.35	7.17	35.85	23.293	26292	73399



TABLE V.—General results of all measurements—Continued.

## TEXAS WOOLS.

Catalogue number of samples.	Crimp per inch.	Fineness.		Strain.		Stretch.		$\frac{D^2 \times S}{D^2}$	18109 $\frac{S}{D^2} = R$	$E = \frac{R}{P}$
		Centimillimeters.	Thousandths of inch.	Grams.	Grains.	Millimeters.	Per cent.			
RAMS.										
2 years old:										
616.....	14	1.891	0.7444	4.34	66.989	5.49	27.45	<i>Grams.</i> 19.419	21979	80072
617.....	14	1.82	0.7165	4.16	64.21	5.78	28.90	20.094	22738	78678
618.....	14	2.04	0.8031	6.45	99.55	4.73	23.65	24.798	28069	118684
619.....	14	1.93	0.7598	3.71	57.26	3.83	19.15	15.936	18041	94209
620.....	16	2.036	0.8015	5.79	89.366	4.75	23.75	22.349	25296	106509
621.....	14	1.93	0.7598	4.80	74.09	5.19	25.95	20.628	23349	89978
622.....	14	1.98	0.7795	4.78	73.778	4.39	21.95	19.508	22082	100509
623.....	20	1.90	0.7480	3.51	58.80	4.02	20.10	16.886	19116	95106
624.....	20	1.97	0.7755	5.27	81.34	6.72	33.60	21.727	24594	73197
625.....	14	1.84	0.7244	3.63	56.03	3.74	18.70	17.155	19422	103860
General average .....	15.40	1.933	0.7610	4.674	72.14	4.864	24.32	20.015	22659	93169
EWES.										
2 years old:										
605.....	16	1.781	0.7011	4.00	61.738	6.51	31.05	20.177	22840	73559
606.....	16	1.688	0.6645	4.26	65.751	6.405	32.025	23.921	27073	84524
607.....	20	1.866	0.7425	4.792	73.863	6.092	30.46	21.555	24402	80111
608.....	20	1.959	0.7712	4.72	72.85	5.92	29.60	19.678	22274	73250
609.....	14	1.837	0.7232	4.193	64.718	5.948	29.74	19.88	22500	75657
610.....	16	1.889	0.7436	5.13	79.179	6.94	34.70	23.003	26031	75019
611.....	16	1.758	0.6921	4.52	70.264	6.09	30.45	23.40	26484	86977
612.....	16	1.835	0.7224	4.03	62.201	5.45	27.25	19.149	21674	78538
613.....	20	1.836	0.7228	4.828	74.518	7.12	36.60	22.917	25351	69264
614.....	20	1.899	0.7476	4.76	73.468	5.93	29.65	21.118	23904	80620
615.....	16	1.885	0.7421	4.092	63.158	4.896	24.98	19.427	21991	88035
General average .....	17.636	1.75	0.6889	4.484	69.208	6.19	30.95	23.427	26518	87677



TABLE V.—General results of all measurements—Averages for each section.

Section, sex, and age.	Number of samples tested.	Number of crimps per inch.	Fineness.		Strain.		Stretch.		$\frac{D^2 \times S}{D^2}$	18109 $\frac{S}{D^2} = R$	$E = \frac{R}{F}$
			In centimillimeters.	In thousandths of inch.	In grams.	In grains.	In millimeters.	In per cent.			
VERMONT.											
Rams:											
2 years old .....	4	15.50	2.06	0.8110	5.158	79.61	5.455	27.28	16.476	18768	68769
3 years old .....	10	16.80	2.122	0.8354	5.87	90.60	6.311	31.55	20.858	23604	74677
Ewes:											
2 years old .....	2	20.00	1.818	0.7157	5.126	79.12	6.513	32.565	24.815	28091	80249
3 years old .....	28	18.50	1.962	0.7724	5.17	79.80	7.126	35.63	21.488	24323	68264
NEW YORK.											
Rams:											
2 years old .....	13	20.00	1.955	0.7696	4.66	71.925	7.58	37.90	19.508	22082	58203
Ewes:											
2 years old .....	16	21.133	2.098	0.8259	5.059	78.08	7.717	38.585	18.386	20814	53936
PENNSYLVANIA.											
Rams:											
Lambs .....	6	18.67	1.979	0.7791	5.84	90.138	6.917	34.585	23.859	27005	78071
2 years old .....	6	21.00	1.48	0.5826	2.914	44.976	7.516	37.58	21.285	24096	64120
Wethers:											
2 years old .....	2	14.00	2.012	0.7921	4.936	76.19	8.049	40.245	19.500	22082	51861
Ewes:											
Lambs .....	2	18.00	1.83	0.7204	4.01	61.89	7.28	36.40	19.159	21192	59576
2 years old .....	7	16.86	1.91	0.7519	4.896	75.567	7.333	36.665	21.473	24300	60266
3 years old .....	11	20.46	1.559	0.6137	2.879	44.44	7.336	36.68	18.300	20780	56652
WISCONSIN.											
Rams:											
1 year old .....	8	19.25	1.844	0.7259	4.237	65.427	5.611	28.058	19.937	22568	80429
2 years old .....	17	19.765	2.219	0.8736	4.764	73.53	6.957	34.785	15.489	17520	50361
3 years old .....	5	18.80	1.774	0.6084	4.591	70.86	6.689	33.445	23.341	26416	78973
4 years old .....	2	21.00	2.112	0.8314	5.611	86.003	5.529	27.645	20.127	22783	82399
Ewes:											
1 year old .....	3	20.00	1.986	0.7818	4.244	65.504	6.171	30.855	17.215	19489	63155
2 years old .....	20	20.40	1.904	0.7496	4.65	71.77	7.034	35.170	20.518	23225	66036
3 to 5 years old .....	23	19.913	1.989	0.7830	5.172	79.53	7.242	36.21	20.917	23677	65990
Very old .....	2	18.00	2.019	0.7948	4.385	67.68	7.082	35.41	17.211	19478	55068
MINNESOTA.											
Rams:											
2 to 3 years old .....	20	17.16	2.079	0.8185	6.12	94.46	7.29	36.45	22.655	26233	70330
Ewes:											
2 to 3 years old .....	20	18.00	2.005	0.7893	6.11	94.205	6.578	32.89	24.318	27526	83690
ILLINOIS.											
Rams:											
1 year old .....	16	17.375	1.934	0.7614	5.11	78.87	5.385	26.925	21.850	24741	91873
2 years old .....	3	16.667	1.92	0.7559	4.863	75.058	4.99	24.95	21.107	23893	67962
3 years old .....	2	16.00	2.156	0.8488	4.985	76.94	4.32	21.60	17.159	19422	89916
Ewes:											
Lamb .....	1	.....	1.78	0.7007	4.82	74.39	7.77	38.85	24.340	27548	70610
1 year old .....	4	19.50	1.891	0.7468	4.49	69.301	4.242	21.21	20.090	22738	107204
2 years old .....	12	18.667	1.868	0.7472	5.48	84.581	6.123	30.613	24.339	27542	89998
3 years old .....	2	18.00	1.94	0.7637	5.465	84.35	7.17	35.85	23.233	26292	73339
TEXAS.											
Rams:											
2 years old .....	10	15.40	1.933	0.7610	4.674	72.14	4.864	24.32	20.015	22659	93169
Ewes:											
2 years old .....	11	17.636	1.75	0.6889	4.484	69.208	6.19	30.05	23.427	26518	87677
CALIFORNIA.											
Rams:											
2 years old .....	7	20.80	1.821	0.7169	4.528	69.887	7.34	36.70	21.847	24730	67384
Ewes:											
2 years old .....	31	22.1	1.897	0.7468	4.279	66.043	7.063	35.01	19.025	21538	61520
3 years old .....	4	22.7	1.982	0.7803	4.47	68.992	7.36	36.60	18.207	20610	56906



### CONCLUSIONS:

The tables, as a rule, will explain themselves, and will show many relations to which we have at the present time been unable to give attention. The principal conclusions we have to offer, based upon the results here presented, are as follows:

- (1) Different fibers in any given sample may vary in diameter throughout their length from 5 to 15 per cent.
- (2) Fineness in American Merino wools may vary from 1 centimillimeter ( $\frac{1}{2534}$  inch) to 4 centimillimeters ( $\frac{1}{634}$  inch).
- (3) This variation as represented in the extremes is not affected either by the sex of the animal or by the section. The average of the maxima will reach about 3.3 centimillimeters and the minima about 1.2 centimillimeters for the American Merino wools generally.
- (4) The ultimate resistance of wool fibers of course depends greatly upon the diameter. But it appears that this will vary from a minimum of 1.5 grams, say 23 grains, to a maximum of about 15 grams, or 230 grains.
- (5) The stretch the fibers will suffer previous to rupture also varies widely from about 5 per cent. of the length tested to as high as 60 per cent.
- (6) There seems to be no special relation between the extremes for strain and stretch and the section in which the wool was grown or the sex and age of the animal producing it. It must in all cases be referred to the individual.
- (7) With regard to the relation between the crimp of the fiber and the fineness, history repeats itself in this series, and while there is some connection between the two, and the averages of large numbers of samples show that the finer wools have, as a rule, the closer crimp, the indication is exceedingly unreliable from sample to sample.
- (8) Age seems to have an influence upon the fineness of the fiber. After the age of one year the wool appears to grow coarser with increase of years.
- (9) The ultimate stretch the fiber is capable of sustaining previous to rupture seems to increase with advance of age; but the data are not fully conclusive upon this point.
- (10) Age has no perceptible influence upon either the ultimate resistance or the modulus of elasticity of the fiber.
- (11) In the averages for fineness the results are somewhat higher, as a rule, for the rams than for the ewes, showing the rams' wool to be the coarser.
- (12) If we arrange the sections represented with reference to average fineness for all sexes and ages, from highest to lowest, they stand in the following order:

Section.	Average fineness in centimillimeters.	Section.	Average fineness in centimillimeters.
Pennsylvania.....	1.6701	Illinois.....	1.926
Vermont.....	1.773	Wisconsin.....	1.9409
Texas.....	1.837	New York.....	2.034
California.....	1.916	Minnesota.....	2.042



13. If they be arranged with relation to the fineness for both rams and ewes two years old, they will stand, respectively—

RAMS.		EWES.	
Sections.	Average fineness in centimillimeters.	Sections.	Average fineness in centimillimeters.
Pennsylvania .....	1.48	Texas .....	1.75
California .....	1.821	Vermont .....	1.818
Illinois .....	1.92	California .....	1.897
Texas .....	1.933	Illinois .....	1.898
New York .....	1.955	Wisconsin .....	1.904
Vermont .....	2.06	Pennsylvania .....	1.91
Minnesota .....	2.079	Minnesota .....	2.005
Wisconsin .....	2.219	New York .....	2.098

14. If the sections be arranged with reference to the average fineness for both sexes two years old, they will stand in the following order, from finest to coarsest:

Sections.	Average fineness in centimillimeters.	Sections.	Average fineness in centimillimeters.
Pennsylvania .....	1.711	Vermont .....	1.979
Texas .....	1.837	New York .....	2.034
California .....	1.883	Minnesota .....	2.042
Illinois .....	1.902	Wisconsin .....	2.048

15. The influence of the density of the fleece upon all qualities is illustrated in the following table:

	Fineness.		Strain.		Stretch.		$\frac{D^2 \times S}{D^2}$	$\frac{S}{18109 D^2} = R$	$\frac{R}{P}$
	Centimillimeters.	Thousandths of inch.	Grams.	Grains.	Millimeters.	Per cent.			
<b>RAMS.</b>									
Dense fleeces:									
681 .....	2.340	0.9236	5.03	77.219	4.98	24.00	14.964	16.939	67.099
683 .....	1.950	0.7700	5.915	91.295	6.915	34.575	19.649	22.240	64.313
Average .....	2.151	0.8468	5.473	84.473	5.948	29.74	18.920	21.421	72.027
Loose fleeces:									
692 .....	1.916	0.7543	4.378	67.573	8.693	42.965	10.086	21.802	50.280
<b>EWES.</b>									
Dense fleeces:									
686 .....	1.96	0.7716	4.81	74.24	7.525	37.625	20.126	22.783	60.546
687 .....	1.989	0.7830	4.53	69.918	8.193	40.965	17.693	19.909	48.593
688 .....	2.117	0.8334	5.63	86.897	7.98	39.90	20.099	22.749	57.016
689 .....	2.264	0.9307	5.345	82.498	7.31	36.55	15.303	17.317	47.404
690 .....	2.163	0.8515	5.25	81.032	9.03	45.15	17.954	20.316	44.997
Average .....	2.119	0.8342	6.113	78.917	8.008	40.04	18.210	20.621	50.329
Loose fleeces:									
679 .....	1.876	0.7385	4.385	66.909	8.54	42.70	19.708	22.308	52.244
680 .....	2.15	0.8464	4.59	70.844	7.253	36.265	15.884	17.564	48.426
681 .....	2.036	0.8015	4.623	71.354	6.868	34.34	17.846	20.203	58.832
682 .....	1.754	0.6905	3.575	55.175	8.075	40.375	18.593	21.040	52.100
683 .....	1.983	0.7807	5.153	79.535	8.652	40.26	20.986	23.734	54.864
684 .....	2.147	0.8452	5.21	80.414	7.427	37.135	18.083	20.463	55.097
Average .....	1.974	0.7771	4.581	70.705	7.469	37.345	18.81	21.289	56.999

This table shows: (a) That the finer fiber is found in loose fleece, both in the ram's wool and the ewe's wool (b) that there is practically little difference in the ultimate tenacity of the fiber in the two kinds of fleeces, the tendency to greater strength being in favor of the loose fleeee; (c) the modulus of elasticity, and hence the ultimate value of the wool, is greater in the loose fleece than in the open fleece for ewe's wool and *vice versa* for ram's wool; (d) the question of the influence of the density of the fleece upon the quality of the wool cannot be considered as fully settled by these results, but the tendency is strongly in favor of the open fleece.

16. Any special relation between the sex and the ultimate resistance seems doubtful. In Vermont, Minnesota, Illinois, and Texas the ewe's wool is stronger, while in New York, Pennsylvania, Wisconsin, and California the ram's wool takes precedence in this particular.

17. There appears to be a tendency to a higher modulus of elasticity, and consequently a higher ultimate value in the ram's wool than in the ewe's wool.



18. If we compare the moduli of elasticity of the wools of rams and ewes two years old for the several sections, we find them to range as follows, from highest to lowest, respectively:

RAMS.		EWES.	
Section.	Moduli of elasticity.	Section.	Moduli of elasticity.
Illinois.....	97,962	Illinois.....	89,998
Texas.....	93,169	Texas.....	87,677
Minnesota.....	70,330	Vermont.....	86,249
Vermont.....	68,799	Minnesota.....	83,690
California.....	67,384	Pennsylvania.....	66,226
Pennsylvania.....	64,120	Wisconsin.....	66,036
New York.....	58,263	California.....	61,520
Wisconsin.....	50,361	New York.....	53,936

19. If we compare the averages of the moduli of elasticity for both sexes two years old, we find the sections to stand in the following order:

Section.	Moduli of elasticity.	Section.	Moduli of elasticity.
Illinois.....	91,657	Pennsylvania.....	65,275
Texas.....	90,292	California.....	62,600
Minnesota.....	77,010	Wisconsin.....	58,834
Vermont.....	74,782	New York.....	55,875

20. If we compare the averages of the moduli of elasticity for all ages and sexes for the several sections, we find them to stand in the following order, from highest to lowest:

Section.	Moduli of elasticity.	Section.	Moduli of elasticity.
Illinois.....	91,751	Pennsylvania.....	63,795
Texas.....	90,292	California.....	61,972
Minnesota.....	77,010	New York.....	55,875
Vermont.....	70,587	Wisconsin.....	48,440



GERMAN MERINO WOOLS.

The classes of wools, of which we here present the results of the measurements, represent the two great classes of Merino wools of Germany, and are therefore of especial interest. The samples have been fully described in the catalogue, and need no further mention here.

The tables are arranged in the same way as the preceding, and will explain themselves.

TABLE VI (A).—Measurements of fineness of Negretti wools from E. W. Perry, Chicago, Ill.

Catalogue number of samples..	400.			401.			402.			403.			404.			405.		
	B'.	B''	B'''	B'.	B''	B'''	B'.	B''	B'''	B'.	B''	B'''	B'.	B''	B'''	B'.	B''	B'''
1.50	2.00	1.625	1.25	1.50	1.875	1.50	1.50	1.50	2.00	2.00	1.375	1.00	1.50	1.375	1.50	2.25	2.00	
1.75	1.875	2.25	1.125	1.875	1.375	1.625	2.00	1.875	1.50	2.875	2.125	1.50	1.625	1.375	1.75	1.625	1.875	
1.75	1.875	1.875	1.125	1.875	1.875	1.50	1.625	1.875	1.50	2.375	2.125	1.125	1.625	1.50	1.50	1.625	1.875	
1.50	2.00	1.75	1.125	1.25	2.00	1.50	2.00	1.875	2.25	1.75	1.625	1.875	2.00	1.50	1.75	2.00	1.625	
1.625	1.825	3.00	1.50	1.875	1.50	1.625	1.625	1.50	1.50	2.75	1.875	1.125	1.50	1.875	1.50	1.875	1.50	
2.00	1.625	1.75	1.25	1.50	1.50	1.50	1.75	2.375	1.875	2.23	1.625	1.125	1.75	1.875	1.50	1.875	2.00	
1.25	1.875	2.25	1.25	1.875	2.375	1.375	1.50	1.75	2.50	1.75	2.25	1.25	1.75	1.50	1.75	2.50	1.625	
1.50	2.00	2.00	1.25	1.875	1.50	1.50	1.75	1.625	2.25	2.50	2.50	1.875	1.875	1.50	1.25	2.00	1.625	
1.50	1.625	2.50	1.625	1.625	2.00	1.50	2.125	1.50	1.50	2.375	2.875	1.00	1.50	1.50	2.00	1.625	1.50	
2.00	1.25	2.375	1.75	1.875	1.75	2.00	1.625	1.875	2.00	1.75	2.00	1.00	1.50	1.625	1.875	2.00	1.75	
2.00	1.625	1.375	1.625	1.625	1.50	1.25	1.75	1.75	1.75	1.625	1.875	1.00	1.575	1.875	1.50	2.00	1.625	
1.50	1.625	1.50	1.50	1.875	1.75	2.00	1.50	1.50	1.50	2.00	1.875	1.50	1.75	1.375	2.50	1.50	1.75	
2.00	1.625	1.875	1.375	1.50	2.50	1.625	1.875	1.625	1.875	1.875	2.125	2.25	1.625	1.25	1.50	2.00	1.50	
2.00	2.00	1.625	1.50	1.50	2.00	1.75	1.625	2.00	2.00	2.50	2.00	1.00	1.375	1.50	1.625	1.625	1.25	
1.375	2.00	1.75	1.625	1.50	2.375	2.00	2.25	2.00	1.875	1.75	2.875	2.125	2.25	1.375	1.50	2.00	1.50	
1.375	1.875	1.75	1.50	1.25	1.875	1.75	1.50	1.875	1.50	2.375	2.625	1.125	1.875	1.50	1.50	1.50	1.75	
1.875	1.875	2.50	1.50	1.625	2.00	2.00	1.50	1.50	1.75	2.00	2.125	1.00	1.75	2.00	2.00	1.875	1.50	
1.875	2.00	1.75	1.50	1.50	1.50	1.625	1.625	1.625	2.125	2.25	2.375	1.875	1.75	1.875	1.875	2.00	1.75	
2.25	1.625	1.875	1.50	1.50	1.625	1.25	1.625	1.50	1.875	1.875	2.00	1.375	1.50	1.50	1.25	1.375	1.75	
1.625	1.875	1.75	1.375	1.50	1.50	1.875	1.50	1.75	2.00	1.875	2.00	1.375	1.75	1.50	1.75	1.25	1.875	
1.75	2.125	1.875	1.75	1.375	1.875	1.50	1.375	2.00	1.625	1.75	2.125	1.875	1.875	1.25	1.75	1.625	1.50	
2.00	1.75	1.50	1.75	1.25	3.00	1.25	2.00	1.875	1.75	2.00	2.00	1.125	1.875	1.625	2.375	1.875	1.50	
1.625	2.00	1.875	1.375	1.875	1.75	1.50	1.50	2.375	1.75	2.25	2.50	1.375	1.75	1.50	2.00	1.875	2.125	
1.375	1.875	1.875	1.50	1.50	2.50	1.25	1.625	1.75	1.75	1.75	2.75	1.125	1.875	1.625	1.50	1.25	1.875	
1.50	2.00	2.00	1.25	1.25	1.50	1.50	1.50	1.75	2.00	1.75	1.50	1.125	1.75	1.50	1.625	2.00	1.50	
1.875	1.75	2.00	1.75	1.375	2.00	1.625	1.50	1.875	2.00	2.75	2.25	1.125	1.50	1.25	1.50	1.60	1.875	
1.75	1.625	2.125	1.875	1.50	2.75	1.75	1.625	1.50	1.875	1.75	1.875	1.00	1.875	1.875	1.50	1.625	1.875	
1.75	1.875	2.00	1.375	1.375	1.875	1.75	1.75	1.625	2.125	2.20	2.50	1.50	1.50	1.375	1.75	2.00	1.50	
1.375	1.875	2.25	1.25	1.50	2.00	1.25	1.50	2.125	1.75	2.00	2.00	1.25	1.25	1.50	1.625	1.50	1.50	
1.625	1.625	1.875	1.50	1.75	1.875	1.625	1.50	2.00	2.00	1.875	2.50	1.60	1.675	1.875	2.00	1.60	1.75	
2.50	1.50	2.00	1.50	1.875	2.00	1.75	1.625	1.875	1.50	2.25	2.25	1.25	1.875	1.75	1.25	1.50	1.50	
1.50	2.125	1.625	1.50	1.50	1.75	1.75	1.25	1.875	2.00	2.875	2.625	1.25	1.50	1.75	1.75	1.00	1.50	
1.50	2.00	1.75	1.375	1.50	1.75	1.75	1.875	1.875	2.00	3.125	2.25	1.25	1.50	1.625	2.125	2.00	1.875	
1.625	2.375	1.75	1.75	1.375	1.25	1.50	1.50	1.625	1.875	1.50	1.875	1.25	1.625	1.50	1.75	2.00	2.00	
1.50	1.75	2.125	1.625	1.75	1.50	1.50	1.50	1.875	1.625	1.75	1.50	1.25	2.00	1.625	2.00	1.50	1.625	
1.75	2.25	1.75	1.50	1.75	2.25	1.75	1.50	1.75	1.625	1.875	2.25	1.25	1.875	1.875	1.50	1.50	1.75	
1.625	2.125	2.25	2.00	1.25	1.875	1.50	1.25	1.50	2.00	1.875	2.375	1.50	1.50	1.75	1.625	1.25	1.875	
1.75	2.375	2.25	1.625	1.875	1.75	1.375	1.75	1.50	1.625	2.00	2.00	1.625	1.50	1.50	2.50	1.125	1.50	
1.50	1.50	1.375	1.125	1.125	1.125	1.75	1.75	1.50	1.875	2.125	1.75	2.00	1.25	1.375	1.75	2.75	1.50	
1.75	2.875	1.50	1.25	1.50	2.05	2.125	1.50	1.375	1.375	3.00	2.00	1.125	1.625	1.625	1.50	1.875	1.50	
1.50	2.875	2.50	1.50	1.25	1.75	1.50	1.025	1.875	1.50	2.75	2.125	1.50	1.75	1.50	1.50	1.50	1.875	
1.75	2.125	2.50	1.625	1.50	2.00	1.50	2.125	1.50	1.875	2.50	1.875	1.125	1.625	1.875	1.75	1.50	1.625	
2.25	1.75	2.00	1.75	1.50	1.75	1.375	1.50	1.875	1.875	2.00	2.625	1.25	1.875	1.50	1.50	2.00	1.875	
1.50	1.75	1.875	2.00	1.625	1.50	1.50	1.375	1.375	1.875	1.875	1.50	2.00	1.50	1.75	1.375	2.00	1.625	
2.00	2.00	1.75	1.50	1.25	2.00	2.125	1.75	1.875	1.50	2.025	2.00	1.85	1.50	1.25	1.875	1.875	2.50	
2.25	1.60	2.00	1.50	1.625	1.875	2.00	1.75	1.25	1.75	2.625	1.875	1.875	1.375	1.75	1.375	1.625	2.00	
1.75	1.75	2.25	1.25	1.50	1.50	1.625	1.875	1.875	2.00	1.875	2.00	1.25	1.625	1.50	1.625	1.875	2.00	
1.50	1.375	2.00	1.25	2.25	1.875	2.25	2.00	1.375	2.00	2.125	1.875	1.375	1.625	1.50	1.875	1.75	1.875	
1.875	1.625	2.25	1.875	1.875	1.875	1.50	1.625	1.75	1.875	2.625	1.25	1.25	1.875	2.00	1.50	1.875	1.875	
1.50	1.75	1.25	1.25	1.50	1.875	1.50	2.00	1.375	1.875	2.625	1.875	1.125	1.875	1.375	2.125	1.25	1.50	
<b>Totals</b> .....	85.00	93.00	97.25	75.25	77.625	92.625	82.00	83.75	87.25	92.00	108.00	103.125	92.125	83.125	79.25	88.50	87.25	85.375

Actual measurement in centimillimeters.	400.			401.			402.			403.			404.			405.		
	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:																		
Maximum measurements.	B' 2.50 B'' 2.875 B''' 3.00	0.9842 1.1318 1.1811	B' 2.00 B'' 2.25 B''' 3.00	0.7874 0.8858 1.1811	B' 2.25 B'' 2.375 B''' 2.375	0.8858 0.9350 0.9350	B' 2.50 B'' 2.875 B''' 2.875	0.9842 1.2303 1.0984	B' 2.50 B'' 3.125 B''' 2.625	0.9842 1.2303 1.0984	B' 1.875 B'' 2.00 B''' 2.00	0.7380 0.7674 0.7674	B' 2.50 B'' 2.75 B''' 2.50	0.9842 1.0826 0.9842				
Highest .....	3.00	1.1811	3.00	1.1811	2.875	0.9350	3.125	1.2303	2.00	0.7674	2.75	1.0826						
Minimum measurements.	B' 1.25 B'' 1.25 B''' 1.25	0.4921 0.4921 0.4921	B' 1.125 B'' 1.25 B''' 1.125	0.4429 0.4921 0.4429	B' 1.25 B'' 1.25 B''' 1.25	0.4921 0.4921 0.4921	B' 1.375 B'' 1.50 B''' 1.25	0.5413 0.5905 0.4921	B' 1.00 B'' 1.25 B''' 1.25	0.3937 0.4921 0.4921	B' 1.25 B'' 1.00 B''' 1.25	0.4921 0.3937 0.4921						
Lowest .....	1.25	0.4921	1.125	0.4429	1.25	0.4921	1.25	0.4921	1.00	0.3937	1.00	0.3937						
Average measurements.	B' 1.70 B'' 1.86 B''' 1.945	0.6692 0.7322 0.7657	B' 1.505 B'' 1.553 B''' 1.853	0.5925 0.6114 0.7295	B' 1.64 B'' 1.68 B''' 1.75	0.6450 0.6614 0.6889	B' 1.84 B'' 2.10 B''' 2.063	0.7244 0.8508 0.8122	B' 1.243 B'' 1.663 B''' 1.585	0.4898 0.6547 0.6240	B' 1.77 B'' 1.745 B''' 1.708	0.6968 0.6870 0.6724						
Average .....	1.835	0.7224	1.637	0.6444	1.69	0.6653	2.02	0.7052	1.49	0.5866	1.74	0.6850						
Measurements above average.	52		40		46		50		03		79							
Measurements below average.	98		110		104		100		57		71							



TABLE VI (A).—Measurements of fineness of Negretti wools from E. W. Perry, Chicago, Ill.—Continued.

Catalogue number of samples..	406.			407.			408.			409.			410.			411.		
	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
	1.625	1.50	1.50	1.875	2.00	2.00	1.50	2.50	2.00	2.00	1.50	2.125	1.50	2.00	2.00	1.50	1.75	1.75
	2.00	2.125	1.50	1.125	2.00	1.50	2.00	1.75	1.50	1.625	1.25	1.625	1.50	2.00	2.25	1.25	2.875	1.50
	1.625	1.625	1.625	1.125	1.625	2.00	1.875	2.50	2.00	1.375	1.25	1.625	1.75	2.00	1.60	1.875	1.875	1.60
	1.625	1.50	1.75	1.00	2.00	2.25	1.50	2.50	2.00	2.00	2.00	1.875	2.00	2.00	2.00	2.00	1.25	1.75
	1.125	1.625	1.50	1.875	1.75	2.50	1.875	2.50	2.00	1.60	1.875	1.60	2.00	2.50	2.00	1.625	2.25	1.875
	2.125	1.75	1.875	1.875	2.00	2.00	1.50	1.50	2.00	2.00	1.375	1.375	1.25	1.00	1.75	1.75	1.625	1.625
	1.60	1.625	1.50	1.60	2.00	1.875	2.00	2.00	2.00	1.50	1.00	1.50	1.50	2.00	1.75	1.875	2.00	1.75
	1.875	1.625	1.625	1.375	1.75	2.00	1.625	2.25	2.50	2.00	1.25	1.875	2.00	1.00	1.75	2.00	1.875	1.50
	1.625	1.75	1.50	1.625	1.75	2.25	1.25	2.00	2.00	2.00	1.75	1.75	1.875	1.50	1.75	2.50	1.60	2.125
	2.00	2.00	1.50	1.00	2.00	2.25	1.875	2.00	2.00	1.75	1.25	2.00	1.50	1.50	2.00	1.375	2.00	2.00
	1.50	1.75	1.375	1.375	2.00	2.50	1.50	2.25	1.75	1.50	1.75	1.50	1.50	1.75	3.25	1.50	2.00	2.00
	2.00	1.50	1.25	1.625	2.00	1.625	1.50	2.00	2.00	2.00	1.875	1.50	1.625	1.50	2.00	1.75	2.25	1.60
	1.50	1.375	1.50	1.125	1.50	1.75	1.50	2.25	2.50	2.00	1.75	1.00	1.50	1.90	2.50	2.25	1.50	2.00
	1.375	1.50	1.50	1.50	2.00	1.625	2.50	2.50	2.00	2.00	2.125	2.00	1.25	1.90	2.00	2.00	1.125	2.125
	1.625	1.625	1.50	1.25	1.625	2.00	1.875	2.00	2.50	1.50	1.875	1.25	1.50	2.00	1.60	1.625	1.875	8.375
	2.00	1.375	1.50	1.25	2.00	2.50	2.00	2.50	2.00	2.00	1.60	2.375	1.50	1.25	2.50	2.00	2.25	2.00
	1.125	1.625	1.625	1.50	1.50	2.00	1.00	2.00	1.75	1.50	2.25	1.60	1.50	2.60	2.50	1.75	1.625	1.50
	1.625	1.625	2.00	1.375	1.50	2.00	1.50	2.00	1.60	1.375	1.875	1.025	1.50	2.00	1.50	1.25	1.875	
	2.00	1.625	2.125	1.00	1.75	2.50	1.875	2.00	1.60	1.50	2.00	1.50	2.50	2.00	1.375	1.50	2.125	
	1.625	1.50	2.00	1.375	2.00	1.375	1.50	2.00	2.00	1.50	1.25	1.875	1.50	1.50	2.00	1.50	2.25	2.125
	1.625	1.50	2.375	1.50	2.00	1.50	2.00	2.00	2.00	1.60	1.625	2.125	1.75	1.50	2.00	1.50	1.875	2.00
	1.625	1.50	1.875	1.125	1.75	1.50	2.00	2.00	2.00	1.50	1.50	1.625	2.00	1.75	2.50	1.00	1.50	1.50
	1.375	1.75	1.875	1.00	1.75	2.25	1.625	2.00	2.00	1.60	1.50	1.00	2.00	2.375	1.75	1.125	1.875	1.75
	1.875	1.625	1.75	1.875	2.00	2.00	1.875	2.00	2.50	1.25	1.75	1.375	2.00	1.875	2.50	1.50	1.025	1.625
	1.50	2.125	2.125	1.50	1.50	3.00	1.875	2.50	2.50	1.50	1.50	1.50	2.25	2.00	1.75	1.125	1.625	1.50
	2.00	1.75	2.00	1.375	2.50	3.00	1.875	3.00	2.00	2.00	1.00	1.25	2.00	2.00	1.50	1.50	1.50	1.625
	1.50	2.375	2.25	1.25	2.00	1.875	2.25	2.25	1.75	1.50	2.25	1.00	1.75	1.75	1.50	1.50	1.625	1.875
	1.625	1.50	2.25	1.375	1.75	1.875	2.00	2.00	2.00	1.50	1.625	1.375	2.00	1.75	1.875	1.50	1.025	1.625
	1.00	1.625	2.125	1.375	1.75	2.00	2.00	2.00	2.00	1.625	2.125	2.25	2.00	1.75	3.00	1.375	1.625	1.50
	1.50	1.625	1.75	1.00	2.50	1.75	1.25	1.75	1.75	1.50	1.625	1.625	1.50	2.00	2.00	1.625	2.125	1.50
	2.00	2.00	2.00	1.875	2.00	1.75	2.125	1.75	2.00	1.50	2.125	2.00	1.75	2.00	2.50	2.00	1.625	1.50
	1.75	2.125	2.125	1.25	2.00	2.00	2.25	2.00	2.00	1.75	1.50	1.25	2.00	1.75	2.50	1.75	1.75	1.75
	1.25	1.625	1.50	1.375	2.25	1.50	2.25	2.25	2.50	1.50	1.875	1.25	2.25	2.00	2.00	1.50	1.50	1.75
	1.50	1.375	1.75	1.00	1.75	2.00	2.00	2.00	2.00	1.875	1.625	1.875	2.00	2.00	1.25	1.50	1.625	2.00
	2.00	1.625	1.875	1.50	2.25	1.75	1.75	1.75	2.00	1.50	2.125	1.75	1.50	2.00	2.50	1.75	1.625	2.00
	1.75	1.875	1.75	1.875	2.00	1.75	1.50	2.00	1.75	1.875	2.125	1.50	1.50	1.75	2.50	1.875	1.75	1.50
	2.00	1.375	2.25	1.75	2.00	1.75	2.25	2.25	1.75	1.50	2.00	1.50	2.00	2.00	2.00	1.625	2.00	1.50
	1.50	1.625	1.50	1.875	1.75	2.00	1.875	2.00	1.75	1.50	2.225	2.00	2.00	2.25	2.00	2.00	1.25	1.50
	1.625	1.625	1.875	1.125	2.00	1.75	1.25	1.75	2.00	1.625	2.225	2.125	2.00	2.00	2.625	1.75	1.625	2.00
	1.50	1.875	2.25	1.00	1.50	2.00	1.875	2.00	2.00	1.50	1.625	1.50	1.50	2.00	2.00	1.75	1.25	1.50
	1.50	1.875	1.50	0.875	2.00	1.75	1.50	2.00	2.25	2.375	2.00	1.50	1.50	2.00	1.875	1.25	1.50	1.75
	1.875	1.375	2.00	1.00	1.60	1.50	2.25	1.75	2.00	2.00	1.25	2.00	1.50	2.50	2.75	1.25	1.50	2.00
	1.50	1.625	1.50	1.50	1.625	1.75	2.00	2.00	2.00	2.00	1.75	1.50	2.00	1.75	2.00	1.375	1.50	1.50
	1.875	1.50	1.50	1.375	1.50	1.75	2.25	2.25	2.00	1.75	1.875	1.75	1.50	2.25	2.00	1.75	1.875	1.625
	1.50	1.50	2.125	1.25	2.00	2.25	1.875	2.00	2.50	1.50	2.00	2.00	1.50	2.75	2.00	1.75	1.625	1.75
	2.00	2.00	1.25	1.50	1.50	2.125	2.00	2.00	2.25	2.25	2.00	2.00	2.125	2.00	1.25	1.50	2.125	
	1.125	1.50	1.75	1.50	1.75	2.00	3.00	3.00	2.00	2.00	1.50	1.625	1.75	2.00	2.00	1.625	1.75	2.125
	1.875	1.25	1.875	1.25	2.00	1.875	2.75	2.75	2.00	2.00	2.125	1.875	1.75	2.50	2.00	1.875	1.625	1.875
	1.50	1.75	2.00	1.125	2.00	2.00	2.00	2.00	2.00	1.75	1.75	1.125	1.875	2.50	1.55	1.625	1.875	
Totals.....	79.75	82.75	83.375	64.375	93.75	104.50	83.875	108.75	102.25	79.875	89.125	90.625	83.875	96.750	104.50	78.75	87.375	88.25

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.						
Maximum measurements.	B'	2.125	0.8366	B'	1.875	0.7280	B'	2.125	0.8366	B'	2.125	0.8366	B'	2.25	0.8958	B'	2.00	0.7874
	B''	2.375	0.9350	B''	2.00	0.8442	B''	3.00	1.1811	B''	2.375	0.9250	B''	2.75	1.0826	B''	2.375	0.9350
	B'''	2.375	0.9350	B'''	3.00	1.1811	B'''	2.50	0.9442	B'''	2.25	0.8858	B'''	3.25	1.2795	B'''	2.125	0.8366
Highest.....		2.375	0.9350		3.00	1.1811		3.00	1.1811		2.375	0.9350		3.25	1.2795		2.375	0.9350
Minimum measurements.	B'	1.00	0.3937	B'	0.875	0.3445	B'	1.00	0.3937	B'	1.125	0.4429	B'	1.125	0.4229	B'	1.00	0.3937
	B''	1.25	0.4921	B''	1.50	0.5905	B''	1.50	0.5905	B''	1.00	0.3937	B''	1.50	0.5905	B''	1.125	0.4429
	B'''	1.25	0.4921	B'''	1.50	0.5905	B'''	1.50	0.5905	B'''	1.00	0.3937	B'''	1.25	0.4921	B'''	1.375	0.5413
Lowest.....		1.00	0.3937		0.875	0.3445		1.00	0.3937		1.00	0.3937		1.125	0.4429		1.00	0.3937
Average measurements.	B'	1.595	0.6279	B'	1.326	0.5220	B'	1.678	0.6660	B'	1.593	0.6291	B'	1.078	0.6660	B'	1.535	0.6043
	B''	1.653	0.6515	B''	1.875	0.7380	B''	2.173	0.8562	B''	1.783	0.7019	B''	1.935	0.7618	B''	1.748	0.6850
	B'''	1.768	0.6960	B'''	2.00	0.8228	B'''	2.043	0.8051	B'''	1.63	0.6417	B'''	2.09	0.8228	B'''	1.765	0.6948
Average.....		1.67	0.6574		1.73	0.6811		1.97	0.7755		1.67	0.6574		1.90	0.7480		1.68	0.6614
Measurements above average.....		58			70													



TABLE VI (A).—Measurements of fineness of Negretti wools from E. W. Perry, Chicago, Ill.—Continued.

Catalogno number of samples..	412.			413.			414.			415.			416.			417.		
	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
	1.75	1.625	1.625	1.50	1.625	2.00	1.625	1.375	1.625	1.75	2.00	2.00	1.50	2.00	1.625	1.375	1.625	2.00
	1.75	1.75	2.00	1.50	1.625	1.625	1.125	1.375	1.75	1.50	1.75	1.125	1.50	1.875	1.875	1.50	1.50	2.25
	2.00	1.50	1.875	1.50	1.50	1.875	0.875	1.50	2.00	1.50	1.625	1.50	1.50	1.50	1.625	1.375	1.375	1.50
	1.50	1.75	1.875	1.50	1.75	1.75	1.75	1.375	1.25	2.00	1.75	1.625	1.75	1.75	1.75	1.25	1.75	2.00
	1.875	1.875	2.00	1.375	1.50	1.50	1.50	1.375	1.625	2.00	1.125	1.625	1.50	1.00	1.375	2.00	1.50	1.375
	1.625	1.625	2.00	1.00	1.50	1.50	2.125	1.50	1.25	2.00	1.75	1.75	1.50	1.25	1.75	2.00	1.50	1.625
	1.50	2.00	2.25	1.625	1.75	1.875	1.50	1.375	1.75	1.375	1.75	2.00	1.75	1.25	1.75	1.75	2.00	1.50
	1.75	1.50	1.75	1.625	1.375	1.75	1.75	1.50	1.75	1.50	1.625	1.50	1.75	1.25	2.00	1.50	1.00	1.625
	2.00	1.875	1.75	2.00	1.50	1.875	1.125	1.75	1.625	1.30	1.625	2.00	1.00	1.75	1.50	1.625	1.875	2.00
	2.50	2.00	2.00	1.75	1.50	1.50	1.75	1.375	1.625	1.25	1.50	1.375	1.625	1.375	1.625	2.00	1.50	2.00
	2.125	1.875	1.75	1.50	1.50	1.625	1.25	1.875	1.625	1.50	2.00	1.125	1.25	2.125	1.50	1.375	1.75	2.00
	1.50	1.625	1.625	2.25	1.75	2.00	2.00	1.50	1.375	2.00	1.50	1.75	1.25	1.625	2.25	1.50	1.50	1.50
	1.50	2.00	1.875	1.875	1.50	2.00	2.00	1.25	2.00	1.625	1.625	1.75	1.875	1.00	1.375	1.50	1.50	1.625
	1.75	1.625	1.75	1.50	1.75	1.625	1.25	1.50	1.50	1.25	1.50	1.625	1.75	1.875	1.75	1.25	1.50	2.00
	1.50	3.25	2.625	1.50	1.375	1.625	1.875	1.25	1.50	1.75	1.75	1.75	1.25	1.625	1.75	1.75	1.625	1.50
	1.50	1.75	1.50	1.50	1.50	2.125	1.125	1.25	1.50	1.625	2.00	2.25	1.375	1.875	2.00	1.50	1.50	1.75
	1.875	2.00	1.75	1.625	1.50	1.875	1.25	1.50	1.625	1.875	1.625	2.75	1.50	1.875	1.875	1.50	1.625	2.25
	1.50	2.00	2.00	1.625	1.75	1.875	1.25	1.00	1.25	1.625	1.625	1.125	1.50	1.625	2.00	1.50	1.50	1.50
	1.50	1.50	1.875	1.625	1.625	2.00	1.50	1.375	2.25	1.625	1.625	1.875	1.125	1.875	2.00	2.03	1.75	1.50
	1.50	2.00	1.625	2.00	1.50	2.00	2.00	1.25	2.375	1.75	1.50	1.25	1.625	1.875	1.625	1.625	1.00	1.50
	1.625	1.625	2.00	1.625	1.625	2.00	1.375	2.00	1.50	1.25	1.375	1.625	1.25	1.75	2.00	2.00	1.875	1.75
	1.75	2.00	1.50	2.00	1.375	2.00	1.125	2.125	2.125	1.625	1.375	1.875	1.125	1.625	2.50	1.50	1.75	1.50
	1.50	2.00	2.00	1.50	1.625	2.50	1.50	1.875	2.00	1.625	1.50	2.00	1.00	1.625	2.00	1.50	1.875	1.50
	1.625	1.50	1.50	2.125	1.50	2.00	2.25	1.50	1.50	1.625	2.00	2.375	1.875	1.50	2.125	1.625	1.75	1.75
	1.625	1.875	2.00	2.125	1.625	1.625	1.25	1.75	2.00	2.00	1.50	2.00	1.50	2.00	1.50	1.50	1.625	1.625
	2.00	1.75	2.375	2.00	1.75	1.75	1.75	1.375	1.375	1.875	1.875	1.75	1.25	1.875	1.75	1.50	1.50	1.375
	1.50	2.00	2.00	2.00	1.50	1.625	1.50	1.25	1.875	1.00	1.50	1.875	1.125	1.875	1.50	1.625	1.625	1.375
	1.625	1.50	2.00	2.00	1.75	1.875	1.00	1.375	1.50	1.375	1.875	1.125	1.625	2.00	1.875	1.50	1.625	1.50
	1.75	2.00	1.875	1.125	2.00	1.75	1.125	1.50	1.875	1.50	1.50	1.875	1.75	1.875	2.50	1.50	1.75	1.50
	1.75	2.00	2.25	1.50	1.875	1.625	1.25	1.625	1.625	1.375	2.25	1.625	1.125	1.625	1.625	1.50	1.50	1.75
	1.50	1.625	2.50	1.50	2.125	2.00	1.375	1.125	1.375	1.50	2.00	1.75	1.125	1.375	1.75	1.625	1.75	1.50
	1.75	2.00	2.00	2.00	1.625	1.875	1.50	1.375	1.625	1.625	1.50	1.625	2.00	1.50	1.625	1.50	1.875	1.75
	2.00	1.875	2.00	2.00	1.50	2.375	1.125	1.25	2.00	1.50	2.00	2.375	1.00	2.00	1.75	1.375	1.50	1.875
	2.00	1.50	1.50	1.50	2.00	2.25	1.50	1.875	2.00	1.625	1.50	2.125	1.125	1.875	1.50	1.50	1.375	1.50
	1.875	2.60	1.875	1.875	1.50	1.875	1.625	1.50	1.50	1.375	1.875	2.00	1.25	1.125	1.625	1.50	1.75	1.75
	1.75	2.125	2.25	1.50	1.625	2.50	2.125	2.00	2.00	1.625	1.625	1.75	1.25	2.00	1.875	1.00	2.00	2.00
	1.875	1.675	2.00	2.375	1.875	2.00	0.875	1.125	1.625	1.50	1.50	1.50	1.50	1.625	1.50	1.50	1.50	1.50
	1.625	1.75	1.50	1.625	1.50	1.625	1.50	1.375	1.75	1.375	1.50	1.50	1.00	1.875	1.25	1.625	1.50	1.625
	2.00	2.125	1.50	1.50	1.60	2.125	1.50	1.50	1.875	1.50	2.375	1.875	1.50	1.50	1.875	1.50	1.50	1.625
	1.50	1.875	1.625	2.00	1.625	2.25	1.25	1.50	1.50	1.625	1.50	1.625	1.125	1.875	1.625	1.75	1.50	1.50
	2.00	1.50	1.375	1.375	1.625	1.75	1.25	1.50	1.625	1.625	1.50	1.625	1.625	1.625	1.50	1.25	1.50	1.50
	2.25	1.50	1.50	2.125	2.00	2.00	1.375	1.50	1.875	1.625	1.875	2.00	2.125	2.00	2.00	1.375	1.75	1.75
	1.50	1.875	2.00	1.50	1.75	1.75	1.50	1.125	1.50	1.50	1.50	2.00	1.50	1.50	2.00	2.00	2.00	1.75
	1.875	1.75	2.00	1.50	1.25	1.75	1.50	1.50	1.25	1.375	1.875	1.25	1.00	2.00	2.375	1.25	1.50	1.625
	1.50	1.75	2.00	1.50	1.75	1.875	1.00	2.00	2.75	1.375	1.50	1.875	1.50	1.125	1.625	2.00	1.50	1.50
	1.75	1.75	2.00	1.75	1.75	1.875	1.375	1.50	2.25	1.625	1.625	1.50	1.25	1.50	1.50	1.00	1.75	1.50
	1.625	1.875	2.00	2.00	1.625	1.75	1.625	1.75	1.75	1.50	1.50	2.00	1.25	2.00	1.50	1.75	1.50	1.375
	1.875	2.00	1.625	1.50	1.50	2.00	1.75	1.625	1.75	1.50	1.875	2.50	1.50	1.625	2.00	1.50	1.50	1.50
	1.625	1.75	1.875	1.50	2.00	2.125	1.125	1.25	1.625	1.50	1.625	1.50	1.25	1.75	2.00	1.75	1.875	1.625
Totals.....	87.00	92.125	93.875	84.625	82.125	95.375	68.00	76.75	86.00	77.375	84.50	90.25	67.625	86.25	91.125	75.25	80.00	84.125

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.						
Maximum measurements.	B'	2.50	0.9442	B'	2.375	0.9350	B'	1.875	0.7380	B'	2.00	0.7874	B'	2.125	0.8366	B'	2.00	0.7874			
	B''	3.25	1.2795	B''	2.125	0.8966	B''	2.375	0.9350	B''	2.375	0.9350	B''	2.125	0.8366	B''	2.00	0.7874			
	B'''	2.625	1.0334	B'''	2.50	0.9442	B'''	2.75	1.0826	B'''	2.75	1.0826	B'''	2.50	0.9842	B'''	2.25	0.8858			
Highest.....		3.25	1.2795		2.50	0.9842		2.75	1.0826		2.75	1.0826		2.50	0.9842		2.50	0.9842			
Minimum measurements.	B'	1.50	0.5905	B'	1.00	0.3937	B'	0.875	0.3445	B'	1.00	0.3937	B'	1.00	0.3937	B'	1.00	0.3937			
	B''	1.50	0.5905	B''	1.25	0.4921	B''	1.00	0.3937	B''	1.25	0.4921	B''	1.125	0.4429	B''	1.00	0.3937			
	B'''	1.375	0.5413	B'''	1.50	0.5905	B'''	1.25	0.4921	B'''	1.125	0.4429	B'''	1.50	0.5905	B'''	1.375	0.5413			
Lowest.....		1.375	0.5413		1.00	0.3937		0.875	0.3445		1.00	0.3937		1.00	0.3937		1.00	0.3937			
Average measurements..	B'	1.740	0.6850	B'	1.693	0.6065	B'	1.30	0.5354	B'	1.548	0.6094	B'	1.352	0.5322	B'	1.505	0.5925			
	B''	1.843	0.7253	B''	1.643	0.6468	B''	1.535	0.6043	B''	1.69	0.6673	B''	1.725	0.6701	B''	1.60	0.6299			
	B'''	1.878	0.7393	B'''	1.908	0.7151	B'''	1.72	0.6771	B'''	1.805	0.7106	B'''	1.825	0.7185	B'''	1.682	0.6621			
Average.....		1.82	0.7165		1.74	0.6850		1.54	0.6062		1.68	0.6614		1.634	0.6433		1.596	0.6263			
Measurements above average..		51			78			57			60			60			69				
Measurements below average..		99			72			93			90			90			81				



TABLE VI (A).—Measurements of fineness of Negretti wools from E. W. Perry, Chicago, Ill.—Continued.

Catalogue number of samples.....	418.			419.			420.			421.			422.		
	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
1.75	1.75	1.75	1.625	2.00	1.625	2.50	1.75	1.50	1.25	1.50	1.875	1.75	1.75	2.00	
1.75	1.625	1.75	1.50	2.00	2.125	1.50	2.00	1.625	1.25	1.50	2.50	2.00	2.00	2.25	
1.75	1.875	1.375	1.50	2.00	2.375	2.00	1.50	1.375	1.50	1.60	2.00	1.875	2.00	2.00	
2.375	1.75	1.25	1.50	2.00	1.50	1.50	1.625	1.375	1.625	1.50	1.50	2.00	1.625	2.125	
1.625	1.625	1.50	1.375	2.50	2.00	1.875	1.625	1.75	1.25	1.50	1.625	2.25	1.75	2.00	
2.125	1.25	1.625	1.625	2.00	2.25	1.50	1.375	1.875	1.25	1.50	1.75	2.00	1.875	1.50	
1.75	1.75	1.875	1.75	2.50	1.875	2.125	2.25	1.625	1.50	1.125	1.75	1.50	1.625	1.875	
2.00	1.75	1.875	1.50	1.75	1.625	1.875	2.75	1.75	1.875	1.125	1.875	1.625	1.875	2.00	
1.50	1.625	1.75	1.75	2.00	1.50	1.875	1.50	2.00	1.25	1.25	1.60	1.50	1.50	1.875	
2.00	1.75	2.25	2.00	2.25	1.75	2.00	1.875	1.50	1.25	1.50	1.75	1.75	2.00	2.00	
2.00	1.75	1.50	2.25	1.50	2.50	1.875	1.875	1.50	1.50	1.50	1.875	1.875	2.00	2.50	
1.75	1.25	2.125	1.50	1.875	1.50	1.50	2.125	1.50	1.125	1.50	1.125	1.75	1.50	2.00	
1.50	1.375	2.00	1.125	1.875	2.375	1.50	1.75	1.50	1.375	2.50	2.50	2.125	1.625	1.625	
1.625	2.125	2.25	1.75	2.125	1.75	1.625	1.50	1.875	1.75	1.50	1.625	2.00	2.00	2.125	
1.50	1.75	1.875	2.00	2.25	1.50	1.625	2.00	1.50	1.75	1.00	1.75	1.50	2.00	2.375	
2.125	1.50	2.125	2.375	1.875	2.00	1.625	2.625	1.50	1.25	2.00	2.00	1.75	1.75	1.50	
1.50	1.50	1.50	1.875	2.00	1.625	1.75	2.125	2.375	1.50	1.25	2.00	1.75	1.875	1.625	
1.875	1.50	2.00	1.875	2.00	2.25	2.00	1.625	1.75	1.375	1.50	2.375	2.50	2.00	1.875	
1.625	1.50	1.625	1.50	2.125	1.875	1.75	1.875	2.25	1.25	1.875	1.50	1.875	1.625	2.00	
1.25	1.375	1.25	1.625	1.75	2.50	2.50	1.75	1.625	1.25	1.50	1.75	2.125	1.75	1.875	
2.00	1.625	2.125	1.50	2.375	1.875	1.50	1.625	1.625	1.875	1.50	1.25	2.625	1.625	1.625	
1.625	1.50	1.50	1.625	2.00	2.00	2.375	2.25	1.50	1.625	1.50	1.625	2.00	1.875	2.125	
1.50	1.75	2.125	2.00	2.375	2.00	1.75	1.75	1.625	1.25	1.375	1.75	2.00	2.00	1.50	
1.50	1.50	1.75	1.50	2.00	1.75	2.00	2.00	1.50	1.50	1.00	1.125	2.75	1.75	2.00	
1.50	1.625	2.125	1.50	2.00	2.125	1.875	2.125	1.875	1.75	1.50	2.125	2.00	1.50	1.50	
1.75	1.50	2.25	1.50	1.875	2.00	1.50	2.25	1.875	1.25	1.875	1.375	2.00	1.25	2.00	
1.625	1.75	1.75	1.875	2.00	1.875	1.75	3.00	1.75	1.50	1.50	1.50	1.75	1.75	1.50	
1.625	1.625	1.50	1.375	2.00	1.75	1.375	2.50	1.625	1.75	1.50	1.50	2.00	1.75	1.50	
1.50	1.50	2.00	1.75	1.875	1.50	1.50	2.00	1.75	1.00	1.50	1.625	2.00	1.50	1.75	
2.00	1.875	2.00	1.50	2.125	1.75	1.50	1.625	1.875	1.00	1.50	1.50	2.00	1.75	1.625	
2.00	1.50	1.875	1.375	2.00	1.625	1.875	2.75	1.875	1.25	1.25	2.125	2.50	1.875	1.375	
1.50	1.625	1.75	1.50	2.50	2.00	1.50	1.875	1.50	1.00	1.125	1.625	2.375	1.50	2.00	
1.75	1.625	1.75	1.50	2.125	1.50	1.375	1.875	1.875	1.50	1.75	1.75	2.25	1.875	2.00	
1.50	1.625	1.875	1.50	2.50	2.00	1.375	1.875	1.75	1.25	1.875	1.875	2.00	2.00	2.00	
1.875	1.625	1.875	1.50	2.375	2.125	1.625	2.00	2.125	1.25	1.375	1.875	2.00	1.625	2.00	
1.625	1.50	1.75	1.625	1.75	1.50	2.00	2.125	1.75	1.00	1.50	1.50	1.375	2.00	2.25	
2.125	1.75	1.75	1.00	2.125	2.375	1.50	2.125	1.875	1.25	1.625	1.50	2.125	2.125	1.625	
1.50	1.875	1.75	1.625	2.00	1.50	1.50	1.50	1.875	1.125	1.75	1.875	2.375	1.875	2.00	
1.75	1.50	1.75	1.375	1.75	1.75	1.50	2.00	2.00	1.50	1.75	2.00	2.125	2.125	2.00	
1.75	1.75	1.625	1.25	2.125	2.00	2.125	1.875	2.00	1.375	1.50	1.75	2.125	1.625	2.00	
2.25	1.625	2.00	1.50	1.75	1.625	1.50	1.50	1.50	1.00	2.125	1.625	2.00	1.625	2.00	
1.75	1.625	2.125	2.00	1.50	1.50	1.75	1.50	1.50	1.75	1.75	1.50	1.75	2.125	2.375	
1.50	1.50	1.50	2.00	2.125	1.75	1.875	1.25	2.00	1.00	1.25	2.00	2.125	1.50	2.50	
1.375	1.50	2.00	1.50	2.375	2.00	1.75	1.625	2.00	1.50	1.25	1.625	2.00	1.625	1.75	
1.625	1.50	1.50	1.25	2.00	2.375	2.375	2.125	1.625	1.625	1.75	1.50	2.125	1.50	2.50	
1.50	2.00	2.00	1.25	1.625	1.625	1.625	2.00	2.375	1.50	1.50	1.875	2.25	1.75	2.00	
1.875	1.875	1.375	1.00	2.00	2.125	1.50	2.00	1.50	1.375	1.75	2.00	2.375	2.00	2.00	
1.625	1.50	1.375	1.75	1.615	2.00	2.00	1.875	1.75	1.50	2.25	1.50	2.00	1.75	1.875	
1.75	1.625	2.375	1.25	2.50	1.875	1.50	1.50	1.625	1.75	1.375	1.375	1.875	2.00	2.00	
1.50	1.75	2.125	1.875	2.375	1.875	1.50	1.875	1.75	1.875	1.50	1.625	1.875	2.00	2.375	
Totals .....	85.625	82.00	90.00	70.25	102.125	94.250	82.375	94.750	87.250	69.375	74.50	87.875	110.375	89.250	96.875

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.			
Maximum measurements .....	B'	2.375	0.9350	B'	2.375	0.9350	B'	2.50	0.9842	B'	1.875	0.7380	B'	2.75	1.0820
	B''	2.125	0.8368	B''	2.50	0.9842	B''	3.00	1.1811	B''	2.25	0.8858	B''	2.125	0.8368
	B'''	2.875	0.9350	B'''	2.50	0.9842	B'''	2.375	0.9350	B'''	2.50	0.9842	B'''	2.50	0.9842
Highest .....		2.375	0.9350		2.50	0.9842		3.00	1.1811		2.50	0.9842		2.75	1.0820
Minimum measurements .....	B'	1.25	0.4921	B'	1.00	0.3937	B'	1.375	0.5413	B'	1.00	0.3937	B'	1.375	0.5413
	B''	1.25	0.4921	B''	1.50	0.5905	B''	1.25	0.4921	B''	1.00	0.3937	B''	1.25	0.4921
	B'''	1.25	0.4921	B'''	1.50	0.5905	B'''	1.375	0.5413	B'''	1.25	0.4921	B'''	1.375	0.5413
Lowest .....		1.25	0.4921		1.00	0.3937		1.375	0.5413		1.00	0.3937		1.25	0.4921
Average measurements .....	B'	1.712	0.6740	B'	1.585	0.6240	B'	1.747	0.6877	B'	1.387	0.5460	B'	2.208	0.8092
	B''	1.64	0.6456	B''	2.042	0.8039	B''	1.895	0.7464	B''	1.49	0.5806	B''	1.785	0.7027
	B'''	1.80	0.7086	B'''	1.885	0.7421	B'''	1.745	0.6870	B'''	1.76	0.6929	B'''	1.937	0.7625
Average .....		1.717	0.6759		1.837	0.7232		1.790	0.7070		1.540	0.6086		1.972	0.7763
Measurements above average .....		77			78			66			69			70	
Measurements below average .....		73			72			84			91			71	



TABLE VI (B).—Measurements of fineness of wools from Herr E. Steiger, Leutwitz, near Meissen, Germany.

		RAMS.														
Catalogue number of samples.....		879.			880.			881.			882.			883.		
Number of section.....		B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
		2.00	1.75	1.50	1.875	1.625	1.75	1.75	1.50	1.50	2.00	1.625	1.875	1.625	1.50	2.00
		1.75	1.75	1.50	1.875	1.50	1.625	1.50	1.625	1.75	1.75	2.00	1.75	1.50	1.50	1.875
		1.75	1.50	2.00	2.00	2.00	1.375	2.00	1.50	1.25	2.00	1.875	2.00	2.00	1.50	2.00
		2.00	1.50	1.75	2.00	1.75	1.50	2.00	1.50	1.75	2.00	2.125	2.125	2.00	1.50	2.00
		2.125	2.00	1.625	1.625	1.875	1.625	1.875	2.125	1.50	2.25	1.75	1.875	2.00	1.625	2.25
		1.50	1.50	2.25	1.875	1.875	1.50	1.75	2.375	1.60	2.25	2.00	2.00	1.875	2.00	1.75
		1.50	1.875	2.00	1.875	1.50	1.50	2.125	2.25	1.50	2.325	2.00	1.75	1.625	1.75	1.875
		1.875	1.50	1.625	2.50	1.025	1.75	1.875	2.125	2.00	1.625	1.75	2.125	1.875	1.75	2.00
		2.00	2.125	1.75	1.025	2.00	2.00	1.875	1.50	2.75	2.375	1.875	1.875	2.50	1.625	1.625
		1.60	1.875	2.25	1.75	1.50	2.00	2.00	1.50	1.50	2.00	1.75	1.625	2.00	1.75	2.25
		2.00	1.75	2.00	2.00	2.25	1.75	1.75	2.00	1.25	1.50	1.50	1.625	2.00	1.75	1.625
		1.50	1.75	1.875	1.625	1.50	1.50	2.00	2.00	1.875	2.00	1.875	2.00	1.75	1.75	2.00
		1.50	1.50	1.875	2.00	1.375	2.00	2.00	1.50	1.50	2.00	2.25	2.00	2.375	2.00	2.125
		2.00	2.00	2.00	1.75	1.50	2.00	1.50	1.75	1.75	1.50	1.625	2.00	1.625	2.125	1.625
		2.00	1.025	1.75	2.125	2.375	1.50	1.50	1.75	1.50	2.75	1.875	2.00	2.00	1.875	2.00
		2.00	2.00	1.875	2.00	1.125	2.00	1.75	1.50	1.60	2.00	2.50	1.875	1.875	1.875	1.50
		2.125	1.50	2.00	1.625	2.00	1.75	1.50	1.50	2.375	3.00	2.00	1.625	1.875	1.60	1.00
		2.375	2.00	1.375	1.50	2.00	1.375	2.25	1.50	1.50	1.025	1.875	1.875	2.625	2.00	2.00
		1.50	1.75	1.75	1.625	1.875	2.00	2.00	1.025	1.375	2.125	2.00	1.625	2.00	1.625	2.00
		2.50	1.75	1.50	1.025	2.00	1.625	2.25	1.875	2.00	2.125	1.75	1.625	1.75	1.50	1.00
		1.50	1.50	1.00	2.125	1.875	2.50	2.00	1.50	2.125	1.50	1.625	1.875	2.50	1.50	2.375
		1.50	1.625	2.00	2.00	1.75	1.75	1.625	2.00	1.60	1.75	2.00	2.50	1.50	1.75	2.125
		1.50	2.25	2.00	2.00	1.50	1.50	1.75	1.50	1.875	2.00	2.00	2.25	1.75	1.60	1.00
		1.625	1.75	1.75	2.00	1.50	1.625	1.50	1.75	1.625	2.625	2.375	2.125	1.50	1.50	1.875
		1.50	1.60	1.50	2.00	1.875	2.00	1.75	1.50	1.50	1.625	2.25	1.875	2.00	2.00	2.00
		2.00	2.00	2.00	2.00	1.875	1.875	2.00	1.75	2.125	2.125	2.00	1.50	2.375	2.00	2.625
		2.125	1.50	1.875	1.875	1.25	1.75	1.75	1.875	1.50	1.625	1.875	2.25	1.625	1.50	2.00
		1.625	1.625	1.50	2.00	1.875	1.75	2.00	1.50	1.875	2.125	2.00	1.625	1.50	1.25	2.00
		2.00	1.75	1.75	1.50	1.75	2.00	2.00	2.00	1.875	1.625	2.25	2.25	1.75	1.875	2.00
		1.025	1.75	1.50	2.25	2.00	2.875	2.125	1.625	2.125	2.00	2.125	2.00	3.375	1.50	1.025
		1.50	1.875	2.00	1.625	2.125	1.875	2.00	2.00	1.50	2.00	1.50	2.50	1.625	2.00	1.875
		2.00	1.50	1.875	1.60	2.00	1.50	2.00	2.00	1.75	2.625	1.625	2.00	2.00	1.25	2.00
		1.625	1.50	1.50	2.00	2.00	2.25	1.875	1.50	1.625	1.625	2.125	2.00	2.125	1.875	1.875
		2.00	2.00	2.125	1.50	2.25	2.00	2.00	1.75	1.625	1.875	2.25	2.50	1.50	2.00	2.00
		1.75	1.75	1.625	1.875	2.00	1.875	1.625	1.875	1.50	2.25	1.875	1.75	2.125	1.875	1.875
		1.60	2.00	1.50	2.00	2.00	1.625	2.00	1.875	2.00	2.125	2.00	2.00	1.625	1.75	2.00
		1.75	1.75	1.50	1.875	1.875	1.60	1.50	2.00	1.875	2.125	1.75	2.00	1.875	1.50	1.50
		1.75	1.50	1.75	2.125	1.50	1.75	1.75	1.625	2.00	2.00	1.50	2.00	1.75	2.00	1.60
		1.50	1.875	1.50	2.00	2.25	2.125	1.625	1.50	1.75	2.00	2.375	2.125	2.00	2.00	1.50
		1.60	1.75	2.00	1.375	1.50	1.50	2.00	1.025	1.625	2.00	2.00	1.625	1.875	2.00	2.00
		1.50	2.125	1.75	1.625	1.50	1.50	1.50	2.00	1.875	1.875	2.50	1.75	2.25	1.75	2.00
		1.60	1.625	1.625	2.125	1.625	2.00	1.60	1.75	1.875	2.00	2.00	2.00	1.75	1.875	2.25
		2.00	1.625	1.75	1.875	1.625	2.00	1.50	1.50	1.75	2.125	1.875	2.125	2.25	2.00	1.875
		2.00	2.00	1.625	2.00	1.75	1.75	1.625	2.00	1.875	2.125	1.625	1.625	1.625	2.25	1.875
		1.60	2.00	2.125	2.00	1.75	1.625	1.875	2.00	2.00	2.00	1.625	2.125	1.50	1.875	1.875
		1.50	2.00	1.75	2.25	1.60	1.50	2.00	1.50	1.60	1.875	2.00	2.00	1.875	2.25	2.00
		1.60	1.625	1.875	2.00	1.625	1.75	1.875	1.625	2.00	2.875	1.625	2.125	2.00	1.50	1.625
		1.75	1.625	1.50	1.625	1.875	1.375	1.50	1.75	2.125	2.25	2.00	1.625	1.50	2.50	2.00
		1.50	1.625	2.00	1.75	1.75	2.00	1.875	1.50	1.625	1.875	1.625	1.625	2.00	1.625	2.00
		1.50	1.625	2.00	1.75	1.625	1.60	1.875	2.00	2.125	2.75	2.125	2.00	2.25	2.00	1.875
Totals.....		87.625	87.625	88.50	93.50	88.625	88.625	90.875	87.125	87.75	101.75	96.625	97.625	96.625	88.625	94.625

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	
Recapitulation and reduction:																
Maximum measurements.....	B'. B''. B'''.	2.375 2.25 2.25	0.9350 0.8858 0.8858	B'. B''. B'''.	2.50 2.375 2.875	0.9842 0.9650 1.1318	B'. B''. B'''.	2.25 2.375 2.75	0.8858 0.9350 1.0826	B'. B''. B'''.	3.00 2.50 2.50	1.1811 0.9842 0.9842	B'. B''. B'''.	3.375 2.50 2.625	1.3287 0.9842 1.6344	
Highest.....		2.375	0.9350		2.875	1.1318		2.75	1.0826		3.00	1.1811		3.375	1.3287	
Minimum measurements.....	B'. B''. B'''.	1.50 1.50 1.00	0.5905 0.5905 0.3937	B'. B''. B'''.	1.375 1.125 1.375	0.5413 0.4429 0.5413	B'. B''. B'''.	1.50 1.60 1.25	0.5005 0.5905 0.4921	B'. B''. B'''.	1.50 1.50 1.50	0.5905 0.5905 0.5905	B'. B''. B'''.	1.50 1.25 1.00	0.5905 0.4921 0.3937	
Lowest.....		1.00	0.3937		1.125	0.4429		1.25	0.4921		1.50	0.5905		1.00	0.3937	
Average measurements.....	B'. B''. B'''.	1.753 1.753 1.77	0.6901 0.6901 0.6968	B'. B''. B'''.	1.67 1.773 1.773	0.7362 0.6980 0.6980	B'. B''. B'''.	1.818 1.743 1.755	0.7157 0.6862 0.6909	B'. B''. B'''.	2.035 1.933 1.933	0.8011 0.7010 0.7668	B'. B''. B'''.	1.932 1.772 1.892	0.7066 0.6976 0.7448	
Average.....		1.755	0.6909		1.805	0.7106		1.772	0.6976		1.973	0.7776		1.865	0.7342	
Measurements above average.....		58			76			66			89			92		
Measurements below average.....		92			74			84			61			58		



TABLE VI (B).—Measurements of fineness of wools from Herr E. Steiger, Leutewitz, near Meissen, Germany—Continued.

Catalogue number of samples .....	RAMS.												EWES.		
	881.			885.			886.			887.			878.		
	U.	B'.	B''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
2.00	2.25	1.75	1.875	1.875	2.00	2.25	2.00	2.375	1.875	2.50	1.50	1.625	1.75	1.875	1.875
1.875	2.00	1.50	1.625	1.75	1.75	1.625	1.625	1.625	1.875	1.625	2.00	1.625	1.625	1.50	1.60
2.00	2.00	1.50	1.50	1.50	1.875	1.50	1.625	2.00	1.50	2.00	1.625	1.50	1.625	1.75	1.75
2.00	2.00	2.00	1.50	2.25	1.75	1.75	1.75	1.875	1.50	2.125	2.00	2.00	1.125	2.00	1.025
2.00	2.00	2.50	1.875	1.50	2.00	2.00	1.50	2.00	1.50	2.00	2.00	2.00	1.125	2.00	2.00
2.00	2.375	1.75	2.00	2.00	2.00	2.00	2.00	2.375	1.875	2.125	1.875	2.00	1.025	2.00	1.50
2.375	2.00	2.00	1.875	1.75	1.75	1.75	1.50	1.625	1.50	2.00	1.50	1.875	1.875	2.00	1.60
1.625	2.00	2.50	1.50	1.625	2.00	2.00	2.00	1.875	2.50	1.50	1.625	1.875	1.625	1.625	1.75
1.875	2.25	1.625	1.50	2.125	2.50	1.75	1.75	2.125	2.00	1.50	2.00	2.00	1.50	1.875	1.75
2.00	1.875	2.00	2.00	1.75	2.25	2.25	1.875	1.50	1.875	1.50	2.50	1.875	1.50	1.50	1.60
1.875	2.25	2.00	1.625	2.125	2.00	1.625	1.625	2.125	1.625	1.50	2.25	1.875	1.625	2.00	2.00
1.50	2.00	2.00	1.875	1.875	2.50	2.50	1.625	2.375	1.625	2.00	1.75	1.625	2.00	1.60	1.60
2.00	2.00	2.50	2.00	1.875	1.75	1.75	1.75	1.875	1.50	1.60	1.875	1.25	2.00	1.60	1.50
1.75	2.25	1.75	2.00	1.625	2.00	2.00	2.00	2.00	2.125	1.75	2.00	2.00	1.50	1.50	1.25
2.00	1.50	1.625	1.875	1.75	2.00	2.00	1.875	1.625	2.375	1.50	1.625	2.125	1.625	1.625	1.50
2.125	1.875	1.625	1.50	1.625	2.00	1.875	1.875	1.875	1.875	1.875	1.75	1.625	1.25	1.75	1.75
2.00	1.625	1.625	2.00	1.875	1.875	1.625	1.625	1.50	1.375	1.50	1.50	2.00	1.50	1.875	1.60
2.00	2.00	1.50	2.25	1.75	1.875	1.625	1.625	1.875	1.50	1.75	2.375	2.00	1.50	1.625	2.00
1.75	1.50	1.75	2.375	1.75	2.00	2.00	2.125	2.00	2.25	1.50	1.625	1.875	1.25	1.25	1.375
1.625	1.875	2.50	1.625	1.50	1.625	1.625	1.75	2.00	1.75	1.50	2.00	1.625	1.625	1.875	1.75
1.75	1.625	1.875	1.50	2.00	2.00	2.00	1.875	2.00	2.00	1.50	2.375	1.75	1.50	1.625	2.00
2.125	1.875	2.75	1.875	1.625	2.00	2.00	2.00	1.875	1.75	1.875	1.50	1.625	1.25	1.60	1.60
2.375	2.00	2.50	2.50	1.50	1.50	1.50	2.25	2.00	1.50	1.50	1.625	1.75	2.00	1.50	2.25
2.00	2.375	1.25	1.50	1.375	2.50	1.875	1.875	1.50	2.375	1.625	1.75	2.25	1.625	1.375	1.625
2.00	1.875	2.50	1.75	1.875	2.25	2.00	2.00	1.75	2.00	1.75	1.375	1.75	1.625	1.50	1.60
1.50	2.50	1.875	2.00	1.625	1.875	1.375	2.00	2.00	2.00	1.625	1.50	2.00	2.00	1.50	1.60
1.50	1.50	2.00	1.75	2.00	2.00	2.00	2.50	2.00	1.50	1.625	1.25	1.60	1.50	1.875	2.00
2.00	1.75	2.375	2.00	1.50	2.375	2.375	2.375	1.75	1.50	2.00	2.25	1.875	1.75	1.50	1.675
2.00	1.625	1.75	1.50	2.00	2.50	1.50	1.50	1.75	2.00	1.875	1.25	2.25	1.75	2.00	2.00
2.00	2.00	1.875	1.75	2.00	2.00	2.00	2.00	1.75	2.00	2.125	2.00	2.625	1.50	1.75	1.60
1.875	1.875	2.25	1.50	1.75	2.125	1.875	1.875	2.00	1.75	2.00	2.25	2.25	1.25	1.625	1.875
1.625	1.50	2.875	2.125	1.50	1.875	2.00	2.00	1.875	2.125	1.625	1.75	1.75	1.75	1.875	1.625
1.875	1.625	2.00	1.875	1.875	2.00	2.00	2.00	2.00	2.125	2.375	2.00	2.00	1.625	1.375	1.875
1.50	1.625	2.00	2.00	2.00	2.375	2.00	2.00	1.50	1.625	1.50	2.125	1.50	1.625	1.50	2.00
1.875	2.00	2.00	2.375	1.875	2.00	2.00	2.00	1.875	1.875	1.60	2.25	1.50	1.75	1.75	1.875
2.00	1.625	2.50	1.625	1.625	2.00	1.625	2.00	2.025	2.625	1.875	1.50	1.50	1.375	1.625	2.00
2.00	1.50	2.125	1.625	1.75	1.75	1.75	1.875	2.75	2.375	1.75	1.875	2.00	1.75	1.625	1.025
1.625	1.625	2.25	2.25	2.00	2.00	2.00	2.00	2.00	1.625	1.75	1.25	2.00	1.50	1.50	1.60
1.875	1.625	1.75	2.125	2.375	2.125	1.50	2.00	2.00	2.00	1.375	1.875	2.00	1.50	2.00	1.60
2.00	2.375	2.00	2.00	1.625	2.00	1.625	2.50	1.75	1.50	1.50	1.50	1.875	2.00	1.125	1.75
2.625	1.625	2.50	2.00	1.375	1.50	1.875	1.875	1.50	1.75	1.50	1.50	1.60	1.60	2.375	1.50
1.50	1.50	1.375	2.00	1.625	2.00	1.75	2.50	2.50	2.50	1.60	2.875	1.625	1.625	2.00	2.00
1.025	2.00	1.875	2.00	1.50	1.875	2.00	2.00	1.625	1.875	1.50	1.60	1.60	1.60	1.75	2.50
2.125	1.50	2.00	2.00	1.50	1.875	2.00	1.50	2.00	2.00	1.75	1.875	1.50	1.625	1.60	1.60
2.75	1.875	3.00	1.375	1.50	1.875	1.625	1.875	2.75	1.75	1.875	1.625	1.625	1.625	1.625	1.60
2.00	1.875	2.50	1.50	2.375	2.00	2.00	2.125	2.50	2.00	1.625	1.625	1.625	1.25	1.50	2.00
1.50	1.75	2.00	1.25	1.50	2.875	1.875	1.875	1.75	1.625	1.875	2.625	2.00	1.625	1.50	1.60
2.25	1.75	2.50	1.50	1.50	1.875	2.00	2.00	1.50	2.00	2.00	2.00	2.375	1.625	1.375	2.00
2.125	1.75	2.125	2.00	2.125	2.00	2.50	2.00	1.875	1.50	1.50	1.50	1.50	1.50	1.875	1.50
2.125	2.00	1.50	1.875	1.875	1.875	1.875	1.875	1.50	2.125	1.375	1.625	2.125	1.50	2.00	1.875
Totals .....	96.50	93.875	102.50	91.125	88.125	100.25	98.375	93.00	90.25	80.375	90.75	98.125	70.875	83.50	85.625

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.						
Maximum measurements.....	B'	2.75	0.9826	B'	2.50	0.9842	B'	2.50	0.9842	B'	2.50	0.9842	B'	2.005	0.7874
	B''	2.50	0.9842	B''	2.375	0.9850	B''	2.75	1.0826	B''	2.625	1.0334	B''	2.375	0.9850
	B'''	3.00	1.1811	B'''	2.875	1.1318	B'''	2.625	1.0324	B'''	2.625	1.0334	B'''	2.50	0.9842
Highest.....		3.00	1.1811		2.875	1.1318		2.75	1.0826		2.625	1.0334		2.50	0.9842
Minimum measurements.....	B'	1.50	0.5005	B'	1.25	0.4921	B'	1.375	0.5413	B'	1.875	0.5413	B'	1.125	0.4429
	B''	1.50	0.5005	B''	1.375	0.5113	B''	1.50	0.5005	B''	1.25	0.4921	B''	1.25	0.4921
	B'''	1.25	0.4921	B'''	1.50	0.5005	B'''	1.375	0.5413	B'''	1.125	0.4429	B'''	1.25	0.4921
Lowest.....		1.25	0.4921		1.25	0.4921		1.375	0.5413		1.125	0.4429		1.125	0.4429
Average measurements.....	B'	1.93	0.7598	B'	1.823	0.7177	B'	1.868	0.7353	B'	1.728	0.6903	B'	1.588	0.6251
	B''	1.875	0.7303	B''	1.769	0.6940	B''	1.88	0.7322	B''	1.815	0.7145	B''	1.67	0.6304
	B'''	2.05	0.8070	B'''	2.005	0.7898	B'''	1.985	0.7814	B'''	1.863	0.7334	B'''	1.713	0.6744
Average.....		1.952	0.7685		1.853	0.7334		1.904	0.7406		1.802	0.7004		1.657	0.6523
Measurements above average.....			83			89			69			72			93
Measurements below average.....			67			61			81			78			97



TABLE VII (A).—Measurements of strain and stretch of Negretti wools from E. W. Perry, Chicago, Ill.

Catalogue number of samples..	400.				401.				402.				403.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	6.25	7.25	3.50	1.50	3.00	4.00	3.00	6.50	4.50	4.25	5.00	6.00	4.00	4.00	4.50	4.75
	2.00	2.00	5.75	4.25	3.25	7.00	3.00	5.00	4.25	3.00	4.00	6.75	6.75	7.25	3.75	7.25
	6.50	2.25	3.00	5.75	1.75	3.00	1.25	1.25	5.50	6.25	2.50	8.00	5.25	4.75	4.00	8.00
	3.00	1.50	4.00	2.00	4.00	6.75	3.25	5.75	3.25	4.00	4.25	7.25	2.00	6.75	5.25	6.50
	2.50	0.75	4.25	7.00	2.75	5.25	4.50	7.25	4.00	1.50	3.50	9.00	5.25	6.25	3.00	6.00
	4.00	7.50	2.50	4.00	2.25	6.00	3.00	4.25	3.50	1.25	3.75	8.00	4.50	3.25	4.00	3.00
	5.00	9.75	2.75	5.25	3.50	3.25	5.25	6.75	2.50	3.75	5.00	4.00	6.25	6.00	5.00	5.00
	4.75	2.00	3.25	6.50	4.00	6.00	2.75	4.75	4.50	5.25	3.50	8.25	5.75	2.50	4.75	4.00
	4.25	6.25	2.75	1.25	2.375	7.375	2.00	4.25	3.50	6.00	3.25	7.00	5.00	0.00	5.50	7.00
	3.25	5.00	4.25	5.75	4.75	1.50	2.00	0.50	4.00	3.50	3.50	7.75	4.00	5.00	5.25	4.75
	4.25	3.50	3.25	3.00	1.50	2.25	3.75	6.00	4.00	3.25	6.25	7.25	3.25	3.00	5.00	5.75
	4.50	3.50	5.75	6.50	2.00	6.75	3.75	7.00	3.00	6.00	4.00	6.00	3.50	3.00	7.25	7.00
	3.00	2.00	2.75	3.00	2.25	6.00	3.00	5.75	4.00	7.75	5.25	7.75	4.50	4.00	4.00	5.50
	2.25	3.25	3.75	3.75	5.00	7.75	4.00	7.50	3.25	6.00	3.25	6.50	3.25	3.25	4.50	7.25
	2.25	3.25	6.50	2.25	4.50	7.00	2.75	4.75	3.00	5.25	4.25	9.25	4.25	6.50	5.00	6.25
	5.25	3.00	4.00	1.50	4.00	6.75	2.75	3.50	3.50	7.25	3.00	7.00	4.75	7.50	3.25	5.00
	4.00	2.00	4.00	3.75	4.25	4.25	3.50	3.75	3.00	7.00	2.75	6.00	3.25	5.25	4.00	5.00
	5.00	2.50	5.00	1.50	3.75	4.00	3.00	3.75	3.25	6.25	2.75	5.00	5.25	7.00	5.00	2.25
	5.50	6.00	3.75	2.25	3.75	3.25	2.75	2.75	3.50	7.25	3.25	7.50	6.50	5.00	5.00	6.50
6.00	4.00	5.00	1.00	5.50	4.00	3.50	4.75	3.25	3.00	2.00	2.75	5.25	5.00	6.25	7.00	
4.00	4.00	4.00	2.75	3.25	3.00	3.75	4.25	4.00	8.25	2.75	4.25	4.00	5.25	5.00	3.50	
5.00	3.25	4.00	4.75	4.00	2.75	3.25	4.25	3.00	7.75	2.00	6.25	6.25	4.00	5.75	3.00	
5.00	3.75	7.25	3.00	4.25	5.00	4.25	5.00	3.25	4.50	3.00	7.00	5.75	3.75	4.00	4.00	
4.00	1.25	4.75	5.00	3.25	4.00	3.25	3.75	5.00	8.75	3.25	4.75	4.00	5.00	5.25	3.25	
5.00	2.00	3.00	1.75	4.00	4.50	4.25	4.00	6.00	7.75	3.75	6.75	5.25	3.75	7.00	6.00	
Totals .....	106.50	92.00	102.75	89.00	86.875	121.375	81.50	123.25	95.25	132.50	88.50	167.00	115.50	123.25	122.25	133.50
	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Highest .....	7.25	111.90	7.50	37.50	5.50	84.89	7.75	38.75	6.25	96.47	9.25	46.25	7.25	111.00	8.00	40.00
Lowest .....	2.00	36.87	1.00	5.00	1.25	19.29	1.25	6.25	2.00	30.87	1.25	6.25	2.00	30.87	2.25	11.25
Average .....	4.18	64.53	3.62	18.10	3.37	52.01	4.89	24.45	3.68	56.80	5.99	29.95	4.76	73.47	5.14	25.70
Tests above average .....	23		22		24		23		18		33		25		23	
Tests below average .....	27		28		26		27		32		17		25		27	
Catalogue number of samples..	404.				405.				406.				407.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	3.75	6.00	2.50	4.00	7.75	5.75	3.00	3.25	4.25	6.00	3.00	3.00	3.50	4.00	5.25	3.50
	3.25	4.00	2.50	2.50	3.75	5.00	6.00	4.50	3.25	5.00	7.25	5.25	3.00	3.75	4.00	7.00
	2.50	3.00	3.00	2.25	6.00	4.75	1.75	4.25	7.00	5.00	2.25	4.00	4.75	4.25	3.75	7.00
	2.00	1.25	3.00	3.50	3.75	1.00	4.00	4.75	3.75	7.50	4.00	5.25	4.00	2.00	1.75	4.00
	2.50	2.00	2.50	6.00	2.75	4.50	1.50	0.75	5.00	4.25	3.00	6.00	3.00	5.00	3.00	4.00
	4.50	5.00	3.00	3.00	5.75	4.75	6.75	4.75	0.50	2.25	3.50	5.00	2.00	2.75	3.00	4.50
	3.75	5.00	5.00	6.00	6.75	5.25	3.00	1.75	5.00	6.50	3.00	4.00	2.75	4.25	3.75	6.75
	4.00	4.00	2.75	3.00	3.25	5.00	6.75	5.25	5.25	8.50	7.00	6.75	3.00	5.00	3.00	2.50
	3.00	4.00	3.00	3.25	2.75	1.50	3.25	0.75	3.00	2.00	3.25	6.00	3.00	5.25	2.25	3.00
	4.00	6.00	3.50	3.50	4.75	5.75	6.25	6.00	4.00	2.50	3.00	4.50	6.00	5.75	2.50	3.75
	3.00	3.00	2.75	2.00	4.00	3.00	4.50	4.25	3.50	4.75	2.50	1.00	3.00	4.00	3.00	4.00
	3.25	5.00	3.75	4.00	2.75	2.00	6.75	7.00	3.25	3.50	5.00	1.25	2.25	2.50	2.00	2.00
	3.00	2.25	4.00	7.00	2.50	1.75	5.75	5.00	5.00	1.00	3.75	4.00	3.00	6.00	3.00	3.00
	4.50	7.50	2.50	2.25	4.00	5.75	4.25	4.00	3.75	1.25	4.75	4.25	1.50	4.00	1.75	1.75
	1.75	1.00	4.00	5.00	6.75	4.75	8.50	4.75	2.50	2.50	4.75	7.50	3.00	5.75	3.00	7.00
	2.00	1.00	5.25	3.50	2.75	3.50	3.00	4.00	6.00	4.00	7.25	5.25	5.00	4.00	5.25	6.50
	3.25	3.25	3.25	4.00	2.75	5.75	4.25	2.00	5.75	7.00	4.00	4.00	4.25	7.00	1.75	4.00
	3.25	6.00	3.75	3.00	3.75	4.75	3.00	2.75	3.00	2.375	3.00	4.75	4.00	7.00	2.00	4.50
	5.50	3.25	3.25	2.00	7.25	7.75	2.75	5.25	6.00	7.00	4.50	6.00	6.00	7.25	4.00	5.25
2.75	4.00	7.00	8.00	4.00	6.00	3.75	2.75	5.00	8.00	3.25	4.00	7.00	4.25	7.00	6.00	
2.00	2.50	3.50	4.50	4.75	2.75	4.00	3.75	5.25	3.00	2.25	4.625	4.00	6.75	2.00	3.00	
5.75	5.00	3.75	2.50	4.00	4.25	2.25	5.75	5.75	4.25	3.00	4.00	3.25	7.00	2.50	3.00	
2.75	2.00	3.50	7.00	4.00	2.00	6.50	5.75	2.25	2.75	4.75	1.50	4.00	4.00	5.00	4.00	
3.50	5.00	4.00	4.00	2.50	4.00	3.00	5.75	4.25	4.75	3.00	3.75	5.00	6.25	2.50	6.25	
3.50	4.00	3.00	1.00	3.00	2.75	8.50	2.50	4.00	4.75	4.25	3.25	4.00	3.75	3.00	1.00	
Totals .....	83.00	95.50	87.00	96.75	105.50	104.00	105.00	101.25	112.25	110.375	100.75	109.00	96.00	117.25	79.40	106.25
	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Highest .....	7.00	108.04	8.00	40.00	7.75	119.617	7.75	38.75	7.25	111.90	8.50	42.50	7.00	108.042	7.25	36.25
Lowest .....	1.25	19.20	1.00	5.00	1.50	23.15	0.75	3.75	2.25	34.73	1.00	5.00	1.50	23.153	1.00	5.00
Average .....	3.40	52.48	3.945	19.725	4.21	64.979	4.11	20.55	4.26	65.75	4.39	21.95	3.61	54.176	4.47	22.35
Tests above average .....	21		25		19		29		20		24		20		22	
Tests below average .....	29		25		31		21		30		26		30		28	



TABLE VII (A).—Measurements of strain and stretch of Negretti wools from E. W. Perry, Chicago, Ill.—Continued.

Catalogue number of samples..	408.				409.				410.				411.				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	6.00	3.00	6.75	1.25	4.00	6.00	4.00	5.25	2.25	7.00	5.00	8.00	2.25	3.25	3.25	2.00	
	3.25	3.00	3.00	5.75	3.50	6.25	2.50	1.00	5.25	6.75	2.00	2.75	6.00	3.00	3.25	2.25	
	4.75	7.00	4.25	1.25	1.75	5.75	3.25	3.00	7.50	4.00	6.25	5.75	4.00	6.75	2.50	2.50	
	3.00	4.25	4.75	5.00	3.75	4.50	3.50	6.50	4.00	6.50	1.75	3.00	3.00	3.00	3.00	3.25	
	5.00	3.75	4.75	6.25	3.75	3.50	3.00	4.75	2.25	6.50	3.00	6.00	4.75	4.00	3.25	1.00	
	6.25	3.00	4.00	3.25	3.75	3.25	3.75	6.00	4.25	9.75	2.75	3.00	2.25	2.50	2.00	3.25	
	3.00	1.75	3.50	6.00	3.00	3.25	1.75	5.00	1.75	3.75	2.75	2.25	2.75	2.25	3.75	4.00	
	3.00	2.00	3.00	2.00	2.75	7.00	3.00	4.25	2.75	3.00	3.00	4.00	4.00	2.25	3.50	4.25	
	2.75	1.25	5.00	3.75	3.00	5.00	3.50	4.25	2.75	3.00	3.50	6.25	3.25	2.75	6.25	6.25	
	6.75	6.75	3.75	6.25	2.25	1.75	2.25	4.75	2.00	4.00	3.50	3.25	3.00	2.00	3.50	3.50	
	4.00	5.75	3.75	2.75	3.00	6.75	5.00	7.25	2.25	2.00	5.50	5.50	3.00	2.50	3.50	5.25	
	4.25	5.75	3.25	3.25	2.25	3.75	2.25	3.75	3.00	3.00	2.00	1.75	4.50	3.25	4.00	2.00	
	4.25	2.50	4.25	4.75	4.00	4.00	7.50	2.50	3.00	3.25	2.50	2.50	5.25	3.50	2.25	3.00	
	3.75	2.25	4.00	3.00	2.50	6.75	2.75	7.00	2.75	2.25	2.50	3.50	7.75	3.50	3.00	4.50	
	6.25	7.25	4.00	3.50	2.75	2.00	3.00	3.25	2.00	4.25	3.00	3.00	3.50	4.00	4.25	2.00	
	3.25	4.00	3.75	2.00	3.25	3.00	2.00	2.00	4.00	2.50	4.00	2.50	3.75	2.25	4.00	3.00	
	6.25	2.50	3.25	4.00	3.25	2.75	3.00	4.00	3.00	5.25	4.25	3.00	3.25	2.00	3.00	4.25	
	5.875	4.125	3.50	1.75	3.75	3.00	3.25	4.00	5.00	6.00	3.25	1.00	2.50	4.25	3.25	4.75	
	6.25	3.60	3.25	2.75	2.00	2.75	2.25	1.25	5.25	3.00	3.25	2.75	3.25	2.50	5.00	2.75	
	3.20	2.00	4.75	1.75	1.25	1.00	2.25	1.25	2.50	6.00	3.00	1.00	4.25	6.25	2.25	2.50	
	6.50	6.00	5.00	2.00	5.50	4.25	5.75	3.00	3.50	3.50	4.00	3.25	4.75	3.75	4.25	3.00	
	4.875	3.50	4.25	3.75	3.75	1.75	3.75	3.00	3.75	5.00	5.00	6.00	3.00	3.25	2.75	3.50	
	4.00	2.25	2.50	3.25	2.50	3.00	2.50	1.75	3.00	5.00	3.00	5.00	2.50	2.25	4.50	5.50	
	3.50	2.50	5.00	2.00	3.00	4.00	3.00	4.75	3.00	4.00	4.00	1.00	2.75	2.75	3.25	4.00	
	3.25	2.50	6.00	3.75	3.25	3.00	3.25	4.75	2.50	6.00	3.50	6.50	3.50	2.25	3.75	2.75	
	Totals .....	112.75	94.125	100.25	86.00	75.50	99.00	77.00	102.50	78.25	98.75	88.50	97.25	95.50	76.25	91.50	85.00

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	6.75	104.13	7.25	36.25	5.75	88.75	7.50	37.50	6.50	84.89	9.75	48.75	7.75	119.62	6.25	31.25
Lowest .....	2.25	34.73	1.25	0.25	1.25	19.29	1.00	5.00	1.75	27.01	1.00	5.00	2.00	30.87	1.00	5.00
Average .....	4.38	67.60	3.60	16.00	3.05	47.08	4.03	20.15	3.34	51.55	2.92	19.60	3.74	57.73	3.23	16.15
Tests above average .....	22		22		19		23		10		25		20		24	
Tests below average .....	28		28		31		27		31		25		30		20	

Catalogue number of samples..	412.				413.				414.				415.				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	5.00	7.00	4.25	7.00	3.75	5.75	4.75	6.00	5.00	5.75	2.25	5.00	3.50	4.00	4.50	5.00	
	3.00	6.75	4.25	5.75	2.00	5.25	4.25	6.75	4.25	6.75	3.00	4.25	5.50	4.25	2.75	3.00	
	4.00	6.25	4.75	5.75	4.25	6.75	3.00	2.25	1.25	2.50	3.75	6.00	5.00	2.75	3.00	1.00	
	4.00	1.25	3.00	5.75	3.00	3.50	4.00	3.75	3.75	5.00	2.75	5.50	3.75	2.75	2.50	7.25	
	2.25	2.25	6.00	5.25	2.75	2.00	4.50	5.50	2.25	5.00	2.00	3.75	3.00	3.75	5.25	4.00	
	4.50	6.75	5.25	4.00	4.75	4.00	2.50	2.75	3.50	5.50	3.25	3.00	6.50	3.75	4.25	6.00	
	5.00	5.25	4.00	4.00	6.00	6.00	4.00	5.00	3.00	5.75	3.00	5.25	4.50	4.75	2.75	1.25	
	4.25	6.00	2.75	1.00	1.75	2.00	4.50	3.00	2.50	4.50	5.00	4.75	4.50	7.00	5.25	5.00	
	3.50	7.00	3.50	4.75	5.00	6.25	3.00	1.25	4.00	5.00	2.25	6.25	3.75	4.75	4.25	5.00	
	6.00	3.25	3.25	3.00	5.00	2.25	6.00	5.25	2.00	2.00	2.25	3.00	3.00	4.00	3.50	4.00	
	3.00	2.25	2.75	3.00	3.00	3.25	4.50	5.00	4.25	3.75	2.25	1.00	3.50	5.00	2.75	2.75	
	3.75	5.25	3.75	6.25	3.00	6.00	3.00	5.50	3.75	4.50	5.75	4.50	3.75	2.50	4.50	1.00	
	1.75	2.50	3.00	3.75	2.25	3.00	2.50	2.00	3.25	2.25	4.00	6.25	3.00	2.75	2.50	3.00	
	3.00	5.50	4.25	7.00	4.75	4.00	3.00	5.00	6.00	5.00	2.25	3.25	4.00	2.25	3.50	2.00	
	3.25	4.00	3.00	3.75	4.50	6.00	2.00	4.50	5.25	7.00	2.50	4.75	4.00	7.00	3.50	4.25	
	4.00	4.00	3.25	4.25	3.00	3.00	3.75	4.75	2.75	4.00	3.00	5.25	4.00	3.00	3.00	5.00	
	5.50	7.00	5.875	4.50	3.00	2.50	4.00	5.00	2.00	2.25	2.25	5.50	5.25	3.125	4.00	5.25	
	4.375	4.00	3.60	3.00	4.75	4.00	5.25	2.25	3.00	3.25	6.75	6.50	2.375	4.25	4.00	5.25	
	3.25	3.75	5.25	6.50	5.75	7.25	3.00	2.60	1.50	3.00	4.25	3.00	4.00	4.75	2.00	2.00	
	3.75	6.00	3.75	5.00	5.25	5.00	4.00	3.00	4.00	6.00	4.75	3.875	4.25	4.75	4.00	5.125	
	3.25	3.00	4.00	6.00	4.00	2.50	4.00	2.25	2.25	6.50	3.875	3.75	6.00	6.00	5.00	3.50	
	5.75	6.50	3.25	3.00	3.25	4.00	4.00	1.75	3.75	6.50	4.00	6.50	3.00	1.00	3.00	6.50	
	3.25	5.25	3.75	4.00	3.00	2.00	4.00	3.75	5.50	6.75	5.75	6.00	4.75	3.00	3.00	6.50	
	2.75	6.00	4.00	6.00	2.00	4.00	3.00	1.25	3.75	5.75	5.75	6.75	3.50	3.25	3.75	4.75	
	4.25	4.00	3.00	3.25	3.00	4.25	2.75	2.00	2.25	4.00	3.25	4.25	2.25	4.875	2.50	5.00	
	Totals .....	96.375	120.75	97.375	115.50	93.25	108.50	92.25	92.00	89.75	118.75	88.875	117.875	100.625	99.25	94.50	103.875

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	6.00	92.608	7.00	33.00	6.00	92.608	7.25	36.25	3.75	135.05	7.00	37.50	7.50	115.76	7.25	36.25
Lowest .....	1.75	27.01	1.25	0.25	1.75	27.01	1.25	0.25	1.25	19.29	1.00	5.00	2.00	30.87	1.00	5.00
Average .....	3.875	59.89	4.725	23.62	3.71	57.262	3.91	19.55	3.57	55.10	4.73	23.65	3.90	60.19	4.00	20.25
Tests above average .....	23		26		27		26		23		28		24		25	
Tests below average .....	27		24		23		24		37		23		26		25	



TABLE VII (A).—Measurements of strain and stretch of Negretti wools from E. W. Perry, Chicago, Ill.—Continued.

Catalogue number of samples..	416.				417.				418.				419.				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	4.25	2.00	5.50	0.25	3.25	5.75	3.00	5.75	2.75	1.00	2.50	3.60	4.50	6.00	2.75	2.75	
	4.50	2.50	4.60	1.50	2.50	3.00	2.50	6.00	4.50	6.25	3.50	2.50	3.00	1.75	3.50	3.00	
	3.50	3.25	2.25	1.00	3.50	5.50	2.00	2.25	4.00	4.75	5.00	3.50	2.375	2.75	3.025	4.75	
	3.75	1.00	3.00	2.50	2.00	3.00	2.75	5.75	3.25	6.00	3.50	4.00	3.625	3.75	2.50	2.00	
	4.00	3.00	2.00	2.50	2.50	0.00	4.25	7.25	3.00	6.00	3.75	4.00	2.75	4.25	2.025	3.50	
	2.50	4.00	2.75	2.00	4.75	0.75	2.75	4.50	4.00	6.00	3.00	3.00	3.60	5.00	2.625	5.75	
	3.50	4.75	3.50	3.50	3.00	3.75	3.00	6.00	4.50	5.25	3.00	1.50	2.25	3.25	3.375	4.00	
	2.00	2.00	2.25	3.00	3.50	5.25	3.00	6.25	3.50	2.50	2.50	5.00	3.50	3.00	2.00	3.25	
	4.50	5.25	1.25	1.00	2.75	4.25	3.75	6.25	2.75	2.00	4.00	0.50	3.50	3.75	2.00	2.00	
	2.75	2.25	2.25	3.75	3.25	7.00	2.50	6.00	3.00	3.25	7.00	6.50	4.25	6.00	3.625	5.00	
	2.50	2.50	2.50	3.00	3.25	4.75	4.75	7.25	2.00	1.75	4.50	2.50	4.25	7.75	2.25	3.75	
	3.50	2.25	3.50	5.00	3.50	5.50	3.00	6.00	4.00	5.50	4.00	3.00	3.375	3.00	3.00	6.75	
	1.75	1.00	4.75	3.00	2.25	4.75	3.00	4.00	3.50	1.00	3.50	4.25	2.25	2.00	4.625	7.00	
	3.00	1.75	3.00	4.00	2.75	4.00	2.75	5.00	3.25	1.25	4.00	3.75	4.50	7.25	4.00	3.00	
	2.00	1.75	2.50	2.75	2.25	4.00	3.00	5.00	4.00	3.00	5.00	3.25	2.75	2.75	4.375	4.25	
	7.00	3.75	3.75	2.00	2.75	4.25	2.25	5.75	5.00	4.00	3.00	1.25	4.25	5.25	3.625	2.75	
	4.00	3.75	2.75	2.25	2.25	3.75	4.00	6.50	2.00	2.50	4.50	0.00	2.25	3.00	4.25	5.25	
	3.00	3.50	5.25	3.00	2.25	5.25	2.75	4.50	6.00	5.50	4.50	5.00	4.00	4.75	3.375	3.00	
	2.25	1.75	3.25	3.00	2.50	7.00	2.75	3.75	5.00	4.00	4.00	1.25	3.50	4.00	5.625	6.25	
	3.50	3.25	3.50	3.50	4.00	6.75	3.75	6.00	3.00	4.00	6.00	0.50	2.50	3.00	2.00	3.75	
	5.00	4.50	4.00	4.00	4.25	4.50	2.75	4.25	3.00	2.50	4.00	2.00	4.375	4.25	2.25	2.25	
	5.25	6.00	2.75	3.00	2.25	3.25	5.25	7.00	2.25	3.00	3.00	2.50	4.25	4.00	3.625	2.50	
	3.25	3.00	3.00	2.75	3.00	4.75	5.75	8.50	3.50	1.00	4.50	6.00	4.375	3.75	4.50	3.75	
	2.75	2.00	4.25	3.50	2.75	5.00	3.75	5.00	3.50	4.00	3.50	6.00	2.375	3.00	4.50	5.00	
	2.25	4.00	3.25	3.00	3.25	5.00	3.50	5.25	3.00	1.25	5.00	6.00	2.375	3.00	5.25	6.75	
	Totals .....	86.25	74.75	81.25	73.00	76.00	122.75	82.50	139.75	83.25	87.25	100.75	99.25	84.125	100.25	85.875	102.00

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	7.00	108.042	6.00	30.00	5.75	86.75	8.50	42.50	7.00	108.042	6.50	32.50	5.625	80.819	7.75	38.75
Lowest .....	1.00	15.435	1.00	5.00	2.00	30.87	2.25	11.25	2.00	30.869	1.00	5.00	2.00	30.869	1.75	8.75
Average .....	3.37	52.015	2.96	14.80	3.17	48.98	5.25	26.25	3.76	58.004	3.75	18.75	3.40	52.48	4.05	20.25
Tests above average .....	23		26		20		23		32		24		26		19	
Tests below average .....	27		22		30		24		18		25		24		31	

Catalogue number of samples..	420.				421.				422.				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	2.75	5.50	3.25	7.00	2.00	5.00	5.50	6.50	2.75	2.00	3.75	7.50	
	3.00	6.00	5.25	6.25	3.75	3.00	4.25	5.25	5.00	6.875	4.00	6.75	
	5.00	7.75	4.75	0.50	4.00	4.00	4.25	7.00	2.25	2.75	7.50	0.50	
	5.00	6.75	3.75	6.00	4.25	4.60	3.75	3.00	2.75	6.00	4.50	5.75	
	4.25	6.75	2.25	6.75	4.00	2.25	4.00	2.25	4.00	5.00	5.25	3.75	
	5.00	6.00	5.25	4.75	4.00	2.00	4.00	5.00	4.50	5.50	3.75	3.75	
	6.50	5.25	4.00	8.75	4.00	5.00	4.50	5.00	5.50	6.50	5.25	5.00	
	3.00	6.75	4.25	8.25	4.00	6.00	4.25	5.00	2.25	2.00	3.75	3.00	
	5.00	6.25	2.50	6.75	3.00	4.00	3.75	4.00	4.00	6.75	3.25	2.25	
	3.50	7.25	4.00	5.75	4.75	3.00	3.00	6.25	5.25	6.50	5.00	7.75	
	3.25	7.75	5.25	5.75	4.00	6.00	3.25	5.00	3.50	5.25	4.00	3.50	
	3.50	4.75	4.00	5.50	4.50	6.00	3.00	4.25	4.25	6.25	8.25	6.00	
	2.75	6.75	4.25	7.75	4.50	7.00	4.50	7.00	6.00	4.00	2.75	1.25	
	3.00	5.75	7.00	8.50	8.75	3.00	3.50	5.50	5.50	6.50	3.25	5.50	
	3.25	6.50	5.25	7.00	4.75	6.00	4.00	6.00	4.00	3.50	3.75	3.875	
	2.00	5.00	3.25	7.00	3.50	4.00	5.50	5.00	4.25	7.25	4.00	4.50	
	3.25	0.00	4.00	8.50	4.50	6.00	4.00	6.00	3.75	5.875	3.75	4.00	
	2.75	7.75	4.00	7.00	5.25	7.00	4.00	7.00	3.00	7.75	5.50	7.00	
	4.75	8.00	3.25	5.00	4.00	6.00	5.00	5.00	7.00	7.00	4.50	3.75	
	4.25	0.00	2.00	6.00	3.75	4.00	4.00	4.00	3.25	2.75	3.75	4.00	
	3.25	8.00	3.25	7.75	4.50	0.00	4.50	5.00	5.00	5.875	4.75	4.00	
	2.00	5.00	2.25	6.50	3.75	5.00	4.75	4.00	3.75	5.75	3.50	5.75	
	7.50	6.00	4.25	5.00	3.50	5.00	4.50	3.00	3.50	3.25	5.50	6.50	
	4.25	7.25	3.50	4.75	4.75	6.25	4.00	3.50	4.00	5.50	4.00	4.75	
	3.25	7.25	3.25	4.25	4.00	5.00	3.75	4.00	3.50	3.875	4.25	5.25	
	Totals .....	96.00	162.00	96.00	163.00	102.75	121.00	102.50	120.75	100.25	132.125	106.50	124.50

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per cent.	grams.	grains.	mm.	per cent.	grams.	grains.	mm.	per cent.
Highest .....	7.50	115.76	8.75	43.75	5.60	84.89	7.00	35.00	7.50	115.70	7.75	38.75
Lowest .....	2.00	30.87	4.25	21.25	2.00	30.87	2.25	11.25	2.25	34.73	1.25	6.25
Average .....	3.88	59.89	6.50	32.50	4.11	63.44	4.84	24.20	4.14	63.90	5.13	25.65
Tests above average .....	24		24		21		31		19		29	
Tests below average .....	26		23		29		10		31		21	



TABLE VII (B).—Measurements of strain and stretch of wools from Herr E. Steiger, Leutenitz, near Meissen, Germany.

Catalogue number of samples.....	RAMS.											
	579.				880.				881.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>
	2.375	9.00	3.75	7.75	2.25	9.00	3.50	8.00	3.00	9.25	3.00	8.75
	2.50	8.00	3.125	7.25	1.50	7.75	2.25	8.00	2.25	7.25	2.50	7.75
	3.625	8.875	4.25	9.00	3.25	9.00	2.25	7.00	5.00	10.50	5.00	8.75
	3.75	10.00	2.25	9.00	3.375	8.00	1.75	8.00	4.50	8.25	6.00	8.00
	3.00	9.00	2.50	9.125	2.625	8.75	2.25	7.00	4.25	9.00	3.00	8.75
	3.00	8.50	3.50	8.50	3.50	8.50	2.625	7.875	6.00	8.00	6.00	9.00
	2.25	9.25	4.25	9.00	2.50	6.00	2.75	8.25	3.00	9.00	4.75	8.75
	3.25	9.00	3.00	10.00	2.25	8.00	3.875	8.00	6.00	9.00	2.75	7.75
	3.00	10.75	1.875	8.50	3.50	8.00	1.375	4.00	4.50	10.00	5.00	7.50
	3.625	10.00	3.375	8.00	3.00	9.00	2.00	7.00	4.00	9.00	6.00	9.50
	2.50	9.50	3.75	10.50	5.25	9.00	3.75	8.50	3.50	9.25	2.75	8.75
	6.50	10.00	2.50	9.25	4.25	9.25	3.25	6.25	3.25	7.50	5.50	9.00
	3.50	9.50	2.75	8.875	5.25	8.25	2.25	8.50	3.00	9.75	5.00	10.25
	4.50	9.25	2.375	8.75	4.50	6.00	3.25	7.25	4.00	9.75	4.00	7.50
	4.50	8.25	3.00	8.00	3.50	9.00	2.00	6.25	3.25	9.00	6.25	10.25
	3.25	8.50	5.125	9.50	4.125	7.125	3.625	8.00	3.75	10.00	4.00	8.50
	2.25	8.875	4.50	10.00	4.125	9.125	2.00	7.125	3.50	8.50	3.00	8.00
	3.00	10.00	5.00	9.75	3.25	9.00	4.75	7.125	4.75	8.00	6.00	6.75
	4.25	9.75	2.75	8.25	5.25	8.875	2.25	7.00	5.00	10.00	5.75	10.00
	8.50	6.25	4.50	10.00	2.50	7.25	5.25	8.50	2.25	8.25	5.00	9.00
	8.50	9.00	3.25	9.375	2.25	8.00	4.25	6.125	4.00	9.50	2.75	8.25
	3.00	9.75	6.00	8.75	2.50	4.125	2.875	8.75	3.00	8.75	3.75	9.00
	4.00	9.375	3.00	7.75	2.75	8.875	2.00	3.875	5.25	8.55	4.50	11.00
	2.50	6.50	3.25	8.50	2.00	7.50	4.25	8.00	5.25	8.75	3.50	8.00
	1.875	7.875	3.00	9.00	5.25	8.125	2.125	7.00	4.00	9.00	5.00	8.00
Totals .....	82.50	218.250	88.625	223.375	87.50	212.50	71.50	174.375	102.25	223.50	115.00	292.75

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:	<i>grams.</i>	<i>grams.</i>	<i>mm.</i>	<i>per ct.</i>	<i>grams.</i>	<i>grams.</i>	<i>mm.</i>	<i>per ct.</i>	<i>grams.</i>	<i>grams.</i>	<i>mm.</i>	<i>per ct.</i>
Highest .....	6.50	100.325	10.75	53.75	5.25	81.031	9.25	46.25	9.25	96.465	11.00	55.00
Lowest .....	1.875	21.222	6.00	30.00	1.875	21.222	8.75	19.875	2.75	42.444	7.50	37.50
Average .....	3.423	62.833	8.833	44.165	8.18	49.182	7.738	38.60	4.35	67.140	8.03	44.65
Tests above average .....	22		32		27		28		24		27	
Tests below average .....	28		18		23		23		26		23	

Catalogue number of samples.....	RAMS.											
	882.				883.				884.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>	<i>grams.</i>	<i>mm.</i>
	4.50	7.00	5.00	7.75	5.00	9.75	5.75	9.00	3.375	7.00	8.25	8.25
	5.50	6.75	8.25	7.25	6.00	9.75	5.75	8.00	5.25	6.25	2.50	2.00
	6.00	10.00	5.50	9.00	4.00	10.00	3.75	9.00	6.00	9.00	8.25	7.75
	5.50	10.00	6.125	9.75	3.50	6.75	6.75	9.00	8.50	7.00	5.00	7.50
	3.00	9.00	4.75	9.25	6.00	9.75	5.50	7.00	3.25	6.00	3.50	9.00
	4.00	8.75	4.375	8.25	6.50	5.00	9.50	9.00	4.00	8.00	4.75	6.75
	3.25	8.75	6.25	9.75	6.00	10.00	4.00	8.00	3.50	8.75	3.50	8.125
	5.50	8.75	5.75	7.00	3.00	6.00	7.00	8.00	6.625	6.00	4.00	9.00
	4.75	10.00	4.75	8.125	4.00	5.75	6.00	8.00	10.00	9.00	3.75	7.875
	6.50	10.25	7.00	10.00	4.00	9.75	6.00	8.00	4.50	8.25	5.50	8.25
	6.50	9.00	6.00	7.75	5.00	8.75	4.75	8.25	2.75	5.00	5.625	5.00
	4.00	8.25	8.75	9.875	5.25	9.00	5.00	7.75	5.75	8.125	3.50	6.00
	4.00	9.25	6.25	10.25	5.00	9.50	4.00	8.00	4.75	3.50	2.625	8.00
	4.25	10.75	5.75	8.25	4.00	7.50	4.00	6.50	3.375	9.00	5.25	7.00
	3.25	8.00	7.50	8.00	4.00	9.50	5.75	9.00	2.50	3.00	7.00	9.00
	4.50	9.75	8.75	9.00	5.00	9.75	4.00	9.50	8.00	7.25	3.125	8.875
	5.625	9.75	5.25	8.50	6.00	8.50	5.00	9.25	2.875	7.125	3.75	4.875
	6.375	10.25	6.50	7.25	6.00	9.75	2.75	5.25	11.50	9.875	7.75	10.00
	5.75	6.50	5.00	6.25	7.00	7.00	4.25	9.75	4.25	8.00	4.50	4.25
	6.25	10.00	6.00	7.00	4.25	9.00	3.00	7.00	2.75	6.75	8.00	9.00
	6.625	7.75	6.625	9.75	6.25	9.00	8.50	8.50	8.875	7.00	3.50	7.00
	5.50	9.00	8.75	9.00	4.75	9.75	4.00	10.00	3.625	8.00	4.875	9.75
	4.875	8.875	6.25	9.00	3.25	8.00	3.75	8.50	2.525	8.125	3.875	9.875
	5.25	9.25	5.75	9.875	3.50	7.75	5.00	7.00	8.75	9.875	2.25	8.00
	5.00	9.00	4.00	10.00	7.00	6.00	4.25	10.25	4.75	6.00	3.50	8.00
Totals .....	126.25	226.026	130.875	216.375	124.25	211.25	123.00	204.50	122.125	188.875	107.625	189.125

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:	<i>grams.</i>	<i>grams.</i>	<i>mm.</i>	<i>per ct.</i>	<i>grams.</i>	<i>grams.</i>	<i>mm.</i>	<i>per ct.</i>	<i>grams.</i>	<i>grams.</i>	<i>mm.</i>	<i>per ct.</i>
Highest .....	8.75	135.952	10.75	53.75	9.50	148.62	10.25	51.25	11.50	177.498	10.00	50.00
Lowest .....	3.00	46.804	6.25	81.25	2.75	42.444	5.00	25.00	2.25	34.727	2.00	10.00
Average .....	5.323	82.158	6.75	43.75	4.93	76.092	6.32	41.60	4.595	76.923	7.58	37.80
Tests above average .....	27		27		26		28		18		30	
Tests below average .....	23		20		24		22		32		20	



TABLE VII (B).—Measurements of strain and stretch of wools from Herr Steiger, &c.—Continued.

Catalogue number of samples..	RAMS.												EWES.			
	885.				886.				887.				878.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	6.25	9.00	5.00	10.00	6.25	9.75	3.75	0.75	3.50	8.875	2.50	7.00	3.50	9.00	3.25	11.50
	3.50	9.25	2.25	9.00	5.25	9.75	7.25	10.25	4.75	8.00	4.50	7.75	2.25	8.00	3.25	10.00
	7.25	9.25	3.75	10.75	6.50	10.50	5.50	9.75	4.00	8.50	5.25	10.00	3.25	9.00	7.00	12.00
	2.50	7.25	6.00	9.00	4.75	9.50	3.50	10.25	3.75	8.00	5.00	10.00	3.50	7.25	4.00	11.00
	4.50	9.50	3.00	9.00	4.00	10.00	5.25	9.00	4.375	8.75	4.50	10.00	3.25	10.00	4.00	7.50
	4.50	9.75	5.50	8.25	3.50	7.50	3.50	7.50	4.25	9.125	4.50	10.00	3.50	9.75	3.50	11.00
	7.50	9.75	7.625	11.00	4.00	10.00	4.00	10.25	2.50	8.00	3.25	9.00	5.25	10.75	3.25	9.75
	2.75	8.00	7.25	11.00	5.00	8.00	4.25	9.75	4.25	8.25	8.00	11.75	3.50	10.25	4.25	10.00
	3.25	6.75	7.00	11.00	4.00	9.75	4.00	9.00	3.25	8.00	4.50	10.00	4.25	11.00	3.25	9.50
	3.75	8.125	4.25	7.25	4.00	8.00	5.25	10.00	2.50	8.00	5.50	5.00	5.75	12.00	3.75	10.25
	7.25	9.00	7.375	8.875	4.00	9.00	3.75	0.25	4.25	9.00	6.50	10.25	4.25	11.50	3.50	11.00
	5.00	8.875	8.25	9.25	8.25	10.00	3.00	10.25	4.75	9.00	3.25	10.00	3.25	10.25	4.50	10.25
	9.00	8.875	4.25	9.75	4.75	11.00	3.75	10.00	2.00	4.875	4.00	10.00	2.00	11.25	3.50	11.00
	9.375	10.00	6.50	9.875	3.50	9.00	4.00	10.00	2.625	7.00	4.75	9.25	4.00	7.00	2.50	9.75
	6.00	8.00	7.75	10.50	3.00	8.75	3.25	7.00	2.50	9.00	3.25	9.50	5.00	11.00	3.00	10.00
	4.00	9.25	7.25	9.00	5.00	11.00	6.00	11.00	3.25	8.875	6.00	10.00	4.25	10.25	3.50	10.00
	6.25	8.25	4.50	8.25	3.50	10.50	3.00	10.50	4.25	11.00	5.50	9.75	3.75	10.75	3.75	8.00
	6.875	9.75	4.50	9.00	9.25	10.00	3.00	9.00	5.625	9.00	5.00	11.00	4.25	10.25	5.75	10.50
	6.875	8.00	6.875	9.60	6.00	9.75	3.75	9.75	1.875	6.875	4.00	10.00	4.25	11.00	5.75	11.00
	5.25	8.50	4.25	8.75	3.00	9.75	2.75	8.50	2.25	7.00	3.00	10.00	5.00	11.00	3.25	9.50
	4.25	10.50	4.50	9.50	3.00	8.50	4.25	10.00	2.50	6.25	6.75	9.50	3.00	8.50	3.00	7.50
	5.50	10.50	4.75	11.25	5.25	10.00	4.75	10.00	2.25	6.875	6.00	11.00	5.25	10.25	6.25	10.00
	4.50	8.00	6.25	10.60	6.00	10.25	3.50	10.00	3.375	7.125	2.50	9.75	4.25	9.00	3.00	9.75
	6.50	10.25	3.00	10.00	6.00	9.25	3.25	10.25	3.00	9.125	3.00	6.75	5.00	11.00	4.00	8.75
	3.50	10.25	3.25	10.75	5.25	9.00	4.75	11.50	3.50	8.00	3.75	11.00	3.00	10.00	3.00	10.00
Totals .....	134.875	224.625	134.375	241.50	123.00	238.50	108.00	242.50	85.125	202.50	113.75	238.25	98.50	248.00	97.75	249.50

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	0.375	144.099	11.25	56.25	9.25	142.769	11.50	57.50	0.75	104.183	11.75	58.75	7.00	108.042	12.00	60.00
Lowest .....	2.25	34.727	6.75	33.75	2.75	42.44	7.00	35.00	1.875	28.940	4.875	24.375	2.00	30.869	7.00	35.00
Average .....	5.385	83.115	9.323	46.615	4.52	69.764	9.62	48.10	3.976	61.368	3.976	19.88	3.93	60.658	9.95	49.74
Tests above average .....	24		23		21		33		26		30		22		32	
Tests below average .....	26		27		29		17		24		20		28		18	





TABLE VII (C).—*Extreme and average measurements of fineness of Negretti wools from E. W. Perry, Chicago, Ill.*

Catalogue number of samples.	Highest.		Lowest.		Average.	
	In centimillimeters.	In thousandths of an inch.	In centimillimeters.	In thousandths of an inch.	In centimillimeters.	In thousandths of an inch.
GERMAN WOOLS.						
400.....	3.00	1.1811	1.25	0.4921	1.835	0.7224
401.....	3.00	1.1811	1.125	0.4429	1.637	0.6444
402.....	2.375	0.9350	1.25	0.4921	1.69	0.6653
403.....	3.125	1.2303	1.25	0.4921	2.02	0.7952
404.....	2.00	0.7874	1.00	0.3937	1.49	0.5866
405.....	2.75	1.0826	1.00	0.3937	1.74	0.6850
406.....	2.375	0.9350	1.00	0.3937	1.67	0.6574
407.....	3.00	1.1811	0.875	0.3445	1.73	0.6811
408.....	3.00	1.1811	1.00	0.3937	1.97	0.7755
409.....	2.375	0.9350	1.00	0.3937	1.67	0.6574
410.....	3.25	1.2795	1.125	0.4429	1.90	0.7480
411.....	2.375	0.9350	1.00	0.3937	1.68	0.6614
412.....	3.25	1.2795	1.375	0.5413	1.82	0.7165
413.....	2.50	0.9842	1.00	0.3937	1.74	0.6850
414.....	2.75	1.0826	0.875	0.3445	1.54	0.6062
415.....	2.75	1.0826	1.00	0.3937	1.68	0.6614
416.....	2.50	0.9842	1.00	0.3937	1.634	0.6433
417.....	2.50	0.9842	1.00	0.3937	1.596	0.6283
418.....	2.375	0.9350	1.25	0.4921	1.717	0.6759
419.....	2.50	0.9842	1.00	0.3937	1.837	0.7230
420.....	3.00	1.1811	1.375	0.5413	1.796	0.7070
421.....	2.50	0.9842	1.00	0.3937	1.546	0.6086
422.....	2.75	1.0826	1.25	0.4921	1.972	0.7763
Average.....	2.695	1.0610	1.087	0.4279	1.735	0.6830

*Extreme and average measurements of fineness of wools from Herr E. Steiger, Leutewitz, near Meissen, Germany.*

RAMS.						
879.....	2.375	0.9350	1.00	0.3937	1.755	0.6909
880.....	2.875	1.1318	1.125	0.4429	1.805	0.7100
881.....	2.75	1.0826	1.25	0.4921	1.772	0.6976
882.....	3.00	1.1811	1.50	0.5905	1.973	0.7747
883.....	3.375	1.3287	1.00	0.3937	1.865	0.7342
884.....	3.00	1.1811	1.25	0.4921	1.932	0.7685
885.....	2.875	1.1318	1.25	0.4921	1.863	0.7334
886.....	2.75	1.0826	1.375	0.5413	1.904	0.7496
887.....	2.625	1.0334	1.125	0.4429	1.892	0.7094
Average.....	2.847	1.1208	1.208	0.4755	1.854	0.7299
EWE.						
878.....	2.50	0.9842	1.125	0.4429	1.657	0.6528



TABLE VII (D).—*Extreme and average measurements of strain and stretch of Negretti wools from E. W. Perry, of Chicago, Ill.*

Catalogue number of samples.	Highest.		Lowest.		Average.		Highest.		Lowest.		Average.	
	grams.	grains.	grams.	grains.	grams.	grains.	mm.	per cent.	mm.	per cent.	mm.	per cent.
GERMAN WOOLS.												
400.....	7.25	111.90	2.00	30.87	4.18	64.53	7.50	37.50	1.00	5.00	3.62	18.10
401.....	5.50	84.89	1.25	19.29	3.37	52.01	7.75	38.75	1.25	6.25	4.89	24.45
402.....	0.25	96.47	2.00	30.87	3.68	56.80	9.25	46.25	1.25	6.25	5.09	29.95
403.....	7.25	111.90	2.00	30.87	4.76	73.47	8.00	40.00	2.25	11.25	5.14	25.70
404.....	7.00	108.04	1.25	19.29	3.40	52.48	8.00	40.00	1.00	5.00	3.945	19.725
405.....	7.75	119.617	1.50	23.153	4.21	64.975	7.75	38.75	0.75	3.75	4.11	20.55
406.....	7.25	111.90	2.25	34.73	4.26	65.75	8.50	42.50	1.00	5.00	4.39	21.95
407.....	7.00	108.042	1.50	23.153	3.51	54.176	7.25	36.25	1.50	5.00	4.47	22.35
408.....	0.75	104.183	2.25	34.73	4.38	67.60	7.25	36.25	1.25	6.25	3.60	18.00
409.....	5.75	88.75	1.25	19.29	3.05	47.08	7.50	37.50	1.00	5.00	4.03	20.15
410.....	5.50	84.89	1.75	27.01	3.34	51.55	0.75	48.75	1.00	5.00	3.92	19.60
411.....	7.75	119.617	2.00	30.87	3.74	57.73	6.25	31.25	1.00	5.00	3.23	16.15
412.....	6.00	92.608	1.75	27.01	3.875	59.59	7.00	3.500	1.25	6.25	4.725	23.62
413.....	0.00	92.608	1.75	27.01	3.71	57.262	7.25	36.25	1.25	6.25	3.01	19.55
414.....	8.75	135.052	1.25	19.29	3.57	55.10	7.50	37.50	1.00	5.00	4.73	23.65
415.....	7.50	115.76	2.00	30.87	3.90	60.19	7.25	36.25	1.00	5.00	4.05	20.25
416.....	7.00	108.042	1.60	15.435	3.37	52.014	0.00	30.00	1.00	5.000	2.96	14.80
417.....	5.75	88.75	2.00	30.87	3.17	48.93	8.50	42.50	2.25	11.25	5.25	26.25
418.....	7.00	108.042	2.00	30.87	3.76	58.34	0.50	32.00	1.00	5.00	3.75	18.75
419.....	5.625	86.819	2.00	30.87	3.40	52.48	7.75	38.75	1.75	8.75	4.05	20.25
420.....	7.50	115.76	2.00	30.87	3.88	59.59	8.75	43.75	4.25	21.25	6.50	32.50
421.....	5.50	84.89	2.00	30.87	4.11	63.44	7.00	35.00	2.25	11.25	4.84	24.20
422.....	7.50	115.76	2.25	34.73	4.14	63.90	7.75	38.75	1.25	6.25	5.13	25.05
General average.....	6.745	104.106	1.733	27.519	3.91	60.35	7.65	38.25	1.41	07.05	4.40	22.00

*Extreme and average measurement of strain and stretch of wools from Herr E. Steiger, of Leutewitz, near Meissen, Germany.*

RAMS.												
	grams.	grains.	grams.	grains.	grams.	grains.	mm.	per cent.	mm.	per cent.	mm.	per cent.
870.....	6.50	100.325	1.375	21.22	3.423	52.83	10.75	53.75	6.00	30.00	8.833	44.165
880.....	5.25	81.03	1.375	21.22	3.18	49.18	9.25	46.25	3.875	19.375	7.738	38.69
881.....	6.25	96.47	2.75	42.44	4.35	67.14	11.00	55.00	7.50	37.50	8.93	44.65
882.....	8.75	135.05	3.00	46.30	5.323	82.16	10.75	53.75	6.25	31.25	8.75	43.75
883.....	9.50	146.02	2.75	42.44	4.03	76.09	10.25	51.25	5.00	25.00	8.32	41.60
884.....	11.50	177.50	2.25	34.73	4.505	70.92	10.00	50.00	2.00	10.00	7.50	37.80
885.....	9.375	144.70	2.25	34.727	5.385	83.12	11.25	56.25	6.75	33.75	9.323	46.615
886.....	9.25	142.77	2.75	42.44	4.52	69.76	11.50	57.50	7.00	35.00	9.62	48.10
887.....	6.75	104.18	1.875	28.94	3.970	61.37	11.75	58.75	4.875	24.375	3.976	19.88
Average.....	7.014	108.258	2.263	34.928	4.409	63.049	10.72	53.60	5.47	27.35	8.117	40.58
EWE.												
872.....	7.00	108.04	2.00	30.87	3.93	60.60	12.00	60.00	7.00	35.00	0.95	49.75



TABLE VIII.—General results of all measurements.

Catalogue number of samples.	Crimp per inch.	Fineness.		Strain.		Stretch.		$\frac{D^2 \times S}{D^2}$	18100 $\frac{S}{D^2} = R$	$\frac{R}{E} = P$	
		Centimillimeters.	Thousandths of an inch.	Grams.	Grains.	Millimeters.	Per cents.				
Negretti wools from E. W. Perry, Chicago, Ill.:											
400.....	20	1.835	0.7224	4.18	64.53	3.02	18.10	grams.	19.862	22,418	124,117
401.....	20	1.637	0.6144	3.37	52.01	4.69	24.45	19.121	22,772	93,137	
402.....	26	1.09	0.6653	3.68	56.80	5.99	29.95	20.615	23,388	77,923	
403.....	30	2.02	0.7952	4.76	73.47	5.14	25.70	18.665	20,699	80,207	
404.....	20	1.49	0.5806	3.40	52.48	3.945	19.725	28.134	31,838	161,867	
406.....	25	1.74	0.6850	4.21	64.075	4.11	20.55	22.249	25,463	122,543	
406.....	20	1.67	0.6574	4.26	65.75	4.39	21.95	24.439	27,661	126,019	
407.....	25	1.79	0.6811	3.51	54.170	4.47	22.35	18.765	21,244	95,052	
408.....	20	1.97	0.7755	4.38	67.60	3.60	18.00	18.658	20,440	113,568	
409.....	22	1.67	0.6574	3.05	47.08	4.08	20.15	17.497	19,866	98,206	
410.....	25	1.90	0.7480	3.24	51.55	3.02	16.00	14.803	16,751	85,463	
411.....	26	1.68	0.6614	3.74	57.73	3.23	16.15	21.202	23,094	148,571	
412.....	30	1.82	0.7165	3.875	59.80	4.725	23.62	18.717	21,187	89,778	
413.....	31	1.74	0.6850	3.71	57.262	3.91	19.55	19.606	22,105	413,528	
414.....	22	1.54	0.6002	3.57	55.10	4.73	23.65	24.065	27,206	115,287	
415.....	25	1.68	0.6614	3.90	60.10	4.05	20.25	22.109	23,024	123,577	
410.....	30	1.694	0.6433	3.37	52.014	2.96	14.80	20.795	22,863	154,470	
417.....	26	1.666	0.6283	3.17	48.93	5.25	26.25	19.012	22,594	85,845	
418.....	26	1.717	0.6759	3.70	58.34	3.75	18.75	20.406	23,100	123,201	
419.....	22	1.837	0.7230	3.40	52.48	4.05	20.25	16.120	18,245	90,098	
420.....	25	1.706	0.7070	3.89	59.89	6.50	32.50	19.240	21,787	67,088	
421.....	26	1.546	0.6086	4.11	63.44	4.84	24.20	20.530	23,247	96,033	
422.....	20	1.672	0.7763	4.14	63.90	5.13	25.65	17.033	19,275	75,145	
Average.....	25	1.735	0.6830	3.91	60.35	4.40	22.00	20.782	23,513	84,017	
Wools from Herr E. Steiger, Leutowitz, near Meissen, Germany:											
<i>Rams.</i>											
879.....	26	1.755	0.6990	3.423	52.83	8.833	44.165	28.182	31,894	72,209	
880.....	23	1.805	0.7106	3.18	49.18	7.738	38.09	15.617	17,670	45,094	
881.....	22	1.772	0.6970	4.35	67.14	8.93	44.65	22.106	25,062	56,198	
882.....	25	1.073	0.7767	5.323	82.16	8.75	43.75	21.879	24,200	55,815	
883.....	25	1.865	0.7342	4.93	76.00	8.32	41.60	22.678	25,669	61,700	
884.....	25	1.952	0.7065	4.505	70.92	7.56	37.80	19.295	21,844	57,788	
885.....	22	1.868	0.7394	6.385	85.12	9.323	46.815	36.654	41,461	88,977	
886.....	22	1.904	0.7460	4.62	69.70	9.02	48.10	19.910	22,579	46,943	
887.....	22	1.802	0.7094	3.976	61.37	3.976	19.88	19.501	22,183	111,587	
Average.....	23.7	1.854	0.7299	4.409	68.05	8.117	40.58	20.523	23,225	57,232	
<i>Ewes.</i>											
878.....		1.657	0.6523	3.93	60.66	9.95	49.75	22.902	25,018	52,098	

## CONCLUSIONS.

- (1) In the Negretti wools there appears to be a decrease of diameter of fiber from the skin outward.
- (2) This variation is quite regular, but may be as great as 20 per cent. of the entire diameter.
- (3) The larger number of measurements of fineness appear to be below the average.
- (4) The Saxony wools appear to be finest at about the middle of their length, the variation being about the same as that above stated.
- (5) In the Saxony wools the measurements above and below the average are about equally divided.
- (6) In the Negretti wools the actual strain varies from an extreme minimum of 1 gram, 15.435 grains, to an extreme maximum of 11.50 grams, 117.49 grains.
- (7) The averages of the extremes of fineness in Negretti wools vary from a maximum of 2.695 centimillimeters,  $\frac{1}{375}$  inch, to a minimum of 1.087 centimillimeters,  $\frac{1}{918}$  inch. The averages vary from a maximum of 2.02 centimillimeters,  $\frac{1}{495}$  inch, to a minimum of 1.546 centimillimeter,  $\frac{1}{647}$  inch. The absolute extremes vary from a maximum of 3.25 centimillimeters,  $\frac{1}{781}$  inch, to 0.875 centimillimeter, or  $\frac{1}{224}$  inch.
- (8) In the Saxony wools the absolute extremes of fineness range from 1 centimillimeter,  $\frac{1}{254}$  inch, to 3.375 centimillimeters,  $\frac{1}{73}$  inch. The average extremes from 1.208 centimillimeter,  $\frac{1}{827}$  inch, to 2.847 centimillimeters,  $\frac{1}{703}$  inch, while the general average is 1.847 centimillimeter, or  $\frac{1}{54}$  inch.
- (9) In the Negretti wools the extremes of strain vary from an absolute minimum of 1.783 gram, 27.59 grains, to an absolute maximum of 6.745 grams, 104 grains, with an average of 3.91 grams, or 60.35 grains. The absolute extremes of stretch vary from 5 per cent. to 40 per cent. the length tested, while the average of the extremes vary from 7 to 30 per cent. The average stretch is 22 per cent.
- (10) In the Saxony wool the absolute extremes for strain are: Minimum, 1.375 grams, or 21.22 grains; maximum, 11.5 grams, or 177 grains. The averages of extremes for strain are 2.263 grams, 35 grains, to 7.014 grams, or 108 grains. In the same wools the absolute extremes of stretch vary from 10 per cent. to 58 per cent. the length tested, and the average extremes from 27 to 53 per cent. The general average for stretch is 40 per cent.



(11) The ultimate resistance for Negretti wools varies from say 15,000 pounds per square inch to 32,000 pounds per square inch, with an average of 23,519. The average moduli of elasticity vary from 67,038 to 167,367, with a general average of 84,917.

(12) The average ultimate resistance of the Saxony wools varies from 17,000 to 41,000 pounds per square inch of section, with a general average of 23,225 pounds. The average moduli of elasticity vary from 45,000 to 111,000, with a general average of 57,000.

(13) Hence it appears that the Negretti wools, both as regards fineness and ultimate strength, are more valuable than the Saxony wools.

(14) It also appears that they are, with one exception, finer than the Merino wools from the several sections of this country represented in our present investigation. And as regards the ultimate strength, if entered in our tables of comparisons, they would occupy the third place. If the Saxony wools were likewise entered in our comparison they would occupy the seventh place.



## CROSSBRED WOOLS.

FROM BAECHEL BROTHERS, *Willits, Mendocino County, California.*

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The wools represented in the following tables have been fully described in the correspondence of Messrs. Baechtel Brothers, who furnished the material. This material represented the result of nearly ten years in the labor of producing by crosses a race of animals capable of producing at the same time good fleeces of wool and good sized carcasses for the shambles. The external results and the pecuniary returns from this experiment so persistently and intelligently prosecuted are well shown in the little table presented in the correspondence already referred to. That table shows no decrease in the net return per head, and a very decided increase in the quantity of wool produced. It is to be hoped that these experiments will not be abandoned, but that they will be diligently pushed to a definite conclusion.

To exhibit any differences in the external characteristics of the fibers of the several crosses due to the influence of breeding, drawings were made of typical fibers from samples representing the pure breeds employed and the several crosses produced, respectively, and these drawings are reproduced in the following lithographed plates.

### LIST OF PLATES OF CROSSBRED WOOLS FROM MATERIAL PRODUCED AND CONTRIBUTED BY MESSRS. BAECHEL BROTHERS, WILLITS, MENDOCINO COUNTY, CALIFORNIA.

These plates were all of them made by projection from the microscope with the aid of sunlight and tracing the image secured. They may therefore be relied upon as accurate.

The plates are as follows:

- I.—Projection of micrometer representing the amplification of the images presented.
- II.—
  - No. 439. Thoroughbred Merino ram, yearling.
  - No. 437. Thoroughbred Merino ram, 4 years old.
- III.—
  - No. 433. Thoroughbred Merino ewe, 4 years old.
  - No. 436. Thoroughbred Shropshire ram, 4 years old.
- IV.— No. 426.  $\frac{1}{8}$  Merino,  $\frac{1}{8}$  Southdown, ram-yearling.
- V.— No. 425.  $\frac{1}{8}$  Merino,  $\frac{1}{8}$  Southdown, ewe-yearling.
- VI.— No. 427.  $\frac{2}{8}$  Merino,  $\frac{1}{8}$  Southdown, ram-yearling.
- VII.— No. 428.  $\frac{3}{8}$  Merino,  $\frac{1}{8}$  Southdown, ewe-yearling.
- VIII.— No. 429.  $\frac{4}{8}$  Merino,  $\frac{1}{8}$  Southdown, ewe, 3 years old.
- IX.— No. 430.  $\frac{5}{8}$  Merino,  $\frac{1}{8}$  Southdown, ram, 2 years old.
- X.— No. 431.  $\frac{6}{8}$  Merino,  $\frac{1}{8}$  Southdown, ewe, 2 years old.
- XI.— No. 435.  $\frac{7}{8}$  Merino,  $\frac{1}{8}$  Southdown, ewe, 1 year old.
- XII.— No. 432.  $\frac{1}{8}$  Merino,  $\frac{7}{8}$  Southdown, ram, 5 years old.
- XIII.— No. 434.  $\frac{3}{8}$  Merino,  $\frac{5}{8}$  Shropshire,  $\frac{1}{8}$  Southdown, ram, yearling.
- XIV.— No. 433.  $\frac{5}{8}$  Merino,  $\frac{3}{8}$  Shropshire,  $\frac{1}{8}$  Southdown, ewe, yearling.



CROSSBRED WOOL

FROM BARNETT BARNETT, THE WOLLEN COUNTY, TENNESSEE

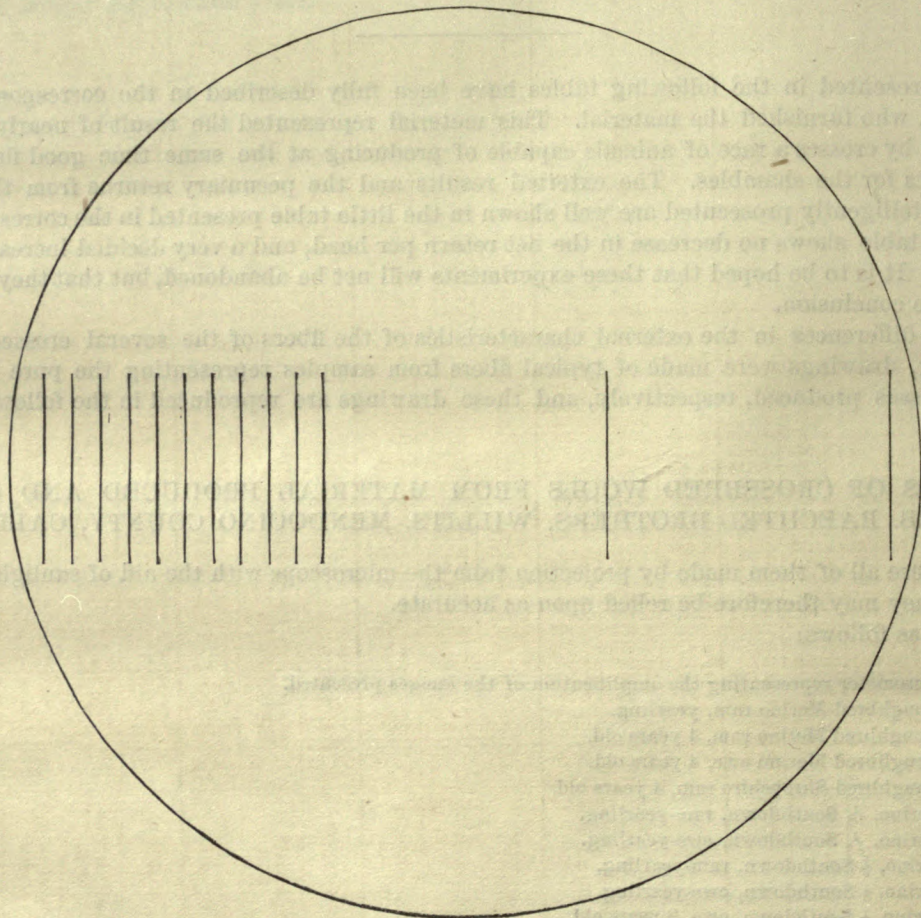
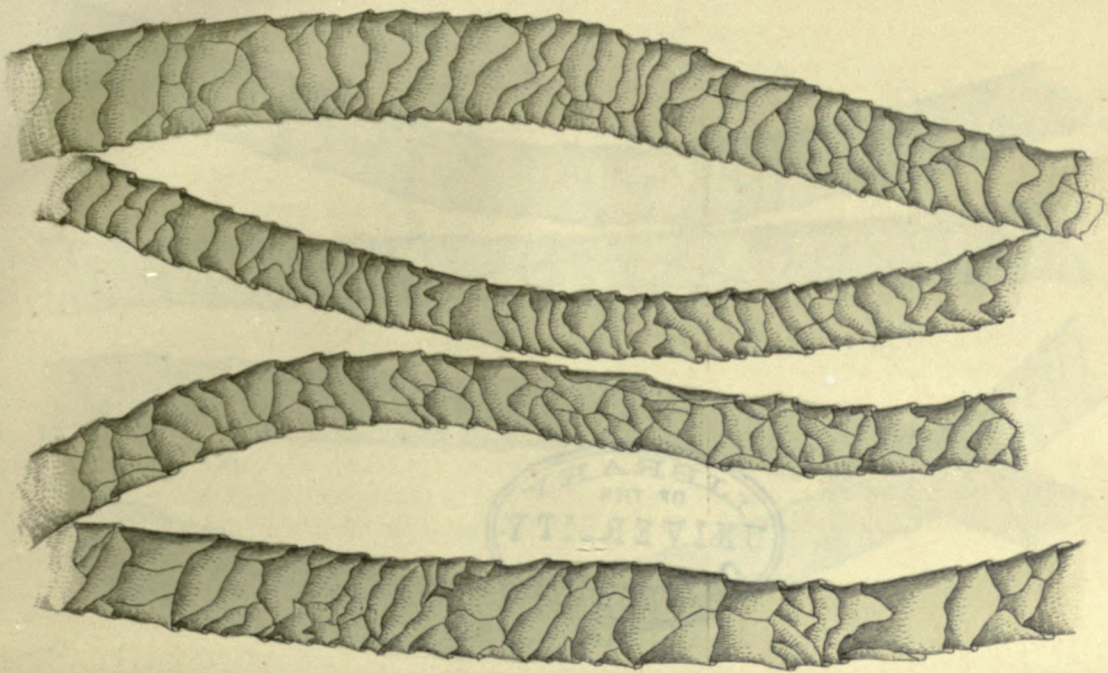
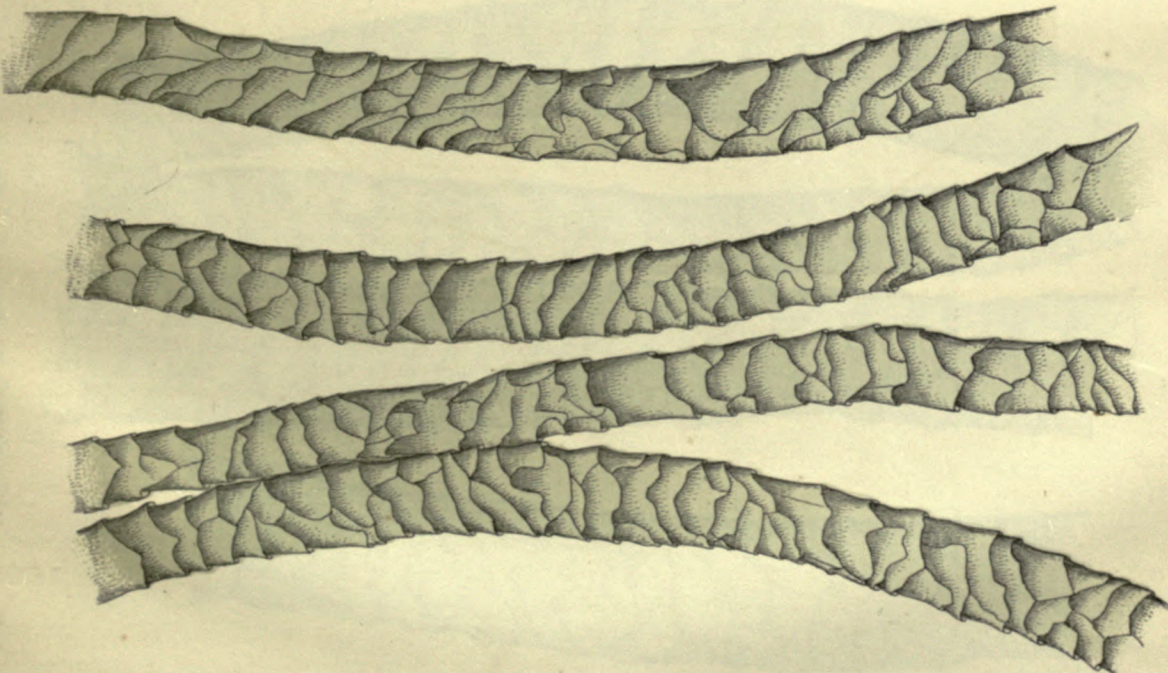


PLATE I.—Projection of micrometer representing the amplification of the images in succeeding plates.  $\frac{1}{10}$  and  $\frac{1}{100}$  millimeter  $\times 300$ .





No. 439. Thoroughbred Merino Ram.  
YEARLING.

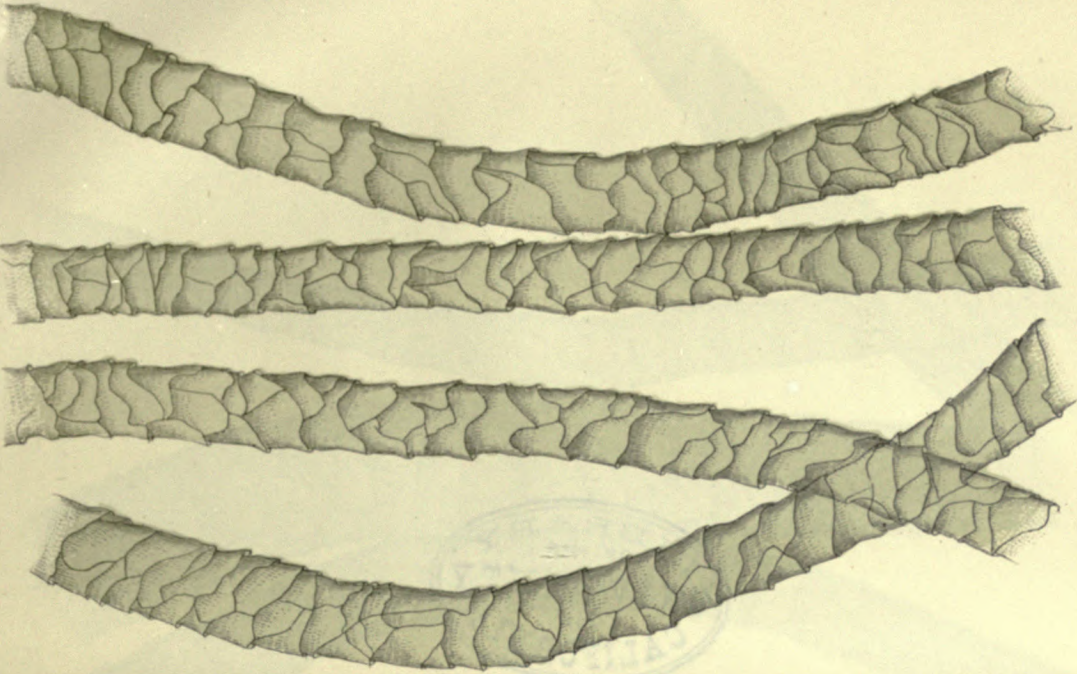


No. 437. Thoroughbred Merino Ram.  
4 YEARS OLD.

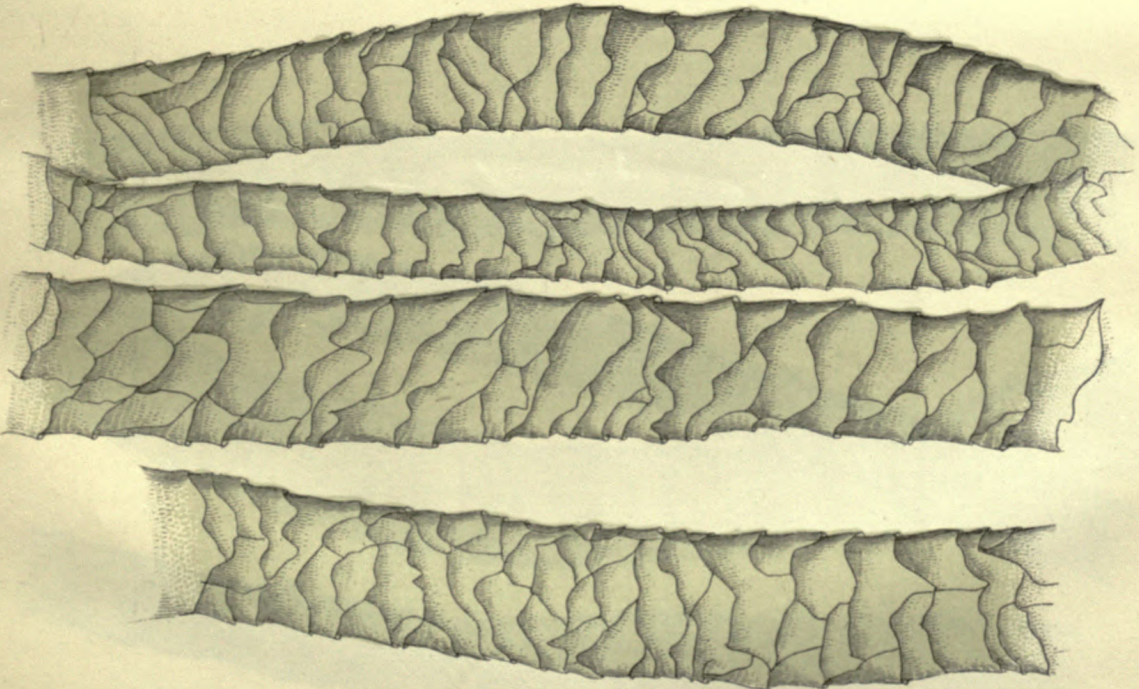








No. 438. Thoroughbred Merino Ewe.  
4 YEARS OLD.



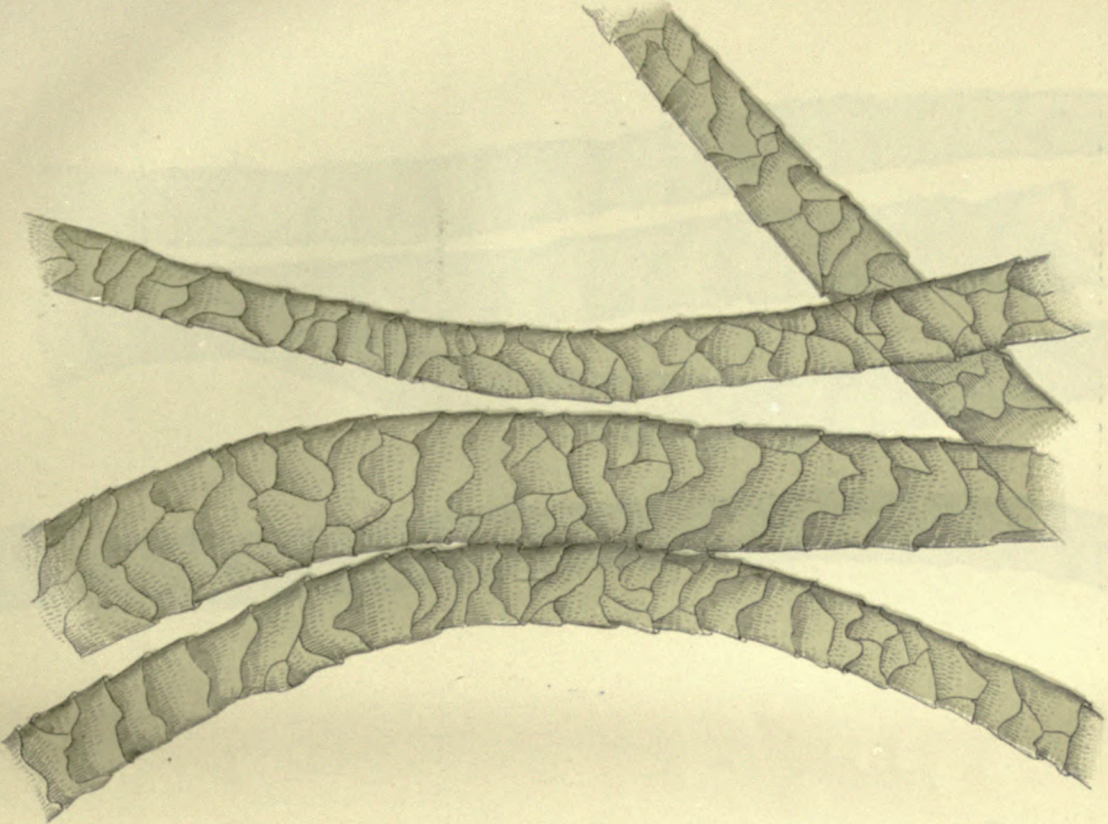
No. 436. Thoroughbred Shropshire Ram.  
4 YEARS OLD.







No. 426. 16-16 Merino, 1-16 Southdown.  
YEARLING RAM.



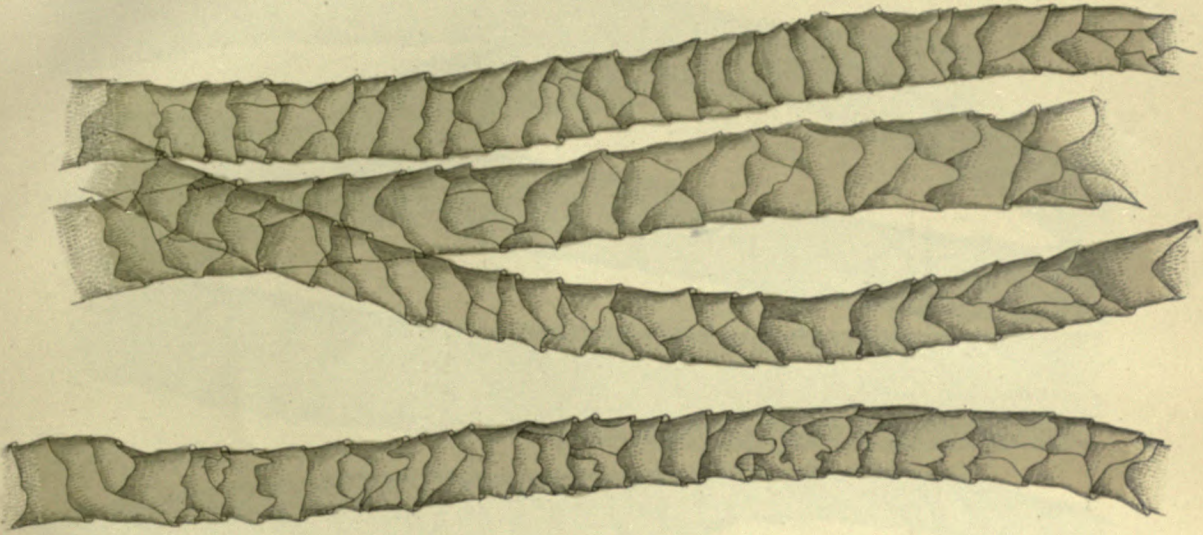
No. 426. 16-16 Merino, 1-16 Southdown.  
YEARLING RAM.











No. 426. 16-16 Merino, 1-16 Southdown.

YEARLING EWE.



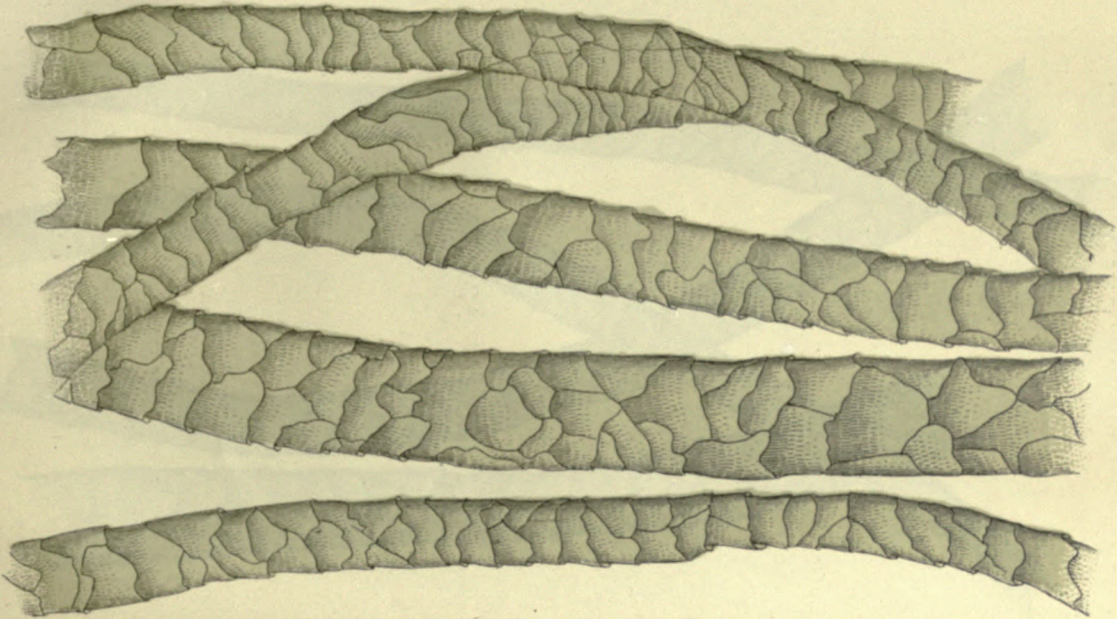
No. 426. 16-16 Merino, 1-16 Southdown.

YEARLING EWE.

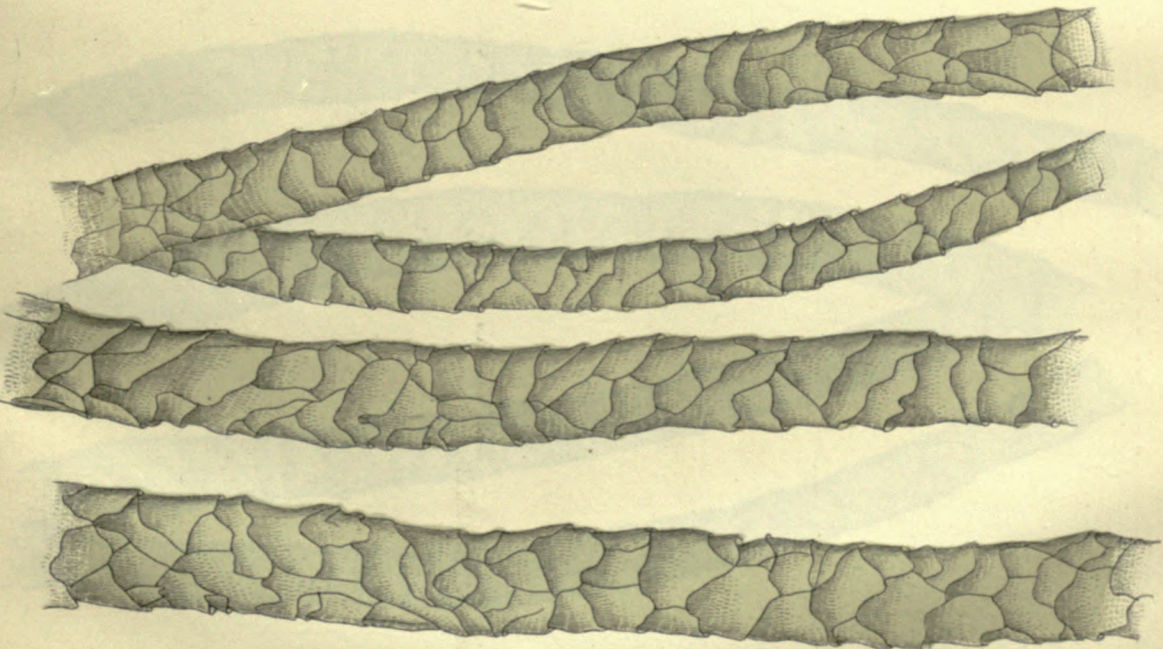








No 427. 7-8 Merino, 1-8 Southdown.  
YEARLING RAM.

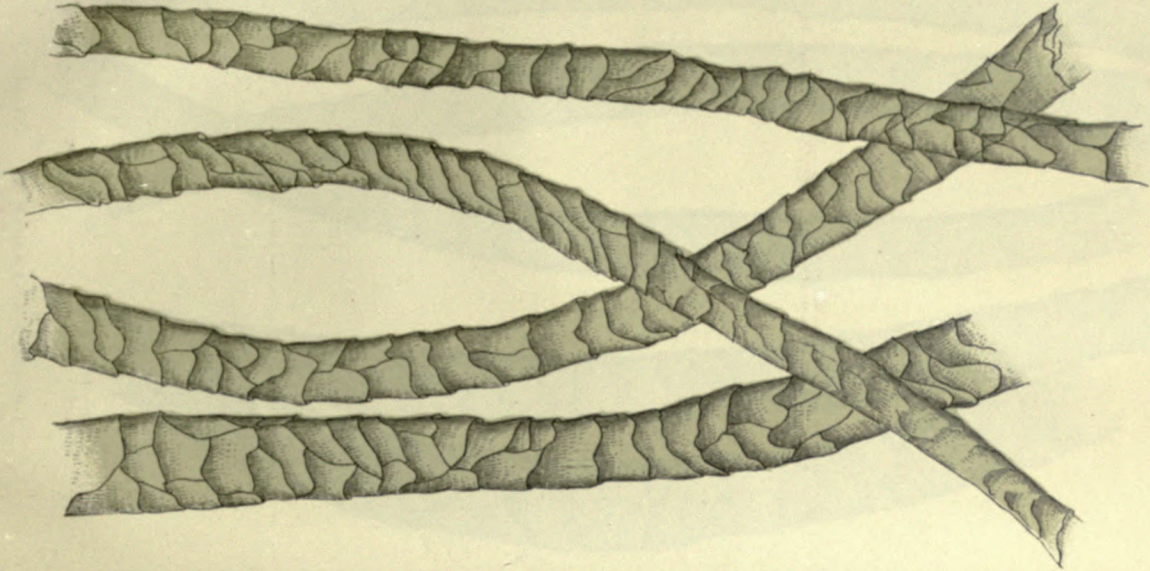


No 427. 7-8 Merino, 1-8 Southdown.  
YEARLING RAM.

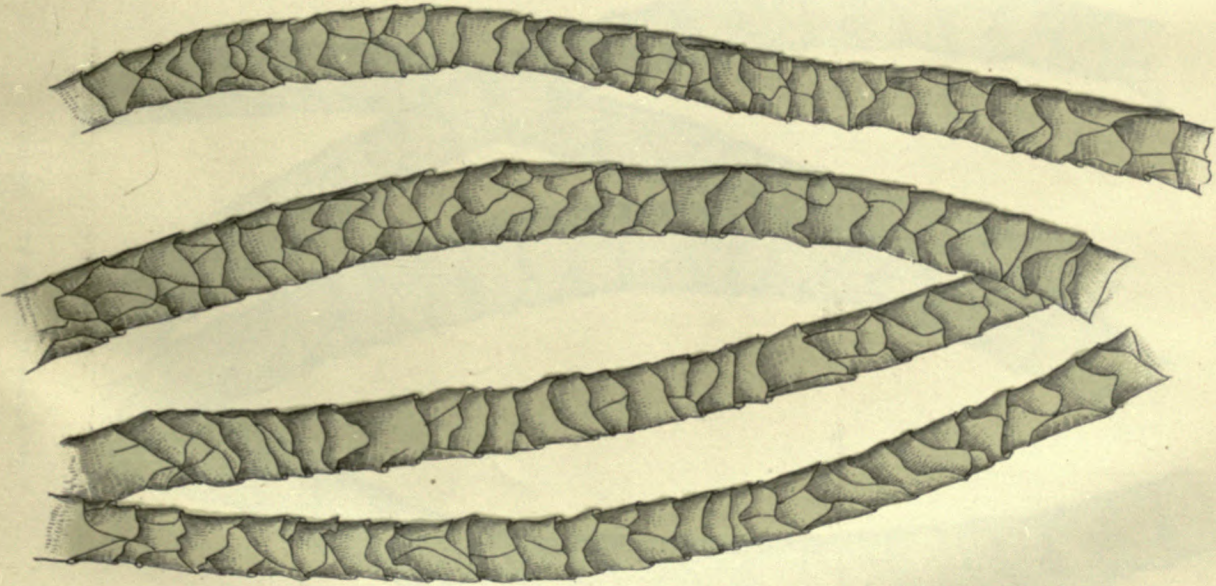








No. 428. 7-8 Merino, 18 Southdown.  
YEARLING EWES.

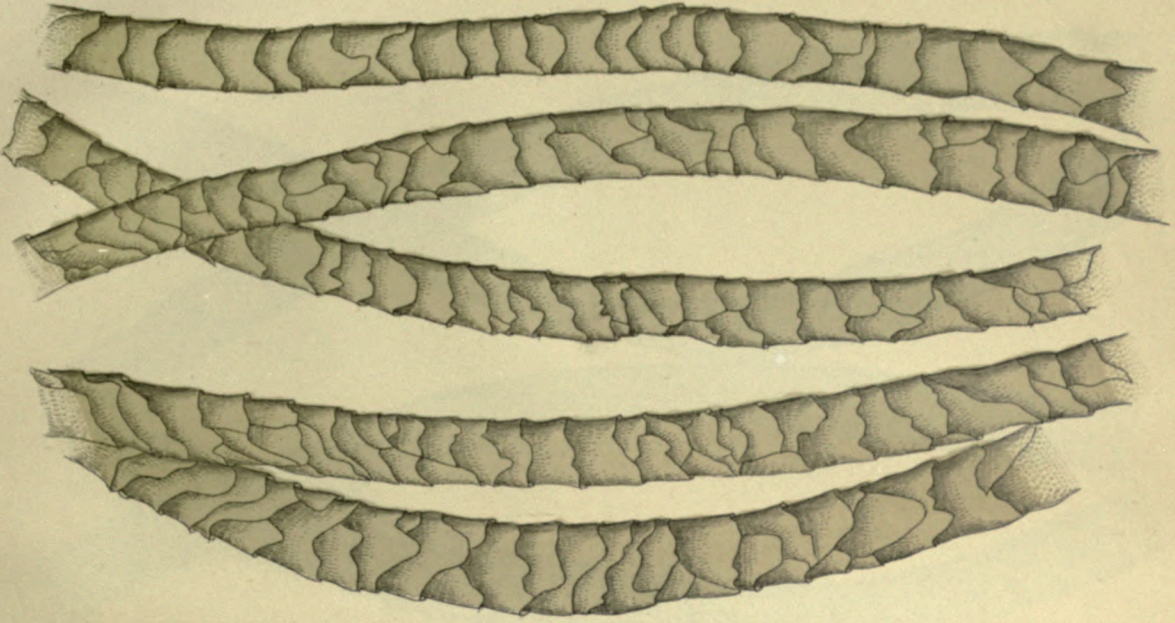


No. 428. 7-8 Merino, 18 Southdown.  
YEARLING EWES.





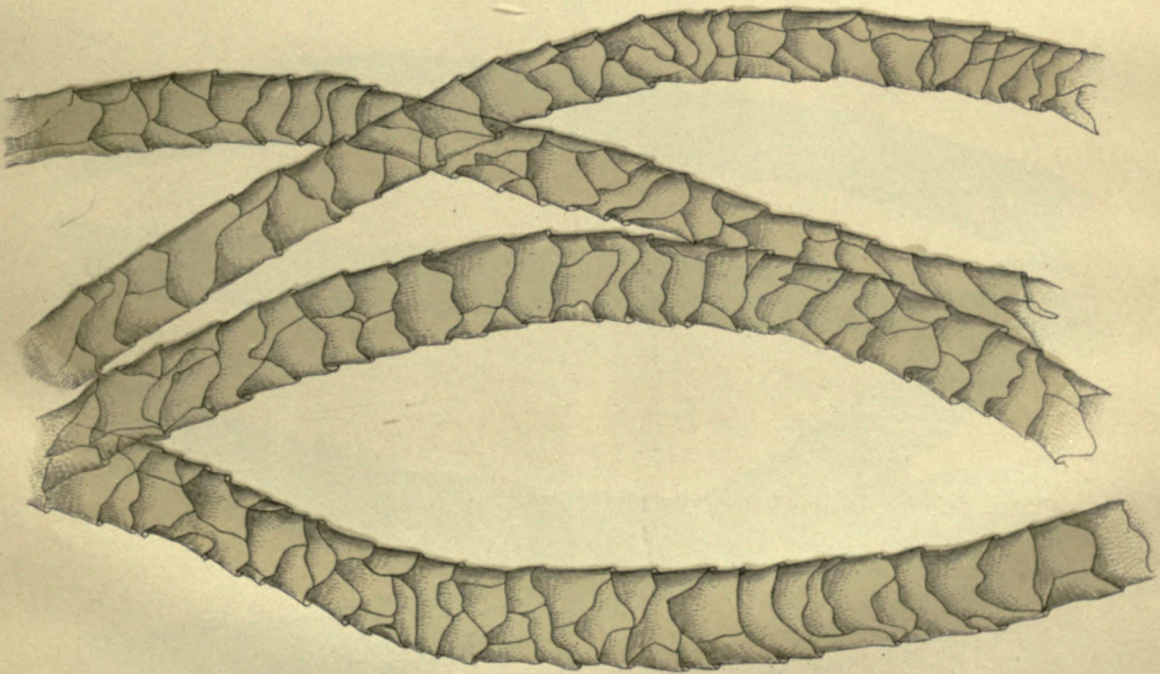




No. 429. 7/8 Merino, 18 Southdown.

EW, 3 YEARS OLD.

Sire, 3/4 Merino, 1/8 Southdown.



No. 430. 7/8 Merino, 1/8 Southdown.

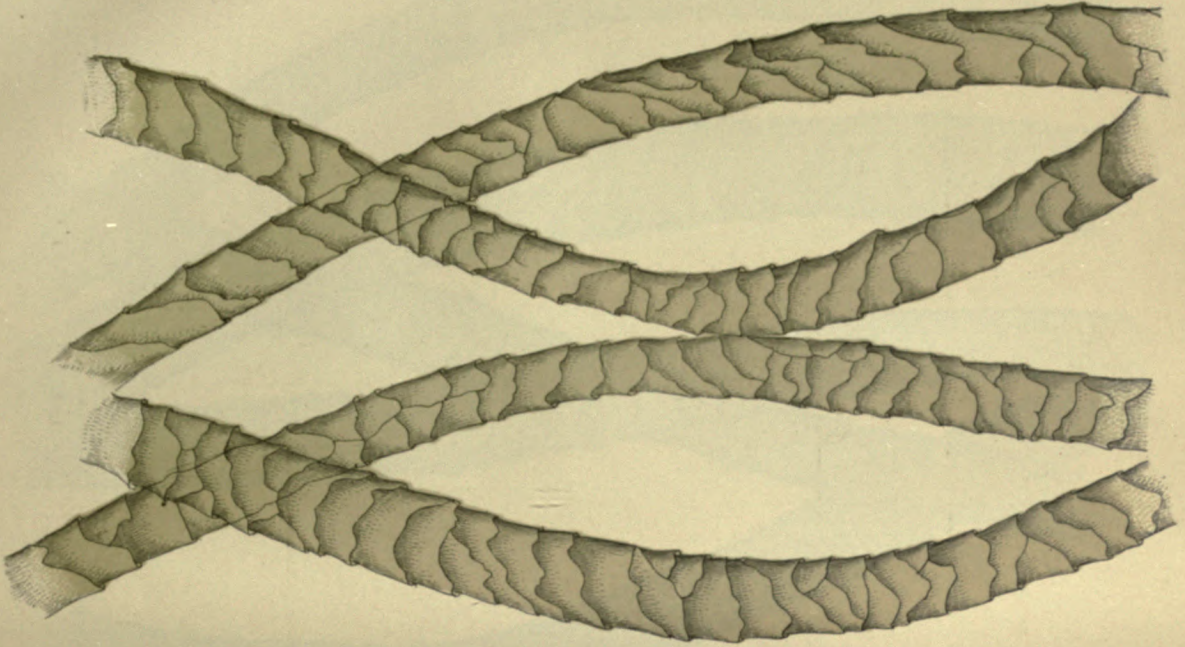
EW, 3 YEARS OLD.

Sire, 3/4 Merino, 1/8 Southdown.

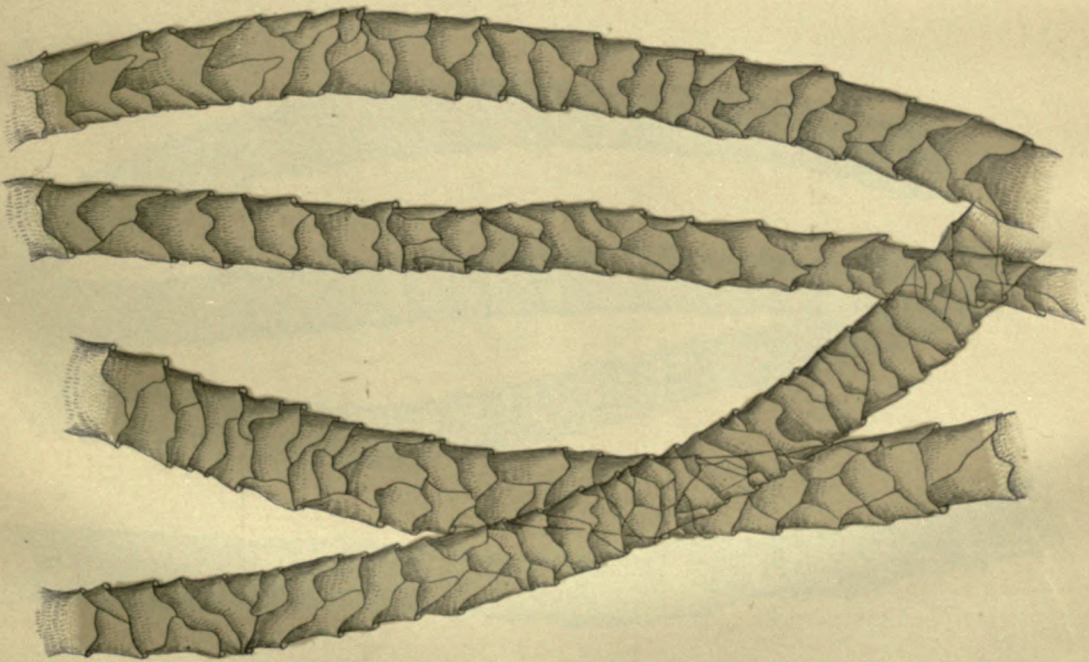








No. 430. 3-4 Merino, 1-4 Southdown.  
RAM, 2 YEARS OLD.

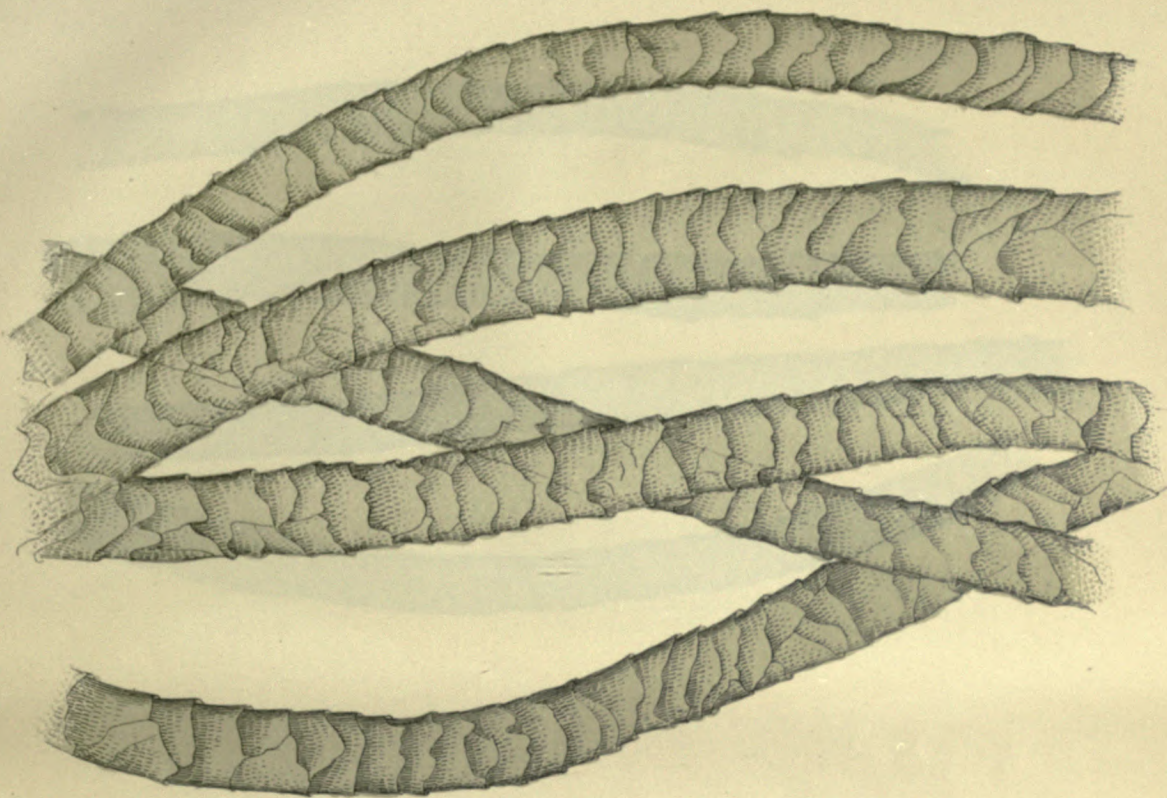


No. 430. 3-4 Merino, 1-4 Southdown.  
RAM, 2 YEARS OLD.

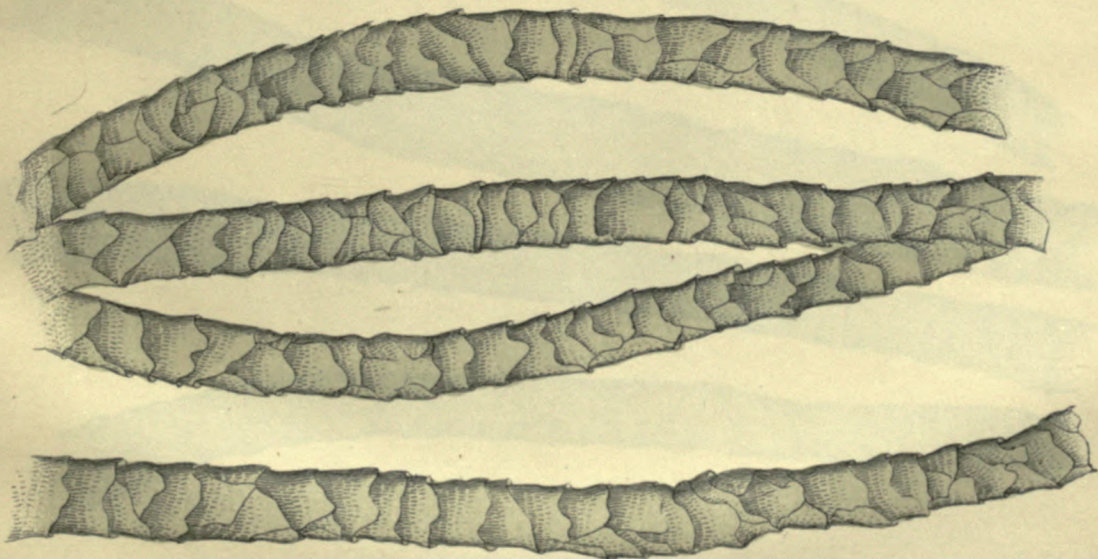








No. 431. 3-4 Merino, 14 Southdown.  
EWE, 2 YEARS OLD.

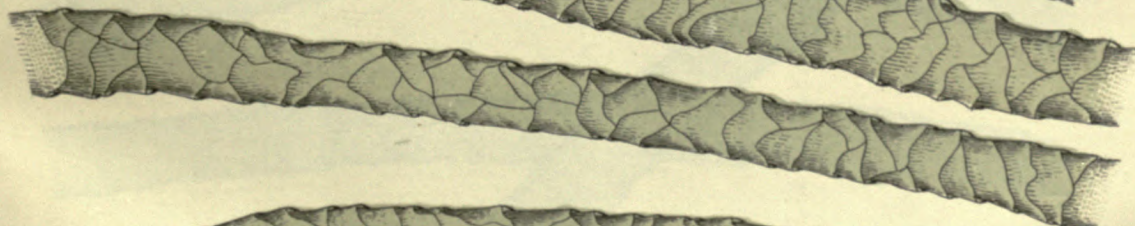
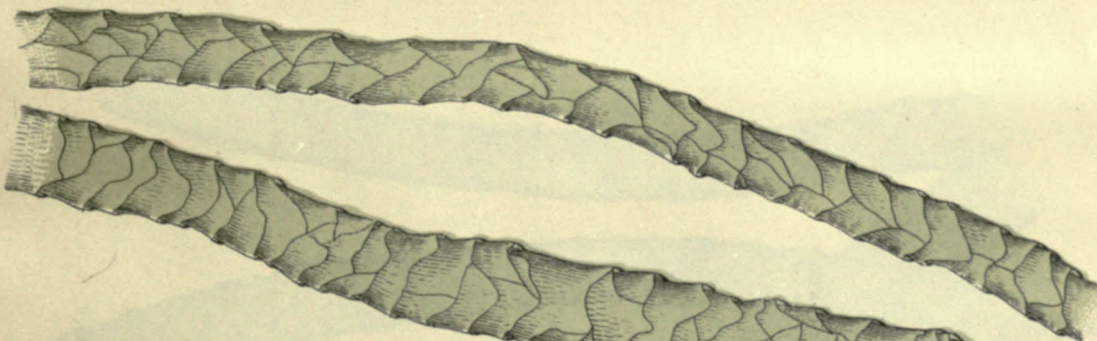
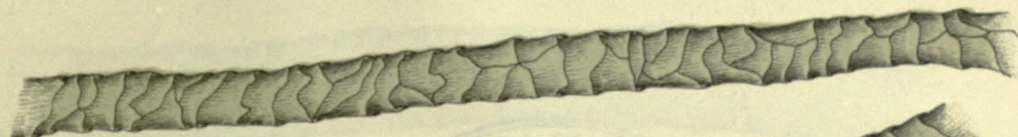
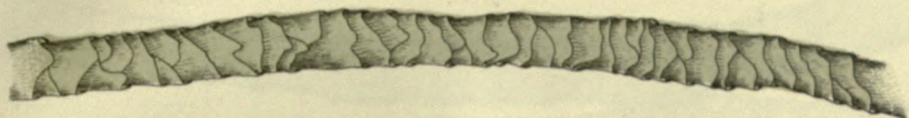


No. 431. 3-4 Merino, 14 Southdown.  
EWE, 2 YEARS OLD.









No 436. 3-4 Merino, 1-4 Southdown.

EW, 1 YEAR OLD.

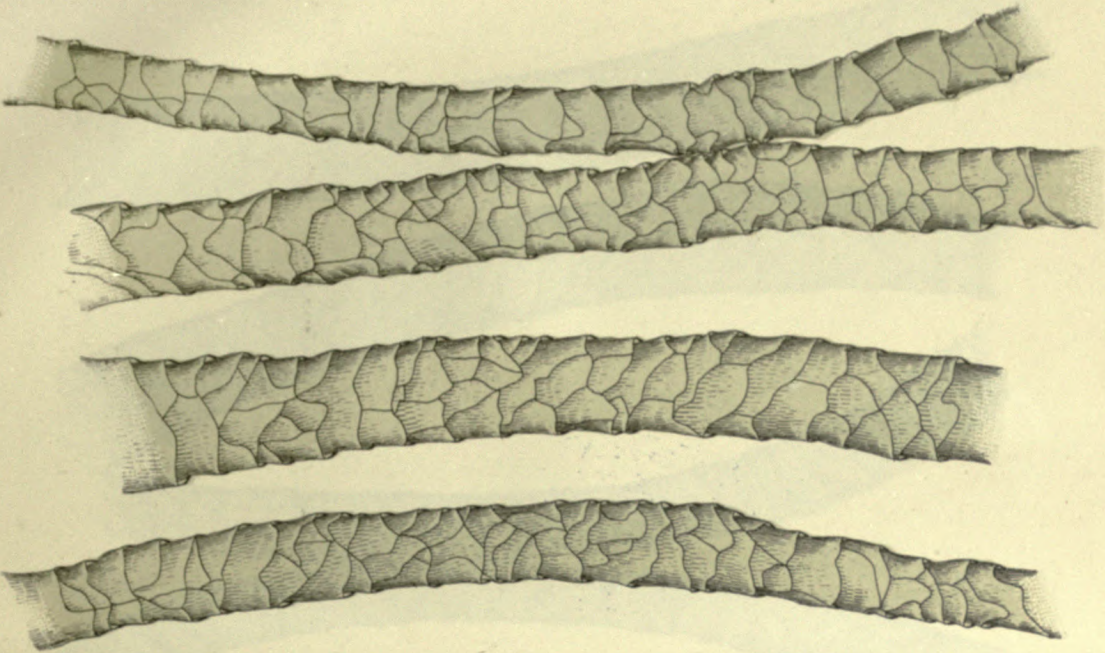
No 436. 3-4 Merino, 1-4 Southdown.

EW, 1 YEAR OLD.



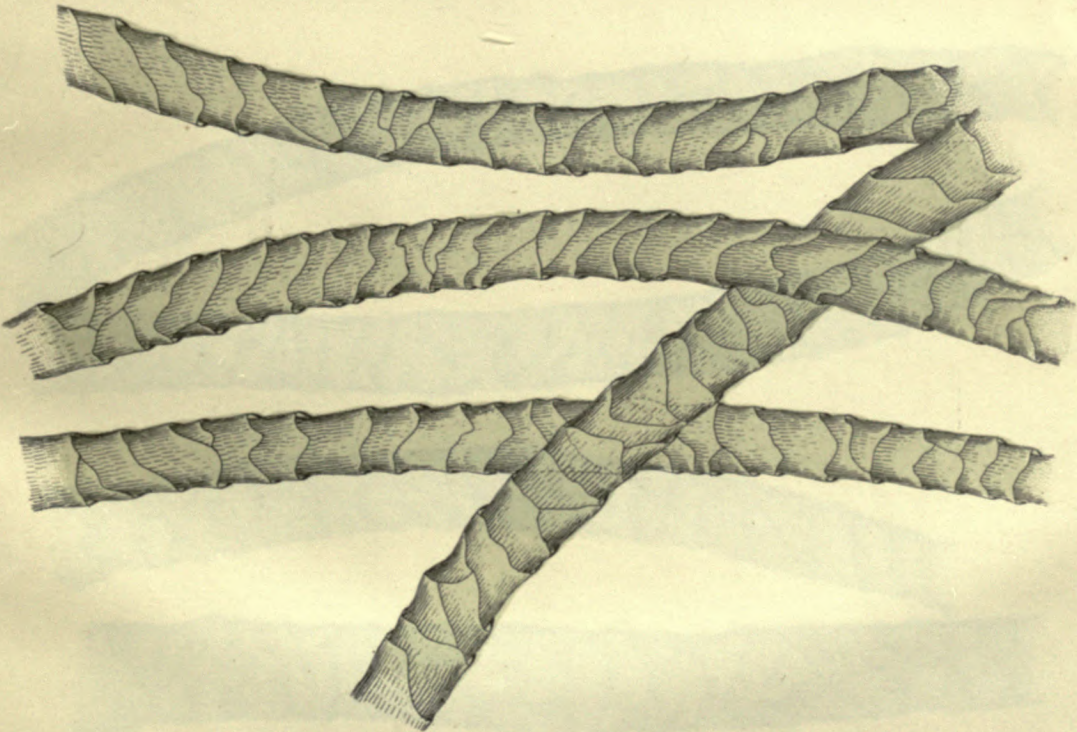






No. 432. 1 2 Merino, 1 2 Southdown.

RAM, 5 YEARS OLD.



No. 433. 1 2 Merino, 1 2 Southdown.

RAM, 5 YEARS OLD.



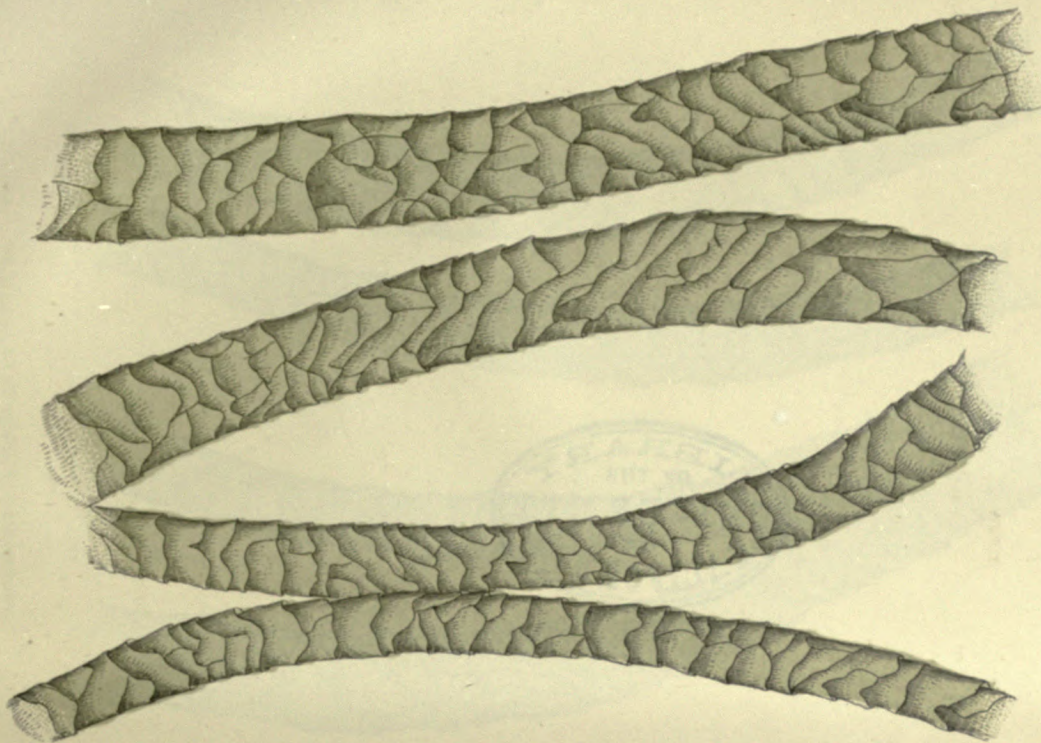
[Redacted text block]

[Redacted text block]

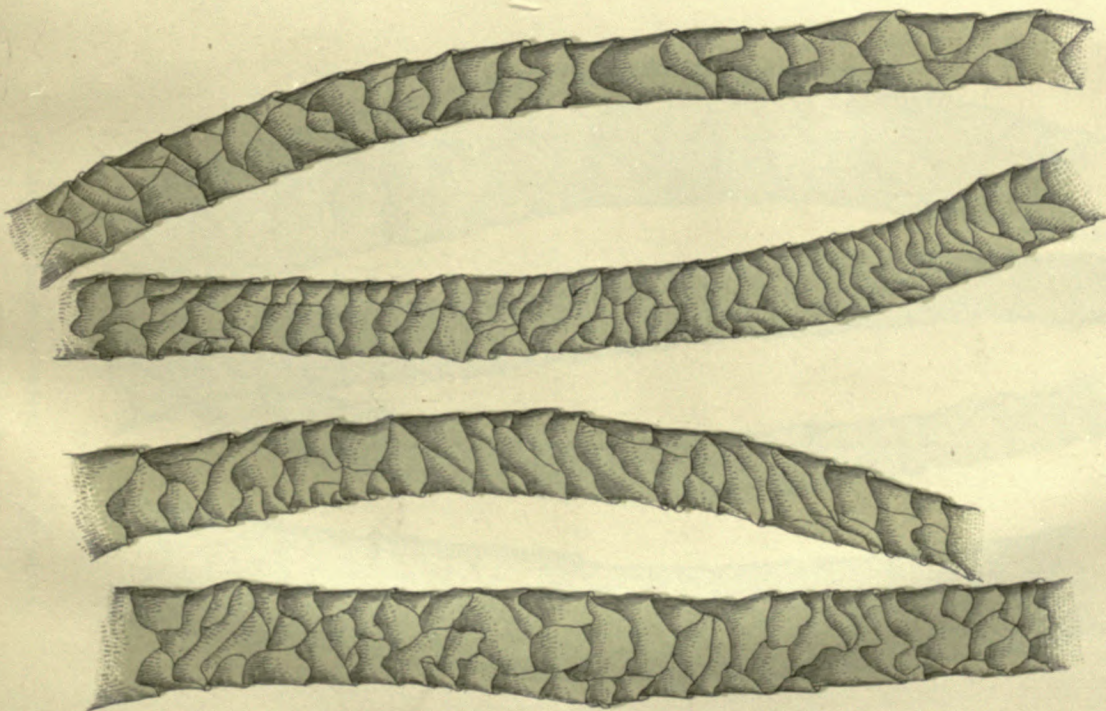
UNIVERSITY OF TORONTO  
LIBRARY



No. 434. 38 Merino, 48 Shropshire, 18 Southdown.  
RAM, 1 YEAR OLD.



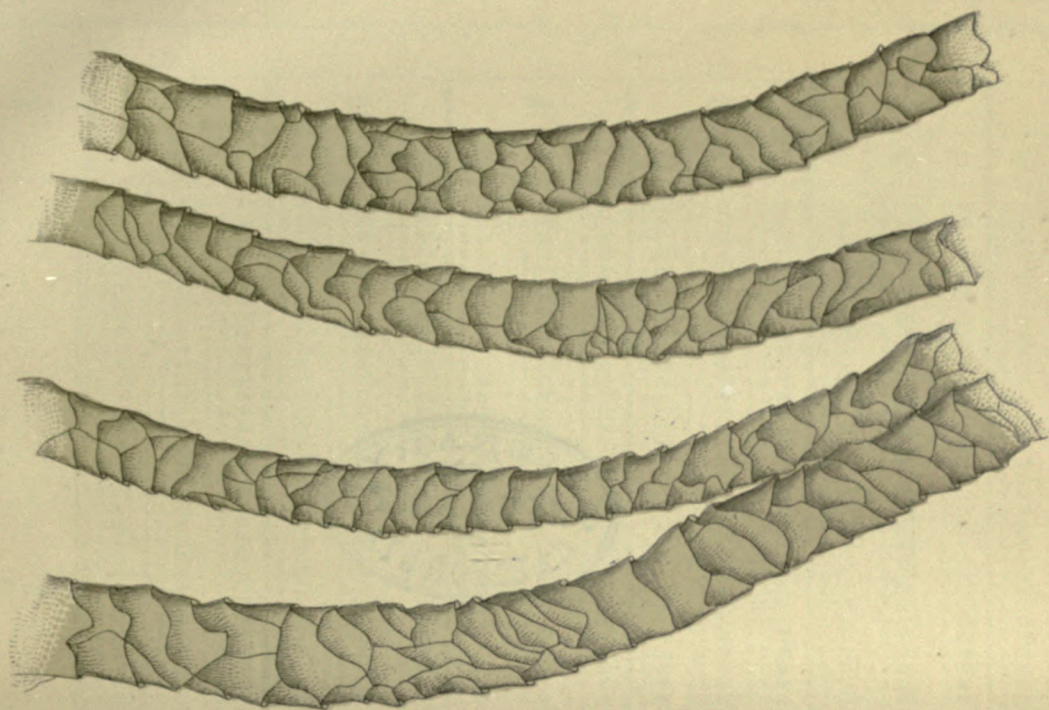
No. 434. 38 Merino, 48 Shropshire, 18 Southdown.  
RAM, 1 YEAR OLD.



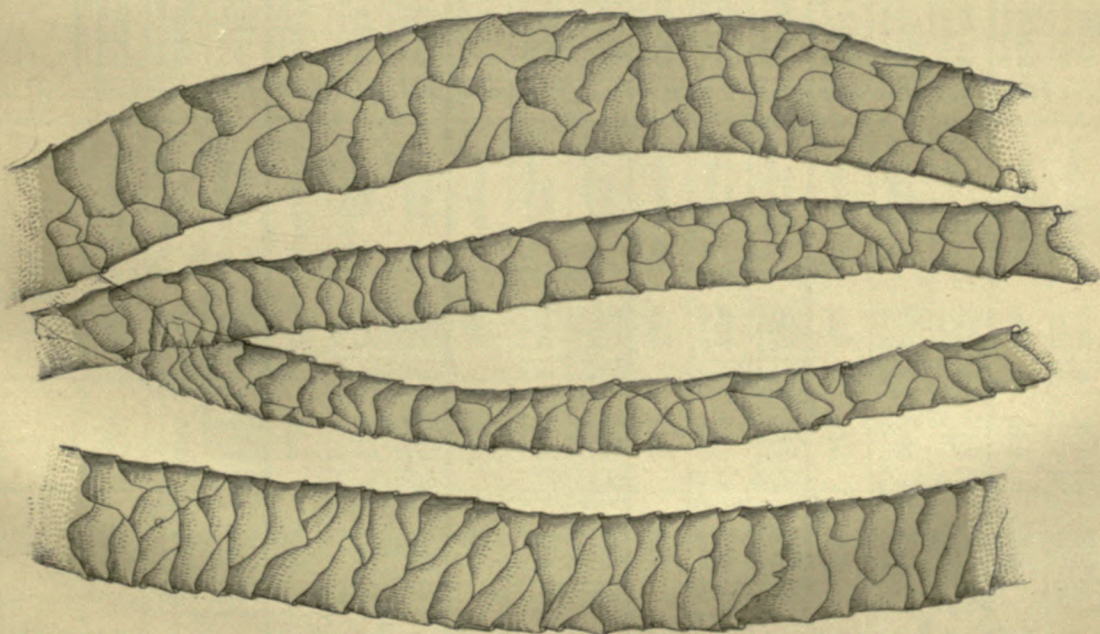








No 433. 3-8 Merino, 4-8 Shropshire, 1-8 Southdown.  
EWE, 1 YEAR OLD.



No 433. 3-8 Merino, 4-8 Shropshire, 1-8 Southdown.  
EWE, 1 YEAR OLD.







The following tables present the result of tests made upon crossbred wools and the data deduced from them:

TABLE IX.—Measurements of fineness of thoroughbred Merino wools, crossbred series, from Bachtel Brothers, Willits, Mendocino County, California.

Catalogue number of sample....	RAMS.																	
	439.			437.			438.			426.			425.			427.		
	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
2.00	2.375	1.625	2.00	2.125	1.875	1.75	2.00	2.50	2.875	1.75	2.00	1.50	2.125	2.25	2.50	1.50	2.00	2.00
1.75	2.00	3.50	2.625	1.75	1.625	2.875	2.125	2.00	1.50	2.00	2.00	2.00	2.00	2.375	1.50	3.00	1.50	1.50
1.75	2.00	1.50	1.875	2.375	2.125	2.00	1.75	2.00	3.00	1.50	2.00	3.00	2.25	2.00	2.00	2.00	1.75	1.60
3.00	2.25	1.50	2.625	2.00	1.75	2.00	2.00	2.00	1.625	1.50	2.00	1.625	1.50	1.75	1.625	1.75	3.00	1.625
1.625	2.00	1.50	1.75	2.00	1.75	2.00	2.125	2.125	2.50	1.75	1.75	1.75	1.50	2.00	2.00	2.00	1.75	1.50
2.00	1.625	3.00	2.00	1.80	2.00	2.875	1.75	2.50	2.625	2.00	2.00	2.875	1.625	1.75	2.25	2.00	1.60	1.60
2.50	1.50	3.00	2.00	1.75	2.50	1.75	2.125	1.875	2.50	1.75	2.00	2.25	2.00	2.25	2.00	2.00	2.00	2.00
2.00	2.00	2.375	2.00	1.80	2.00	2.125	1.50	1.50	2.50	1.75	1.75	2.125	1.875	1.75	2.00	1.50	1.60	1.60
1.875	2.75	1.50	1.875	1.625	2.00	1.875	2.00	1.75	2.125	2.25	2.00	1.875	1.875	1.75	2.00	1.75	1.75	1.75
2.00	1.75	3.00	1.625	1.50	1.625	2.00	2.00	1.50	2.00	1.50	2.00	2.00	1.75	1.75	1.75	2.00	2.00	1.75
1.50	3.00	2.00	2.00	1.75	2.125	2.25	1.875	3.00	2.00	1.75	2.00	2.25	1.25	1.75	1.75	2.25	1.625	1.25
3.125	2.25	2.00	2.60	1.625	1.625	1.50	1.75	2.50	2.125	2.00	2.00	2.25	1.625	1.75	2.00	1.60	1.125	1.125
3.00	1.875	1.50	1.625	2.00	1.875	2.00	2.375	2.125	2.00	2.00	2.00	2.00	2.00	2.125	1.50	2.00	2.25	2.375
2.00	1.875	1.75	2.375	1.625	1.50	2.00	2.50	2.125	1.875	1.75	1.50	2.375	2.00	1.75	2.00	2.00	2.00	1.375
1.875	2.50	2.00	2.00	1.75	1.625	2.25	1.60	1.75	2.00	2.25	2.25	1.875	2.00	1.75	2.00	2.00	1.875	1.50
2.00	2.125	1.75	2.375	2.375	1.75	2.875	2.00	2.25	1.50	2.00	2.50	1.875	1.875	1.75	2.25	1.875	1.50	1.50
2.00	2.125	3.00	1.625	2.50	1.875	2.00	2.50	2.00	2.50	2.00	1.50	2.375	1.25	1.50	1.75	1.60	1.75	1.50
1.75	1.50	2.00	2.00	2.00	2.00	2.375	2.50	1.375	1.75	2.00	2.00	1.35	2.125	1.50	2.75	1.75	2.00	2.00
2.00	2.25	1.50	1.625	1.50	1.50	1.50	1.625	1.125	2.125	2.00	2.00	1.625	2.125	1.50	2.00	2.00	2.00	2.00
2.00	2.00	2.00	2.50	1.50	2.00	1.875	3.50	1.50	2.375	1.75	2.00	2.875	1.875	2.00	1.75	2.50	2.50	2.50
2.00	2.00	2.50	1.75	1.75	2.575	1.80	3.00	2.00	2.00	2.00	2.00	1.125	1.875	1.875	2.25	1.50	2.375	2.375
1.875	2.25	2.50	3.00	2.00	2.00	1.50	2.25	1.75	1.75	1.50	1.50	2.125	1.875	1.625	2.25	1.875	1.50	1.50
2.00	1.875	2.00	2.50	2.00	1.625	1.50	2.50	2.875	2.50	1.50	2.50	2.25	2.00	2.00	2.00	1.50	1.625	1.625
1.50	2.00	2.125	1.875	2.00	2.00	2.00	2.00	2.25	2.60	2.00	1.625	2.00	1.625	2.00	2.00	2.00	2.00	2.00
2.00	2.00	2.50	3.25	2.50	1.875	1.875	2.125	2.00	1.50	2.00	2.25	1.75	2.00	1.875	2.00	1.75	1.50	1.50
2.00	2.00	1.625	2.00	1.625	2.00	1.50	1.875	2.00	2.00	2.00	2.00	2.125	2.50	1.625	1.75	1.625	2.00	2.00
2.00	2.00	2.50	2.00	1.625	2.625	1.625	1.625	1.875	2.00	2.00	2.00	2.125	2.375	1.625	1.75	2.00	2.25	2.25
2.00	2.00	2.00	1.75	2.25	1.75	2.00	2.60	2.00	2.50	2.00	2.00	0.875	2.25	1.625	2.00	1.50	1.50	1.50
2.50	2.25	2.375	2.00	2.25	1.50	2.25	3.00	1.875	2.50	2.00	2.50	2.125	1.875	2.00	1.50	2.25	2.125	2.125
1.60	2.25	1.875	2.00	2.00	1.375	1.75	2.00	1.60	3.00	1.75	1.80	2.375	1.50	1.625	2.25	1.50	2.00	2.00
1.625	2.00	2.125	2.00	1.875	2.375	2.00	1.75	2.025	3.00	2.00	2.50	1.75	2.375	2.00	1.50	1.50	1.75	1.75
1.625	2.00	1.625	2.625	2.00	1.50	1.75	2.00	2.00	2.00	1.875	2.00	1.375	1.625	1.625	2.50	2.50	3.50	3.50
2.125	1.50	1.875	2.50	2.50	1.875	2.125	1.625	2.00	3.00	2.50	2.50	1.875	2.375	1.625	1.50	1.875	2.50	2.50
2.00	2.00	2.125	2.375	2.375	2.00	2.00	1.75	2.125	2.25	1.50	2.00	2.125	2.25	2.00	2.00	1.50	3.00	3.00
2.00	1.75	2.00	2.00	1.75	1.75	2.375	1.50	2.125	2.00	2.00	2.00	2.00	2.375	1.50	2.00	1.75	2.00	2.00
2.25	2.00	2.00	2.25	2.375	2.00	3.50	2.00	2.25	1.50	2.00	2.00	1.75	1.875	2.00	2.00	1.625	1.50	1.50
1.75	1.625	3.00	2.25	2.00	1.50	2.50	1.60	2.125	3.60	2.00	2.00	1.625	1.75	1.75	2.00	2.00	1.50	1.625
1.875	2.125	1.50	2.50	1.875	1.875	2.625	2.00	1.50	3.00	2.00	1.75	1.625	1.875	1.50	2.00	2.00	2.00	2.00
1.875	2.125	1.50	1.00	2.00	2.00	2.125	2.125	1.75	2.25	2.00	2.00	1.75	1.875	1.875	2.00	1.75	2.50	2.50
1.625	1.625	1.625	1.75	2.00	1.375	2.60	2.25	2.00	1.75	2.50	2.50	1.875	2.00	1.50	2.00	1.625	2.00	2.00
3.025	1.50	2.50	2.00	2.50	1.875	2.60	1.875	2.00	2.50	1.50	2.375	2.125	2.25	2.00	1.50	2.00	2.125	2.125
1.75	2.00	2.25	2.00	1.875	2.00	2.75	2.50	1.875	2.00	2.00	1.50	2.375	2.375	1.50	2.50	1.625	3.50	3.50
2.00	2.00	2.875	2.25	1.875	2.00	2.375	2.00	2.25	2.00	2.50	1.80	2.375	2.375	1.625	3.00	1.875	1.60	1.60
1.875	2.00	1.50	2.00	2.375	1.875	3.00	2.25	2.125	2.125	2.00	1.50	1.125	1.75	1.50	2.00	1.50	1.875	1.875
2.50	2.00	1.875	2.625	2.25	1.375	2.00	1.50	1.625	2.00	2.00	1.50	2.75	1.875	2.00	1.75	2.125	2.50	2.50
2.00	1.625	2.00	2.00	2.00	1.50	2.875	2.00	1.875	1.75	2.00	1.60	1.75	1.75	1.75	2.00	1.75	1.75	1.75
2.00	2.00	3.00	2.00	1.50	1.875	2.375	2.125	2.50	2.50	1.125	1.60	2.00	2.50	1.75	2.625	1.625	2.00	2.00
1.75	1.75	2.00	2.00	1.50	2.50	3.00	2.25	1.875	1.50	2.00	2.00	1.50	1.875	1.50	2.50	2.125	2.00	2.00
2.00	2.50	2.25	2.50	2.00	2.00	1.75	1.625	1.875	2.50	2.00	2.00	1.75	1.625	1.50	2.00	1.75	2.00	2.00
2.125	2.375	1.25	2.125	2.00	1.75	2.375	1.75	1.625	2.50	2.00	2.00	2.875	1.50	1.50	3.00	1.75	1.50	1.50
Totals	101.50	101.125	104.875	108.50	98.375	95.50	100.25	103.375	98.00	100.125	90.25	90.50	99.375	97.75	87.375	100.375	89.25	90.875

Actual measurement in centimillimeters.

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.						
Highest	B'	3.625	1.4271	B'	3.625	1.4271	B'	3.50	1.3779	B'	3.00	1.1811	B'	2.875	1.1318	B'	3.25	1.2795
	B''	3.00	1.1811	B''	2.875	1.1318	B''	3.50	1.3779	B''	2.50	0.9842	B''	2.875	1.1318	B''	2.50	0.9842
	B'''	2.50	1.3779	B'''	2.875	1.1318	B'''	3.00	1.1811	B'''	3.00	1.1811	B'''	2.25	0.8858	B'''	3.50	1.8770
Highest		3.625	1.4271		3.625	1.4271		3.50	1.3779		3.00	1.1811		2.875	1.1318		3.50	1.8770
Lowest	B'	1.50	0.5905	B'	1.625	0.6387	B'	1.50	0.5905	B'	1.50	0.5905	B'	0.675	0.3447	B'	1.50	0.5905
	B''	1.50	0.5905	B''	1.50	0.5905	B''	1.50	0.5905	B''	1.50	0.5905	B''	1.25	0.4921	B''	1.375	0.5413
	B'''	1.25	0.4621	B'''	1.375	0.5413	B'''	1.125	0.4429	B'''	1.50	0.5905	B'''	1.50	0.5905	B'''	1.125	0.4429
Lowest		1.25	0.4621		1.375	0.5413		1.125	0.4429		1.50	0.5905		0.675	0.3447		1.125	0.4429
Average	B'	2.03	0.7802	B'	2.17	0.8543	B'	2.125	0.8306	B'	2.183	0.8594	B'	1.988	0.7828	B'	2.127	0.8373
	B''	2.025	0.7972	B''	1.968	0.7748	B''	2.068	0.8141	B''	1.925	0.7578	B''	1.953	0.7690	B''	1.785	0.7027
	B'''	2.098	0.8580	B'''	1.91	0.7519	B'''	1.90	0.7716	B'''	1.90	0.7884	B'''	1.748	0.6681	B'''	1.928	0.7980
Average		2.05	0.8070		2.016	0.7936		2.051	0.8074		2.033	0.8003		1.807	0.7408		1.95	0.7677
Measurements above average		46			43</													



TABLE IX.—Measurements of fineness of thoroughbred Merino wools, crossbred series, &c.—Continued.

Catalogue number of sample....	RAMS.																	
	428.			429.			430.			828.			829.			830.		
	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
2.625	2.25	1.375	1.875	2.00	1.50	2.25	1.875	1.75	1.125	1.00	1.25	1.025	1.375	1.75	2.00	1.50	1.75	1.125
2.50	2.25	1.375	2.125	1.875	1.875	2.25	1.875	2.00	1.125	1.50	1.25	1.00	2.00	2.00	1.75	1.25	1.25	1.875
2.00	2.375	1.50	2.50	2.00	2.125	2.00	1.50	2.00	2.25	1.75	1.00	1.00	1.875	2.125	1.625	1.125	1.625	1.875
1.75	1.875	1.50	2.50	2.00	2.00	2.00	2.00	1.50	1.50	2.25	1.75	1.125	2.00	2.50	2.25	2.00	1.50	1.50
3.00	1.50	1.50	2.25	1.25	1.50	2.50	1.875	2.00	1.125	2.50	1.75	1.00	1.50	2.00	2.00	2.00	2.00	1.625
2.50	1.75	1.50	2.125	1.625	1.375	2.25	2.00	2.00	2.125	2.25	2.25	1.50	2.00	1.50	2.375	2.125	2.125	1.625
2.125	1.75	1.25	2.25	2.25	1.25	2.50	2.00	2.25	2.00	2.00	1.50	1.25	2.00	1.50	1.625	2.00	2.00	2.00
2.50	1.625	1.375	2.00	1.75	2.00	3.25	1.875	1.50	1.50	1.875	1.50	1.00	2.125	1.375	2.00	1.375	1.75	1.75
2.00	1.50	1.50	3.00	1.75	2.00	3.00	2.25	2.50	1.25	1.75	1.875	1.00	1.75	2.00	2.00	1.50	1.50	1.50
2.00	2.00	1.50	2.00	2.00	2.25	3.00	2.375	2.00	1.375	1.50	1.50	1.50	2.50	1.50	2.00	1.00	2.00	2.00
2.00	2.00	1.50	1.50	1.75	2.00	2.00	2.00	2.00	2.00	1.75	1.50	1.625	2.25	1.625	1.50	1.50	1.50	1.50
2.00	2.375	1.375	1.75	2.00	1.50	2.00	1.75	2.25	1.50	1.625	1.50	1.50	2.00	1.625	1.50	2.00	1.75	1.75
2.00	1.75	1.75	2.00	2.00	2.00	2.00	2.125	2.00	1.00	2.00	1.50	1.25	1.25	1.50	1.875	1.625	1.625	1.875
2.50	1.75	1.50	2.875	2.125	1.75	2.00	1.625	3.00	1.25	2.50	1.25	1.125	1.75	1.50	1.625	1.50	1.625	1.625
2.00	2.00	1.375	2.50	2.875	1.50	2.00	1.50	3.00	1.125	1.875	1.25	1.50	2.25	1.50	2.00	1.50	1.50	1.50
2.00	2.00	1.50	2.50	2.00	1.50	2.00	2.75	2.00	1.50	2.75	1.50	1.75	2.125	2.00	2.50	1.25	1.625	1.625
2.00	1.75	1.00	2.00	2.00	2.125	2.00	1.625	2.00	1.25	2.125	1.50	1.75	1.875	1.75	1.625	1.625	1.375	2.00
2.00	2.125	1.50	2.50	2.50	1.50	1.75	2.00	2.00	1.75	1.50	1.50	1.25	1.00	1.50	1.75	1.50	1.50	1.50
2.00	1.75	1.625	2.50	1.75	1.875	2.50	1.75	2.50	2.125	1.50	1.75	1.25	1.25	1.50	1.875	2.00	2.25	2.25
2.00	2.00	1.25	2.125	2.50	1.25	2.00	3.50	2.00	2.00	2.00	1.25	1.50	2.00	1.50	1.375	1.00	1.875	1.875
2.50	2.50	1.50	2.50	1.50	2.00	2.00	1.375	2.50	1.75	1.50	1.25	1.75	2.125	1.75	1.50	1.25	1.625	1.625
1.75	2.00	1.50	2.00	2.00	1.75	2.00	1.875	2.00	1.50	2.125	1.50	1.50	2.25	1.00	1.50	2.25	2.00	2.00
2.00	2.00	1.75	2.00	1.875	2.125	2.00	1.875	2.50	1.75	2.00	1.25	2.50	1.625	1.125	1.50	1.50	1.625	1.625
2.00	2.00	1.375	2.00	2.50	1.50	2.50	1.875	2.375	2.625	1.50	2.00	1.625	2.125	1.25	2.25	1.75	1.875	1.875
2.00	2.00	1.00	2.00	2.50	1.875	2.25	2.00	2.115	1.50	1.50	1.375	1.375	1.875	1.50	2.50	2.50	1.75	1.75
1.875	2.375	1.25	2.00	2.00	1.625	2.50	3.50	2.00	1.875	1.375	1.50	1.375	1.50	1.50	1.875	2.00	1.50	1.50
2.00	2.00	1.00	3.00	2.00	1.50	3.00	1.625	1.75	1.25	1.50	1.875	1.00	2.00	1.25	2.00	1.75	1.50	1.50
2.00	2.00	1.00	3.00	1.75	2.00	2.00	2.25	2.00	1.25	1.25	1.625	1.625	2.00	1.375	2.00	1.00	1.25	1.25
2.00	2.125	1.375	2.00	1.50	2.00	2.00	1.75	2.125	1.50	1.00	1.625	1.50	1.50	2.25	1.625	2.00	1.00	1.375
2.00	1.75	1.50	2.50	1.75	2.00	3.00	2.00	2.00	2.00	1.625	1.375	1.125	1.875	1.75	1.375	1.75	1.50	1.50
2.00	2.00	1.50	2.25	2.50	2.25	3.00	2.25	2.00	1.50	2.00	1.25	1.00	1.75	2.25	3.00	2.00	1.50	1.50
2.00	2.00	1.50	1.875	1.875	1.75	3.00	1.75	2.50	2.375	1.75	1.75	1.00	2.00	1.50	2.375	1.50	1.875	1.875
2.00	2.00	1.50	2.25	1.625	2.00	2.50	2.00	2.00	1.75	2.25	1.50	1.00	1.625	1.50	1.625	1.50	1.375	1.625
2.00	2.00	1.25	2.50	3.00	1.50	2.00	2.00	2.50	1.50	2.125	1.75	1.00	1.625	2.125	1.50	1.375	1.75	1.75
1.875	2.375	1.50	1.625	2.125	1.50	2.00	1.75	2.50	2.00	1.50	1.75	1.50	2.00	1.50	1.50	1.50	1.50	1.25
2.00	1.50	1.25	2.50	1.875	1.50	2.00	1.75	2.25	1.50	1.50	1.375	1.50	1.50	1.50	2.375	1.625	1.50	1.50
2.25	1.50	1.50	2.50	2.00	2.00	2.00	2.00	2.00	1.50	1.75	1.00	1.625	1.50	1.50	1.875	2.00	1.625	1.625
2.00	2.00	1.50	1.875	2.25	1.625	3.00	2.125	2.50	1.50	2.00	1.00	1.75	2.00	2.00	1.50	1.75	2.00	2.00
2.00	2.00	1.25	2.25	1.75	2.125	2.00	3.00	1.875	1.25	1.375	1.875	1.50	2.25	1.75	1.875	1.125	1.375	1.375
2.00	2.00	1.375	2.00	1.875	1.75	2.00	2.25	2.00	1.00	2.375	2.00	2.00	1.375	1.50	1.50	1.50	1.50	1.50
2.50	1.50	1.50	2.50	2.00	1.50	2.00	1.625	3.00	1.50	2.50	2.25	1.25	2.125	1.50	1.50	2.00	1.625	1.625
2.00	2.00	1.125	2.00	1.875	2.00	2.50	1.625	2.00	2.00	1.875	1.50	1.75	2.50	1.50	1.625	1.50	2.00	2.00
2.25	2.00	1.75	2.25	1.875	1.50	2.00	1.625	2.125	2.50	2.025	1.50	2.00	1.625	1.625	1.875	1.375	2.125	2.125
2.00	1.625	1.50	2.125	2.00	1.75	2.50	2.375	2.00	1.125	2.25	1.50	1.875	2.00	2.00	2.125	1.25	1.875	1.875
2.125	2.125	1.50	3.00	1.50	2.00	2.00	1.875	2.375	1.75	2.375	1.50	2.125	1.75	2.125	1.625	1.50	1.75	1.75
1.75	1.50	1.50	2.125	2.00	2.00	2.00	1.625	1.625	1.75	1.50	2.00	2.00	1.75	1.50	1.825	1.375	1.50	1.50
2.25	2.00	1.375	2.00	1.875	2.50	1.75	1.375	2.50	1.875	1.625	1.25	1.50	2.00	1.25	1.50	1.375	1.75	1.75
2.25	2.00	1.375	1.75	2.25	2.00	2.25	2.00	2.06	1.50	1.375	1.25	1.25	2.25	1.75	2.375	1.50	1.625	1.625
2.25	1.625	1.50	2.00	2.125	1.875	2.50	2.125	2.625	1.50	2.00	1.50	1.75	2.375	1.75	1.875	1.625	1.625	1.625
1.875	2.50	1.50	1.75	2.00	1.875	3.00	2.00	2.00	1.50	2.00	1.50	2.25	1.50	2.00	2.00	1.50	1.50	1.50
<b>Totals</b> .....	<b>105.50</b>	<b>97.875</b>	<b>70.75</b>	<b>111.00</b>	<b>100.25</b>	<b>90.250</b>	<b>114.00</b>	<b>99.50</b>	<b>107.00</b>	<b>80.75</b>	<b>92.375</b>	<b>75.875</b>	<b>72.125</b>	<b>94.625</b>	<b>82.125</b>	<b>93.625</b>	<b>79.125</b>	<b>83.675</b>

	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.						
<b>Recapitulation and reduction:</b>																		
Highest.....	B' 3.00 B'' 2.50 B''' 1.75	1.1811 0.9842 0.8889	B' 3.00 B'' 3.00 B''' 2.50	1.1811 1.1811 0.9842	B' 3.25 B'' 3.50 B''' 3.00	1.2795 1.3779 1.1811	B' 2.625 B'' 2.75 B''' 2.25	1.0334 1.0828 0.8858	B' 2.25 B'' 2.50 B''' 2.50	0.8858 0.9842 0.9842	B' 3.00 B'' 2.25 B''' 2.25	1.1811 0.8858 0.8858	B' 3.00 B'' 2.25 B''' 2.25	1.1811 0.8858 0.8858	B' 3.00 B'' 2.25 B''' 2.25	1.1811 0.8858 0.8858	B' 3.00 B'' 2.25 B''' 2.25	1.1811 0.8858 0.8858
Highest.....	3.00	1.1811	3.00	1.1811	3.50	1.3779	2.75	1.0826	2.50	0.9842	3.00	1.1811	3.00	1.1811	3.00	1.1811	3.00	1.1811
Lowest.....	B' 1.75 B'' 1.50 B''' 1.00	0.6889 0.5905 0.3937	B' 1.625 B'' 1.25 B''' 1.25	0.6397 0.4921 0.4921	B' 1.75 B'' 1.375 B''' 1.50	0.6889 0.5413 0.5005	B' 1.00 B'' 1.00 B''' 1.00	0.3937 0.3937 0.3937	B' 1.00 B'' 1.00 B''' 1.00	0.3937 0.3937 0.3937	B' 1.375 B'' 1.00 B''' 1.125	0.5413 0.3937 0.3937	B' 1.375 B'' 1.00 B''' 1.125	0.5413 0.3937 0.3937	B' 1.375 B'' 1.00 B''' 1.125	0.5413 0.3937 0.3937	B' 1.375 B'' 1.00 B''' 1.125	0.5413 0.3937 0.3937
Lowest.....	1.00	0.3937	1.25	0.4921	1.375	0.5413	1.00	0.3937	1.00	0.3937	1.00	0.3937	1.00	0.3937	1.00	0.3937	1.00	0.3937
Average.....	B' 2.11 B'' 1.958 B''' 1.415	0.8307 0.7708 0.5570	B' 2.22 B'' 2.005 B''' 1.805	0.8740 0.7893 0.7106	B' 2.28 B'' 1.99 B''' 2.14	0.9978 0.7834 0.8425	B' 1.615 B'' 1.847 B''' 1.518	0.6359 0.7110 0.5676	B' 1.443 B'' 1.892 B''' 1.643	0.5681 0.7448 0.6408	B' 1.873 B'' 1.582 B''' 1.673	0.7374 0.6228 0.6594	B' 1.873 B'' 1.582 B''' 1.673	0.7374 0.6228 0.6594	B' 1.873 B'' 1.582 B''' 1.673	0.7374 0.6228 0.6594	B' 1.873 B'' 1.582 B''' 1.673	0.7374 0.6228 0.6594
Average.....	1.827	0.7102	2.01	0.7913	2.13	0.8385	1.66	0.6585	1.659	0.6531	1.709	0.6						







TABLE IX.—Measurements of fineness of thoroughbred Merino wools, crossbred series, &c.—Continued.

Catalogue number of sample...	RAMS.																	
	837.			838.			839.			840.			841.			842.		
	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
1.50	2.50	2.00	1.625	1.50	1.60	3.125	2.375	2.50	1.625	2.50	1.00	2.00	2.50	1.75	1.50	3.00	1.50	1.50
2.00	2.00	2.125	1.75	1.625	1.50	3.60	2.00	2.50	1.625	2.375	1.50	2.25	2.375	0.875	2.00	1.50	1.50	1.60
2.00	2.25	1.75	1.875	1.50	1.375	2.00	2.50	1.625	1.50	2.00	1.125	1.50	2.00	1.00	1.50	1.50	1.50	1.50
1.75	1.875	1.75	1.50	1.50	1.625	2.125	2.375	2.00	1.50	1.625	1.25	1.625	2.25	1.375	2.00	1.75	2.00	2.00
2.50	2.50	1.75	1.50	1.75	1.50	2.50	2.00	1.625	1.50	2.25	1.625	2.00	2.25	1.50	2.00	1.75	1.625	1.625
2.00	2.25	1.625	2.00	1.625	1.625	2.50	2.50	1.875	2.00	1.875	1.00	2.50	2.00	1.125	2.00	1.375	2.00	2.00
1.75	2.625	1.625	2.50	1.60	2.126	3.00	2.25	2.50	1.50	2.25	1.50	2.125	2.25	1.375	1.50	2.00	2.00	2.00
2.50	2.625	1.625	1.50	1.75	1.75	3.00	2.375	2.50	1.50	1.75	1.75	2.25	2.50	1.50	2.125	2.00	2.00	2.00
1.875	2.375	2.00	1.50	1.50	2.25	2.375	1.50	1.625	2.50	2.25	1.25	2.50	2.00	1.25	1.50	1.75	1.50	1.50
2.25	2.50	1.625	1.50	1.375	1.50	2.00	2.25	2.50	1.625	2.125	1.875	2.25	2.00	2.00	1.375	1.375	2.00	2.00
2.375	2.375	2.00	1.875	1.75	1.50	2.50	2.00	2.00	1.50	1.875	1.625	1.50	2.375	1.50	2.00	1.75	1.50	1.50
2.00	1.75	2.00	1.75	1.60	2.25	3.00	1.50	1.625	2.00	3.00	1.50	2.625	2.25	2.00	1.625	2.50	1.60	1.625
2.00	1.625	1.75	1.625	1.50	1.50	3.125	1.75	1.875	1.50	2.00	2.00	2.50	2.375	1.25	2.00	3.00	3.00	1.625
1.625	2.50	1.875	2.00	1.50	1.50	2.00	2.25	2.00	1.50	2.50	1.50	1.50	2.50	1.375	2.00	2.00	2.00	1.875
2.25	1.75	1.75	1.50	1.625	1.625	2.25	2.50	1.50	1.625	2.25	2.50	2.00	2.00	2.50	1.50	2.125	1.60	1.50
1.50	2.75	2.625	1.50	2.125	1.50	2.50	2.00	2.125	1.75	2.50	1.50	1.50	2.00	2.00	2.00	1.50	1.625	1.625
2.125	2.375	2.00	1.75	2.00	1.25	2.50	2.00	2.125	2.125	2.375	1.50	1.875	2.00	2.125	1.625	1.625	1.875	1.625
2.125	2.50	2.00	1.75	1.75	1.75	2.375	2.50	2.50	2.00	1.75	1.875	1.625	1.75	2.25	2.125	1.50	1.50	1.50
1.875	1.875	1.50	1.75	1.625	2.00	2.625	2.50	2.50	1.50	1.625	2.00	1.50	1.875	2.00	1.50	1.875	2.00	1.75
2.00	2.00	1.625	2.00	1.50	1.25	3.00	2.25	1.625	1.75	2.00	1.75	2.00	2.00	1.625	2.50	2.00	1.75	1.75
2.375	3.25	2.125	2.50	1.50	1.75	3.50	2.375	2.00	1.50	1.875	1.125	2.50	3.00	2.00	1.50	2.50	2.00	1.75
2.60	2.375	1.75	2.625	1.50	1.50	2.00	2.25	2.00	2.00	2.50	1.875	2.50	2.00	1.50	1.625	1.50	2.00	2.00
1.50	3.00	1.125	2.625	1.375	1.625	2.125	2.50	2.75	2.125	1.75	1.875	2.625	2.25	2.00	2.50	1.625	1.50	1.50
2.75	2.00	2.00	2.00	1.50	2.00	2.50	2.50	1.25	1.50	1.75	1.50	1.50	2.375	2.00	2.00	1.625	2.00	2.00
1.875	2.125	2.00	1.50	1.75	2.00	2.50	2.375	1.75	1.75	2.00	1.25	3.00	2.00	2.625	2.00	2.00	2.25	1.75
1.875	2.50	2.25	1.50	1.50	2.00	2.00	2.25	2.00	1.60	1.875	1.625	3.00	2.00	2.00	1.25	1.75	1.50	1.875
2.50	2.375	2.00	2.75	2.00	1.50	3.00	2.00	2.125	2.00	2.125	1.50	1.50	3.00	1.875	2.00	2.00	2.00	2.00
1.625	2.25	2.25	2.875	2.25	2.00	2.50	2.25	2.125	1.50	2.00	1.625	3.00	2.00	2.00	2.00	2.00	2.00	2.00
2.375	2.125	1.75	2.375	1.75	2.125	1.50	2.00	2.25	1.60	2.50	1.375	2.375	3.00	1.375	2.00	2.25	2.00	1.50
3.125	2.75	2.00	2.00	2.00	2.125	2.00	2.50	1.625	1.375	2.50	1.375	2.50	2.00	1.50	2.25	2.00	2.00	2.00
2.25	2.25	1.75	2.125	1.60	2.125	2.00	2.00	1.75	1.625	2.125	1.625	2.125	2.125	1.75	2.50	1.75	1.50	1.50
2.25	1.75	2.00	2.25	2.00	1.50	2.50	2.125	2.00	1.875	2.25	1.625	2.875	2.75	1.00	3.00	2.00	2.00	1.50
2.60	1.875	1.75	1.625	1.625	1.60	2.00	2.25	1.60	2.00	2.25	1.60	2.00	2.25	1.50	2.625	1.75	1.875	1.375
2.50	1.75	2.00	2.25	1.375	1.625	2.00	2.00	1.50	2.25	2.375	1.875	2.625	2.00	2.00	1.50	1.75	1.75	1.75
2.60	2.00	2.50	2.00	1.25	1.60	1.025	2.00	2.00	1.75	1.50	2.25	2.625	1.00	1.60	2.00	2.00	2.00	1.75
2.375	2.50	2.00	2.00	1.75	1.50	3.00	2.125	2.00	1.75	2.00	1.875	2.00	1.50	1.50	2.00	1.625	1.875	1.625
2.125	2.75	2.00	1.625	2.125	1.50	3.00	1.875	2.00	1.875	2.50	1.375	2.00	1.50	1.00	2.00	1.625	1.875	1.875
2.25	2.375	1.875	2.625	2.25	1.625	1.50	2.00	2.00	1.50	2.00	1.875	2.00	1.50	1.00	2.00	2.00	2.00	1.50
2.75	3.60	2.00	2.625	1.875	1.75	3.00	2.25	2.00	1.50	2.00	1.875	1.50	2.25	2.00	1.50	3.00	2.00	1.50
2.00	3.00	1.50	3.125	1.50	1.60	1.50	2.25	2.00	1.50	2.00	1.50	2.25	2.00	1.50	2.50	2.00	2.00	1.375
2.00	2.50	2.00	3.00	1.50	1.875	2.50	2.50	2.00	2.00	1.875	1.375	2.375	2.375	1.50	2.00	1.75	1.50	2.00
2.00	2.00	1.875	2.50	1.75	1.75	2.50	2.25	2.25	2.25	2.25	2.125	2.25	2.375	2.00	1.625	2.75	2.00	1.50
1.375	2.00	1.50	1.50	1.875	2.00	2.00	2.00	2.375	2.25	2.25	2.25	1.625	1.75	1.75	2.50	1.75	1.75	1.375
1.375	2.25	1.375	1.50	1.50	1.50	2.00	2.50	1.625	1.75	2.50	1.60	1.375	2.00	1.50	2.00	1.75	1.50	1.50
2.00	1.75	2.00	1.625	1.50	2.00	2.00	2.00	2.25	2.50	2.125	2.25	1.50	2.125	1.50	2.50	2.25	3.00	3.00
1.625	1.875	1.50	1.50	1.375	1.60	2.00	2.50	2.375	1.25	1.375	2.00	1.50	1.875	2.50	2.25	3.00	1.50	2.00
1.875	2.50	1.60	2.125	1.375	1.50	2.00	2.00	1.75	1.50	2.375	1.75	2.00	2.25	1.25	2.00	2.25	2.25	1.75
2.00	2.875	1.50	2.00	2.25	1.25	3.00	2.125	2.125	1.50	2.50	2.00	1.375	2.375	2.00	2.00	2.125	2.125	2.00
1.875	3.00	2.00	2.125	1.50	1.375	2.50	2.00	1.625	1.50	1.625	2.375	1.625	2.125	1.50	1.50	1.875	2.00	1.625
2.00	2.75	1.625	2.50	1.75	1.125	2.00	2.50	1.00	1.625	2.00	1.50	2.00	2.50	1.375	1.625	2.00	1.625	2.00
Totals	102.625	117.00	92.500	100.125	83.25	84.50	121.375	107.00	97.875	84.25	109.75	76.50	105.625	107.25	80.25	100.25	94.125	86.25

	No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.		No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.		No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.	
		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.						
Recapitulation and reduction:																		
Highest	B'	3.125	1.2303	B'	3.125	1.2303	B'	3.50	1.3779	B'	2.50	0.9842	B'	3.00	1.1811	B'	3.00	1.1811
	B''	3.50	1.3779	B''	2.25	0.8858	B''	2.50	0.9842	B''	3.00	1.1811	B''	3.00	1.1811	B''	3.00	1.1811
	B'''	2.625	1.0334	B'''	2.25	0.8858	B'''	2.75	1.0826	B'''	2.00	0.7874	B'''	2.625	1.0334	B'''	3.00	1.1811
Highest		3.50	1.3779		3.125	1.2303		3.50	1.3779		3.00	1.1811		3.00	1.1811		3.00	1.1811
Lowest	B'	1.375	0.5413	B'	1.50	0.5905	B'	1.50	0.5905	B'	1.00	0.3937	B'	1.375	0.5413	B'	1.25	0.4921
	B''	1.625	0.6397	B''	1.25	0.4921	B''	1.50	0.5905	B''	1.625	0.6397	B''	1.00	0.3937	B''	1.375	0.5413
	B'''	1.125	0.4429	B'''	1.125	0.4429	B'''	1.00	0.3937	B'''	1.00	0.3937	B'''	0.875	0.3445	B'''	1.375	0.5413
Lowest		1.125	0.4429		1.125	0.4429		1.00	0.3937		1.00	0.3937		0.875	0.3445		1.25	0.4921
Average	B'	2.053	0.8082	B'	2.003	0.7865	B'	2.428	0.9559	B'	1.685	0.6333	B'	2.113	0.8318	B'	2.005	0.7893
	B''	2.34	0.9212	B''	1.665	0.6555	B''	2.140	0.8425	B''	2.19	0.8622	B''	2.145	0.8429	B''	1.882	0.7409
	B'''	1.85	0.7283	B'''	1.690	0.6658	B'''	1.958	0.7708	B'''	1.53	0.6023	B'''	1.605	0.6318	B'''	1.725	0.6791
Average		2.081	0.8192		1.786	0.7031		2.175	0.8562		1.801	0.7090		1.954	0.7692		1.870	0.7362
Measurements above average		59</																



TABLE IX.—Measurements of fineness of thoroughbred Merino wools, crossbred series, &c.—Continued.

Catalogue number of sample...	RAMS.															EWES.		
	843.			844.			845.			846.			847.			431.		
	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
2.00	2.125	2.00	1.50	1.50	2.00	2.25	1.875	1.60	1.60	2.00	1.25	2.00	2.00	1.75	2.50	2.00	2.60	
1.50	1.375	1.875	2.125	2.00	1.50	2.375	2.00	2.25	2.00	1.125	2.00	1.25	2.125	1.75	2.75	2.00	3.00	
1.75	2.00	2.00	2.125	1.625	1.60	1.75	2.125	2.375	1.25	1.875	1.50	2.25	1.875	1.625	2.00	1.875	2.00	
1.40	1.625	1.375	1.875	1.75	2.00	1.625	2.25	2.125	2.00	1.625	2.00	1.625	1.875	1.75	2.125	2.75	3.625	
1.875	2.00	1.75	2.00	2.00	2.00	2.25	1.50	1.75	2.00	1.875	1.50	2.25	1.50	2.00	3.00	3.375	2.00	
1.50	1.50	2.125	1.875	2.25	2.00	2.375	1.625	1.875	1.375	2.25	1.25	2.60	1.60	2.00	3.00	3.50	2.00	
1.625	1.50	1.625	2.375	1.625	1.875	2.00	2.00	1.75	2.125	2.00	1.625	2.375	1.625	2.25	2.75	3.00	1.025	
1.375	1.60	1.625	1.875	1.75	1.75	2.125	1.875	2.00	2.25	3.25	2.00	1.75	2.00	1.875	3.50	2.875	2.25	
1.375	1.25	1.875	2.00	2.25	2.00	1.75	2.25	1.50	2.50	2.00	1.625	1.875	1.75	1.60	2.625	2.00	2.50	
2.25	1.375	1.625	2.125	1.50	1.625	2.50	1.50	1.625	2.125	1.60	2.60	2.25	2.00	2.25	2.60	2.50	2.75	
1.875	1.50	1.50	1.60	2.375	1.75	2.025	1.50	2.25	1.60	1.625	1.60	2.60	1.25	2.375	3.00	2.00	1.875	
2.50	1.625	1.375	2.00	1.75	1.625	2.00	1.375	2.875	1.75	1.375	1.375	2.625	1.375	2.25	3.50	3.00	1.75	
2.75	1.75	1.625	2.125	2.00	2.75	2.375	1.625	1.75	1.50	1.60	1.875	2.25	1.50	2.60	2.50	2.00	1.625	
1.875	1.50	1.875	2.50	1.75	2.375	2.125	2.00	1.625	1.50	2.25	1.25	1.75	1.50	1.75	2.00	2.00	1.50	
1.375	1.75	1.625	1.875	1.50	1.60	1.625	2.00	1.625	1.75	1.00	2.375	1.625	2.00	2.125	3.25	2.25	2.25	
1.625	1.375	1.375	2.40	2.125	1.375	1.75	2.125	1.625	1.75	2.00	1.25	2.25	1.75	2.375	2.50	2.00	2.00	
1.50	1.50	1.50	2.50	2.60	1.25	2.375	2.00	1.75	2.00	1.50	2.25	2.00	1.375	1.75	2.00	2.00	2.375	
1.75	1.375	1.625	2.00	1.625	2.25	1.75	1.75	1.50	2.25	1.60	2.375	2.125	1.25	2.00	3.00	2.00	2.25	
2.125	1.25	1.75	2.00	1.75	2.375	2.125	1.875	2.25	1.50	2.875	1.50	2.125	2.00	1.875	2.25	2.375	2.25	
2.00	1.25	1.375	1.875	1.60	1.625	2.25	1.60	2.375	1.625	1.60	1.375	2.25	2.00	2.00	2.50	2.60	2.875	
2.25	1.375	1.625	2.00	2.00	1.375	2.375	1.75	2.00	1.60	2.00	1.75	1.875	2.25	2.25	2.50	2.375	2.00	
1.625	1.375	2.125	2.00	2.25	1.25	2.25	2.25	1.50	2.00	1.875	2.00	2.25	2.375	2.375	2.75	2.00	1.875	
2.125	1.25	2.125	1.875	1.75	1.625	2.00	2.50	1.75	1.60	1.60	2.25	2.00	1.50	2.25	2.25	2.25	1.75	
2.00	1.40	1.375	2.00	1.50	2.00	2.625	1.50	1.875	1.625	1.50	1.75	1.625	1.60	2.125	2.25	2.25	1.875	
2.00	1.375	2.00	1.75	1.50	1.75	2.25	2.125	1.75	1.875	2.25	1.50	1.75	1.625	2.00	2.25	2.25	2.375	
2.125	2.00	1.875	2.125	1.375	2.00	1.875	2.00	1.625	2.00	2.00	2.25	1.625	2.00	1.875	2.50	2.00	2.75	
2.025	1.60	1.375	2.375	2.25	1.375	1.75	2.125	2.00	1.60	1.60	2.125	2.25	1.50	2.00	3.50	2.50	2.875	
2.125	2.375	1.50	2.00	2.00	2.25	1.60	2.50	1.50	1.625	1.75	2.00	2.375	1.625	2.25	3.00	2.25	2.125	
1.625	1.50	1.375	1.875	1.75	2.125	2.00	2.00	1.25	1.75	2.25	1.625	2.25	2.00	2.125	3.00	2.25	1.625	
1.875	1.60	2.25	2.50	1.625	1.75	1.75	1.75	1.625	2.00	1.50	2.25	2.00	1.375	1.75	2.25	2.25	2.00	
1.75	1.75	1.75	2.125	2.00	1.875	2.00	1.75	1.75	2.125	2.00	2.00	2.375	2.00	1.875	2.60	2.60	1.625	
1.625	1.625	2.375	2.50	1.75	1.875	2.00	1.025	1.875	1.875	1.50	2.125	2.375	2.125	2.00	2.75	2.75	2.00	
2.125	2.00	2.60	2.00	1.625	3.00	2.125	1.60	2.125	2.00	1.75	1.875	1.875	2.00	2.125	3.375	2.00	1.875	
1.125	1.50	1.60	2.60	2.50	1.125	1.875	2.00	1.50	2.375	2.00	2.50	1.50	2.60	2.00	2.50	2.00	1.875	
1.625	1.375	1.625	1.875	1.50	1.50	2.00	1.60	2.125	1.875	1.75	1.75	2.25	1.75	2.50	2.00	2.50	2.00	
1.875	1.375	1.125	2.50	1.625	2.00	2.25	1.025	1.75	1.75	2.25	2.25	1.50	2.00	1.875	2.625	2.375	2.00	
1.875	1.75	1.375	2.125	1.60	2.00	2.625	1.75	1.875	1.75	1.875	2.50	2.25	1.75	1.75	2.50	2.00	2.375	
2.00	1.25	2.00	2.60	1.75	2.25	2.50	1.75	1.50	1.25	2.00	2.25	1.625	1.625	2.75	2.00	2.00	2.60	
1.75	1.50	2.50	2.125	1.75	2.00	2.25	2.50	1.375	2.00	2.50	1.75	1.75	2.00	2.00	3.00	3.00	2.75	
2.25	1.50	1.375	1.50	1.75	1.625	2.00	1.60	1.025	2.125	1.75	1.375	1.875	2.60	1.625	3.00	2.25	1.75	
2.125	2.375	2.875	1.875	1.50	1.75	2.00	1.75	1.75	2.00	1.75	1.625	2.00	1.625	2.25	2.625	3.00	1.60	
1.50	1.625	2.50	1.625	2.25	2.00	1.75	1.025	1.875	1.75	2.00	2.00	2.125	3.00	2.375	2.50	2.60	2.00	
1.625	2.125	1.625	2.00	2.375	1.375	1.875	1.025	2.00	2.125	2.50	1.50	1.75	2.60	2.00	2.375	2.00	2.00	
1.875	1.50	1.375	2.00	2.50	1.75	1.75	1.50	1.50	2.00	2.50	3.00	1.625	1.375	2.25	3.00	2.625	1.625	
2.00	1.50	1.375	1.875	2.50	2.25	2.625	2.00	1.625	2.25	1.25	2.50	2.125	2.125	2.50	2.00	1.50	1.50	
1.75	1.875	1.75	2.00	2.375	2.75	2.375	1.60	2.00	1.75	1.875	1.50	2.25	1.50	2.25	2.125	2.00	2.00	
1.60	2.00	2.25	1.60	1.75	1.50	3.00	1.75	1.75	2.00	2.00	1.625	2.375	1.60	2.375	2.00	3.25	2.25	
1.625	2.00	2.00	2.125	1.50	1.25	2.25	2.25	1.50	2.25	1.875	2.00	1.50	1.375	1.60	2.60	2.25	2.00	
1.75	1.75	2.375	2.50	2.00	1.875	2.00	2.00	2.00	1.60	2.25	2.125	2.375	1.60	1.75	3.125	2.75	2.25	
1.625	1.50	2.00	2.00	1.75	2.00	1.875	2.00	1.875	1.625	1.60	1.75	2.25	1.60	1.625	1.75	2.00	1.625	
Totals .....	92.875	80.125	80.375	103.00	01.875	01.375	106.50	02.250	90.50	00.125	95.875	00.125	101.625	87.875	101.75	130.875	119.50	106.375

	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.						
Recapitulation and reduction:																		
Highest .....	B'	2.75	1.0826	B'	2.50	0.9842	B'	3.00	1.1811	B'	2.50	0.9842	B'	2.625	1.0334	B'	3.50	1.3770
	B''	2.375	0.9350	B''	2.60	0.9842	B''	2.50	0.9842	B''	3.25	1.2705	B''	2.00	1.1811	B''	3.625	1.4271
	B'''	2.875	1.1318	B'''	3.00	1.1811	B'''	2.875	0.9350	B'''	3.00	1.1811	B'''	2.75	1.0826	B'''	3.00	1.1811
Highest .....		2.875	1.1318		3.00	1.1811		3.00	1.1811		3.25	1.2705		3.00	1.1811		3.625	1.4271
Lowest .....	B'	1.125	0.4429	B'	1.50	0.5905	B'	1.625	0.6397	B'	1.125	0.4429	B'	1.50	0.5905	B'	2.00	0.7874
	B''	1.25	0.4921	B''	1.375	0.5413	B''	1.375	0.5413	B''	1.375	0.5413	B''	1.25	0.4921	B''	1.875	0.7380
	B'''	1.125	0.4429	B'''	1.125	0.4429	B'''	1.25	0.4921	B'''	1.00	0.3937	B'''	1.50	0.5905	B'''	1.50	0.5905
Lowest .....		1.125	0.4429		1.125	0.4429		1.25	0.4921		1.00	0.3937		1.25	0.4921		1.50	0.5905
Average .....	B'	1.858	0.7314	B'	2.000	0.8110	B'	2.130	0.8385	B'	1.803	0.7098	B'	2.033	0.8003	B'	2.618	1.0307
	B''	1.602	0.6307	B''	1.837	0.7232	B''	1.815	0.7263	B''	1.917	0.7547	B''	1.757	0.6917	B''	2.329	0.9409
	B'''	1.788	0.7039	B'''	1.828	0.7196	B'''	1.810	0.7125	B'''	1.803	0.7098	B'''	2.036	0.8011	B'''	2.128	0.8377
Average .....		1.755	0.6909		1.908	0.7511		1.929	0.7594		1.841	0.7248		1.911	0.7641		2.378	0.9362
Measurements above average ..			65			70			75			78			85			65
Measurements below average ..			94			74			75			74			65			85







TABLE IX.—Measurements of fineness of thoroughbred Merino wools, crossbred series, &c.—Continued.

Catalogue number of sample...	EWES.																		
	873.			874.			875.			876.			877.			432.			
	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	
1.875	1.50	2.00	2.00	2.00	2.00	2.00	1.50	1.875	2.60	1.75	2.60	2.75	2.25	2.60	2.60	2.875	2.00	2.875	2.00
2.00	2.00	2.00	2.00	1.75	1.875	2.00	1.75	2.25	2.00	1.75	2.50	3.00	2.375	2.60	2.60	2.025	2.00	2.025	2.00
1.875	2.50	2.00	1.025	2.00	1.875	2.25	1.375	1.625	2.60	2.75	3.00	2.25	2.00	1.75	3.00	2.50	2.50	2.75	2.50
1.75	2.00	2.00	1.50	1.875	1.025	2.125	2.00	1.625	2.00	1.625	2.00	2.60	1.75	2.25	3.50	2.50	2.50	2.75	2.50
2.00	1.75	2.00	2.00	1.75	2.00	2.125	1.375	1.625	1.875	1.75	2.875	2.50	2.00	1.875	8.00	2.50	2.50	2.50	2.50
2.00	1.875	1.50	1.25	2.125	2.00	2.50	2.125	2.00	2.60	2.00	2.125	1.875	2.00	1.75	8.00	2.50	2.50	2.75	2.50
2.125	2.025	1.50	1.025	2.125	1.025	2.50	2.50	1.75	2.125	1.75	3.00	2.25	1.50	1.50	2.60	8.00	2.00	8.00	2.00
1.875	1.75	1.875	1.875	1.375	1.625	2.00	2.125	2.00	2.25	2.00	2.125	2.125	1.75	2.00	2.50	8.00	2.00	8.00	2.00
1.50	1.625	1.875	3.00	2.25	1.75	2.00	1.50	1.50	2.75	1.60	2.25	2.875	2.00	1.625	3.00	2.00	2.00	2.00	2.00
2.025	2.00	2.125	2.00	1.625	1.50	2.75	2.00	1.625	2.875	1.50	2.00	1.875	1.50	1.875	2.00	8.00	2.00	8.00	2.00
2.25	1.75	2.375	2.00	1.50	2.125	2.00	1.50	1.875	2.25	2.00	2.025	2.50	1.875	2.375	2.00	3.00	2.50	3.00	2.50
2.125	2.00	2.50	1.875	2.125	1.025	2.00	1.625	2.25	1.625	1.875	2.375	2.00	1.875	1.75	2.00	2.00	2.00	2.00	2.00
2.375	2.25	2.50	1.50	1.50	1.875	2.50	1.375	2.80	2.50	2.625	2.50	2.50	2.00	2.00	2.925	2.50	2.50	2.50	2.50
2.375	1.025	2.00	2.00	1.50	1.75	2.75	1.50	2.60	1.50	2.00	1.625	2.75	2.125	1.60	2.50	2.50	2.25	2.50	2.25
2.50	1.875	1.875	2.50	2.025	2.00	2.50	1.50	1.375	2.00	1.75	3.00	2.60	1.875	2.00	8.00	2.00	8.00	2.00	2.00
2.375	2.60	2.00	1.375	1.50	1.875	2.125	1.75	1.50	2.375	1.875	1.50	3.00	1.625	2.50	2.50	8.00	2.00	8.00	2.00
2.25	2.375	1.75	2.25	2.50	1.625	2.00	1.50	1.60	3.00	1.50	2.125	2.00	2.00	2.50	2.00	2.00	2.50	2.00	2.50
2.00	1.625	1.875	2.75	2.00	2.00	1.875	1.75	1.875	2.50	2.00	2.00	2.50	1.75	1.875	2.00	1.25	2.50	2.00	2.50
2.375	2.00	3.00	1.625	1.625	1.625	2.00	1.50	1.50	2.00	2.00	2.00	2.00	1.75	2.00	2.00	8.00	2.00	3.125	2.00
1.875	2.25	2.125	1.625	1.75	2.00	2.50	1.875	1.50	2.125	2.00	2.00	2.00	2.00	1.625	2.25	2.00	2.00	2.00	2.00
2.125	1.875	2.00	3.125	2.025	1.625	2.00	2.00	1.50	2.25	2.00	1.75	2.00	2.50	1.50	3.00	3.00	2.25	2.50	2.25
2.00	2.125	1.60	1.875	1.75	1.625	2.025	1.50	1.50	2.75	1.625	1.875	2.00	2.125	1.875	2.50	2.25	2.50	2.50	2.50
1.50	2.00	2.125	2.00	2.00	1.75	1.50	2.00	1.25	2.50	1.50	2.375	2.50	1.875	2.50	2.50	3.00	2.00	2.00	2.00
2.00	2.60	2.25	2.375	1.50	2.125	2.025	1.60	1.625	2.375	1.50	2.125	2.60	2.25	1.50	3.00	2.25	2.00	2.00	2.00
1.625	2.00	3.00	1.625	1.375	1.50	2.00	1.875	2.60	2.875	2.00	2.00	2.00	2.00	2.25	8.00	3.00	3.00	3.00	3.00
2.00	2.00	2.125	2.125	1.75	2.00	2.50	1.75	1.25	1.75	2.50	2.00	2.60	2.00	2.00	2.60	8.00	2.00	8.00	2.00
2.75	2.125	1.60	1.50	1.60	1.625	1.875	1.75	1.625	2.125	2.25	2.50	2.00	2.50	2.275	2.00	3.00	2.00	2.00	2.00
2.375	1.50	2.875	1.025	1.50	1.75	1.875	1.50	1.875	2.125	2.50	2.60	2.00	2.025	1.625	8.00	2.00	2.00	2.00	2.00
2.25	2.00	3.00	2.75	1.625	2.00	2.00	2.00	1.50	1.875	1.625	2.60	2.50	1.875	2.00	2.00	2.50	2.00	2.50	2.00
1.875	2.25	2.00	2.125	1.50	2.00	1.625	1.25	1.50	1.75	2.375	2.60	2.50	2.75	1.50	2.00	2.50	2.00	2.50	2.00
3.375	1.75	2.25	2.00	1.60	2.00	2.50	1.75	2.00	2.00	2.25	2.00	2.60	1.875	2.125	1.75	2.75	2.00	2.00	2.00
2.50	1.625	2.125	2.00	1.375	1.875	2.00	1.75	1.75	1.625	2.125	2.125	2.875	2.00	2.60	2.50	2.00	2.00	2.00	2.00
1.60	2.875	2.00	2.50	2.00	2.00	2.50	2.00	1.75	2.75	1.875	1.875	2.50	2.50	1.50	2.00	2.375	2.00	2.60	2.60
2.125	1.625	2.00	1.75	1.50	1.625	2.00	1.50	1.625	2.25	1.75	2.00	2.00	2.00	1.875	3.00	2.00	3.00	3.00	3.00
2.00	1.75	1.75	2.00	1.50	2.00	2.50	1.75	1.60	1.60	1.75	1.875	3.00	1.60	1.75	1.75	2.00	2.00	2.00	2.00
2.50	1.50	2.375	1.75	1.75	1.625	2.125	1.75	1.75	2.00	2.50	2.50	1.625	2.25	1.60	2.60	3.25	2.75	2.75	2.75
2.50	2.00	2.60	2.00	1.625	1.75	1.875	1.75	2.00	2.00	1.75	2.60	2.60	1.875	2.125	2.375	2.50	3.00	3.00	3.00
2.50	1.75	1.60	1.625	1.875	1.75	2.50	1.60	1.875	2.00	2.00	2.00	2.625	2.50	1.75	2.875	2.50	1.75	2.875	2.50
2.00	2.125	1.625	1.75	1.75	1.50	1.75	2.00	1.875	2.00	2.25	1.625	2.375	2.50	2.00	3.00	2.50	2.50	2.50	2.50
2.00	2.00	1.875	2.00	1.00	1.75	2.00	2.00	1.50	2.125	1.375	3.00	2.125	2.00	2.75	2.00	2.50	1.75	2.00	1.75
2.00	2.25	1.75	2.50	1.50	2.00	2.75	1.60	2.00	1.50	1.625	1.875	2.00	1.875	1.60	3.25	2.00	2.75	2.00	2.75
2.50	1.625	1.625	1.875	1.625	1.50	2.125	1.50	1.60	2.25	1.625	2.25	2.50	1.875	1.625	2.375	3.00	2.00	2.75	2.75
1.50	2.00	1.50	1.875	1.875	1.75	1.875	1.625	1.50	2.00	1.375	2.00	2.875	2.50	1.875	3.00	3.00	2.00	2.125	2.125
2.00	1.625	2.125	1.625	2.00	2.00	1.75	2.00	1.75	1.625	2.00	2.25	2.00	2.60	2.25	3.625	3.00	1.00	1.75	1.75
2.75	2.50	2.125	2.00	1.50	1.625	1.75	1.75	1.625	1.875	2.00	1.875	1.75	2.00	1.80	2.00	2.25	2.00	2.00	2.00
2.125	2.00	1.625	1.875	1.875	2.00	2.00	2.00	1.875	2.25	2.00	2.75	1.625	2.125	1.875	2.50	2.50	2.50	2.125	2.125
1.875	1.75	1.50	1.875	2.00	1.60	1.625	2.00	1.60	2.00	2.125	2.125	1.60	1.875	2.00	3.25	2.50	2.50	2.50	2.50
1.625	2.25	2.50	2.00	1.875	1.50	2.00	2.00	1.75	1.625	2.125	1.60	2.25	3.50	1.75	3.625	2.50	2.50	2.50	2.50
2.375	1.625	1.875	1.625	2.00	1.75	2.00	1.50	1.75	2.50	2.00	2.00	2.00	2.125	2.00	2.60	2.75	2.00	2.60	2.60
2.00	2.125	1.75	2.375	1.625	2.00	1.875	1.375	2.00	2.00	2.875	2.60	2.00	1.75	1.375	2.75	2.00	2.00	2.60	3.50
Totals	106.375	99.00	100.625	98.80	88.00	80.375	107.625	85.50	85.00	107.00	98.125	111.625	119.625	101.375	95.00	128.50	110.125	123.125	123.125

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:																		
Highest	B'	3.00	1.1811	B'	3.00	1.1811	B'	2.75	1.0826	B'	3.00	1.1811	B'	3.50	1.3770	B'	3.625	1.4271
	B''	2.625	1.0333	B''	2.625	1.0333	B''	2.50	0.9842	B''	2.75	1.0826	B''	2.75	1.0826	B''	3.50	1.3770
	B'''	3.00	1.1811	B'''	2.125	0.8360	B'''	2.50	0.9842	B'''	3.00	1.1811	B'''	2.75	1.0826	B'''	3.50	1.3770
Highest		3.00	1.1811		3.00	1.1811		2.75	1.0826		3.00	1.1811		3.50	1.3770		3.625	1.4271
Lowest	B'	1.50	0.5905	B'	1.25	0.4921	B'	1.60	0.5005	B'	1.50	0.5905	B'	1.50	0.5906	B'	1.75	0.6889
	B''	1.50	0.5905	B''	1.00	0.3937	B''	1.25	0.4921	B''	1.875	0.5413	B''	1.375	0.5413	B''	1.25	0.4921
	B'''	1.875	0.5413	B'''	1.875	0.5413	B'''	1.25	0.4921	B'''	1.60	0.5005	B'''	1.375	0.5413	B'''	1.75	0.6889
Lowest		1.875	0.5413		1.00	0.3937		1.25	0.4921		1.875	0.5413		1.375	0.5413		1.25	0.4921
Average	B'	2.128	0.8377	B'	1.90	0.7710	B'	2.133	0.8476	B'	2.14	0.8425	B'	2.393	0.9421	B'	2.57	1.0118
	B''	1.98	0.7705	B''	1.76	0.6929	B''	1.71	0.6732	B''	1.963	0.7728	B''	2.028	0.7084	B''	2.203	0.8673
	B'''	2.013	0.7															



TABLE IX.—Measurements of fineness of thoroughbred Merino wools, crossbred series, &c.—Continued.

Catalogue number of sample...	EWES.																	
	858.			859.			860.			861.			862.			863.		
	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
1.50	2.75	2.50	3.50	3.75	3.25	1.625	1.75	2.50	2.50	2.125	2.50	2.00	2.25	3.375	2.875	2.75	2.875	
2.25	2.125	2.125	2.25	1.875	2.125	2.125	2.00	2.00	3.50	2.25	2.00	1.875	3.00	2.00	1.50	2.875	3.50	
3.125	3.125	2.50	2.50	2.00	2.875	2.00	1.75	2.375	2.50	2.625	2.875	3.125	3.00	2.375	2.50	2.50	3.125	
1.625	1.875	2.025	2.375	2.25	2.625	2.125	2.00	1.625	3.00	1.875	1.875	3.50	3.00	2.50	2.625	3.125	2.50	
2.50	3.00	1.875	4.00	2.25	2.50	1.875	1.625	2.00	2.375	1.50	2.00	3.00	2.50	2.375	3.50	2.875	2.00	
1.75	2.00	2.50	3.75	3.125	2.375	3.00	2.50	1.875	2.00	2.00	2.50	3.50	3.00	2.375	3.50	2.50	2.125	
2.25	2.50	2.50	1.875	2.375	2.50	2.50	1.50	1.125	2.375	1.75	2.25	2.375	2.25	2.625	3.75	3.00	2.00	
3.525	2.50	2.875	2.50	3.75	2.375	2.00	1.75	1.875	1.50	2.00	2.50	2.75	2.25	2.625	2.50	3.50	2.50	
2.50	2.50	1.875	2.625	1.625	2.625	2.125	2.00	2.00	2.625	2.25	2.375	3.50	2.50	2.50	2.625	2.00	3.25	
2.80	2.125	2.50	3.00	1.625	2.00	1.875	2.50	2.375	2.00	2.125	2.625	2.50	2.50	2.125	2.375	4.00	3.00	
2.75	2.50	2.75	2.00	2.50	2.625	2.50	1.60	2.50	2.50	2.50	2.50	3.00	2.625	2.00	2.50	2.50	2.50	
2.875	2.25	2.75	3.75	1.875	2.125	2.625	1.875	2.125	2.625	2.375	2.50	2.25	2.00	2.375	2.50	2.50	2.50	
2.50	3.125	3.125	2.875	2.25	2.375	2.375	2.00	2.50	2.125	3.00	2.875	2.875	2.375	2.00	2.625	2.375	2.625	
2.375	2.375	2.875	2.25	2.25	2.50	2.375	1.75	2.625	3.50	2.25	2.375	2.375	2.50	2.875	3.125	3.875	2.875	
1.875	2.00	2.375	3.375	3.25	2.00	2.00	2.00	1.875	2.50	2.25	2.125	2.50	3.00	2.50	3.25	2.125	2.00	
2.25	2.375	2.50	3.625	2.125	1.875	1.875	1.75	1.875	2.875	2.375	2.375	3.375	3.50	2.50	3.00	2.50	1.675	
2.50	2.375	1.875	1.875	2.75	2.50	1.875	1.50	1.50	3.75	2.50	3.00	2.50	2.75	2.375	2.50	3.00	2.00	
2.60	2.125	2.875	2.00	2.125	2.00	2.00	2.125	2.00	3.75	1.75	2.50	2.50	2.875	2.50	2.125	2.375	2.75	
3.00	3.25	2.50	2.125	3.00	2.25	1.875	2.25	2.875	2.50	2.625	2.375	3.00	2.125	2.00	2.875	2.50	2.375	
2.50	3.00	1.875	2.025	2.375	2.25	1.875	2.25	2.375	3.00	2.375	2.375	2.625	3.00	3.00	3.50	2.875	2.50	
2.50	2.00	2.50	2.375	2.75	2.25	1.625	2.00	2.50	3.00	2.50	2.625	1.875	2.50	2.00	2.375	2.25	2.125	
2.875	3.875	2.50	2.50	1.875	2.00	1.875	2.00	2.50	3.25	2.375	1.875	2.875	3.375	2.50	2.00	2.00	2.875	
3.00	2.50	2.50	2.125	2.375	2.00	1.875	2.00	2.00	2.125	1.50	2.375	2.75	2.625	3.375	2.50	2.125	2.125	
2.375	2.625	2.125	2.25	3.00	3.50	2.50	1.75	1.875	2.50	1.75	2.375	1.375	2.00	2.875	3.00	2.50	2.50	
2.75	3.50	2.375	2.50	3.00	2.25	1.50	2.00	2.125	3.75	2.875	2.50	2.75	1.875	2.50	3.50	3.25	2.125	
2.60	3.00	2.375	2.75	2.50	2.00	2.375	1.75	2.125	2.625	2.50	1.875	2.00	2.625	2.125	2.25	1.875	2.875	
3.125	3.00	2.125	2.75	2.25	3.00	2.50	1.625	2.375	3.25	1.75	2.675	2.25	2.00	2.375	2.50	2.75	2.875	
2.25	2.50	2.50	2.50	3.625	3.00	1.625	2.00	2.575	2.50	1.625	2.375	2.00	2.50	2.50	2.50	2.375	2.875	
2.875	3.25	2.50	2.375	2.00	2.00	1.625	2.00	2.375	3.125	1.25	2.50	2.50	1.75	2.375	2.75	2.00	3.00	
2.375	1.625	2.25	2.00	2.875	2.25	1.75	1.75	1.875	2.50	1.875	2.50	3.00	2.50	1.875	3.50	4.375	2.125	
3.00	2.375	3.09	2.125	3.50	2.125	2.00	2.125	2.125	2.50	2.125	2.875	2.375	2.375	3.50	2.25	2.50	2.375	
3.625	3.00	2.375	8.00	2.25	3.00	2.125	1.875	2.125	2.375	2.50	2.75	2.375	2.375	2.375	2.875	2.125	2.50	
3.50	2.50	2.125	3.625	3.625	3.75	2.375	2.50	2.00	2.60	2.00	2.625	2.00	1.50	3.00	2.75	2.375	2.125	
2.875	2.50	2.025	3.25	2.25	2.50	2.50	1.75	1.75	2.125	2.375	2.625	2.125	2.50	2.50	2.875	2.00	1.625	
2.50	2.00	3.00	2.25	2.50	2.50	1.75	1.75	1.875	2.50	1.875	2.375	2.25	2.125	2.375	2.25	2.375	2.625	
2.50	2.75	3.00	2.375	2.625	3.00	2.00	2.00	2.00	2.875	1.625	2.25	2.00	2.50	2.00	3.00	3.00	2.125	
3.00	2.625	3.625	2.625	3.125	2.25	2.25	1.875	1.625	2.75	2.125	1.50	2.00	1.625	2.125	3.50	3.50	3.00	
2.50	2.125	2.875	2.50	2.75	2.25	1.75	2.00	2.00	2.625	2.00	2.00	3.50	2.50	1.875	3.75	2.625	1.875	
3.00	2.60	2.125	2.25	2.00	2.50	1.875	1.375	2.25	3.25	2.125	2.125	3.50	2.375	1.75	2.875	2.75	3.75	
1.625	3.00	2.125	2.75	2.50	2.75	1.875	2.00	2.00	2.50	1.75	2.125	2.50	2.50	2.75	3.50	3.125	2.25	
3.00	2.50	2.375	2.875	2.50	2.00	2.00	1.75	1.75	2.625	1.625	2.00	1.50	2.375	1.875	3.25	2.625	2.875	
2.50	2.50	2.50	2.50	2.25	1.875	2.25	2.60	2.125	1.60	3.50	2.125	2.00	2.50	1.50	2.875	3.50	2.50	
3.625	1.50	2.00	2.50	1.625	2.75	1.75	1.50	2.00	3.00	1.75	2.875	3.50	2.375	2.375	3.125	3.00	2.00	
2.50	2.50	2.50	2.50	3.00	2.50	1.125	1.625	1.625	2.50	2.25	2.875	3.375	2.00	2.50	2.375	2.125	2.50	
3.00	2.50	2.50	2.625	3.25	3.00	2.00	1.50	2.00	2.875	2.60	2.375	2.875	3.00	2.50	4.50	3.00	2.25	
2.50	2.50	2.50	2.125	2.50	2.75	2.125	1.375	1.60	2.125	2.00	2.75	2.375	2.75	1.875	4.00	3.50	2.375	
3.25	3.50	2.875	2.375	2.75	2.50	3.00	2.00	1.50	2.375	2.375	2.375	2.50	2.50	1.875	3.25	3.125	2.875	
2.875	3.00	3.50	2.375	3.00	1.875	2.50	1.50	1.875	2.75	3.00	2.375	2.875	2.50	2.625	2.125	3.25	2.50	
2.75	3.125	2.50	2.00	2.125	2.50	2.625	1.75	1.50	2.125	1.75	3.375	2.75	2.625	2.50	3.00	2.00	2.875	
3.00	3.60	2.875	1.875	2.50	3.50	2.875	2.00	1.75	2.25	2.125	2.125	2.00	2.50	1.125	2.875	3.50	3.00	
Totals.....	131.50	130.250	125.625	129.00	126.625	124.25	104.375	94.25	102.50	133.00	107.375	120.75	127.625	121.625	117.125	141.00	138.00	124.125

Actual measurement in centimillimeters.	858.			859.			860.			861.			862.			863.		
	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:																		
Highest.....	B' 3.625 B'' 3.50 B''' 3.625	1.4271 1.3779 1.4271	B' 4.00 B'' 3.75 B''' 3.75	1.5748 1.4763 1.4763	B' 3.00 B'' 2.50 B''' 2.875	1.1811 0.9842 1.1318	B' 3.75 B'' 3.00 B''' 3.375	1.4763 1.1811 1.3287	B' 3.50 B'' 3.375 B''' 3.50	1.3779 1.3267 1.3779	B' 4.00 B'' 4.375 B''' 3.75	1.5748 1.7224 1.4768						
Highest.....	3.625	1.4271	4.00	1.5748	3.00	1.1811	3.75	1.4763	3.50	1.3779	4.375	1.7224						
Lowest.....	B' 1.50 B'' 1.50 B''' 1.875	0.5905 0.5905 0.7380	B' 1.875 B'' 1.625 B''' 1.875	0.7380 0.6397 0.7380	B' 1.125 B'' 1.375 B''' 1.50	0.4429 0.5413 0.5905	B' 1.50 B'' 1.25 B''' 1.50	0.5905 0.4921 0.5905	B' 1.375 B'' 1.50 B''' 1.125	0.5413 0.4429 0.4429	B' 1.50 B'' 2.00 B''' 1.625	0.5905 0.7874 0.6397						
Lowest.....	1.50	0.5905	1.625	0.6397	1.125	0.4429	1.25	0.4921	1.125	0.4429	1.50	0.5905						
Average.....	B' 2.630 B'' 2.605 B''' 2.513	1.0954 1.0255 0.9893	B' 2.58 B'' 2.533 B''' 2.485	1.0157 0.9972 0.9783	B' 2.088 B'' 1.885 B''' 2.05	0.8220 0.7421 0.8070	B' 2.660 B'' 2.148 B''' 2.415	1.0472 0.8456 0.9507	B' 2.553 B'' 2.433 B''' 2.342	1.0051 0.9378 0.9220	B' 2.820 B'' 2.760 B''' 2.482	1.1102 1.0666 0.8984						
Average.....	2.582	1.0165	2.532	0.9963	2.097	0.7901	2.407	0.9476	2.44	0.9606	2.687	1.0578						
Measurements above average.....	53		56		52		70		81		74							
Measurements below average.....	02		04		98		80		69		70							



INTERNATIONAL EXHIBITION OF SHEEP AND WOOL



TABLE IX.—Measurements of fineness of thoroughbred Merino wools, crossbred series, &c. Continued.

Catalogue number of sample...	EWES.												RAMS.					
	861.			865.			866.			867.			436.			818.		
	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
2.625	1.875	2.75	1.875	1.875	2.00	2.00	2.25	1.75	1.875	3.25	2.50	3.00	3.00	3.25	4.00	2.25	1.75	2.125
2.50	3.00	1.875	2.50	3.00	2.125	2.50	2.50	3.00	2.00	2.00	3.00	2.50	4.50	3.625	2.125	1.625	2.25	
2.00	3.00	2.125	1.875	2.00	1.625	2.75	1.625	2.00	2.125	4.00	2.00	2.50	4.875	4.00	1.875	1.50	2.875	
2.625	2.875	3.25	1.875	1.875	1.875	2.625	2.125	2.00	2.25	2.00	3.00	3.50	4.00	4.00	2.125	2.00	1.875	
2.375	2.375	1.875	2.00	2.00	1.60	1.875	2.00	3.375	2.50	2.00	2.25	4.00	4.125	3.25	2.25	1.875	2.00	
1.625	2.125	2.25	2.875	2.375	1.875	2.00	1.60	2.50	2.00	2.875	2.50	2.60	3.50	3.875	1.625	1.50	1.75	
2.50	2.625	2.00	2.00	2.25	1.875	1.625	1.875	2.75	2.375	2.00	2.50	3.50	4.00	4.00	1.875	2.25	1.625	
2.00	2.00	2.00	1.875	1.875	2.25	2.50	3.25	2.375	2.00	2.00	2.50	3.50	3.625	3.25	2.25	2.00	2.125	
1.625	2.50	2.025	2.00	1.625	2.50	1.875	2.00	2.60	2.125	2.25	2.875	3.50	3.50	2.00	2.00	2.375	2.00	
2.50	2.00	2.625	1.875	1.875	1.75	2.125	3.25	3.00	4.00	2.50	2.25	2.25	3.25	4.00	2.125	1.875	1.75	
2.00	2.625	1.875	2.00	1.50	1.625	2.375	3.00	2.875	2.025	3.00	3.125	2.50	3.375	3.00	2.50	1.75	1.875	
2.375	2.875	2.375	1.875	1.625	2.50	2.50	2.50	3.25	1.60	2.25	1.875	4.625	3.375	4.00	2.25	2.00	2.00	
2.50	2.125	1.50	1.875	1.50	1.75	2.00	3.25	2.125	2.375	2.50	2.375	5.00	3.50	3.50	2.375	2.125	1.875	
2.00	2.50	3.00	1.625	1.625	2.375	1.50	2.60	2.00	2.025	2.00	2.625	3.00	3.75	4.375	1.75	2.25	2.125	
1.875	2.50	2.125	2.00	2.25	1.75	2.625	2.60	2.375	1.625	2.50	1.875	2.75	2.25	4.00	1.875	2.50	2.00	
2.375	1.625	2.375	2.00	2.25	1.75	2.00	1.875	3.00	1.875	3.50	3.25	3.50	3.00	3.00	2.00	2.00	1.75	
2.025	2.125	2.375	2.50	1.875	1.875	3.60	2.50	2.00	2.875	2.00	2.00	4.00	4.00	4.00	2.00	2.00	1.875	
2.125	1.875	1.875	2.125	2.00	2.00	4.125	2.50	2.00	2.375	3.00	3.00	3.50	4.50	3.125	2.125	2.00	2.25	
3.00	2.125	2.375	1.625	1.75	1.875	3.00	2.125	2.25	2.375	1.75	2.50	3.75	4.60	3.50	2.125	1.75	2.00	
1.875	2.875	2.625	1.875	1.875	2.50	2.125	2.75	2.25	2.25	2.00	1.875	4.00	3.75	3.50	1.75	1.50	1.50	
2.50	2.25	3.625	2.50	1.50	2.125	2.125	2.25	2.00	2.875	2.125	2.50	4.25	4.00	3.25	1.875	1.50	1.75	
2.00	2.125	3.25	2.00	1.50	2.25	2.50	2.50	2.375	3.25	2.60	1.875	4.50	1.75	3.375	2.25	2.00	2.00	
2.625	1.50	2.125	2.375	1.625	1.60	2.25	2.625	2.75	2.50	3.00	2.375	5.00	4.00	4.00	2.25	1.875	2.125	
2.50	2.50	2.00	1.875	2.00	1.875	2.625	2.00	4.00	1.875	2.50	2.60	4.00	4.00	5.00	2.125	1.875	2.25	
2.125	2.125	2.875	2.00	2.00	1.875	2.75	3.75	2.00	2.50	3.50	2.125	3.75	4.75	4.125	2.00	1.50	1.50	
2.00	1.625	2.125	1.875	1.625	1.875	2.50	3.25	3.75	3.00	2.25	2.00	3.50	3.50	3.375	1.75	1.50	1.25	
2.125	2.25	2.875	1.875	1.75	1.50	2.00	2.50	3.00	3.00	3.00	2.75	3.00	4.00	4.125	1.875	1.50	2.50	
3.00	2.00	2.50	2.50	1.875	1.75	1.75	2.25	2.60	2.375	2.50	2.125	4.75	3.50	4.25	2.25	1.625	1.875	
3.50	2.875	2.75	1.875	1.75	1.50	3.625	2.00	2.875	2.50	2.875	2.75	3.50	3.25	5.00	2.125	2.00	2.00	
2.625	2.00	1.875	1.875	2.00	1.625	3.00	2.625	2.125	2.125	1.875	2.75	3.75	3.25	3.375	2.25	2.50	2.25	
2.50	2.625	2.00	1.75	2.00	2.00	2.50	3.00	2.875	2.50	2.125	3.125	2.50	3.00	4.00	1.875	1.875	1.875	
2.50	1.875	1.875	1.875	1.50	1.60	2.50	2.50	3.375	2.50	2.625	2.00	2.50	3.50	4.00	1.625	2.00	1.75	
2.60	2.375	2.75	1.875	1.625	1.875	3.125	2.00	2.25	1.875	2.00	1.875	3.50	2.25	3.00	1.75	1.75	1.875	
2.125	3.00	2.50	1.875	1.875	2.00	3.125	3.125	2.125	2.125	3.50	2.375	2.00	4.00	3.50	1.75	1.75	1.25	
3.50	2.125	2.125	1.50	2.75	2.375	3.75	2.875	2.125	2.50	2.00	2.125	3.00	4.50	3.75	1.875	2.00	2.00	
2.375	2.375	2.375	1.625	2.00	2.00	2.375	3.00	2.50	3.375	2.75	3.00	4.50	4.00	2.50	2.00	2.125	1.75	
1.25	2.50	2.625	1.625	2.125	2.00	2.625	3.00	2.875	3.00	2.50	2.75	4.375	3.75	2.50	2.25	1.875	1.375	
2.625	2.625	1.875	1.75	1.75	1.875	2.50	2.75	2.625	2.50	2.125	2.875	3.875	3.75	4.00	2.375	1.625	2.00	
2.50	2.75	2.375	1.75	2.00	1.625	1.875	2.00	2.125	3.25	2.50	3.00	5.00	4.375	2.00	2.00	1.50	2.125	
1.875	2.25	1.875	1.875	2.00	1.625	1.875	3.00	2.25	2.25	2.50	2.125	4.60	3.625	3.625	1.875	2.00	1.75	
2.375	2.125	2.875	2.00	1.875	1.75	1.75	1.875	2.00	1.875	2.75	1.75	2.875	3.75	4.00	2.25	1.375	2.25	
2.875	2.25	2.00	1.875	1.75	2.125	2.375	2.00	2.625	2.00	3.25	2.75	3.50	4.00	2.50	2.25	1.025	1.50	
2.875	2.25	2.00	2.125	1.75	2.125	2.875	2.25	2.625	2.625	2.875	3.00	3.25	3.75	4.00	2.75	1.625	1.625	
2.375	2.00	1.75	1.50	2.00	2.00	2.375	3.50	1.625	2.75	2.025	3.25	3.75	4.00	3.50	2.00	2.00	1.60	
2.00	2.00	2.25	2.125	3.00	1.625	1.625	2.875	2.00	3.00	2.25	2.375	4.00	3.00	3.125	1.75	1.50	2.00	
2.125	2.625	2.50	1.875	1.625	1.875	1.75	1.75	2.375	3.50	3.50	2.00	3.50	3.50	3.375	2.125	1.875	2.00	
2.375	3.00	2.50	1.50	2.125	1.625	2.00	2.875	2.875	2.75	1.75	2.875	3.625	4.50	2.625	2.00	2.00	1.875	
2.125	1.875	3.00	2.875	1.875	2.00	2.125	2.875	2.875	2.625	2.00	2.50	4.00	4.00	3.50	1.75	1.875	1.75	
2.60	2.25	2.125	1.875	1.625	1.875	2.50	1.625	1.875	2.50	2.50	2.00	3.875	4.50	3.50	1.875	1.50	2.75	
2.375	1.60	2.50	1.625	1.875	2.125	2.375	1.75	3.375	1.60	2.60	2.625	2.50	3.50	4.50	1.375	1.625	2.00	
Totals	118.375	119.25	118.375	96.125	95.125	94.875	119.500	126.50	126.500	127.750	124.875	122.875	178.375	185.625	176.875	101.50	92.00	94.125

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.		No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.		No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.	
		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.		In centimillimeters.	In thousandths of inch.						
Highest	B'	3.50	1.3770	B'	2.50	0.9842	B'	4.125	1.6240	B'	4.00	1.5748	B'	5.00	1.9685	B'	2.75	1.0826
	B''	3.875	1.6255	B''	3.00	1.1811	B''	3.50	1.3770	B''	4.00	1.5748	B''	4.75	1.8700	B''	2.50	0.9842
	B'''	3.625	1.4271	B'''	2.50	0.9842	B'''	4.00	1.5748	B'''	3.25	1.2795	B'''	5.00	1.9685	B'''	2.50	1.0826
Highest		3.875	1.5255		3.00	1.1811		4.125	1.6240		4.00	1.5748		5.00	1.9685		2.75	1.0826
Lowest	B'	1.25	0.4921	B'	1.50	0.5905	B'	1.50	0.5905	B'	1.625	0.6397	B'	2.00	0.7874	B'	1.375	0.5413
	B''	1.50	0.5905	B''	1.00	0.3937	B''	1.50	0.5905	B''	1.75	0.6880	B''	1.75	0.6880	B''	1.375	0.5413
	B'''	1.50	0.5905	B'''	1.50	0.5905	B'''	1.625	0.6397	B'''	1.875	0.7380	B'''	2.00	0.7874	B'''	1.25	0.4921
Lowest		1.25	0.4921		1.50	0.5905		1.50	0.5905		1.625	0.6397		1.75	0.6880		1.25	0.4921
Average	B'	2.367	0.9318	B'	1.922	0.7566	B'	2.390	0.9409	B'	2.555	1.0059	B'	3.568	1.4017	B'	2.03	0.7992
	B''	2.385	0.9389	B''	1.903	0.7492	B''	2.53	0.9960	B''	2.498	0.9534	B''	3.713	1.4618	B''	1.84	0.7244
	B'''	2.367	0.9318	B'''	1.897	0.7468	B'''	2.53	0.9960	B'''	2.458	0.9677	B'''	3.537	1.3925	B'''	1.883	0.7413
Average		2.373	0.9342		1.907	0.7507		2.48	0.9763		2.503	0.9854		3.60	1.4015		1.905	0.7499
Measurements above average		80			58			74			54			77			77	
Measurements below average		70			92			70			90			73			73	



TABLE IX.—Measurements of fineness of thoroughbred Merino wools, crossbred series, &c.—Continued.

Catalogue number of sample...	RAMS.																	
	819.			820.			821.			822.			823.			824.		
	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
2.375	3.00	1.625	2.50	1.50	1.875	2.50	4.00	4.00	2.00	2.875	2.00	2.75	1.75	2.00	1.875	2.25	1.875	
2.75	2.00	1.375	2.75	2.875	1.50	2.75	2.50	2.25	2.25	2.50	2.50	1.875	2.50	2.00	2.00	1.75	2.125	
1.75	1.875	1.50	3.75	2.25	1.625	3.00	2.00	1.375	3.50	2.25	2.25	3.00	2.00	2.125	2.00	1.875	2.625	
1.625	2.00	1.50	2.50	2.125	1.75	3.00	2.00	2.50	1.875	2.00	1.875	2.25	2.25	2.25	2.00	2.00	1.625	
1.625	1.75	1.625	2.25	2.00	1.50	3.125	1.625	3.50	2.00	2.25	2.375	2.25	2.375	1.875	1.875	1.375	2.50	
2.00	1.875	1.75	2.875	1.875	3.50	3.25	3.75	2.00	1.875	2.50	1.625	1.375	1.875	2.125	1.75	2.00	1.625	
2.125	2.125	2.00	1.875	2.25	3.50	3.875	2.50	2.00	3.50	2.375	2.50	2.50	1.50	2.50	1.75	1.50	1.50	
2.25	2.25	1.875	3.25	2.125	1.50	3.75	2.00	2.25	3.25	2.50	1.625	3.125	1.625	1.875	3.00	2.00	1.875	
2.625	2.00	1.50	2.00	2.50	1.50	2.875	1.50	1.375	3.25	2.00	1.625	2.50	1.75	2.125	2.75	2.25	1.375	
2.00	1.75	1.50	1.875	2.50	1.875	2.50	1.625	2.00	4.25	2.375	1.50	3.125	2.25	2.25	1.875	2.50	2.00	
1.75	2.25	1.50	3.75	2.375	2.50	3.75	2.00	1.625	3.625	2.50	2.125	2.50	2.125	2.50	1.625	2.375	2.50	
1.875	2.25	1.50	2.25	1.50	1.75	4.125	1.875	4.50	3.25	2.25	2.125	3.50	2.125	2.125	2.00	1.75	1.875	
1.50	2.00	2.50	2.25	1.75	1.875	2.25	2.00	3.00	3.375	2.375	1.875	2.25	2.00	1.75	3.00	2.375	1.625	
2.00	2.00	2.125	2.00	1.875	2.00	3.50	1.75	2.00	3.25	2.50	2.375	3.00	2.00	2.00	2.25	2.125	1.50	
2.25	1.75	2.00	2.50	2.00	1.875	3.75	2.25	3.00	3.50	2.625	2.00	2.375	2.00	1.875	2.375	2.00	2.00	
2.625	2.125	2.125	2.25	2.00	2.00	2.75	2.00	2.00	3.00	2.375	2.00	2.00	2.25	2.00	2.00	2.00	1.875	
2.625	1.875	1.75	1.875	2.00	2.75	2.875	2.00	2.00	3.00	2.25	2.75	2.00	1.125	2.50	2.125	2.25	2.75	
2.00	2.00	1.875	2.25	1.875	1.75	2.125	2.25	2.50	3.125	2.50	1.50	1.875	2.00	3.00	3.00	3.00	1.875	
1.875	2.00	1.625	2.375	2.50	2.00	4.00	1.75	2.75	2.50	2.50	1.875	2.50	2.00	2.00	2.00	2.00	1.50	
2.00	2.00	2.25	2.00	2.00	1.875	2.50	1.875	2.375	2.125	2.50	3.375	2.00	1.875	2.00	1.125	1.75	2.625	
2.50	2.375	2.125	2.25	2.50	1.75	2.125	2.00	2.50	2.50	2.375	2.375	1.75	2.125	2.50	1.875	2.00	2.50	
2.50	2.00	2.00	2.125	1.875	2.375	3.625	2.50	2.50	2.50	2.375	2.00	3.25	2.25	2.00	2.50	2.00	2.75	
2.00	1.75	1.75	2.25	1.875	1.875	2.025	1.75	3.00	2.50	2.25	1.875	1.50	2.00	2.625	2.125	2.00	2.625	
1.75	1.875	2.00	4.00	2.00	2.00	2.75	2.00	2.75	2.25	2.50	2.00	2.00	1.875	2.875	2.625	2.00	1.375	
1.875	2.125	2.00	1.875	1.875	1.875	1.625	2.00	2.875	3.00	2.25	2.125	2.00	1.75	2.125	2.375	2.00	1.625	
2.00	2.00	2.125	2.375	2.00	1.50	2.00	1.50	3.50	2.50	1.875	1.875	2.50	1.625	2.00	1.125	1.625	2.50	
1.50	2.50	1.75	1.75	1.75	2.125	3.75	1.50	2.625	3.125	2.00	3.00	3.25	1.75	3.25	1.875	2.50	1.875	
2.75	2.25	1.875	2.75	1.375	3.50	4.50	1.75	3.00	2.50	2.50	2.00	2.25	2.00	2.00	2.00	1.25	2.00	
2.50	1.875	2.00	2.50	2.25	2.25	4.00	3.00	3.25	2.50	2.125	2.125	2.625	2.25	1.625	2.00	2.00	2.375	
2.00	1.75	2.50	2.25	2.00	2.00	2.75	2.25	2.125	2.50	2.25	2.00	2.50	2.00	2.375	1.50	1.875	2.125	
2.125	2.125	1.75	2.25	1.375	1.50	2.625	2.50	2.75	3.125	2.375	2.375	3.25	1.625	2.375	1.00	2.125	1.875	
1.50	1.875	2.50	1.875	2.125	2.00	2.00	3.50	4.00	3.00	2.625	2.50	2.25	1.75	2.625	3.00	2.50	2.25	
2.00	1.75	2.00	2.375	2.00	1.875	2.125	3.00	2.50	3.625	2.50	2.25	2.00	2.00	2.00	2.125	2.75	2.75	
2.25	2.50	1.625	2.375	1.75	1.625	3.75	2.00	2.50	3.625	1.875	1.875	2.00	2.00	2.625	2.50	2.25	1.875	
3.00	2.25	2.625	2.625	1.875	2.00	2.50	2.50	2.875	2.75	2.00	2.50	2.50	2.50	2.375	2.125	2.375	1.50	
3.125	2.25	1.50	2.25	2.00	1.875	3.25	2.125	4.25	3.00	2.50	2.00	2.375	2.50	2.00	3.00	2.00	1.625	
2.00	2.50	2.50	2.625	2.00	1.50	2.625	3.25	2.375	3.00	2.50	1.875	2.50	1.875	2.50	2.00	2.00	1.875	
2.00	1.625	1.75	1.875	1.50	2.25	2.875	5.00	2.25	2.125	2.25	1.75	2.50	2.125	2.75	2.125	1.875	1.75	
2.00	1.75	2.25	3.25	1.875	1.625	4.00	1.875	3.50	2.125	2.375	2.50	2.50	2.25	2.375	2.50	1.875	1.25	
1.375	1.875	1.50	1.875	1.75	1.75	3.375	4.00	1.625	2.875	2.625	1.875	2.875	2.00	1.50	2.00	1.75	2.25	
1.50	2.00	1.625	2.625	2.50	1.875	3.25	3.50	2.00	2.75	2.75	2.00	2.00	1.75	2.125	2.125	1.75	2.00	
2.50	1.625	2.375	1.875	2.125	1.50	2.625	2.50	2.00	2.75	3.00	2.00	2.125	2.50	1.875	1.625	1.75	1.875	
2.375	2.25	2.00	3.00	2.50	1.50	2.00	2.50	2.50	2.50	2.50	1.875	2.375	2.00	2.50	2.50	2.00	2.375	
2.25	2.00	1.75	2.00	2.625	1.625	2.375	2.125	1.75	3.00	2.50	2.125	2.125	2.25	2.00	2.75	2.00	1.625	
2.375	1.625	2.00	1.875	1.50	2.00	2.50	1.75	3.50	4.00	3.25	1.75	2.25	1.75	2.00	3.50	1.875	2.125	
1.50	2.50	2.125	1.75	2.25	1.625	2.375	2.00	3.25	2.125	2.00	2.125	2.00	2.00	2.125	2.00	2.125	1.875	
1.875	2.375	1.75	2.25	2.375	1.375	2.75	2.25	2.50	2.50	3.00	1.875	2.50	2.125	2.25	2.50	2.50	1.625	
2.25	2.25	1.875	2.50	2.00	2.00	3.00	2.375	2.875	2.50	2.25	1.875	2.50	3.00	2.00	1.875	2.375	1.875	
1.625	2.00	1.75	2.50	1.75	1.375	2.75	3.00	2.00	2.50	2.50	2.50	2.125	2.25	2.00	1.625	1.625	2.00	
2.50	1.75	2.50	2.125	2.00	2.375	2.75	2.00	2.50	2.375	2.00	2.00	2.50	2.25	2.125	2.00	1.50	2.375	
Totals .....	105.125	102.75	94.875	110.50	101.375	96.625	147.625	115.75	130.625	139.50	118.875	105.375	119.00	108.00	109.25	110.375	100.25	99.00

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.						
Highest .....	B'	3.125	1.2903	B'	4.00	1.5748	B'	4.50	1.7716	B'	4.25	1.6732	B'	3.50	1.3779	B'	3.50	1.3779
	B''	3.00	1.1811	B''	2.875	1.1318	B''	5.00	1.9855	B''	3.00	1.1811	B''	3.00	1.1811	B''	2.75	1.0826
	B'''	2.625	1.0334	B'''	3.50	1.3779	B'''	4.50	1.7716	B'''	3.375	1.3287	B'''	3.25	1.2795	B'''	2.75	1.0826
Highest .....		3.125	1.2903		4.00	1.5748		5.00	1.9855		4.25	1.6732		3.50	1.3779		3.50	1.3779
Lowest .....	B'	1.375	0.5413	B'	1.75	0.6880	B'	1.625	0.6397	B'	1.875	0.7380	B'	1.375	0.5413	B'	1.50	0.5905
	B''	1.625	0.6397	B''	1.375	0.5413	B''	1.50	0.5905	B''	1.875	0.7380	B''	1.50	0.5905	B''	1.25	0.4921
	B'''	1.375	0.5413	B'''	1.375	0.5413	B'''	1.375	0.5413	B'''	1.50	0.5905	B'''	1.375	0.5413	B'''	1.25	0.4921
Lowest .....		1.375	0.5413		1.375	0.5413		1.375	0.5413		1.50	0.5905		1.375	0.5413		1.25	0.4921
Average .....	B'	2.108	0.8279	B'	2.39	0.9409	B'	2.953	1.1625	B'	2.79	1.0984	B'	2.38	0.9370	B'	2.208	0.8692
	B''	2.055	0.8090	B''	2.026	0.7984	B''	2.315	0.9114	B''	2.378	0.9302	B''	2.10	0.8503	B''	2.005	0.7893
	B'''	1.898	0.7472	B'''	1.993	0.7610	B'''	2.613	1.0287	B'''	2.108	0.8299	B'''	2.185	0.8602	B'''	1.990	0.7795
Average .....		2.018	0.7944		2.117	0.8334		2.627	1.0342		2.425	0.9547		2.241	0.8822		2.064	0.8125
Measurements above average .....		55			63			59			73			65			61	
Measurements below average .....		95			87			91			77			85			89	



TABLE IX.—Measurements of fineness of thoroughbred Merino wools, crossbred series, &c.—Continued.

Catalogue number of sample...	RAMS.									EWES.								
	825.			826.			827.			788.			789.			700.		
	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
2.00	2.00	2.50	2.50	1.50	2.00	1.875	3.00	1.50	2.125	2.00	2.00	2.25	2.00	1.625	2.25	3.00	3.00	
2.00	2.125	2.00	2.00	2.60	1.875	1.875	2.00	1.625	3.00	2.25	1.875	1.75	1.75	2.25	2.50	2.375	1.75	
1.50	2.125	1.75	1.875	2.25	1.625	2.00	2.50	1.125	2.50	2.625	2.125	2.50	2.75	1.875	1.25	2.50	3.50	
2.00	1.875	1.50	1.625	2.125	1.625	1.875	2.25	1.50	2.00	2.00	1.50	1.625	2.375	1.875	2.50	2.125	2.50	
1.875	2.125	1.625	1.625	2.00	2.125	1.875	2.125	1.75	2.25	2.00	1.625	2.00	2.00	1.50	2.00	2.375	3.25	
2.00	2.375	2.50	2.00	1.75	1.375	2.375	2.00	1.875	2.00	2.375	1.75	2.625	2.75	1.625	1.875	2.60	2.375	
2.375	2.625	1.75	1.75	2.00	1.50	1.875	3.00	2.00	1.875	2.00	1.875	2.50	2.50	1.50	1.50	2.50	2.25	
2.00	2.00	2.375	2.00	2.00	2.50	1.625	3.50	1.50	1.625	1.50	2.00	2.00	2.50	1.875	1.625	2.00	2.125	
2.00	1.75	2.00	2.00	1.875	1.50	1.625	1.625	1.50	2.25	1.875	1.875	2.375	2.00	2.00	2.125	2.00	2.50	
2.50	2.50	2.25	1.875	2.00	1.375	1.875	1.50	1.75	1.75	2.25	1.625	1.625	2.00	1.50	2.00	2.375	3.00	
2.125	2.00	1.875	1.75	2.25	1.375	2.50	3.00	1.50	1.875	2.25	1.75	2.25	2.50	1.50	2.75	2.00	1.875	
2.00	2.00	2.25	1.625	2.125	1.50	3.25	2.00	1.50	2.00	1.875	2.00	2.375	2.50	1.625	2.25	2.50	2.50	
2.50	2.25	1.875	2.125	1.875	1.50	2.375	2.25	2.125	2.00	2.00	2.125	1.625	3.00	1.375	2.375	2.50	2.25	
2.75	2.50	2.50	2.00	2.00	2.375	2.00	2.50	2.00	2.50	1.50	1.875	2.625	2.00	1.25	2.50	2.00	2.625	
2.375	2.50	2.00	2.125	1.875	1.50	1.50	2.75	2.375	2.00	2.00	2.50	2.00	2.50	2.25	1.50	2.125	2.375	
2.00	2.25	2.00	2.50	1.75	1.375	2.50	2.50	2.00	2.625	2.375	2.25	2.25	1.875	2.00	1.625	1.875	2.00	
2.00	2.125	1.875	2.00	2.00	2.125	2.25	2.25	2.625	2.25	1.50	2.00	2.00	2.50	1.875	2.00	2.00	1.75	
2.00	2.50	2.875	2.75	2.00	2.125	2.25	2.375	1.50	3.50	1.75	2.00	1.875	2.375	1.75	1.625	2.025	2.00	
2.50	2.75	2.875	1.625	2.00	2.125	1.875	2.00	2.25	2.125	2.125	1.50	2.625	2.50	1.75	2.00	3.00	2.125	
2.50	2.25	2.00	1.875	2.00	1.25	2.125	2.00	1.50	2.00	2.00	1.875	2.00	2.50	2.00	2.125	2.25	2.50	
2.875	3.00	2.50	1.75	2.50	1.50	1.375	1.875	1.625	2.75	2.00	2.00	2.625	2.25	1.875	2.50	2.25	3.50	
2.00	1.75	2.00	2.00	2.375	1.375	1.875	1.50	1.25	2.125	1.25	2.125	2.25	2.00	1.25	3.00	2.375	3.25	
2.50	2.00	2.125	2.00	1.75	2.00	1.875	3.00	1.75	2.125	2.25	2.00	2.125	2.25	2.50	2.625	1.875	3.50	
2.25	1.875	2.50	2.00	1.75	1.625	2.00	2.00	1.60	2.625	1.75	1.50	2.50	3.00	2.00	2.00	1.875	3.00	
2.125	1.75	2.375	2.50	2.00	2.00	2.00	1.625	1.50	2.00	3.00	2.00	1.625	1.50	1.75	3.00	3.00	3.50	
2.50	2.00	1.75	1.75	1.875	1.875	1.875	2.00	2.125	3.125	1.875	4.125	1.875	1.875	2.00	1.75	1.75	3.00	
2.125	1.875	2.125	1.875	1.875	1.75	1.75	1.925	2.25	1.75	3.00	2.50	2.25	2.00	1.50	1.75	2.00	2.625	
2.375	2.125	2.50	2.00	2.00	1.375	2.00	2.50	1.50	2.875	1.875	3.25	2.125	2.025	1.875	1.50	1.875	2.75	
2.50	2.50	2.50	1.625	2.00	2.125	1.50	1.25	1.375	3.25	2.00	2.50	2.25	2.00	2.375	1.625	2.00	3.00	
2.375	1.50	2.00	2.00	2.375	1.375	1.875	1.50	2.00	2.25	3.00	2.375	1.50	3.00	2.00	1.75	2.50	1.75	
2.00	2.50	2.00	2.30	2.00	1.75	1.75	1.375	2.00	1.75	2.75	3.375	2.625	2.25	1.50	2.50	3.00	1.625	
2.50	2.00	1.50	2.50	1.875	2.25	1.975	1.25	2.00	3.00	2.00	1.625	1.875	2.50	1.50	2.00	2.00	2.50	
2.00	2.125	2.375	2.375	2.375	1.625	2.125	2.875	1.625	3.125	1.75	2.125	2.125	2.00	2.25	2.25	1.75	2.625	
2.00	1.75	2.125	2.00	2.50	2.375	2.50	1.50	1.50	2.875	1.875	2.25	2.00	2.75	3.00	1.50	3.00	3.25	
2.125	2.25	1.625	2.125	2.025	1.75	2.375	3.00	1.75	1.75	2.75	2.50	2.25	2.50	2.25	1.375	2.75	2.00	
1.875	2.125	1.50	1.875	2.00	1.50	2.375	3.50	1.50	2.25	1.875	2.50	2.875	3.25	1.50	2.00	3.00	2.25	
2.25	2.50	1.75	2.50	2.125	1.875	2.00	2.00	2.125	3.50	2.50	2.125	2.00	3.00	2.125	2.00	2.50	3.00	
2.50	2.00	1.75	2.00	1.875	2.00	2.00	2.50	1.50	3.50	2.75	2.00	1.875	2.00	1.625	1.75	2.00	1.50	
2.50	1.875	2.625	1.75	2.00	2.00	1.875	2.75	1.50	3.50	2.00	2.75	2.75	2.00	2.00	1.875	2.00	1.75	
1.875	1.50	1.875	2.50	2.25	1.625	1.50	2.25	1.50	2.25	1.75	2.875	2.75	2.00	1.50	1.875	3.00	2.00	
2.50	2.00	1.625	2.50	2.875	1.375	2.375	2.75	1.625	2.125	1.50	1.625	2.50	2.00	1.25	2.75	2.50	3.00	
2.375	1.50	1.875	2.00	2.00	1.875	1.50	1.50	1.75	3.00	2.00	1.875	2.525	2.00	1.625	1.50	1.875	2.125	
1.50	1.50	2.375	2.00	2.00	1.875	1.50	1.625	1.375	2.875	2.00	1.50	2.00	2.625	2.00	2.625	2.00	2.75	
1.375	1.875	2.50	1.75	1.875	2.125	1.875	1.75	1.125	3.00	2.00	1.875	3.00	2.50	2.125	1.875	2.50	2.50	
2.00	2.125	1.875	1.875	2.375	1.625	2.125	2.00	1.50	2.75	2.00	2.75	2.75	2.25	2.75	2.00	2.00	2.125	
2.00	1.125	1.125	1.75	2.25	1.875	1.875	2.00	1.60	2.25	2.375	1.75	1.50	3.00	2.50	3.00	2.00	2.50	
2.50	1.75	2.00	1.625	2.25	1.50	1.875	1.875	2.00	2.00	2.625	1.875	2.00	2.50	2.625	2.75	2.75	3.00	
2.375	2.375	1.875	1.625	1.625	1.75	2.50	2.125	1.50	2.125	2.00	3.50	3.00	2.75	2.375	1.625	2.125	2.375	
2.375	2.50	2.00	1.375	2.50	2.375	2.00	2.25	2.625	3.25	1.50	3.25	1.75	2.375	2.875	1.50	2.25	2.25	
2.50	1.75	2.00	1.625	1.875	1.875	2.50	1.625	2.375	2.25	2.50	3.625	2.25	2.625	2.00	1.375	3.00	3.00	
Totals	109.75	102.625	102.25	99.875	102.625	89.60	90.25	108.50	85.25	123.25	103.00	100.875	108.75	117.25	96.125	100.625	115.00	126.375

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:																		
Highest.....	B'	2.875	1.1318	B'	2.75	1.0826	B'	3.25	1.2795	B'	3.50	1.3779	B'	3.00	1.1811	B'	3.00	1.1811
	B''	3.00	1.1811	B''	2.625	1.0334	B''	3.50	1.3779	B''	3.00	1.1811	B''	3.00	1.1811	B''	3.00	1.1811
	B'''	2.875	1.1318	B'''	2.50	0.9842	B'''	2.625	1.0334	B'''	4.125	1.6240	B'''	3.00	1.1811	B'''	3.50	1.3779
Highest.....		3.00	1.7811		2.75	1.0826		3.50	1.3779		4.125	1.6240		3.00	1.1811		3.50	1.3779
Lowest.....	B'	1.875	0.5413	B'	1.375	0.5413	B'	1.375	0.5413	B'	1.625	0.6397	B'	1.50	0.5905	B'	1.25	0.4921
	B''	1.50	0.5905	B''	1.50	0.5905	B''	1.25	0.4921	B''	1.25	0.4921	B''	1.50	0.5905	B''	1.75	0.6889
	B'''	1.125	0.4429	B'''	1.25	0.4921	B'''	1.125	0.4429	B'''	1.50	0.5905	B'''	1.25	0.4921	B'''	1.50	0.5905
Lowest.....		1.125	0.4429		1.25	0.4921		1.125	0.4429		1.25	0.4921		1.25	0.4921		1.25	0.4921
Average.....	B'	2.195	0.8641	B'	1.998	0.7896	B'	1.985	0.7814	B'	2.465	0.9705	B'	2.173	0.8502	B'	2.013	0.7925
	B''	2.053	0.8082	B''	2.053	0.8082	B''	2.17	0.8543	B''	2.06	0.8110	B''	2.345	0.9232	B''	2.30	0.9055
	B'''	2.045	0.8051	B'''	1.78	0.7007	B'''	1.705	0.6712	B'''	2.198	0.8653	B'''	1.923	0.7570	B'''	2.528	0.9055
Average.....		2.098	0.8259		1.943	0.7649		1.953	0.7688		2.241	0.8622		2.147	0.8492		2.280	0.8974
Measurements above average.....		73			78			72			65			69			67	
Measurements below average.....		78			72			78			85			81			83	



TABLE IX.—Measurements of fineness of thoroughbred Merino wools, crossbred series, &c.—Continued.

Catalogue number of sample...	EWES.																	
	791.			792.			793.			794.			795.			796.		
	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
1.875	1.75	2.25	2.25	2.50	3.00	2.00	1.75	1.50	2.00	1.50	2.625	2.625	1.50	2.50	2.625	2.00	1.75	1.75
2.00	1.75	2.125	2.00	2.00	2.00	2.75	1.75	1.025	2.375	1.75	2.00	2.375	1.75	1.375	2.00	1.875	2.00	1.875
2.00	2.50	2.25	2.375	1.75	2.125	2.125	1.875	2.00	1.50	1.875	1.875	2.125	2.00	1.875	2.00	1.875	2.00	1.625
2.00	2.00	2.125	2.125	2.25	2.25	2.375	2.00	2.75	2.125	2.00	1.50	1.875	2.125	2.00	1.625	2.125	1.75	1.625
2.625	1.50	2.00	3.25	2.875	2.00	2.60	1.50	1.75	2.125	2.00	2.50	2.25	2.50	2.875	2.25	2.50	2.50	1.75
2.00	2.00	2.75	2.00	2.25	2.00	2.125	2.00	2.00	2.125	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.875
1.875	2.50	2.00	2.125	2.25	1.50	2.25	1.50	2.25	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.125	1.50	1.50
1.50	2.75	2.125	2.75	2.00	1.625	2.00	2.00	2.375	2.25	1.625	2.50	2.00	2.00	1.375	2.00	1.75	1.50	2.00
1.625	2.00	1.625	2.675	1.50	2.375	1.75	2.75	1.875	2.125	1.625	1.75	1.875	2.00	2.00	2.75	1.875	1.375	2.125
2.25	2.125	3.50	2.50	2.50	1.50	1.875	2.50	1.875	2.125	2.00	1.875	2.00	2.00	2.00	1.50	1.875	1.125	1.875
1.875	1.50	2.00	2.00	2.00	2.00	3.00	1.75	1.875	2.00	1.625	1.875	2.00	2.00	2.00	2.00	1.375	1.875	1.875
2.25	1.50	2.25	2.125	1.50	2.00	2.75	3.00	2.00	2.25	1.625	2.125	2.50	2.25	1.75	2.125	1.875	1.50	1.50
2.625	2.125	2.50	2.00	2.00	2.125	2.625	2.25	2.75	2.25	1.75	2.00	2.50	1.875	1.875	2.125	1.25	2.00	2.00
1.50	1.60	2.375	2.00	2.75	1.875	2.50	2.00	2.50	2.00	2.375	2.625	2.125	2.00	1.875	1.875	1.50	1.25	1.625
1.625	2.25	2.50	2.25	2.00	2.25	2.375	1.875	2.00	2.375	2.00	1.875	2.00	1.50	1.75	1.625	2.00	2.50	2.50
2.75	1.625	2.625	2.875	2.50	2.00	2.00	2.00	1.625	1.75	2.00	1.875	1.75	2.00	1.625	1.75	2.00	2.00	2.50
2.375	2.25	1.875	2.75	2.375	3.25	2.00	2.50	2.00	1.50	1.75	1.625	2.50	2.50	2.50	1.875	1.50	1.50	1.50
2.875	1.625	2.00	2.50	2.00	3.00	1.75	2.375	2.125	2.00	1.875	1.875	2.25	2.25	1.75	2.125	1.50	1.625	2.375
2.75	1.625	2.125	2.00	1.625	2.25	1.875	1.50	1.50	2.50	2.00	2.125	2.125	1.50	2.50	1.50	1.50	1.50	1.75
2.00	1.875	2.00	2.125	2.875	2.00	2.00	1.75	1.75	2.375	1.875	2.00	2.25	1.75	1.875	2.25	1.75	1.625	1.875
2.125	1.625	3.125	1.50	2.00	1.875	1.75	1.875	1.875	1.50	1.50	1.875	2.125	1.75	1.75	1.875	1.50	1.625	1.875
2.00	2.00	2.875	1.625	2.00	2.00	3.50	2.25	2.25	1.875	1.75	2.00	1.875	2.00	2.375	1.50	1.375	1.75	1.75
2.00	1.875	2.75	2.125	1.75	1.75	1.75	2.125	2.375	2.125	2.00	2.00	2.125	2.00	2.50	1.875	2.00	1.625	1.625
1.875	2.00	1.75	1.50	2.00	1.50	2.25	2.00	2.25	2.00	2.25	2.375	1.50	1.625	2.50	1.75	2.375	2.00	1.50
3.00	2.25	1.50	1.75	2.625	1.75	2.00	1.75	2.375	2.50	2.00	1.875	2.75	1.75	2.75	1.875	2.00	1.875	2.00
2.00	1.50	1.625	1.125	2.00	2.125	1.875	2.625	1.50	2.125	2.00	2.00	2.125	2.00	2.125	2.00	2.125	2.25	1.50
2.50	1.75	1.75	3.00	2.00	2.25	1.625	2.125	1.625	2.375	2.00	1.875	2.00	1.75	3.00	3.00	1.125	1.875	2.50
2.00	2.00	2.00	3.00	2.00	2.25	1.75	2.125	1.75	2.75	1.625	2.50	1.50	2.00	2.25	1.875	1.875	1.625	1.625
1.875	2.00	2.00	2.125	2.00	2.125	2.00	2.50	2.00	2.50	2.25	2.00	2.00	1.875	2.875	2.25	1.875	1.875	2.125
2.60	2.50	3.00	2.75	1.50	2.50	2.125	2.50	2.125	2.125	1.625	2.375	2.125	2.00	2.25	2.00	2.00	1.875	1.875
2.25	2.00	3.125	1.625	2.25	1.75	2.125	1.50	1.75	2.00	1.75	1.625	2.00	2.00	2.375	2.00	1.375	1.625	1.625
2.50	1.75	2.75	2.00	2.375	1.75	1.75	1.75	1.875	2.125	1.75	1.875	2.00	1.375	2.25	2.00	1.50	2.50	2.375
3.00	1.625	2.50	2.125	2.00	2.50	1.75	3.00	2.00	2.50	2.375	2.00	2.125	1.375	2.00	2.25	2.00	1.50	2.50
1.50	2.00	2.375	2.25	2.875	2.00	2.50	2.125	2.00	2.50	2.00	2.00	2.00	2.875	1.375	2.00	2.125	1.875	2.00
2.25	1.50	2.00	2.375	2.00	2.25	2.50	1.875	2.00	1.75	1.875	1.50	1.50	2.00	1.75	2.00	2.125	1.875	2.00
2.375	2.00	1.875	2.25	2.00	2.25	2.75	2.00	1.875	2.00	2.125	1.50	1.875	1.50	2.00	2.00	2.00	1.75	1.875
2.50	1.875	2.00	1.50	2.25	2.50	2.375	2.125	2.00	2.50	2.125	1.625	2.00	2.50	2.00	2.00	2.00	2.125	1.875
1.875	2.00	2.50	2.375	2.25	2.025	1.875	2.00	2.125	2.00	1.625	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.125
2.25	2.50	1.75	1.625	3.00	1.50	2.00	2.00	1.50	1.875	2.25	3.00	2.125	1.875	1.875	2.50	2.50	1.50	1.625
2.00	1.875	1.50	2.50	2.50	2.00	2.25	2.00	2.50	2.00	1.875	2.25	3.00	2.50	2.125	2.00	2.00	1.50	1.875
2.25	2.00	1.60	2.75	2.00	1.50	1.50	2.00	2.50	2.00	1.875	1.75	1.50	1.875	2.00	1.75	1.375	1.50	2.50
2.875	2.50	1.50	3.125	2.25	2.25	2.50	2.00	2.00	2.50	2.50	1.75	2.50	2.00	1.625	2.25	2.00	1.875	1.875
2.50	1.75	3.25	2.00	2.50	2.375	2.50	1.875	2.00	1.875	2.00	1.75	2.00	3.00	1.875	2.375	2.25	1.75	1.75
2.60	2.00	3.00	2.00	2.00	2.50	2.00	1.75	2.25	2.625	2.00	2.00	2.00	1.50	1.875	2.375	2.00	1.50	1.50
1.625	1.50	2.75	2.25	2.25	2.625	2.125	1.50	2.50	2.00	2.50	2.00	2.125	1.75	2.00	2.00	2.00	1.50	1.50
2.625	2.50	2.875	2.125	2.50	2.50	1.875	2.00	1.625	2.25	1.50	2.50	2.50	2.00	2.00	1.875	2.75	1.375	1.50
2.00	1.625	2.50	2.125	2.00	1.75	2.50	2.00	1.625	2.25	1.625	1.875	2.50	1.50	2.375	1.625	1.50	2.625	2.00
2.00	3.00	3.00	2.00	2.00	2.25	1.50	1.625	2.00	2.00	1.625	1.625	1.875	2.00	2.25	1.875	2.00	1.625	1.875
1.875	2.00	2.00	1.875	1.75	2.00	2.25	1.75	2.25	2.375	1.50	2.50	2.00	2.00	2.375	1.75	2.00	1.50	1.50
1.625	2.25	1.75	2.125	2.00	2.125	2.375	2.00	2.375	2.00	1.875	2.125	2.125	1.50	2.125	1.50	1.50	1.50	1.875
Totals	107.125	98.50	113.875	110.375	109.125	106.875	107.00	103.75	99.750	107.625	92.25	104.500	111.250	93.875	108.50	99.625	85.375	92.250

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.						
Highest.....	B'	3.00	1.1811	B'	3.25	1.2795	B'	3.50	1.3779	B'	2.75	1.0826	B'	3.00	1.1811	B'	3.00	1.1811
	B''	3.00	1.1811	B''	3.25	1.2795	B''	3.00	1.1811	B''	2.625	1.0326	B''	3.00	1.1811	B''	2.50	0.9842
	B'''	3.50	1.3779	B'''	3.25	1.2795	B'''	2.75	1.0826	B'''	3.00	1.1811	B'''	3.00	1.1811	B'''	2.625	1.0326
Highest.....		3.50	1.3779		3.25	1.2795		3.50	1.3779		3.00	1.1811		3.00	1.1811		3.00	1.1811
Lowest.....	B'	1.375	0.5413	B'	1.125	0.4429	B'	1.50	0.5905	B'	1.50	0.5905	B'	1.50	0.5905	B'	1.375	0.5413
	B''	1.50	0.5905	B''	1.50	0.5905	B''	1.50	0.5905	B''	1.50	0.5905	B''	1.375	0.5413	B''	1.125	0.4429
	B'''	1.50	0.5905	B'''	1.50	0.5905	B'''	1.50	0.5905	B'''	1.50	0.5905	B'''	1.375	0.5413	B'''	1.375	0.5413
Lowest.....		1.375	0.5413		1.50	0.5905		1.50	0.5905		1.50	0.5905		1.375	0.5413		1.125	0.4429
Average.....	B'	2.143	0.8436	B'	2.208	0.8692	B'	2.14	0.8425	B'	2.153	0.8476	B'	2.225	0.8750	B'	1.993	0.7840
	B''	1.97	0.7755	B''	2.163	0.8504	B''	2.075	0.8161	B''	1.85	0.7283	B''	1.878	0.7398	B''	1.707	0.6720
	B'''	2.278	0.8908	B'''	2.138	0.8417	B'''	1.995	0.7854	B'''	2.01	0.7913	B'''	2.17	0.8543	B'''	1.845	0.7263
Average.....		2.190	0.8385		2.176	0.8566		2.07	0.8149		2.004	0.7889		2.091	0.8282		1.848	0.7275
Measurements above average.....		50			63			62			5							



TABLE IX.—Measurements of fineness of thoroughbred Merino wools, crossbred series, &c.—Continued.

Catalogue number of sample...	EWES.			RAMS.						EWES.								
	797.			431.			433.			798.			799.			800.		
	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
	2.375	1.50	1.875	3.00	2.00	2.75	3.00	4.50	2.75	2.25	2.00	2.00	2.625	3.00	3.50	2.625	2.50	2.25
	1.875	2.375	1.625	2.75	2.25	2.375	1.25	3.25	2.00	1.50	1.625	3.125	2.50	1.75	3.50	2.00	2.875	2.50
	2.125	1.375	2.00	2.00	2.00	2.00	2.50	3.00	4.00	1.625	2.00	1.00	2.25	2.50	3.50	2.00	2.625	1.60
	2.25	1.875	1.75	3.00	2.50	2.00	2.50	3.25	2.00	1.75	3.25	2.50	2.25	3.00	2.50	1.50	3.25	2.00
	1.875	2.00	2.00	2.00	2.00	2.25	2.00	3.50	3.50	2.00	3.00	1.50	1.75	2.00	2.625	2.875	2.625	1.60
	1.875	1.625	2.00	2.50	2.50	2.00	2.00	3.75	3.75	2.00	2.75	1.50	2.50	2.00	2.50	3.00	3.00	2.00
	2.125	1.75	2.00	2.50	3.25	1.50	2.00	2.75	3.50	1.75	1.625	1.50	2.00	1.875	2.25	1.75	2.50	1.75
	2.125	1.625	1.875	2.50	3.00	3.00	3.00	2.50	2.50	1.50	1.50	1.25	2.00	1.50	3.125	1.50	3.00	2.00
	2.375	1.625	1.625	3.00	2.00	2.00	3.00	2.00	3.00	1.50	1.75	1.75	2.375	3.00	1.50	1.50	2.50	1.25
	2.00	2.00	2.75	3.50	3.25	1.625	2.00	3.25	2.25	1.75	2.50	1.50	2.25	3.50	2.25	1.50	2.75	2.00
	1.625	1.75	2.50	2.50	2.50	2.00	2.00	2.25	2.125	1.625	2.00	2.00	2.00	2.00	2.00	1.625	3.50	1.75
	1.625	2.00	1.875	2.50	2.50	1.625	2.50	2.25	3.875	1.80	2.25	2.25	2.50	1.875	1.50	2.60	2.75	1.625
	1.875	1.75	1.625	3.00	2.00	2.625	2.00	2.00	2.00	2.125	2.50	1.75	2.75	2.50	1.75	2.375	2.925	1.625
	1.625	1.25	2.215	3.75	3.00	1.75	2.00	2.00	2.00	2.00	2.00	1.25	1.75	2.00	2.50	2.375	2.125	1.25
	2.00	1.75	2.00	2.50	2.00	2.25	2.50	3.00	2.00	2.25	2.25	2.00	1.75	3.00	4.00	2.00	3.00	2.00
	2.00	1.50	2.00	2.25	2.75	3.25	2.50	2.50	2.50	3.00	2.125	1.50	1.50	1.875	2.00	2.00	1.75	1.75
	2.375	1.50	1.875	3.00	2.00	3.375	2.25	4.00	3.50	2.00	1.50	1.625	2.00	2.875	2.00	2.50	2.75	2.00
	2.00	1.50	1.60	2.875	2.25	2.00	2.00	2.375	3.00	3.00	2.125	1.50	2.125	2.00	1.75	1.75	2.75	2.25
	1.875	1.375	2.375	3.25	3.00	1.625	2.50	2.50	3.50	2.00	1.625	1.875	2.00	2.125	2.00	1.75	2.00	2.75
	2.00	2.00	2.75	3.00	2.00	2.375	2.25	3.625	2.50	1.50	1.50	1.875	2.50	2.00	1.50	2.625	2.50	3.00
	2.25	1.625	2.125	2.625	2.25	2.00	2.50	3.25	3.875	2.125	1.75	1.50	2.625	2.50	1.75	2.125	3.00	1.00
	2.375	2.375	2.00	3.00	3.00	2.00	2.50	3.25	2.50	1.625	2.00	2.25	2.00	1.75	1.50	2.125	2.625	1.60
	2.125	2.00	2.50	3.50	2.50	2.25	3.00	3.875	2.00	1.875	2.00	1.50	2.25	2.50	1.625	1.50	1.875	2.25
	1.875	1.50	2.25	1.875	2.00	2.00	3.00	3.00	3.00	1.25	2.75	2.50	2.25	3.00	1.75	2.60	2.50	2.875
	1.75	1.50	2.375	3.00	2.00	2.00	2.00	4.00	4.00	2.00	2.00	2.375	3.00	2.625	2.50	2.00	2.00	1.75
	2.375	1.50	2.375	2.50	2.50	1.875	3.00	2.50	2.50	1.75	2.00	1.25	4.00	1.75	2.50	2.875	2.25	2.50
	1.75	1.50	1.375	2.25	3.125	2.00	2.125	3.50	3.00	1.625	1.875	2.00	2.25	2.00	2.75	1.50	2.00	2.75
	1.875	1.625	2.125	2.00	1.75	2.50	2.125	2.125	3.00	1.50	1.75	1.875	2.00	3.00	1.75	3.25	2.50	3.00
	1.625	1.50	1.75	2.75	3.00	2.00	2.125	3.75	3.50	2.00	3.25	2.625	2.50	2.00	2.00	3.125	1.75	1.75
	2.00	1.50	1.875	2.25	4.00	2.00	2.125	1.875	4.00	1.50	2.375	2.00	2.125	2.75	2.25	2.00	3.875	1.875
	1.875	2.00	2.125	2.25	3.375	2.00	2.50	3.50	3.875	1.25	2.875	1.50	2.75	2.00	2.50	3.00	3.875	2.25
	1.625	1.50	1.375	3.00	2.00	2.50	2.50	3.50	3.50	2.25	2.00	2.50	2.00	3.375	1.75	2.00	2.50	1.875
	2.125	1.50	1.875	1.75	2.00	1.75	3.125	2.75	3.875	2.25	1.80	2.25	1.75	1.625	2.00	2.25	2.50	2.125
	2.125	1.50	1.375	3.00	2.00	2.00	2.50	3.50	2.875	2.25	2.00	2.50	2.00	2.375	1.75	2.00	2.50	1.875
	1.75	1.625	2.50	2.00	2.00	2.00	2.00	3.00	2.025	1.50	3.00	2.25	2.00	3.375	2.50	1.50	2.00	2.60
	2.50	1.875	2.125	2.00	2.00	2.00	2.00	1.75	1.75	2.50	2.00	1.75	2.00	3.00	2.50	3.00	3.125	2.75
	1.875	2.125	2.25	2.50	2.60	2.00	2.50	3.50	2.375	2.625	1.50	2.50	3.50	3.25	1.75	2.50	3.50	2.75
	1.75	2.25	2.375	1.75	3.50	4.25	2.50	3.875	2.00	2.00	2.50	1.50	2.00	1.625	1.75	3.00	3.00	2.875
	2.00	1.50	2.00	1.875	2.50	1.75	2.00	2.00	2.25	1.25	2.375	2.125	1.75	1.625	2.25	2.00	3.00	2.125
	2.125	2.00	2.375	2.75	1.75	2.00	2.00	2.00	2.00	1.00	2.125	1.50	1.875	2.00	2.50	2.00	3.00	1.50
	2.125	2.00	2.00	2.25	2.00	2.00	2.50	2.25	2.125	1.00	3.00	2.00	3.00	3.00	1.75	2.00	2.875	2.00
	2.25	2.50	1.875	2.00	2.50	1.625	2.25	3.75	2.75	1.50	3.00	2.50	3.00	1.875	1.50	2.125	2.50	2.25
	2.50	2.00	2.00	2.00	2.00	1.75	2.375	2.75	3.50	2.00	2.50	2.75	1.50	3.00	1.25	2.375	3.875	1.50
	1.625	2.00	2.00	2.625	2.00	2.25	2.50	3.50	3.625	1.75	2.125	1.25	2.00	2.75	1.75	2.50	3.625	2.25
	2.50	2.00	2.50	1.875	2.00	2.00	2.50	3.50	4.00	2.25	2.75	1.75	1.50	3.875	1.75	3.00	2.125	1.75
	1.875	2.125	2.00	2.50	2.00	1.75	2.00	2.75	2.25	1.75	2.875	2.25	1.50	2.00	2.00	1.50	2.125	2.00
	1.75	1.875	2.25	2.75	2.00	2.00	2.50	3.875	3.50	1.50	2.00	1.75	2.00	3.00	2.00	1.50	2.375	2.50
	2.75	2.125	2.75	2.25	3.00	2.00	2.50	2.50	2.50	1.50	2.00	2.00	2.75	2.00	1.75	2.00	3.375	3.00
	2.875	2.50	2.375	2.00	3.125	1.75	2.50	3.875	3.00	1.625	3.00	1.50	5.875	2.50	1.625	2.625	2.50	1.50
Totals.....	112.00	91.375	107.125	119.625	127.375	113.00	120.875	151.625	153.625	91.875	108.625	94.500	116.375	113.00	105.875	105.625	123.875	104.875

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.		No. of section.	In centimillimeters.	
		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.		In thousandths of inch.	In thousandths of inch.						
Highest.....	B'	2.75	1.0926	B'	3.625	1.4271	B'	3.50	1.8779	B'	3.00	1.1511	B'	3.875	2.3129	B'	3.25	1.2705
	B''	2.625	1.0926	B''	4.00	1.5748	B''	4.50	1.7716	B''	3.25	1.2708	B''	3.50	1.3779	B''	3.50	1.8779
	B'''	3.00	1.1811	B'''	4.25	1.6732	B'''	5.00	1.9685	B'''	3.125	1.2308	B'''	4.00	1.5748	B'''	3.00	1.1811
Highest.....		3.00	1.1811		4.25	1.6732		5.00	1.9685		3.25	1.2708		3.875	2.3129		3.50	1.3779
Lowest.....	B'	1.625	0.6397	B'	1.75	0.6889	B'	1.25	0.4921	B'	1.00	0.3937	B'	1.375	0.5413	B'	1.50	0.5905
	B''	1.25	0.4291	B''	1.75	0.6889	B''	1.75	0.6889	B''	1.50	0.5905	B''	1.50	0.5905	B''	1.75	0.6889
	B'''	1.875	0.5413	B'''	1.50	0.5905	B'''	1.75	0.6889	B'''	1.00	0.3937	B'''	1.25	0.4921	B'''	1.00	0.3937
Lowest.....		1.25	0.4291		1.50	0.5905		1.25	0.4921		1.00	0.3937		1.25	0.4921		1.00	0.3937
Average.....	B'	2.24	0.8677	B'	2.393	0.9121	B'	2.696	1.0296	B'	1.917	0.7153	B'	2.327	0.9161	B'	2.112	0.8314
	B''	1.828	0.7196	B''	2.548	1.0631	B''	3.033	1.1940	B''	2							



TABLE IX.—Measurements of fineness of thoroughbred Merino wools, crossbred series, &c.—Continued.

Catalogue number of sample...	EWES.																	
	801.			802.			803.			804.			805.			806.		
	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
2.50	2.25	2.00	4.50	3.125	3.75	2.50	2.25	3.50	2.25	2.50	1.50	3.00	3.25	2.125	2.00	2.00	3.00	3.00
2.50	1.875	1.875	4.00	2.125	2.50	3.00	4.00	2.25	2.50	1.875	2.50	3.50	3.00	2.50	2.00	2.00	3.875	2.75
2.00	2.00	2.00	4.00	3.00	2.00	2.25	3.00	2.50	2.75	3.00	2.625	2.00	2.00	2.00	2.00	2.00	2.00	2.50
2.375	2.25	2.00	4.00	3.00	2.25	2.00	1.50	2.75	2.00	2.375	2.00	2.00	2.00	2.00	2.00	2.00	2.875	2.75
2.25	2.00	1.625	3.00	2.50	3.25	4.00	2.625	4.00	2.375	2.00	2.625	2.50	2.00	2.00	3.00	2.25	1.875	2.00
2.375	2.00	2.50	2.625	3.00	3.125	1.75	2.00	3.375	2.125	1.75	2.00	2.00	1.875	2.375	1.875	3.75	3.00	3.00
2.75	3.25	1.875	3.00	3.00	3.25	1.50	1.25	3.50	3.00	3.125	2.50	4.125	2.50	3.00	2.50	2.00	2.00	2.50
2.50	2.50	1.875	2.625	2.50	3.25	1.875	2.00	3.75	1.875	3.00	2.75	2.375	2.125	2.50	4.00	2.625	2.50	2.50
1.625	2.00	2.125	3.50	3.00	2.75	3.125	2.875	2.50	2.50	2.50	3.00	3.00	1.625	2.50	3.75	2.375	2.00	2.00
1.75	2.125	3.00	5.25	3.00	2.50	3.50	2.375	2.25	2.00	3.25	1.625	3.00	3.375	2.50	2.00	2.50	2.00	2.00
1.75	2.25	2.50	4.375	4.00	5.00	3.25	3.125	3.125	1.875	2.50	1.50	2.625	3.00	2.50	2.50	2.50	3.00	3.00
2.375	2.50	1.75	3.50	2.50	2.75	1.50	3.00	2.875	2.50	3.00	2.00	2.125	3.625	1.75	3.00	1.875	2.00	2.00
1.75	1.025	2.00	3.625	3.00	2.50	1.50	3.50	3.125	2.625	2.75	3.50	2.125	1.75	1.875	2.50	1.75	3.00	3.00
1.625	1.50	2.50	3.00	2.875	2.75	1.625	3.625	3.625	2.875	2.875	1.375	2.75	2.00	2.25	2.50	2.125	1.875	1.875
2.50	2.375	1.50	4.50	2.50	3.00	2.125	2.25	2.625	2.125	3.00	2.25	2.50	2.25	4.00	2.00	2.625	2.375	2.375
2.75	1.875	1.875	3.75	2.50	2.75	2.50	2.125	2.75	2.375	2.50	3.00	2.50	2.375	2.125	2.50	2.125	2.00	2.00
2.375	2.625	1.625	3.75	2.25	2.50	2.125	2.75	2.375	2.50	3.00	2.50	3.375	2.125	2.50	2.50	2.125	2.00	2.00
2.00	1.625	2.00	3.00	3.00	3.125	2.75	2.50	3.875	3.00	2.625	2.00	2.125	3.00	2.50	2.25	2.125	3.25	3.25
2.75	2.625	1.50	3.50	2.375	3.50	1.50	2.625	3.50	2.50	2.75	3.00	2.00	2.00	2.00	2.25	3.375	3.50	3.50
2.375	2.50	2.125	3.50	2.375	3.50	1.50	2.625	2.00	4.50	3.75	2.375	3.00	2.125	2.875	2.50	3.00	1.50	1.50
2.50	1.50	2.00	3.625	2.25	2.50	2.625	2.00	4.50	3.75	2.375	3.00	2.125	2.50	1.875	2.25	2.375	3.00	3.00
2.25	2.75	2.25	3.50	2.50	3.50	2.00	1.875	3.375	4.00	2.125	2.50	1.625	2.75	2.00	1.625	2.00	2.50	2.50
2.00	2.125	2.00	3.625	2.50	3.00	2.125	4.25	3.75	2.00	2.875	2.75	3.00	1.625	2.00	2.50	2.00	2.50	2.50
2.125	2.00	2.00	3.50	2.75	3.75	4.50	1.875	1.875	2.225	2.875	1.25	2.00	1.50	1.50	2.625	1.875	2.50	2.50
2.50	1.625	2.375	3.00	3.00	2.50	2.375	3.00	2.50	2.00	3.125	1.75	3.00	1.875	3.50	2.75	3.625	2.50	2.50
3.25	2.00	2.00	3.00	2.50	2.50	2.00	3.50	2.375	2.50	2.50	2.00	2.50	1.50	3.00	2.50	1.75	3.00	3.00
2.25	1.50	2.375	3.00	3.00	3.25	3.25	1.875	2.00	2.625	2.375	2.25	2.25	1.50	3.00	2.50	2.125	3.00	2.50
2.625	1.75	1.50	3.50	3.25	3.25	2.375	2.50	2.50	3.00	2.50	2.125	2.75	2.00	2.125	2.50	2.625	2.50	2.50
2.75	2.00	1.75	3.50	2.50	3.25	3.50	2.00	4.00	2.125	2.125	2.25	2.875	2.125	2.50	2.625	2.50	2.50	2.50
2.25	2.00	1.50	3.375	3.00	3.75	3.50	2.00	4.375	2.00	2.00	2.50	2.875	2.50	2.125	2.50	2.125	1.875	1.875
2.50	2.75	1.50	3.75	2.50	1.875	4.50	3.25	3.00	3.00	2.375	2.625	2.125	1.50	2.50	3.00	2.75	2.50	2.50
1.50	1.50	1.875	3.125	3.00	2.50	2.00	2.50	3.00	2.50	2.50	2.50	2.50	2.00	2.50	2.00	2.125	2.375	2.375
2.00	2.00	2.375	2.50	1.875	3.75	3.50	2.00	3.875	2.50	2.50	2.00	2.00	2.00	2.50	3.00	2.125	2.00	2.00
2.00	2.00	1.875	3.375	2.50	3.625	2.75	3.50	4.50	3.00	3.00	1.75	2.00	2.00	2.50	3.00	2.125	2.00	2.00
1.75	2.00	1.75	4.375	2.50	2.375	1.50	2.50	3.25	3.00	3.00	2.00	2.00	2.00	2.50	2.00	2.50	1.75	1.75
2.75	1.125	1.625	3.375	2.00	3.125	1.50	1.25	4.50	2.50	2.50	3.375	2.50	2.125	2.00	3.50	2.25	2.75	2.75
1.875	1.625	1.875	3.125	2.50	4.25	1.375	3.125	3.375	2.25	2.25	2.50	2.50	2.50	3.125	2.125	2.125	3.00	3.00
2.00	1.875	1.875	3.00	1.75	2.75	2.50	2.50	2.50	2.125	3.625	2.00	2.00	2.00	3.50	2.375	2.25	2.50	2.50
1.75	2.50	2.00	3.00	2.375	3.50	1.875	2.50	3.00	2.00	2.875	2.50	2.00	2.00	2.875	2.50	2.25	3.50	3.50
1.875	1.75	1.875	3.50	2.50	2.75	3.00	3.375	5.25	2.25	3.00	3.25	3.00	2.00	2.00	2.00	2.125	1.75	1.75
2.125	2.375	2.00	3.50	2.625	4.00	4.00	2.00	2.875	2.00	2.25	3.00	3.50	3.00	2.50	2.50	2.625	2.00	2.00
2.25	1.625	2.00	3.50	3.50	3.75	3.375	2.50	3.375	2.00	2.25	2.00	2.00	3.00	2.00	2.75	1.625	1.875	1.875
2.125	1.75	2.375	3.625	2.00	4.00	3.50	3.50	2.00	1.875	2.75	2.00	2.75	2.00	2.50	2.00	2.25	2.50	2.50
1.625	1.625	1.75	4.00	3.50	3.25	2.625	2.875	5.00	2.625	2.125	2.125	3.125	2.375	1.875	2.50	2.375	2.00	2.00
1.50	2.00	2.25	3.50	3.50	3.875	2.125	3.875	3.50	2.00	3.00	1.75	2.75	2.375	1.50	2.375	2.875	2.00	2.00
1.875	1.75	2.625	2.50	1.25	3.875	2.50	4.00	2.50	2.00	2.25	2.50	2.50	2.75	2.25	2.50	1.75	1.875	1.875
1.75	1.75	2.25	1.50	2.375	2.50	4.00	3.00	2.50	2.00	2.375	1.125	3.375	2.375	2.25	3.00	3.00	3.00	2.25
2.00	1.75	1.875	1.625	3.00	3.25	3.75	2.875	3.25	2.625	2.375	2.50	2.50	2.375	3.50	3.75	2.75	2.50	2.50
2.75	2.50	3.00	3.75	2.375	2.75	3.125	2.25	3.375	1.375	2.875	2.625	2.50	2.375	1.50	3.00	2.125	2.00	2.00
Totals	109.375	103.00	101.50	163.25	134.50	156.125	128.50	132.75	161.25	112.75	132.625	116.375	125.875	111.50	124.875	129.25	119.875	121.875

Recapitulation and reduction:	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Highest	B'	3.25	1.2795	B'	5.25	2.0669	B'	4.50	1.7716	B'	3.75	1.4763	B'	4.125	1.6240	B'	4.00	1.5748
	B''	3.25	1.2795	B''	4.00	1.5748	B''	4.25	1.6732	B''	3.625	1.4271	B''	3.625	1.4271	B''	3.875	1.5255
	B'''	3.00	1.1811	B'''	4.25	1.6732	B'''	5.25	2.0669	B'''	4.00	1.5748	B'''	4.00	1.5748	B'''	4.00	1.5748
Highest		3.25	1.2795		5.25	2.0669		5.25	2.0669		4.00	1.5748		4.125	1.6240		4.00	1.5748
Lowest	B'	1.50	0.5905	B'	1.50	0.5905	B'	1.375	0.5413	B'	1.375	0.5413	B'	1.50	0.5905	B'	1.875	0.7380
	B''	1.50	0.5905	B''	1.75	0.6389	B''	1.25	0.4921	B''	1.75	0.6389	B''	1.50	0.5905	B''	1.625	0.6397
	B'''	1.50	0.5905	B'''	1.875	0.7380	B'''	1.875	0.7380	B'''	1.25	0.4921	B'''	1.50	0.5905	B'''	1.50	0.5905
Lowest		1.50	0.5905		1.50	0.5905		1.25	0.4921		1.25	0.4921		1.50	0.5905		1.50	0.5905
Average	B'	2.188	0.8614	B'	3.265	1.2854	B'	2.57	1.0118	B'	2.255	0.8877	B'	2.518	0.9913	B'	2.585	1.0177
	B''	2.06	0.8110	B''	2.69	1.0590	B''	2.655	1.0452	B''	2.653	1.0444	B''	2.23	0.8779	B''	2.598	1.0228
	B'''	2.08	0.7992	B'''	3.123	1.2295	B'''	3.225	1.2696	B'''	2.328	0.9165	B'''	2.498	0.9834	B'''	2.438	0.9508
Average		2.092	0.8236		3.026	1.1913		2.810	1.1086		2.412	0.9496		2.412	0.9496		2.54	0.9999
Measurements above average		66			57			68			77			71				46
Measurements below average		84			98			82			73			79				104



TABLE IX.—Measurements of fineness of thoroughbred Merino wools, crossbred series, &c.—Continued.

Catalogue number of sample...	RAMS.																		
	848.			849.			850.			851.			852.			853.			
	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	
3.625	3.00	3.25	2.00	2.25	2.50	3.50	1.50	3.125	2.00	3.00	2.125	3.00	2.50	2.625	3.125	2.00	2.00	2.875	
2.50	1.375	3.50	2.25	3.00	1.75	2.375	2.60	3.875	2.625	2.50	3.375	2.625	2.625	2.625	2.625	2.625	2.625	2.625	
2.75	2.75	3.00	2.125	2.50	2.25	3.875	2.875	2.375	1.60	3.75	2.50	2.00	2.50	4.00	2.125	2.50	1.60	1.625	
3.75	2.75	2.75	2.25	3.00	2.125	2.60	2.25	2.00	1.50	3.00	2.625	1.875	3.25	2.625	1.50	1.75	1.625	1.625	
2.50	4.50	2.375	2.00	2.25	2.00	2.125	1.875	2.125	2.00	2.50	2.60	2.00	2.125	4.00	2.625	1.875	1.875	1.875	
3.00	2.50	2.875	2.125	2.25	2.125	2.025	2.50	2.375	1.60	3.00	2.50	1.875	2.25	2.625	2.375	2.25	1.50	1.50	
3.25	2.50	4.50	2.125	2.375	2.25	2.875	3.75	2.625	2.00	2.75	2.875	2.00	2.50	2.50	2.125	1.875	1.875	1.875	
3.125	2.125	3.125	2.50	3.50	1.875	2.00	2.75	2.625	2.125	2.50	2.50	1.875	1.875	2.625	2.625	2.50	1.625	1.625	
4.00	2.50	3.25	2.50	2.50	1.75	2.00	3.625	2.50	2.625	2.50	2.50	2.625	2.50	2.625	3.00	2.00	1.875	1.875	
3.00	1.50	4.00	2.25	2.125	2.00	2.625	2.625	1.875	2.00	2.125	2.625	3.376	3.00	2.625	3.00	2.375	1.875	1.875	
3.25	3.00	2.25	2.25	2.25	1.875	2.875	2.25	2.625	2.50	2.50	1.875	1.875	2.50	2.625	2.625	1.875	1.50	1.50	
2.25	2.50	2.375	2.625	2.50	1.50	2.50	2.00	2.50	2.00	2.875	2.875	1.875	2.25	4.00	2.835	1.625	2.00	2.00	
2.375	2.00	3.50	2.50	2.00	1.625	1.875	2.75	3.00	2.125	3.875	2.875	2.00	8.00	2.625	2.625	1.75	2.00	2.00	
2.50	2.00	3.00	2.75	2.875	2.25	2.625	2.50	3.875	2.60	2.75	2.50	1.75	2.50	3.625	2.875	1.875	2.00	2.00	
3.00	2.60	2.375	1.75	2.00	2.00	3.125	2.375	1.875	2.00	2.75	2.625	2.625	2.25	2.50	3.125	2.125	1.625	1.625	
3.25	1.875	2.375	2.00	2.50	1.50	2.00	2.375	2.625	2.875	3.25	2.625	3.125	3.00	2.625	2.50	2.00	1.625	1.625	
2.25	1.75	2.50	2.25	3.00	1.625	3.375	2.375	2.375	2.375	2.00	4.00	2.50	3.25	2.50	2.60	1.625	1.625	1.625	
4.25	1.25	2.25	2.50	3.125	1.50	2.875	3.00	2.625	1.875	2.125	3.025	1.875	3.75	3.625	2.375	2.00	2.00	2.00	
5.00	1.75	2.375	2.50	2.75	2.50	2.025	3.50	1.50	2.125	3.00	4.00	1.375	2.875	3.375	2.50	2.00	1.875	1.875	
4.00	2.25	3.00	2.00	2.50	2.00	2.025	2.50	2.60	2.00	3.00	1.875	1.875	2.125	2.875	2.875	1.75	2.00	2.00	
3.00	3.00	3.50	2.25	2.625	2.00	2.125	2.00	1.50	2.125	3.00	3.125	2.375	2.25	3.375	3.625	2.25	1.625	1.625	
3.50	2.00	2.625	2.375	2.00	2.00	2.125	3.00	1.625	2.00	3.00	1.875	2.60	3.00	2.625	3.375	2.00	1.625	1.625	
3.00	3.00	2.75	2.60	2.125	1.75	2.875	2.75	1.50	2.375	3.00	2.875	2.50	3.875	3.875	3.625	1.50	2.875	2.875	
2.50	1.875	3.00	2.25	2.25	1.625	2.625	1.875	1.625	2.00	3.00	1.875	1.375	3.75	3.00	2.875	2.75	2.00	2.00	
3.25	2.00	2.50	2.00	2.50	1.625	4.00	1.75	2.50	1.875	3.125	3.875	1.875	3.75	2.125	2.50	1.875	1.875	1.875	
3.75	1.25	2.50	2.635	3.25	1.50	2.375	2.00	2.375	2.00	1.875	2.00	1.125	2.60	3.625	2.50	2.00	1.625	1.625	
3.50	3.00	4.00	3.00	2.25	2.25	2.125	2.125	1.625	2.00	3.125	1.875	1.875	3.75	4.00	1.00	2.50	1.875	1.875	
4.00	3.50	4.125	2.60	2.50	2.375	3.625	3.00	2.875	2.00	3.60	2.625	2.00	2.125	2.625	2.50	1.625	1.875	1.875	
4.25	2.00	2.25	1.75	2.25	1.50	8.125	3.25	1.50	1.625	1.875	2.875	2.375	2.25	3.50	2.625	2.00	3.375	3.375	
2.50	1.75	1.75	2.50	2.25	1.75	2.50	3.00	2.00	1.875	1.50	2.00	2.125	3.875	4.00	3.125	1.875	1.875	1.875	
2.625	2.25	1.625	1.625	2.375	2.25	2.625	2.50	1.375	2.125	3.00	1.875	2.625	3.876	2.625	2.625	2.00	2.125	2.125	
3.125	2.50	3.00	2.50	2.60	3.00	3.125	1.375	2.375	2.875	2.875	2.625	1.875	3.875	2.375	2.00	1.125	2.625	2.625	
3.50	2.60	3.25	2.25	2.25	2.875	2.00	2.00	2.00	1.375	3.00	3.375	2.625	1.50	2.625	2.50	2.00	1.875	1.875	
3.25	2.25	3.875	2.375	2.75	2.25	2.00	2.50	1.625	1.375	2.875	8.125	2.625	3.50	3.375	3.375	1.875	1.875	1.875	
3.50	2.00	4.00	2.50	3.25	2.125	2.625	2.50	3.375	3.50	2.50	3.00	1.875	2.125	2.625	1.125	1.875	1.875	1.875	
3.875	2.125	2.50	3.00	2.50	1.625	2.00	1.875	2.875	1.50	3.60	2.00	2.00	2.00	2.625	2.625	2.25	1.625	1.625	
2.375	4.00	2.50	2.50	2.625	2.00	3.125	2.125	1.50	2.125	3.375	1.875	3.875	2.00	2.625	4.00	2.00	1.875	1.875	
2.875	2.50	2.25	2.25	2.25	2.125	3.00	1.75	1.375	2.875	4.00	2.875	1.875	3.60	3.125	2.875	2.25	1.50	1.50	
4.00	2.50	2.125	2.125	2.00	2.75	2.625	1.50	1.875	2.00	3.375	1.375	2.50	3.75	2.625	2.875	2.00	1.50	1.50	
2.00	3.625	2.50	2.25	1.75	3.125	3.00	2.50	1.625	1.50	3.50	1.875	2.125	4.650	4.00	3.125	1.75	2.00	2.00	
2.25	3.75	2.625	3.25	2.50	1.875	1.875	1.50	1.375	1.875	2.50	2.625	2.00	3.75	3.625	2.625	1.875	1.625	1.625	
3.00	2.50	2.75	2.50	2.625	1.50	2.375	2.60	2.00	2.625	2.25	3.375	1.875	2.75	2.00	2.625	1.125	1.875	1.875	
2.60	2.50	2.875	1.75	2.50	2.375	2.125	2.60	2.00	2.125	3.875	3.125	1.875	2.75	2.00	3.875	2.50	2.00	2.00	
3.00	3.00	3.00	1.875	2.375	1.875	1.625	1.625	1.875	2.625	3.125	3.125	2.60	1.875	2.625	3.125	2.00	1.875	1.875	
3.125	2.25	3.125	2.125	2.25	1.875	2.00	2.625	2.00	2.625	1.025	3.125	2.625	3.25	2.50	2.50	2.125	2.00	2.00	
2.625	2.00	2.50	1.625	3.00	3.00	2.50	2.60	2.75	2.125	3.00	2.00	1.50	1.125	3.625	3.125	1.75	2.00	2.00	
3.375	2.125	2.625	1.75	2.25	1.75	2.875	2.875	2.875	1.815	3.00	2.125	1.60	3.50	2.60	2.60	2.375	2.00	2.00	
2.50	2.50	2.875	1.625	2.50	2.25	2.50	1.625	2.00	1.875	3.00	3.875	2.625	2.00	3.875	2.875	2.625	2.125	2.625	
2.50	2.50	3.50	2.00	2.75	1.625	2.00	2.50	1.875	1.875	3.00	3.375	2.00	2.875	2.00	2.875	2.00	1.875	1.875	
2.75	3.00	2.50	2.25	2.75	2.375	2.375	2.50	1.875	2.50	3.80	2.875	2.625	2.00	2.50	3.125	2.125	1.875	1.875	
Totals .....	156.625	122.625	145.625	114.125	124.375	90.00	129.625	110.25	109.625	105.00	141.625	131.625	107.875	137.625	147.875	138.250	112.00	94.00	

	No. of section.			In centimillimeters.			In thousandths of inch.		
	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:									
Highest .....	B'	4.25	1.6732	B'	3.25	1.2795	B''	4.00	1.5748
	B''	4.50	1.7716	B''	3.50	1.3779	B''	3.75	1.4763
	B'''	4.50	1.7716	B'''	3.125	1.2303	B'''	3.875	1.5255
Highest .....		4.50	1.7716		3.25	1.2795		4.00	1.5748
Lowest .....	B'	2.00	0.7874	B'	1.625	0.6397	B'	1.875	0.7380
	B''	1.25	0.4921	B''	1.75	0.6889	B''	1.375	0.5413
	B'''	1.625	0.6397	B'''	1.375	0.5413	B'''	1.375	0.5413
Lowest .....		1.625	0.6397		1.375	0.5413		1.375	0.5413
Average .....	B'	3.133	1.2034	B'	2.283	0.8988	B'	2.593	1.0208
	B''	2.453	0.9057	B''	2.497	0.9830	B''	2.385	0.9389
	B'''	2.913	1.1468	B'''	1.980	0.7440	B'''	2.193	0.8633
Average .....		2.833	1.1153		2.253	0.8570		2.390	0.9400
Measurements above average .....		70			62			76	
Measurements below average .....		80			88			74	



TABLE IX.—Measurements of fineness of thoroughbred Merino wools, crossbred series, &c.—Continued.

Catalogue number of sample...	RAMS.												EWES.					
	854.			855.			856.			857.			808.			800.		
	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
2.00	2.50	2.125	4.50	3.50	3.00	2.50	3.75	2.125	3.25	3.25	2.50	2.50	2.00	3.00	2.125	1.50	2.125	2.125
2.00	2.50	1.50	2.50	3.25	4.25	3.25	3.75	2.00	2.50	2.25	2.25	2.50	2.00	2.125	2.50	3.50	1.875	1.50
1.875	2.50	2.00	3.00	3.00	4.00	4.00	3.75	2.25	3.875	2.50	2.00	2.00	2.00	2.375	2.50	2.00	1.625	1.25
2.50	3.125	1.50	3.25	2.50	3.25	2.75	3.75	2.50	2.375	2.00	1.875	1.875	1.875	3.00	3.25	1.75	1.125	1.25
2.625	2.875	2.00	3.00	3.25	3.00	2.00	3.025	2.75	3.50	1.875	2.50	2.00	1.75	2.50	2.50	1.75	1.75	1.75
2.75	2.625	2.00	3.75	4.00	2.50	0.00	3.875	2.875	3.25	2.50	2.75	2.125	1.875	3.75	3.25	1.50	1.50	1.50
2.50	2.875	2.50	3.00	2.50	2.125	2.50	4.75	3.00	2.75	3.125	1.875	2.00	1.625	3.00	2.00	2.50	2.00	1.50
1.625	2.50	1.75	4.125	2.75	2.50	3.50	2.75	2.50	2.50	2.25	2.125	2.50	2.00	3.00	2.25	2.00	1.50	1.50
2.25	2.50	1.50	3.125	3.25	2.375	3.75	3.75	3.00	4.00	2.50	2.75	2.00	2.125	3.25	2.125	1.75	2.00	2.00
2.00	2.375	1.875	4.25	4.125	2.75	2.50	2.50	2.75	2.50	2.00	2.00	2.50	1.875	3.00	2.00	1.50	1.00	1.00
2.50	2.375	2.00	3.00	3.50	2.625	1.875	2.375	2.375	3.375	2.125	3.00	2.25	2.125	3.00	2.25	1.25	1.75	1.00
2.50	2.625	1.875	3.125	2.875	2.50	2.50	2.50	2.00	4.00	2.95	2.375	2.125	2.00	2.375	2.00	2.00	2.125	2.125
3.00	2.375	2.00	3.75	5.00	2.75	3.50	4.00	2.50	2.50	3.75	2.50	2.50	2.00	3.50	2.50	1.50	1.875	2.25
2.00	2.875	2.00	3.375	2.50	2.375	3.75	4.00	2.50	3.125	3.625	2.00	2.50	2.00	2.125	2.00	2.25	2.125	2.25
1.50	3.00	1.865	4.125	2.625	2.375	3.25	4.875	2.75	4.00	2.25	3.50	2.00	2.00	2.25	2.25	2.00	1.875	2.00
2.125	3.00	2.09	4.25	3.125	2.625	4.00	4.375	2.50	2.50	2.50	2.00	2.50	2.00	2.00	2.375	2.125	1.875	2.125
2.50	1.625	2.50	3.25	3.50	3.125	4.00	3.375	2.25	4.50	3.00	2.50	1.25	2.50	2.375	2.125	1.875	1.75	1.50
2.00	3.00	2.625	3.125	4.25	2.25	2.125	3.00	3.00	3.75	3.50	2.875	2.25	2.375	2.25	2.50	2.75	1.25	1.25
1.75	2.50	2.00	3.50	3.375	2.375	2.50	2.75	2.50	4.00	3.125	2.50	2.00	2.00	2.00	2.50	1.50	1.125	1.125
2.00	2.375	2.75	3.625	3.75	2.125	3.00	4.75	2.75	3.00	2.75	2.875	2.50	2.125	2.50	2.875	1.875	1.25	1.25
2.00	2.00	2.125	4.75	3.625	3.00	2.875	3.75	1.875	2.375	2.75	2.00	2.375	2.375	2.125	2.75	2.875	1.875	1.125
2.00	2.00	2.00	3.25	3.375	3.00	4.00	2.625	1.875	4.50	3.00	3.00	1.50	1.875	1.875	2.50	2.25	1.00	2.50
2.25	1.50	1.875	3.875	3.75	2.50	2.75	2.125	2.625	3.25	4.00	3.375	1.875	1.875	2.00	2.00	2.875	1.75	2.00
2.60	2.375	3.50	3.00	3.625	3.25	2.50	4.00	2.00	3.625	3.125	2.75	2.50	2.00	3.00	2.25	2.00	2.25	2.25
2.25	2.625	1.75	3.875	3.375	2.375	2.50	3.00	2.00	3.25	4.25	1.50	2.75	2.50	2.00	2.125	2.25	1.75	2.00
2.375	2.50	1.875	3.00	3.375	2.375	2.875	2.50	3.00	3.125	2.00	1.875	2.375	1.75	2.00	2.00	2.50	2.00	2.00
2.25	3.50	1.625	3.275	2.50	1.875	2.875	2.50	3.00	3.125	1.75	2.00	2.375	1.75	2.00	2.00	2.50	2.00	2.00
2.125	2.50	2.00	4.00	2.00	2.50	2.50	4.00	3.00	2.75	1.75	2.00	2.50	2.00	2.00	2.50	1.25	2.00	2.00
2.50	2.00	1.875	3.625	2.775	3.00	4.00	3.00	2.00	4.125	2.125	3.50	2.375	2.375	3.25	1.875	1.875	1.875	1.875
2.25	2.375	2.25	3.75	3.625	3.00	5.00	4.00	3.50	2.875	2.50	1.50	2.00	2.125	3.00	2.25	1.50	1.75	1.75
2.125	2.00	2.00	3.625	2.75	2.50	4.25	3.00	2.75	3.375	2.50	2.625	1.50	2.125	3.50	3.75	2.00	2.125	2.00
2.375	2.625	2.25	3.125	3.50	2.25	4.25	4.00	3.00	3.25	2.75	3.00	1.875	3.00	3.25	4.375	2.00	1.50	1.50
2.00	2.00	1.50	3.625	3.00	2.375	2.50	2.00	3.25	4.375	3.00	3.00	1.625	2.125	1.875	3.00	1.50	1.50	1.50
2.25	2.125	1.50	2.375	4.00	2.00	3.50	2.50	2.50	4.75	2.50	1.50	1.875	2.00	3.00	3.00	1.75	1.75	1.75
2.00	2.25	2.25	3.375	4.00	1.875	3.125	3.75	1.75	2.50	2.125	1.875	2.00	2.875	2.00	2.50	1.50	1.625	2.00
2.25	2.00	2.25	3.50	2.50	3.00	2.50	2.50	2.625	3.75	3.00	2.25	2.625	2.50	1.75	3.00	2.125	1.875	2.00
2.00	2.00	2.00	4.00	3.25	4.00	2.50	2.50	2.375	3.00	3.00	2.50	2.00	2.375	3.00	2.50	1.50	1.50	1.50
2.25	2.00	1.50	4.00	2.50	2.50	3.50	1.625	2.50	2.50	2.50	1.875	1.75	1.875	3.00	2.25	1.875	1.375	1.375
2.125	2.00	2.00	3.25	3.00	2.50	4.75	3.00	2.50	4.00	2.25	1.875	1.50	1.875	2.50	2.75	1.50	1.625	1.625
2.50	1.875	2.25	3.75	2.375	2.375	3.00	3.625	3.25	3.25	2.375	2.75	1.75	2.00	2.00	2.25	1.50	1.625	1.625
2.375	2.125	2.375	2.50	2.50	2.50	4.00	2.00	1.75	3.50	3.25	2.50	2.50	2.00	2.00	2.75	2.00	1.625	1.50
2.75	2.50	2.00	3.50	2.50	2.50	4.25	3.25	1.875	3.75	2.125	2.375	1.875	1.625	2.50	1.625	1.625	2.50	2.50
2.00	2.00	2.00	3.125	3.75	2.125	2.75	3.375	2.375	3.00	2.50	2.00	2.00	3.00	2.50	3.00	2.00	2.00	2.75
2.00	2.125	3.00	3.50	2.50	4.00	4.00	2.375	2.50	3.00	2.50	1.75	1.75	2.375	2.25	2.00	1.625	2.25	2.25
2.25	1.75	2.50	3.25	2.875	3.125	3.50	3.50	2.75	3.50	3.25	1.875	2.375	2.625	3.25	2.25	1.375	2.00	2.00
2.25	2.375	1.875	3.75	2.50	3.00	3.00	3.50	3.75	3.00	2.00	2.00	2.00	2.00	2.75	2.00	2.125	2.375	2.375
1.875	1.25	2.50	3.00	3.25	2.125	3.75	3.00	2.50	3.25	2.125	1.875	1.875	2.125	3.00	1.75	1.625	1.625	1.625
2.25	2.00	2.00	3.875	2.875	2.125	4.00	3.50	2.75	2.375	2.625	2.25	2.25	3.375	3.25	3.00	1.75	1.25	1.25
2.125	2.125	2.50	3.875	2.75	2.50	3.00	3.025	4.50	2.50	2.75	2.375	2.50	2.125	3.00	1.125	2.125	1.25	1.25
Totals .....	111.000	117.625	106.750	174.75	160.125	132.875	167.00	160.50	128.375	165.815	131.875	117.125	105.675	120.00	136.50	119.625	88.00	85.750

Recapitulation and reduction:	No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.		No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.		No. of section.	In centimillimeters.		No. of section.	In thousandths of inch.	
		B'	B''		B'	B''		B'	B''		B'	B''		B'	B''		B'	B''
Highest .....	B'	3.00	1.1811	B'	4.75	1.8700	B'	4.75	1.8700	B'	5.00	1.9685	B'	2.75	1.0826	B'	4.375	1.7224
	B''	3.125	1.2303	B''	5.00	1.9685	B''	4.75	1.8700	B''	4.25	1.6732	B''	3.375	1.3287	B''	2.75	1.0826
	B'''	3.75	1.4763	B'''	4.25	1.6732	B'''	4.50	1.7716	B'''	3.50	1.3779	B'''	3.75	1.4763	B'''	2.75	1.0826
Highest .....		3.75	1.4763		5.00	1.9685		4.75	1.8700		5.00	1.9685		3.75	1.4763		4.375	1.7224
Lowest .....	B'	1.50	0.5905	B'	2.375	0.9850	B'	1.875	0.7380	B'	2.375	0.9350	B'	1.25	0.4921	B'	1.125	0.4429
	B''	1.50	0.5905	B''	2.00	0.7874	B''	1.625	0.6397	B''	1.75	0.6889	B''	1.625	0.6397	B''	1.00	0.3937
	B'''	1.50	0.5905	B'''	1.875	0.7380	B'''	1.75	0.6889	B'''	1.50	0.5905	B'''	1.875	0.7380	B'''	1.00	0.3937
Lowest .....		1.50	0.5905		1.875	0.7380		1.625	0.6397		1.50	0.5905		1.25	0.4921		1.00	0.3937
Average .....	B'	2.22	0.8740	B'	3.495	1.3759	B'	3.340	1.3140	B'	3.318	1.3062	B'	2.113	0.8318	B'	2.393	0.9421
	B''	2.35	0.9251	B''	3.20	1.2598	B''	3.21	1.2637	B''	2.637	1.0381	B''	2.40	0.9448	B''	1.76	0.6929
	B'''	2.185	0.8405	B'''	2.653	1.0464	B'''	3.508	1.0110	B'''	2.343	0.9224	B'''	2.73	1.0748	B'''	1.715	0.6751
Average .....		2.24	0.8818		3.117	1.2271		3.039	1.1964		2.760	1.0359		2.414	0.9503		1.956	0.7700
Measurements above average .....		70			75			62			61			60			75	
Measurements below average .....		74			75			88			89			90			75	



TABLE IX.—Measurements of fineness of thoroughbred Merino wools, crossbred series, &c.—Continued.

Catalogue number of sample.....	EWES.																
	810.			811.			812.			813.							
	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.					
3.25	2.50	2.25	2.25	2.125	2.25	1.50	2.00	2.00	2.00	2.00	2.25	2.00					
3.75	1.75	3.25	2.00	1.50	2.00	2.00	2.00	1.75	1.75	2.125	1.875	1.375					
3.50	2.25	3.00	1.50	2.00	2.125	1.875	1.875	1.875	1.875	2.00	1.75	1.50					
3.875	3.00	2.125	1.75	1.50	1.75	2.125	1.50	2.00	2.00	2.50	2.00	1.50					
2.50	2.50	3.00	1.625	2.75	1.675	1.50	2.50	2.00	2.125	2.625	2.125	2.125					
2.50	3.25	2.875	1.625	2.125	1.50	2.25	2.125	1.625	1.625	2.25	3.25	2.00					
4.00	4.00	2.50	1.625	2.375	2.00	2.50	2.00	2.00	2.00	2.50	3.00	2.25					
2.25	3.375	2.25	2.25	1.375	1.875	1.125	1.125	2.00	2.125	2.50	1.875	1.50					
2.50	3.75	2.50	2.375	2.00	1.75	1.875	1.875	1.875	1.875	2.375	1.875	1.875					
4.75	3.75	1.875	2.25	1.625	1.125	1.025	2.25	1.75	2.00	2.00	1.75	2.00					
2.25	3.625	2.00	1.875	2.25	2.125	2.00	2.00	2.00	1.625	1.875	1.625	2.125					
3.00	2.50	2.25	2.25	2.375	2.00	2.25	2.125	1.75	2.00	2.00	2.00	1.50					
3.50	2.50	1.75	1.50	1.50	2.25	2.125	2.00	1.50	1.625	2.00	2.00	1.375					
3.625	3.25	2.125	1.75	1.625	1.625	1.50	1.875	1.25	2.125	1.875	1.375	2.25					
3.25	3.375	2.00	1.60	2.50	2.00	1.50	1.75	2.00	2.25	2.25	1.25	2.00					
3.875	2.125	3.00	1.625	1.875	1.50	2.25	2.00	2.125	1.875	1.00	2.875	2.00					
5.25	3.00	2.875	2.125	1.875	1.625	1.625	2.00	2.25	2.00	2.00	2.00	2.00					
3.00	3.75	1.75	1.75	1.50	2.00	1.75	1.875	3.25	2.25	2.25	2.375	2.125					
3.50	3.50	2.25	2.00	1.50	2.125	2.00	1.75	3.50	2.125	2.00	2.25	2.25					
3.00	1.75	1.625	1.75	1.50	1.875	1.50	2.375	2.00	1.875	1.875	1.75	1.75					
4.00	2.00	2.00	2.375	1.625	1.75	1.60	2.25	2.00	2.125	1.75	2.00	2.00					
3.00	4.00	2.00	2.25	1.50	2.00	1.50	2.00	1.625	2.25	1.375	2.25	2.25					
3.625	3.00	2.75	1.50	1.875	1.875	1.60	1.875	1.875	2.375	2.25	2.00	2.00					
4.00	2.625	3.75	1.50	1.625	1.375	2.00	1.75	2.00	2.50	2.00	1.50	1.50					
3.00	2.25	2.75	1.625	1.625	2.25	2.125	1.60	2.50	2.375	2.00	1.875	1.875					
3.125	3.50	3.125	1.375	1.375	2.25	2.25	1.375	1.50	2.625	1.60	2.25	2.25					
3.25	4.50	3.00	1.75	2.00	1.75	1.50	2.25	1.625	1.00	2.60	2.60	2.60					
2.875	2.875	4.00	2.125	1.625	1.75	2.00	1.75	2.00	3.50	1.75	1.875	1.875					
2.50	3.625	2.00	1.50	1.75	2.00	2.00	1.75	1.75	2.25	1.625	1.60	1.60					
4.875	2.00	1.75	1.50	1.50	1.875	1.25	2.00	2.00	2.125	2.50	2.125	2.125					
2.50	3.875	1.875	1.50	1.50	1.60	2.00	2.125	2.125	1.75	2.25	2.25	2.25					
3.50	4.50	2.50	1.75	2.00	1.875	2.125	2.375	2.00	2.25	1.875	2.00	2.00					
4.25	1.625	1.50	1.625	1.875	1.50	1.875	2.00	1.875	2.60	1.625	2.25	2.25					
3.25	2.75	1.75	1.50	1.50	2.25	1.875	1.375	1.75	1.75	1.375	2.375	2.375					
3.00	2.25	2.00	1.50	1.50	2.375	1.75	1.75	2.125	3.00	1.25	1.875	1.875					
2.875	4.50	1.875	2.125	1.625	1.75	2.00	1.60	1.75	3.625	2.25	1.75	1.75					
3.125	2.75	1.625	2.00	2.00	2.50	1.625	2.125	2.00	2.00	2.00	2.25	2.25					
4.625	3.00	2.25	1.60	1.75	2.625	2.50	2.00	1.875	2.50	3.00	2.375	2.375					
3.25	2.375	3.00	2.00	1.875	2.25	1.00	2.00	1.375	2.625	1.25	1.50	1.50					
3.75	2.75	3.125	2.125	1.25	2.125	2.00	2.25	1.50	2.50	1.875	1.75	1.75					
2.50	2.625	1.75	1.75	2.875	1.625	1.75	1.75	1.75	2.25	1.25	2.00	2.00					
2.00	2.00	3.25	1.875	1.50	1.50	2.00	1.875	2.125	2.375	1.125	2.00	2.00					
2.50	2.00	2.875	2.00	2.00	2.00	2.00	2.75	2.00	2.875	1.75	1.125	1.125					
3.00	2.00	4.00	1.75	1.875	1.625	1.875	2.50	2.00	2.00	1.625	1.50	1.50					
4.00	4.75	3.50	1.50	2.00	1.60	1.50	2.00	2.125	2.25	2.50	1.375	1.375					
3.00	2.375	2.00	1.625	1.50	2.125	2.00	2.125	1.875	3.00	2.00	2.50	2.50					
3.75	2.125	1.375	2.25	1.875	1.125	2.125	1.75	2.25	2.875	1.75	1.25	1.25					
2.00	1.875	2.125	2.00	2.125	1.875	1.875	1.875	2.125	3.50	1.875	1.50	1.50					
2.00	4.75	2.25	1.50	2.375	1.75	1.75	1.50	2.00	3.75	2.125	2.00	2.00					
3.00	2.00	1.875	1.75	2.125	2.375	2.60	2.00	2.00	2.125	2.00	2.125	2.125					
Totals.....	163.25	147.25	120.875	83.625	92.000	94.25	92.625	97.25	96.875	117.50	95.75	91.50					
	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.					
Recapitulation and reduction:																	
Highest.....	B' 4.875	1.0192	B' 2.375	0.0350	B' 2.50	0.0842	B' 3.75	1.4763									
	B'' 4.75	1.8700	B'' 2.875	1.1318	B'' 2.75	1.0820	B'' 3.25	1.2795									
	B''' 4.00	1.5748	B''' 2.625	1.0384	B''' 3.50	1.3779	B''' 2.50	0.9842									
Highest.....		4.875		1.9132		2.875		1.1318			3.60		1.3770		3.75		1.4763
Lowest.....	B' 2.00	0.7874	B' 1.00	0.3937	B' 1.00	0.3937	B' 1.00	0.3937									
	B'' 1.375	0.5413	B'' 1.25	0.4921	B'' 1.375	0.5413	B'' 1.00	0.3937									
	B''' 1.375	0.5413	B''' 1.125	0.4429	B''' 1.25	0.4921	B''' 1.25	0.4921									
Lowest.....		1.375		0.5413		1.00		0.3937			1.00		0.3937				
Average.....	B' 3.305	1.3011	B' 1.773	0.6980	B' 1.853	0.7605	B' 2.25	0.9251									
	B'' 2.945	1.1594	B'' 1.81	0.7244	B'' 1.945	0.7657	B'' 1.915	0.7539									
	B''' 2.418	0.9519	B''' 1.885	0.7421	B''' 1.938	0.7629	B''' 1.800	0.7440									
Average.....		2.889		1.1373		1.833		0.7212			2.05		0.8070				
Measurements above average.....		73				73					67						
Measurements below average.....		77				77					70						



TABLE IX.—Measurements of fineness of thoroughbred Merino wools, crossbred series, &c.—Continued.

Catalogue number of sample.....	EWES.											
	814.			815.			816.			817.		
	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.	B'.	B''.	B'''.
1.50	3.00	1.625	1.75	2.25	3.50	1.75	1.50	1.50	3.00	1.50	3.50	
4.00	1.375	1.50	2.25	1.75	2.00	2.00	1.625	1.75	2.50	1.875	3.00	
2.60	1.50	2.00	2.00	1.50	2.25	2.125	1.50	1.375	2.625	2.00	3.00	
2.25	2.25	1.375	2.50	1.50	2.50	2.50	1.75	1.25	2.60	2.50	2.00	
2.00	2.00	1.625	2.25	1.50	2.00	2.25	2.00	1.50	1.00	2.125	1.50	
2.125	1.50	1.25	3.00	2.00	2.00	1.875	2.25	1.625	1.50	2.125	2.25	
1.75	1.625	2.00	2.50	2.125	2.25	2.125	2.50	1.50	1.75	1.50	2.00	
2.00	1.50	1.25	1.75	2.00	2.00	2.00	2.25	2.25	2.375	3.00	2.50	
2.125	1.625	1.50	2.125	1.50	1.375	2.25	1.75	2.125	2.875	2.00	2.625	
2.50	2.00	1.50	2.50	1.625	2.50	2.125	2.00	1.375	2.75	1.75	3.00	
1.875	2.25	1.25	3.00	1.375	3.00	3.00	1.375	2.125	2.50	1.875	2.50	
2.00	3.00	1.375	3.25	2.25	3.125	3.25	1.50	2.50	2.125	1.25	2.50	
2.125	1.625	2.125	2.125	2.00	1.50	2.00	2.00	1.375	3.00	3.00	2.50	
2.75	2.25	1.875	2.125	1.125	1.625	2.25	1.875	1.50	2.00	1.25	2.25	
1.875	1.25	1.25	2.00	1.625	2.00	2.50	1.625	1.625	2.375	1.50	1.75	
1.75	2.00	2.25	1.625	1.50	1.375	1.875	1.50	2.125	2.375	1.50	1.50	
1.625	2.00	1.00	2.75	1.50	1.50	1.50	2.50	1.375	2.50	2.375	1.875	
2.625	1.625	1.25	2.50	1.375	1.00	1.75	2.625	1.25	1.875	2.50	2.00	
3.00	1.75	2.00	3.00	2.00	1.60	1.75	2.00	2.125	2.25	1.75	3.00	
2.50	1.875	2.00	2.00	2.00	2.00	1.875	2.00	2.25	2.125	1.50	2.25	
2.25	3.00	2.125	1.75	2.125	2.125	3.00	1.50	1.875	2.25	2.00	4.00	
2.375	1.25	1.75	1.625	2.375	2.00	2.75	1.125	2.125	2.50	2.00	2.00	
1.875	1.625	1.375	1.625	2.00	2.25	2.00	3.00	2.50	2.375	3.25	2.50	
2.50	1.75	1.50	3.00	1.75	2.125	1.75	2.50	1.75	2.00	1.25	4.00	
2.125	1.50	1.125	2.875	1.875	2.25	1.875	1.75	1.875	2.50	1.25	3.00	
2.50	1.50	1.25	2.00	2.00	1.75	2.00	2.00	1.75	2.625	3.125	2.25	
2.625	2.00	1.25	2.375	1.375	2.75	2.125	2.125	1.375	2.00	1.25	2.375	
1.75	1.50	1.25	1.50	1.625	1.875	1.75	1.875	2.00	2.375	1.50	1.75	
1.875	2.25	1.125	1.625	1.125	2.00	1.875	1.75	1.75	2.00	1.50	1.875	
2.75	2.125	1.50	1.50	1.50	2.125	2.00	2.00	1.625	1.875	2.00	2.00	
1.75	2.00	1.375	1.625	1.75	1.25	2.50	2.00	2.25	1.75	1.75	2.25	
2.375	1.50	1.375	1.75	2.00	1.875	1.625	2.00	2.50	1.75	2.25	2.50	
2.50	1.60	1.25	3.50	2.00	2.00	1.75	1.375	1.50	2.50	2.375	3.00	
2.25	1.25	1.375	3.625	1.50	2.25	1.875	1.125	1.875	3.00	2.25	3.125	
2.125	1.375	1.125	4.00	1.75	1.875	2.50	2.00	1.75	3.00	1.50	3.125	
1.875	3.00	1.50	1.50	1.625	2.00	2.625	2.00	1.50	2.75	2.375	2.25	
2.125	2.875	1.50	1.25	1.75	1.75	2.75	1.75	1.75	2.625	2.00	2.00	
1.75	2.00	1.75	2.00	2.00	1.50	2.25	1.875	1.875	2.50	2.25	2.25	
2.00	1.875	1.125	2.25	2.25	2.00	2.50	2.00	1.875	1.75	2.125	2.75	
1.50	1.25	1.375	2.50	1.875	1.625	1.50	1.875	2.00	2.00	1.875	3.00	
1.75	1.75	1.50	3.00	1.75	2.00	2.00	2.50	1.50	2.25	2.00	3.125	
2.00	1.25	1.025	2.00	1.75	2.25	2.125	2.375	1.625	2.50	2.00	3.00	
2.125	1.75	2.00	1.25	1.50	1.50	2.75	2.375	1.75	3.00	1.75	2.50	
2.375	1.875	2.125	2.50	2.125	1.625	1.875	2.50	2.00	1.875	2.50	3.00	
2.25	2.00	2.25	2.375	2.25	2.375	2.50	2.00	2.25	2.375	3.25	3.50	
2.25	1.50	1.50	2.25	2.375	1.50	1.50	1.60	2.375	3.00	2.50	3.00	
2.75	1.50	1.75	1.50	1.25	2.50	2.00	1.875	2.50	1.875	2.00	2.25	
1.50	1.625	1.25	1.875	1.25	1.75	1.75	2.25	1.25	1.25	2.50	1.75	
3.00	1.50	1.50	3.75	1.50	1.875	2.25	1.50	1.25	2.50	2.75	3.00	
2.60	2.00	1.50	3.75	1.625	3.00	2.125	1.375	2.00	2.50	2.75	2.00	
Totals .....	110.25	91.875	77.00	115.50	87.625	100.75	106.625	96.00	90.50	114.875	102.75	122.00

	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.	No. of section.	In centimillimeters.	In thousandths of inch.
Recapitulation and reduction:												
Highest.....	B'	4.00	1.5748	B'	4.00	1.5748	B'	3.25	1.3705	B'	3.00	1.1811
	B''	3.60	1.1811	B''	2.375	0.9350	B''	3.00	1.1811	B''	3.25	1.2795
	B'''	2.25	0.8858	B'''	3.60	1.3779	B'''	2.50	0.9842	B'''	4.00	1.5748
Highest.....		4.00	1.5748		4.00	1.5748		3.25	1.2795		4.00	1.5748
Lowest.....	B'	1.50	0.5905	B'	1.25	0.4921	B'	1.50	0.5905	B'	1.00	0.3937
	B''	1.25	0.4921	B''	1.125	0.4429	B''	1.125	0.4429	B''	1.25	0.4921
	B'''	1.00	0.3937	B'''	1.00	0.3937	B'''	1.25	0.4921	B'''	1.50	0.5905
Lowest.....		1.00	0.3937		1.00	0.3937		1.125	0.4429		1.00	0.3937
Average.....	B'	2.205	0.8681	B'	2.31	0.9004	B'	2.133	0.8397	B'	2.298	0.9047
	B''	1.838	0.7230	B''	1.753	0.6901	B''	1.92	0.7559	B''	2.055	0.8090
	B'''	1.340	0.5275	B'''	2.015	0.7933	B'''	1.81	0.7125	B'''	2.44	0.9600
Average.....		1.794	0.7062		2.026	0.7970		1.954	0.7692		2.204	0.8913
Measurements above average.....		73			55			76			68	
Measurements below average.....		77			95			74			82	



TABLE X.—Measurements of strain and stretch of crossbred wools produced by Bacchiel Brothers, Willits, Mendocino County, California.

Catalogue number of sample...	RAMS.								EWES.				RAMS.			
	439				437				438				436			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	rams.	mm.
	5.75	7.50	6.25	4.75	5.25	5.25	5.25	7.75	2.625	9.00	5.375	4.25	4.25	6.25	12.00	6.50
	7.75	7.00	8.00	8.00	4.00	7.00	6.00	8.125	5.50	4.25	4.375	4.25	7.25	8.875	9.50	7.00
	4.00	9.50	4.25	6.25	4.75	8.00	3.00	7.75	1.625	2.25	4.025	3.25	2.00	5.875	7.00	5.25
	3.75	8.00	7.00	6.50	4.50	7.75	4.25	7.00	8.50	6.25	4.00	2.75	4.25	7.75	19.00	8.25
	4.75	9.75	0.50	7.75	4.25	5.75	7.00	7.50	3.625	7.25	4.25	4.00	5.75	8.50	5.25	8.25
	3.75	7.75	7.25	7.00	3.875	0.00	4.25	7.00	2.025	6.00	2.375	2.00	4.25	8.00	3.00	6.00
	4.00	7.00	9.75	6.75	4.50	7.50	3.00	7.25	3.375	5.50	3.50	6.50	3.00	7.50	6.50	4.50
	5.25	6.00	7.00	6.50	5.00	8.00	4.75	7.75	4.00	6.50	5.00	2.25	5.00	5.75	5.00	6.50
	5.50	5.50	0.50	7.00	4.25	8.00	2.25	5.875	4.75	8.75	3.625	4.25	10.00	3.25	6.25	6.25
	14.00	8.75	8.50	5.50	3.25	8.50	5.25	7.25	8.375	2.50	4.25	1.50	10.00	6.75	11.00	6.875
	4.25	7.00	0.00	8.75	7.00	0.75	4.25	8.00	3.00	2.00	2.00	3.75	7.50	7.50	6.00	8.00
	4.75	7.00	9.75	7.50	5.75	4.00	4.50	8.25	5.50	5.75	2.625	8.50	4.25	3.50	7.75	7.00
	9.25	8.00	5.75	7.60	4.00	7.75	3.25	6.75	4.25	2.00	4.25	6.75	3.00	2.75	4.00	5.00
	6.75	7.50	10.75	8.50	3.25	0.75	4.25	6.50	2.875	2.25	3.375	3.25	6.50	8.00	8.25	7.875
	6.25	7.00	10.25	7.50	4.00	7.125	4.00	6.125	4.25	2.75	2.625	3.00	10.00	6.00	8.00	8.00
	8.25	9.75	5.50	0.00	4.25	7.25	4.25	7.25	3.50	2.00	3.50	3.50	4.00	2.75	7.50	8.00
	16.75	9.00	4.75	4.00	5.50	8.75	6.75	6.00	4.875	4.75	5.75	9.75	5.125	7.50	4.00	2.00
	4.00	7.75	6.75	5.00	3.00	6.00	4.25	7.00	3.50	4.25	4.75	7.75	4.125	4.125	4.50	8.50
	4.00	3.75	5.00	9.75	4.25	7.75	8.00	8.875	3.25	6.25	4.625	7.25	10.50	7.00	5.00	7.50
4.25	5.00	6.25	3.00	4.125	5.00	5.25	3.25	2.00	4.50	2.00	6.00	6.00	3.00	5.00	6.50	
4.75	7.00	3.00	3.75	6.75	7.875	6.50	8.75	2.75	1.50	3.25	5.75	5.75	5.00	8.25	6.50	
4.50	7.25	3.25	5.25	4.75	7.25	3.00	7.75	4.375	8.00	2.625	2.25	4.00	4.875	4.25	6.25	
4.50	8.00	5.25	8.75	5.00	8.00	4.25	7.75	4.875	6.75	2.375	2.00	7.25	7.75	8.50	5.125	
4.50	5.00	3.50	8.00	5.25	5.50	3.00	6.25	5.25	3.25	3.25	2.25	6.00	6.875	4.25	4.25	
6.25	7.00	10.00	9.75	3.00	6.25	4.00	7.75	9.00	4.00	2.625	1.50	5.00	7.50	5.75	6.50	
Totals .....	145.50	181.75	169.75	175.75	112.375	173.375	114.25	182.00	100.75	114.75	93.50	99.75	143.75	150.625	163.50	146.875

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest.....	14.00	216.09	9.75	48.75	8.00	123.48	8.875	44.375	9.00	138.911	9.75	48.75	12.00	185.22	8.50	42.50
Lowest.....	3.00	46.30	8.75	18.75	2.25	34.75	4.00	20.00	1.625	25.776	1.50	7.50	2.00	30.87	2.75	13.75
Average.....	6.31	97.89	7.15	35.75	4.53	69.92	7.11	35.55	4.00	61.738	4.25	21.45	6.15	94.92	6.12	30.60
Tests above average.....	19		24		19		20		23		20		19		29	
Tests below average.....	31		26		31		21		27		30		31		21	

Catalogue number of samples...	EWES.				RAMS.				EWES.				RAMS.			
	425				427				428				429			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	5.00	7.25	6.375	8.50	4.25	5.50	11.50	7.25	0.00	9.25	9.00	8.50	9.75	8.00	4.00	7.00
	6.00	8.25	4.375	6.75	7.25	7.25	4.375	6.25	5.25	4.00	7.75	7.50	7.00	7.50	4.75	3.125
	4.00	6.00	4.50	8.00	5.375	7.25	4.375	6.00	6.75	4.75	4.50	2.00	4.25	7.25	4.25	6.875
	6.375	6.00	4.00	8.25	5.625	3.25	5.00	5.50	9.25	4.25	10.75	9.50	4.25	4.25	5.25	5.50
	3.375	5.00	3.00	6.25	5.75	2.75	7.375	6.00	12.50	6.00	6.00	5.25	0.00	7.00	5.75	8.25
	4.375	7.75	4.375	7.25	4.375	8.00	4.375	1.00	9.75	7.00	4.75	5.50	7.75	7.00	5.75	7.00
	4.75	8.00	3.625	7.75	6.625	5.25	5.375	4.75	3.50	7.00	5.50	9.00	7.00	6.625	5.50	5.50
	2.75	3.75	4.625	8.25	4.375	6.00	7.625	7.50	2.50	4.00	2.50	4.00	9.00	8.75	6.125	6.50
	4.375	5.75	3.625	4.75	8.25	6.25	9.375	5.00	9.75	7.00	6.00	5.75	4.75	7.00	4.375	7.00
	6.25	8.75	5.50	4.00	4.625	4.75	4.625	3.25	10.00	7.50	5.75	5.50	5.75	7.75	6.625	6.00
	6.00	6.00	4.25	8.00	14.025	8.00	8.25	4.75	3.25	1.50	5.00	3.00	4.375	7.375	7.00	8.00
	5.50	7.25	5.375	8.25	3.375	1.50	5.25	6.00	5.00	4.00	8.75	8.50	4.625	6.25	5.75	7.25
	5.50	8.00	4.375	6.75	6.00	2.00	6.25	8.25	4.75	6.00	3.75	1.25	5.625	3.75	4.50	6.00
	7.00	7.25	6.50	9.00	5.625	1.50	6.00	8.00	7.75	2.25	5.75	8.50	5.875	7.50	4.25	1.00
	4.25	7.75	3.875	7.75	10.375	0.25	5.375	7.75	11.00	7.25	3.50	5.25	4.75	1.25	6.00	5.875
	7.25	7.75	4.875	9.00	12.625	8.00	4.75	7.75	4.25	4.50	5.50	2.50	5.75	7.125	5.25	8.00
	6.625	5.75	3.75	7.00	6.625	7.25	3.625	5.25	7.25	7.25	8.25	5.00	5.00	8.00	5.00	7.50
	6.00	9.00	4.625	6.00	5.375	4.75	5.00	4.00	4.75	2.75	8.00	5.00	6.65	8.00	5.50	8.00
	4.375	8.00	6.375	7.25	4.375	4.75	5.375	6.00	9.00	6.00	0.75	7.50	2.75	1.50	4.00	4.875
5.625	6.25	4.625	8.00	6.00	7.00	4.75	8.75	5.00	7.00	4.75	9.00	3.00	2.875	7.625	3.60	
5.00	8.25	3.00	7.00	5.00	4.50	4.50	6.50	9.75	5.75	3.50	3.25	6.75	6.00	4.25	1.25	
5.375	6.00	6.00	8.50	5.03	7.75	2.375	3.00	10.75	7.75	6.00	3.00	7.25	8.00	3.625	7.00	
4.375	8.00	4.625	6.25	4.00	7.25	4.375	6.00	4.75	1.75	11.00	3.00	4.00	6.25	6.50	6.00	
7.375	8.75	4.00	6.00	5.00	6.00	2.50	1.75	7.25	5.25	7.00	8.50	5.50	7.00	3.00	5.00	
3.375	7.75	6.25	8.25	6.50	7.25	5.50	5.25	8.00	8.75	5.00	7.00	6.75	5.00	5.75	7.50	
Totals .....	131.375	181.25	115.875	182.75	137.00	144.00	135.375	136.50	178.75	140.60	154.25	117.00	143.875	157.50	129.50	150.00

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest.....	7.50	113.76	9.00	45.00	14.625	22.573	9.25	46.25	12.50	192.98	9.25	46.25	9.75	152.59	8.875	44.875
Lowest.....	2.75	42.45	3.75	18.75	2.50	38.58	1.00	5.00	2.50	38.59	1.25	6.25	2.75	42.44	1.00	5.00
Average.....	4.95	76.49	7.28	30.40	5.85	90.29	5.61	28.05	6.86	102.60	5.75	28.75	5.47	81.43	6.15	30.75
Tests above average.....	22		27		17		27		23		24		29		32	
Tests below average.....	28		23		33		23		27		24		21		18	



TABLE X.—Measurements of strain and stretch of crossbred wools produced by Baechtel Brothers, &c.—Continued.

Catalogue number of sample...	RAMS.															
	430.				828.				829.				830.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	6.375	9.25	9.25	8.75	1.50	7.875	2.00	9.25	6.50	11.75	5.00	8.75	3.25	9.50	7.75	9.75
	5.25	8.25	5.25	6.75	2.25	8.25	1.25	8.75	4.25	9.75	3.75	4.00	4.00	8.75	3.00	8.75
	5.50	4.25	3.625	4.00	2.00	8.125	2.50	8.875	4.00	9.00	4.75	7.25	5.00	8.00	5.00	10.00
	5.375	8.00	4.00	4.00	1.25	6.25	2.125	10.125	8.00	8.50	6.25	10.50	6.00	8.50	4.00	12.00
	4.375	4.25	9.375	4.25	2.25	9.125	3.25	6.25	4.50	7.50	4.75	7.75	7.00	8.50	3.75	7.00
	0.25	6.75	6.00	5.00	3.00	7.25	2.00	8.50	4.50	7.00	3.25	8.00	6.25	11.00	3.75	7.00
	6.00	8.25	3.375	4.00	1.75	5.50	2.00	6.75	7.25	7.75	5.00	11.00	7.00	8.00	7.00	8.50
	4.375	6.75	5.375	6.50	2.50	6.75	1.25	4.75	4.50	4.50	4.00	9.00	6.75	8.75	5.75	10.00
	8.025	8.00	4.625	8.00	1.25	4.25	2.50	9.875	4.25	8.50	4.25	8.75	4.75	11.25	3.25	10.00
	4.625	3.00	4.50	8.25	4.75	8.875	1.75	6.00	3.75	4.50	3.25	2.00	6.00	7.75	7.25	10.75
	2.625	5.00	6.00	7.25	4.25	1.50	2.75	7.25	4.00	7.50	4.25	9.00	3.50	8.50	0.00	7.00
	5.00	8.25	3.375	8.50	2.00	10.75	2.25	6.75	3.00	2.50	8.00	10.00	7.25	9.00	4.75	11.00
	5.00	8.25	5.375	6.00	1.75	7.25	1.75	10.00	3.00	10.00	5.00	8.75	2.75	6.00	4.25	8.75
	10.25	4.75	5.00	8.00	1.75	7.00	2.75	6.875	4.75	10.00	6.00	7.25	4.50	10.00	7.75	11.75
	8.625	7.50	4.50	8.25	3.50	7.75	2.75	7.50	3.00	9.00	5.00	9.25	5.50	11.00	4.25	9.75
	5.375	7.25	3.50	0.00	1.75	9.50	2.125	6.50	4.00	8.75	4.00	10.75	4.25	10.00	5.00	11.00
	3.625	4.25	4.50	8.00	2.00	8.875	2.00	7.125	5.50	7.75	4.50	11.25	7.00	9.00	4.75	9.50
	7.00	8.75	5.00	7.00	2.00	9.75	1.75	8.25	9.75	8.25	4.00	8.75	7.75	9.75	6.00	10.50
	3.625	4.25	8.50	8.25	3.25	9.25	3.50	8.25	3.50	8.75	5.50	8.00	4.00	8.00	4.50	9.50
10.375	5.75	8.00	8.25	1.00	5.25	2.00	6.75	4.00	10.00	3.00	8.75	6.25	7.50	6.25	9.75	
4.375	8.75	3.75	5.25	2.25	8.25	2.25	8.25	6.25	10.00	5.25	7.00	6.50	10.25	4.00	9.75	
5.375	6.75	4.00	7.00	2.00	8.75	3.25	9.00	4.75	4.00	5.00	9.50	6.50	11.00	4.00	9.75	
10.375	8.25	7.00	7.25	1.75	5.75	5.25	6.25	3.50	5.25	4.75	8.75	3.50	9.00	8.00	10.00	
5.375	5.50	4.375	7.25	2.25	0.75	8.50	5.00	2.75	3.00	3.50	9.00	0.25	8.75	6.25	10.50	
6.375	0.00	6.25	7.00	2.00	6.25	3.50	6.75	3.50	7.50	4.00	7.50	6.00	11.00	10.00	10.00	
Totals.....	150.50	169.00	134.50	160.75	58.00	185.00	64.00	189.625	116.75	191.00	116.00	210.50	137.75	228.75	139.75	242.25
Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest.....	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Lowest.....	10.375	160.13	9.25	40.25	8.50	131.19	10.75	53.75	9.75	150.49	11.75	58.75	10.50	162.00	12.00	60.00
Average.....	5.70	87.98	6.76	33.80	2.40	37.04	7.89	39.45	4.65	71.77	8.03	40.15	5.55	85.66	9.42	47.10
Tests above average.....	18		28		10		22		21		29		26		27	
Tests below average.....	32		22		34		28		29		21		24		23	

Catalogue number of samples..	RAMS.															
	831.				832.				833.				834.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	5.25	10.00	4.75	9.75	2.50	9.00	2.75	5.50	3.75	7.75	3.00	2.50	2.75	5.00	6.25	8.75
	4.00	9.00	4.50	10.25	2.25	0.00	2.25	1.75	4.75	6.00	6.00	6.00	6.75	8.75	5.00	5.25
	6.75	10.75	4.00	7.00	3.50	10.00	2.50	8.25	4.875	8.00	5.00	8.75	4.00	8.50	8.25	8.25
	4.00	8.00	5.00	9.00	4.25	5.75	2.50	7.75	0.25	5.75	5.25	8.75	4.00	5.00	7.00	8.25
	3.00	8.00	3.50	11.00	5.00	7.875	3.50	8.25	6.00	5.25	4.75	8.00	4.50	7.75	9.50	9.75
	4.00	7.00	4.00	7.00	2.00	7.25	3.50	6.75	5.75	7.75	2.625	6.00	4.25	7.00	5.75	9.00
	3.00	8.00	5.00	10.25	2.25	5.60	5.00	9.00	7.00	5.25	3.00	6.25	3.00	7.50	8.50	9.00
	5.25	8.00	4.50	8.75	4.00	7.50	9.00	9.875	8.875	7.50	3.875	7.00	4.75	8.75	4.75	9.75
	5.50	8.75	6.25	8.00	3.75	6.50	3.00	6.00	6.00	8.00	3.75	8.00	5.00	10.00	5.00	8.25
	2.75	6.50	0.00	8.75	4.75	7.75	3.50	7.55	6.75	6.125	3.00	7.25	8.00	8.50	3.25	8.25
	4.00	6.50	5.25	7.25	4.00	9.75	5.75	7.875	5.125	7.25	6.875	7.00	2.25	8.00	3.75	8.50
	7.00	8.25	3.75	9.75	3.60	8.25	3.00	5.22	6.50	7.00	8.375	6.00	6.25	5.00	3.00	7.00
	4.75	10.25	5.75	9.50	3.00	8.25	3.00	7.22	8.25	6.00	6.00	8.25	0.25	9.00	5.25	7.50
	5.00	7.00	4.50	9.00	5.50	6.75	3.50	7.125	8.75	9.00	7.00	6.875	5.00	7.00	6.50	7.75
	3.25	9.75	4.25	8.00	3.75	8.00	3.00	8.75	6.025	7.125	3.625	6.00	7.75	8.25	0.50	8.25
	3.00	10.00	7.25	8.75	5.75	6.125	8.00	9.875	3.75	8.25	3.50	6.50	5.75	7.75	4.00	8.00
	4.25	9.75	5.75	9.00	2.75	8.00	4.50	5.75	6.50	4.00	7.50	6.50	6.00	7.50	6.75	3.50
	6.75	9.00	4.00	4.75	2.25	4.00	6.125	7.75	4.00	8.00	11.00	7.25	8.75	9.00	3.50	7.25
	3.25	7.60	5.75	8.00	2.25	5.00	7.00	7.875	7.00	8.50	3.625	8.00	4.75	9.75	0.25	8.50
3.75	9.75	3.75	9.50	6.50	8.875	11.25	9.25	6.00	7.75	5.50	7.125	6.00	7.50	6.75	8.00	
4.50	8.00	6.25	0.00	6.50	8.75	2.75	6.75	6.25	7.125	3.625	5.00	8.25	10.75	11.50	8.50	
3.60	0.25	3.00	8.00	4.00	7.00	4.50	9.75	8.75	8.25	8.75	5.25	8.75	9.75	7.00	7.25	
8.00	0.75	3.00	6.75	5.50	10.00	8.75	8.25	6.25	5.00	6.75	7.50	3.75	6.09	5.75	7.00	
4.75	0.00	3.75	7.50	4.00	5.25	4.00	7.75	5.00	7.00	7.875	5.25	6.75	8.00	5.50	7.50	
3.75	9.75	5.00	9.00	2.25	9.75	4.25	8.00	4.25	9.75	4.00	7.00	8.25	10.00	6.50	8.50	
Totals.....	113.00	212.00	118.50	214.00	95.50	180.125	116.875	187.875	149.25	177.375	128.25	168.00	144.50	200.00	153.75	199.50
Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest.....	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Lowest.....	7.25	111.90	11.00	55.00	11.25	173.64	10.00	50.00	11.00	169.78	8.75	43.75	11.50	177.50	10.75	63.75
Average.....	2.25	42.44	6.25	31.25	2.25	84.93	1.75	8.75	2.625	43.90	4.00	20.00	2.25	84.73	8.50	17.50
Tests above average.....	21		28		17		29		24		30		24		81	
Tests below average.....	29		23		93		21		26		20		26		19	



TABLE X.—Measurements of strain and stretch of crossbred wools produced by Baechtel Brothers, &c.—Continued.

Catalogue number of samples..		RAMS.															
		835.				836.				837.				838.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	rams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
		8.00	7.00	6.25	8.00	4.00	8.25	5.00	7.00	9.00	7.00	5.00	6.00	3.75	8.00	8.75	8.00
		9.00	6.50	11.00	8.00	8.00	8.75	6.25	7.00	8.50	6.25	7.25	11.50	4.25	7.75	3.50	10.00
		9.75	5.00	6.00	6.50	4.25	7.00	4.75	7.25	8.00	9.00	5.00	6.50	5.50	7.75	6.00	8.20
		7.50	6.50	7.25	6.75	4.50	7.125	6.00	9.50	4.60	6.00	7.75	9.00	5.00	9.00	8.75	8.00
		5.75	8.75	3.25	6.25	4.25	6.00	3.25	6.00	6.00	6.50	7.25	6.25	4.25	8.75	8.75	8.50
		8.00	8.50	7.50	6.75	2.00	6.75	4.25	8.50	12.00	6.00	8.00	7.00	4.00	7.75	3.75	8.00
		3.50	2.50	8.50	4.50	2.75	6.125	4.25	7.875	6.00	5.00	4.75	4.00	5.00	8.25	4.25	8.00
		8.25	7.25	15.25	7.25	4.50	6.75	3.25	5.00	7.00	7.00	0.00	8.25	2.25	8.00	4.00	7.75
		6.00	7.75	9.00	8.25	3.60	8.00	4.60	6.25	8.00	7.75	7.00	0.00	2.50	8.00	6.00	9.75
		6.75	5.00	5.00	7.75	3.00	6.125	4.50	8.50	6.50	6.75	4.00	2.25	2.50	7.75	4.00	9.50
		4.75	9.60	4.00	8.60	3.00	7.00	6.50	8.25	7.00	6.00	7.00	9.50	4.00	8.00	4.50	8.00
		5.75	8.00	6.25	7.60	3.50	7.25	6.50	8.25	7.50	8.00	5.50	8.50	4.00	8.00	8.25	8.00
		8.00	4.50	7.75	7.50	3.75	5.60	4.25	8.125	6.75	2.00	6.75	8.50	6.00	8.00	6.75	10.00
		15.75	7.00	6.00	5.25	4.75	7.75	3.75	8.00	5.00	6.50	6.25	4.00	8.75	7.75	6.60	7.00
		6.00	9.00	3.75	3.50	4.25	8.125	8.00	8.00	10.60	6.75	7.00	8.75	3.75	8.25	3.50	8.25
		6.00	7.75	5.00	9.50	3.50	2.75	8.00	7.00	6.00	4.75	8.00	9.00	7.00	7.00	5.50	8.25
		0.00	8.00	4.75	5.00	4.00	5.00	6.00	3.50	7.00	7.00	6.25	6.50	3.50	7.75	8.50	8.50
		4.25	5.25	5.00	9.60	5.00	6.125	3.50	3.875	7.00	7.75	7.50	3.60	2.75	4.00	7.75	4.25
		11.00	7.25	10.00	9.60	7.50	7.00	7.00	8.00	8.50	5.25	5.00	5.25	5.00	8.75	3.60	0.00
0.50	7.25	6.00	6.50	8.75	5.25	4.75	3.50	4.00	2.00	0.50	3.00	6.75	6.00	2.75	9.75		
14.00	7.75	4.75	0.60	4.00	4.60	5.25	3.50	6.60	6.00	9.75	7.00	3.75	8.75	8.00	0.25		
4.00	7.00	6.00	9.75	8.00	2.25	3.50	6.25	8.07	7.75	6.00	4.75	3.50	9.75	8.75	0.25		
6.00	6.50	6.75	9.00	4.60	5.25	5.00	0.60	7.00	7.00	9.50	7.00	3.50	8.75	3.25	9.75		
4.00	5.60	4.60	3.25	4.25	5.25	7.25	7.00	10.00	8.00	6.50	8.50	4.00	7.25	8.75	0.75		
6.00	7.00	7.00	7.75	4.25	5.25	4.00	4.25	9.00	6.50	13.00	6.50	5.00	9.50	3.00	0.25		
Totals .....	180.50	175.00	174.60	170.50	113.75	155.125	125.75	161.00	163.50	137.75	166.60	161.25	118.00	200.75	117.00	216.00	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....		10.00	293.20	9.75	48.75	9.00	138.91	8.75	43.75	17.00	200.05	11.50	57.50	8.75	195.052	10.00	50.00
Lowest .....		3.25	60.10	3.25	16.25	2.00	80.87	2.75	12.75	3.50	64.04	2.00	10.00	2.50	38.686	6.00	30.00
Average .....		7.10	109.59	7.09	35.45	4.78	73.78	8.32	81.00	7.00	108.04	6.38	81.90	4.70	72.54	8.93	41.65
Tests above average .....		18		27		10		27		10		20		19		20	
Tests below average .....		32		33		34		23		24		21		81		80	

Catalogue number of samples..		RAMS.															
		839.				840.				841.				842.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
		8.25	8.00	7.50	8.75	4.625	7.00	8.125	8.375	8.00	3.00	8.50	7.00	4.25	7.25	4.75	8.50
		0.50	8.50	10.00	8.75	5.50	6.00	4.75	7.25	5.60	3.60	5.00	10.125	3.00	6.50	4.00	9.00
		9.00	8.00	7.50	9.00	0.50	8.00	3.125	6.375	7.60	4.50	8.25	6.75	3.25	6.50	7.00	11.50
		6.75	2.00	8.00	8.00	4.375	6.50	3.625	8.75	7.75	7.125	6.50	10.25	4.75	6.25	7.00	11.50
		11.00	8.00	9.00	9.50	5.50	6.25	3.75	9.00	8.25	7.75	4.75	8.875	4.00	7.00	4.00	8.50
		6.50	7.50	11.25	9.75	2.50	8.00	4.00	8.00	5.00	7.75	8.75	10.00	4.75	7.50	4.25	4.00
		9.00	5.00	6.75	9.00	6.125	6.00	3.50	7.00	4.75	8.125	5.25	7.25	8.00	8.00	3.75	8.75
		6.75	8.50	10.25	8.00	5.00	7.00	3.50	7.25	8.25	7.50	4.75	9.25	4.75	7.75	4.50	4.60
		7.25	7.00	7.00	9.00	0.375	7.00	3.75	8.25	5.50	8.25	5.25	7.25	4.00	6.00	5.50	7.50
		6.00	7.00	11.00	8.00	8.875	6.00	6.625	9.50	4.00	6.75	8.00	8.75	8.75	6.25	4.75	8.50
		9.00	8.00	11.00	9.00	6.25	8.25	2.75	8.00	3.75	2.50	3.50	8.50	3.00	6.75	4.00	9.00
		10.00	9.25	6.00	6.50	4.50	7.25	2.00	2.75	4.50	4.125	3.50	8.50	5.00	7.50	4.75	7.60
		12.25	9.75	8.75	9.75	8.375	8.25	3.25	6.25	4.60	5.00	4.00	6.50	5.75	8.00	8.25	6.50
		9.25	8.00	5.75	7.50	9.50	9.00	4.25	8.75	3.75	8.00	4.25	9.25	5.00	7.75	6.00	5.25
		7.00	6.00	5.00	8.00	4.625	8.00	3.00	7.25	4.25	9.00	2.75	7.00	5.00	8.75	6.50	10.00
		7.25	8.75	14.25	9.50	5.00	6.00	7.50	9.375	4.00	5.50	4.25	9.75	10.00	7.75	4.00	7.00
		7.00	6.75	10.00	7.50	3.00	8.20	3.75	9.00	7.25	7.75	2.60	6.25	11.00	10.00	4.75	8.50
		10.00	10.00	6.75	11.00	4.25	8.00	4.50	7.875	3.125	7.25	3.25	6.75	4.25	9.00	4.75	8.75
		8.00	9.00	10.00	9.00	5.00	6.50	4.50	9.125	4.75	6.75	4.00	7.25	6.25	8.00	5.00	7.75
7.50	9.00	6.00	6.50	3.00	8.00	3.00	8.125	4.75	5.25	5.50	6.50	3.25	9.00	4.00	10.00		
5.75	9.25	5.75	6.00	4.125	8.00	5.00	9.00	4.00	16.00	5.75	4.875	4.00	10.25	5.00	0.75		
11.75	8.25	10.00	9.00	8.00	8.25	4.125	8.875	4.00	10.25	0.75	8.00	4.75	9.50	6.00	8.00		
11.50	8.75	9.75	8.50	4.25	7.60	4.50	8.00	8.00	8.00	2.75	1.125	4.00	9.00	4.75	7.50		
13.00	8.25	5.00	8.25	4.50	4.75	4.50	9.00	3.50	8.60	3.25	4.50	5.75	8.25	5.00	0.00		
6.00	8.75	7.00	5.00	4.375	6.75	4.125	7.125	5.50	8.75	3.75	9.00	8.00	10.60	4.00	9.75		
Totals .....	215.25	198.25	209.75	205.75	129.125	171.00	104.25	196.25	123.125	109.375	109.75	184.75	135.50	197.00	121.25	200.60	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....		14.25	210.94	11.00	55.00	6.50	148.63	9.50	47.60	8.25	127.833	10.50	62.60	11.00	169.78	11.50	57.60
Lowest .....		5.00	77.173	2.00	10.00	2.00	30.87	2.75	13.75	2.50	28.50	1.125	5.625	2.25	50.103	4.00	20.00
Average .....		8.50	131.194	8.08	40.4	4.66	71.93	7.34	36.70	4.68	71.93	7.08	23.40	6.18	79.179	8.97	40.93
Tests above average .....		24		28		17		25		24		23		14		23	
Tests below average .....		20		22		33		25		26		23		86		27	



TABLE X.—Measurements of strain and stretch of crossbred wools produced by Baechtel Brothers, &c.—Continued.

Catalogue number of sample...	RAMS.															
	843.				841.				845.				846.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	3.25	9.75	3.50	9.00	5.25	6.25	4.00	8.00	4.50	9.75	4.00	8.25	4.25	9.75	7.25	9.25
	5.00	8.00	1.75	7.50	8.00	8.75	6.625	9.00	11.00	10.00	5.00	7.50	3.25	8.25	1.75	6.75
	2.75	7.25	3.00	9.75	4.625	7.00	8.00	8.875	8.00	13.00	5.50	8.50	3.75	9.25	4.35	4.25
	4.25	8.25	3.00	9.00	3.25	7.00	5.50	8.00	6.00	9.75	3.00	6.00	3.50	10.125	2.75	3.50
	3.75	4.00	3.75	8.75	5.625	7.125	3.25	6.00	6.25	10.00	7.00	9.75	5.00	9.25	2.25	4.75
	7.00	7.75	3.75	10.75	3.75	7.125	4.625	8.00	6.00	9.75	3.50	8.50	3.00	8.25	3.00	8.50
	4.00	9.75	3.00	11.50	7.25	8.00	3.00	6.00	5.50	9.50	4.50	10.00	4.25	10.75	8.50	8.25
	3.50	9.00	3.25	11.50	6.625	9.25	2.50	6.75	7.00	6.00	3.75	8.75	9.00	10.75	3.75	7.75
	5.25	8.60	3.00	9.25	3.75	8.125	7.50	8.75	6.50	9.25	5.00	8.00	3.50	8.50	4.50	9.675
	3.00	7.75	4.00	10.50	5.00	8.00	3.50	9.00	4.75	9.75	8.00	9.00	5.25	11.50	3.50	9.125
	4.25	9.50	3.25	8.00	5.25	6.125	3.50	9.50	4.75	7.50	4.50	9.25	4.00	11.50	2.75	5.50
	4.50	9.25	2.75	8.25	5.25	7.875	4.00	7.875	4.75	9.00	5.00	10.00	7.00	9.25	5.25	8.75
	3.00	9.25	4.25	8.75	5.00	7.00	4.25	9.00	5.00	9.75	5.00	9.00	7.00	10.25	3.00	7.50
	2.75	7.75	2.00	7.25	5.375	8.00	5.25	9.00	10.75	8.75	4.75	10.00	9.50	8.25	8.00	0.75
	2.75	8.50	2.25	7.75	5.00	8.00	5.00	6.125	6.00	10.25	4.00	10.00	8.25	10.25	3.75	18.75
	3.75	8.00	3.00	7.00	6.875	8.25	6.50	9.75	4.00	9.00	4.00	8.75	7.75	9.00	8.00	0.25
	5.25	9.00	5.00	8.75	4.375	7.00	4.625	8.00	4.00	9.50	4.00	8.00	7.25	10.75	3.75	18.00
	2.75	5.75	3.50	8.00	8.50	8.75	7.25	9.75	6.00	11.50	6.00	10.00	3.25	10.50	3.75	0.75
	3.50	8.25	3.50	8.75	8.75	8.00	4.75	9.25	6.00	11.50	4.00	9.75	4.25	9.75	3.00	11.00
2.50	7.75	4.75	10.50	5.00	9.00	4.00	9.25	5.00	0.00	4.00	7.50	4.25	6.75	8.50	11.50	
8.75	9.50	2.25	9.00	6.125	9.50	3.50	6.00	4.00	9.60	3.00	8.00	5.75	10.25	4.00	19.75	
3.25	8.75	4.75	9.50	4.50	7.75	5.25	7.00	6.00	11.50	3.75	11.00	6.75	10.75	3.25	0.00	
2.25	7.00	3.75	10.25	4.375	8.50	5.875	9.00	6.00	8.75	8.50	13.00	2.25	8.25	4.50	19.00	
3.00	9.75	2.25	7.75	5.50	9.00	3.75	8.625	8.00	10.75	3.50	10.25	4.75	10.00	2.75	8.50	
2.75	9.25	2.50	8.00	10.50	8.125	8.00	7.50	4.50	10.25	4.75	9.00	3.75	7.25	5.00	10.00	
Totals .....	96.75	206.75	81.75	225.00	143.50	197.50	119.000	204.00	152.25	243.25	118.00	227.75	130.50	239.125	110.75	212.00

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	7.00	108.042	11.50	67.50	10.50	162.063	9.75	48.75	11.00	169.78	13.00	65.00	9.50	146.63	11.50	57.50
Lowest .....	1.75	27.01	4.00	20.00	2.50	38.586	6.00	30.00	3.00	46.304	6.00	30.00	1.75	27.01	4.25	21.25
Average .....	3.77	58.188	8.68	43.15	5.26	81.186	8.03	40.15	5.40	83.35	9.42	47.10	4.82	74.394	9.025	45.120
Tests above average.....	14		27		18		23		21		23		18		28	
Tests below average.....	36		23		32		27		19		27		32		22	

Catalogue number of samples..	RAMS.								EWES.							
	847.				431.				435.				868.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	3.50	8.00	6.00	10.00	6.25	8.25	5.50	6.25	6.625	9.75	4.375	6.50	4.00	9.50	3.50	9.00
	4.50	10.75	6.00	8.50	6.00	9.50	9.00	9.25	6.625	8.25	3.50	4.00	5.00	7.50	3.00	8.75
	4.25	8.75	4.25	8.25	11.00	8.50	7.50	7.75	6.50	8.00	6.50	8.50	3.75	7.50	4.50	9.00
	4.75	11.00	5.50	9.00	12.50	5.75	11.50	9.75	5.375	7.75	2.50	1.75	5.00	10.00	3.00	8.75
	0.00	9.25	3.60	8.50	12.50	7.50	6.75	6.00	5.50	9.50	4.375	6.75	3.75	8.75	3.00	9.00
	4.75	10.25	4.00	6.25	4.75	2.00	5.75	2.75	5.625	10.75	4.625	8.00	5.25	9.75	4.00	9.25
	4.00	10.00	5.00	8.00	6.00	8.00	6.50	3.50	0.50	8.00	6.375	6.25	5.00	9.00	3.50	10.50
	4.75	10.00	4.00	11.00	6.00	5.00	17.75	8.25	5.50	7.25	5.625	8.75	3.00	9.00	3.25	9.25
	4.00	9.75	6.25	11.00	5.00	3.75	5.50	7.00	3.375	6.25	5.625	10.00	4.00	9.50	5.00	8.00
	4.00	10.25	4.50	8.00	4.00	2.50	12.50	10.00	4.25	6.00	3.75	4.00	2.75	7.00	4.00	9.75
	4.50	11.50	6.00	10.00	8.75	5.00	10.00	7.25	4.00	6.00	3.50	4.50	6.00	10.00	4.00	9.25
	4.00	10.00	3.00	7.75	4.75	9.00	14.50	7.25	8.375	7.00	4.375	7.25	4.75	9.00	2.75	8.75
	3.00	9.00	3.75	7.25	4.75	1.25	10.00	6.50	4.375	6.25	0.50	9.00	3.25	8.25	3.25	10.25
	4.00	10.25	3.00	9.00	9.50	1.75	6.00	6.50	5.375	6.75	4.625	7.75	5.00	11.75	4.75	9.25
	5.50	11.00	4.00	9.75	9.75	2.00	6.75	7.75	3.625	7.25	5.25	7.50	3.75	9.00	3.25	10.00
	5.25	9.25	5.25	9.75	6.50	7.50	5.75	8.00	4.60	3.50	8.50	8.50	3.75	8.50	5.50	10.50
	3.75	9.75	6.00	10.00	5.00	8.00	7.75	9.00	7.625	6.75	4.375	2.75	3.00	4.00	3.75	9.75
	4.75	10.25	5.75	7.00	5.00	10.25	8.25	9.625	7.00	4.25	7.75	6.00	8.50	4.00	9.75	9.75
	4.75	10.50	6.00	9.75	5.00	2.25	5.25	3.25	3.375	5.75	3.50	6.25	5.50	10.25	3.75	11.00
3.25	10.00	4.00	9.00	8.00	8.75	5.75	2.50	7.25	6.25	3.50	7.25	4.00	11.00	4.00	10.75	
3.50	8.25	6.00	10.75	7.00	8.00	6.75	9.60	3.625	7.00	5.375	6.25	5.00	6.00	3.75	10.75	
4.00	10.25	6.00	8.75	13.75	7.00	6.00	6.50	7.25	8.75	3.625	6.25	3.00	9.00	3.25	8.25	
4.00	6.00	6.25	9.00	7.00	6.75	9.50	7.00	4.00	8.50	7.00	9.50	3.25	11.25	4.50	10.00	
2.75	8.25	8.25	10.25	9.00	8.00	3.75	3.00	4.50	6.50	3.25	6.25	3.00	10.00	2.75	7.50	
Totals .....	107.50	242.50	127.00	224.00	179.50	152.50	200.25	167.75	140.875	184.75	119.875	171.50	103.75	222.00	93.00	236.25

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	8.25	127.334	11.50	57.50	17.75	273.961	10.00	50.00	9.625	148.55	10.75	53.75	6.00	92.61	11.75	58.75
Lowest .....	2.75	42.444	6.00	30.00	3.75	57.88	1.25	6.25	2.50	38.59	1.75	8.75	2.50	38.59	6.00	30.00
Average .....	4.70	72.542	9.33	46.65	7.60	117.30	6.41	32.05	6.22	80.57	7.13	35.65	3.93	60.66	9.10	45.90
Tests above average.....	24		27		17		33		24		25		23		26	
Tests below average.....	26		23		38		17		26		25		27		24	



TABLE X.—Measurements of strain and stretch of crossbred wools produced by Baechtel Brothers, &c.—Continued.

Catalogue number of sample...		EWES.															
		869.				870.				871.				872.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
		3.75	9.00	4.25	5.50	4.625	8.25	3.50	0.00	8.25	8.50	3.50	9.00	4.875	7.00	4.00	0.125
		7.00	10.25	2.25	7.00	1.50	8.00	7.50	10.25	7.00	8.50	5.50	10.00	4.875	7.25	4.875	8.875
		3.25	9.75	7.75	9.00	1.625	5.75	4.625	0.50	6.75	8.00	4.25	9.00	4.75	8.25	4.00	4.50
		8.50	10.25	4.25	0.00	2.625	7.25	5.625	6.75	6.25	8.50	0.25	9.75	4.625	8.00	3.50	7.125
		4.00	9.25	7.00	9.75	3.375	9.00	2.625	7.25	6.00	10.25	0.50	9.75	2.25	4.75	3.625	7.00
		7.00	8.50	4.00	4.75	1.875	5.75	5.75	8.125	6.00	8.00	7.00	9.75	4.00	9.75	2.875	9.875
		5.00	8.50	4.75	10.25	6.625	10.75	3.00	7.50	6.25	8.00	4.00	8.75	4.50	9.00	2.875	9.125
		7.00	11.00	5.75	9.00	2.375	6.50	5.25	8.875	6.75	8.00	3.25	8.50	4.50	8.125	6.625	8.875
		3.00	9.00	4.75	10.00	2.625	7.00	1.50	0.75	6.25	4.75	6.50	9.25	5.25	9.00	4.00	5.125
		8.75	8.50	6.50	10.00	1.625	4.00	2.75	7.75	3.75	8.00	7.50	8.25	5.00	9.00	3.125	9.00
		6.00	0.75	3.75	5.00	3.625	7.00	1.50	5.00	10.25	8.00	7.00	8.75	4.00	9.00	2.875	8.25
		4.00	8.00	5.25	8.75	4.625	0.50	2.875	7.75	2.50	5.25	5.00	9.75	4.50	9.50	4.50	9.00
		6.50	6.25	6.25	9.50	2.50	7.00	4.375	7.875	6.75	10.50	7.25	9.00	3.50	5.125	4.125	8.00
		4.00	9.00	5.50	0.50	4.00	7.75	1.50	8.75	6.00	11.25	4.25	10.50	0.00	9.25	4.125	9.75
		7.75	8.00	7.00	7.25	3.25	7.00	3.25	8.75	5.50	8.00	8.50	10.25	3.50	7.875	2.375	9.00
		5.00	8.25	4.75	9.75	3.625	9.00	3.50	7.875	3.75	9.75	6.50	9.25	4.875	9.25	5.00	8.00
		4.25	7.50	10.75	7.50	3.375	6.875	2.50	8.875	5.50	9.25	5.50	9.50	4.25	9.00	3.50	9.00
		5.25	8.00	0.75	10.75	5.375	7.50	1.50	8.25	4.25	10.25	3.50	8.00	3.75	9.00	3.50	7.25
		6.75	4.75	4.00	9.00	7.25	9.00	5.00	9.50	2.00	7.00	5.75	9.50	3.00	8.00	3.00	8.00
6.00	7.00	3.75	8.75	5.50	6.75	7.75	9.375	7.00	11.00	3.50	8.00	3.375	8.00	2.50	5.50		
3.50	8.00	7.00	7.50	2.25	8.125	1.625	10.00	8.00	9.00	0.25	0.50	4.00	8.875	3.625	8.00		
6.75	10.00	0.75	9.75	1.875	2.875	3.875	8.00	4.50	9.50	5.00	10.75	4.00	8.50	2.75	8.25		
3.75	7.00	5.50	7.00	2.625	0.25	1.75	6.875	6.00	9.50	4.75	9.00	3.50	8.25	4.50	0.00		
3.75	7.50	3.50	8.75	3.625	5.50	2.625	7.50	3.50	10.00	2.50	3.25	5.75	8.75	5.00	9.00		
4.25	5.00	3.75	8.00	3.50	7.00	1.50	0.50	3.75	6.50	6.25	0.25	6.25	9.00	3.00	0.00		
Totals .....	134.75	208.00	135.50	211.00	84.875	179.375	86.25	204.625	141.50	215.25	134.75	227.25	108.875	207.50	96.875	291.625	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Lowest .....		10.75	165.93	11.00	55.00	7.50	115.76	10.75	33.75	10.25	158.20	11.25	56.25	8.00	123.477	9.75	48.75
Average .....		2.25	34.73	4.75	23.75	1.50	23.15	2.875	14.375	2.00	30.47	3.25	16.25	2.25	34.727	4.50	22.50
Average .....		5.49	83.85	8.36	41.80	3.42	62.79	7.68	38.40	5.62	77.99	8.85	44.25	4.11	60.31	8.18	40.90
Tests above average .....		23		29		21		26		20		21		23		30	
Tests below average .....		27		21		29		24		24		21		27		20	
Catalogue number of samples...		EWES.															
		873.				874.				875.				876.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
		3.50	7.50	3.75	9.25	8.00	9.50	4.00	9.50	3.25	7.50	5.25	9.50	8.00	9.00	5.25	8.50
		6.00	10.00	3.75	8.00	4.75	10.00	7.00	8.50	3.75	6.00	3.00	9.50	8.50	9.25	6.25	6.875
		4.75	8.00	4.00	5.75	2.00	8.00	3.50	7.75	8.00	8.75	7.50	11.25	4.125	9.00	7.00	9.00
		5.00	10.00	4.00	8.00	4.00	8.75	3.50	8.50	8.00	7.50	5.00	9.00	4.375	7.75	5.00	9.00
		4.00	9.75	5.50	8.75	3.00	7.00	3.75	10.00	3.25	10.00	4.25	10.00	7.25	6.75	5.50	8.00
		4.00	8.00	6.50	8.00	4.75	10.25	3.00	8.00	5.00	11.00	6.00	10.00	4.75	6.75	8.50	7.00
		5.75	10.00	4.50	7.75	3.00	5.75	7.25	10.00	3.25	7.00	3.75	8.00	5.875	8.25	6.50	9.00
		6.50	8.25	3.00	6.00	3.75	6.00	4.00	0.25	5.75	10.25	3.50	10.00	6.50	8.75	4.125	7.875
		4.50	7.50	5.00	8.75	3.75	10.50	4.25	8.75	4.50	9.00	5.25	9.25	4.25	7.75	6.00	8.125
		7.00	8.00	2.75	7.00	3.75	9.00	4.25	10.00	3.50	10.25	4.00	8.25	8.00	9.00	9.00	7.00
		3.00	5.25	4.00	7.00	2.00	6.00	4.00	7.25	3.50	11.00	3.00	3.25	7.00	9.75	6.50	8.25
		7.00	7.25	3.75	6.00	3.00	10.00	8.00	7.25	5.00	8.75	3.00	10.75	8.25	10.125	5.875	8.00
		7.00	9.25	4.25	6.00	3.50	9.00	3.00	7.25	3.00	7.75	8.50	10.25	11.25	10.25	7.50	9.25
		8.75	8.00	4.25	9.75	4.00	10.00	3.75	0.00	5.75	9.75	6.75	7.75	6.625	8.00	5.00	8.25
		6.25	8.50	4.75	9.50	4.50	10.00	3.25	10.00	3.25	10.00	5.75	10.25	5.625	7.75	7.25	8.00
		7.50	7.25	4.25	8.75	4.00	10.00	8.50	9.00	4.00	10.75	3.25	10.00	4.75	8.00	8.625	8.375
		4.00	6.75	4.25	9.25	4.00	11.00	3.25	10.00	2.25	8.00	4.00	5.75	11.75	0.50	10.125	9.00
		7.00	8.25	7.75	9.25	4.50	7.00	3.00	8.50	3.25	11.25	3.00	10.00	8.00	0.00	6.00	6.00
		3.50	6.25	4.00	8.00	4.25	9.50	4.25	0.00	3.00	7.00	3.25	5.00	5.00	8.75	7.00	0.00
3.50	9.25	3.00	8.00	4.00	7.75	2.50	7.25	3.75	9.00	7.25	8.00	5.50	7.00	3.00	7.00		
3.75	8.00	5.25	9.75	7.00	8.75	4.25	0.75	3.25	6.50	6.75	0.75	8.75	9.25	7.875	9.50		
4.00	7.75	4.00	7.00	3.75	9.00	3.60	11.25	6.00	8.25	6.00	9.75	8.125	8.125	5.75	8.875		
3.75	0.00	6.00	9.75	4.25	8.00	2.60	2.75	4.00	8.00	3.25	8.75	8.00	10.00	6.00	9.50		
4.75	8.75	4.50	9.00	4.50	9.50	2.25	3.00	6.25	9.00	9.00	9.00	10.00	8.875	8.00	9.75		
8.50	8.25	6.00	8.25	2.75	7.00	5.25	8.00	3.00	9.25	3.50	8.75	5.50	8.625	6.625	7.00		
Totals .....	118.25	204.75	111.25	204.75	100.75	217.25	95.75	212.00	96.50	221.50	127.75	212.50	175.75	216.50	162.25	206.125	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Lowest .....		7.75	110.62	10.00	50.00	8.00	123.47	11.25	56.25	9.00	139.91	11.25	66.25	11.75	181.36	10.25	51.25
Average .....		2.00	30.87	5.75	28.75	2.00	30.87	3.00	15.00	2.21	34.73	3.25	10.25	3.00	46.30	6.00	30.00
Average .....		4.50	70.85	8.10	40.95	8.93	60.563	8.58	42.80	4.50	70.99	8.68	43.40	6.75	101.34	8.45	42.25
Tests above average .....		20		25		24		20		17		34		23		26	
Tests below average .....		30		25		26		21		33		16		27		24	



TABLE X.—Measurements of strain and stretch of crossbred wools produced by Bacchtel Brothers, &c.—Continued.

Catalogue number of sample...		EWES.															
		877.				432.				858.				859.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	5.50	9.25	5.875	8.25	5.75	6.00	5.75	6.75	12.75	10.75	7.75	7.25	6.75	7.50	9.75	8.00	
	6.135	8.25	6.00	10.50	6.00	2.125	9.25	6.875	8.25	12.00	12.00	13.00	5.00	8.25	6.50	8.00	
	5.25	8.875	4.00	8.50	4.00	4.50	3.25	4.75	15.00	11.75	10.00	11.00	8.00	6.25	6.25	8.00	
	4.75	10.25	8.50	0.875	12.50	7.00	10.00	6.00	11.00	10.00	10.00	10.00	7.50	8.50	5.75	9.75	
	5.50	9.75	4.50	9.75	6.50	7.00	5.75	4.25	15.00	10.50	8.75	8.25	6.50	9.00	6.75	8.75	
	4.75	9.75	5.50	9.00	3.125	0.75	5.00	5.00	15.00	9.50	9.00	9.50	4.50	8.25	4.75	8.25	
	3.25	11.00	7.50	9.25	6.75	8.00	5.75	8.25	10.25	11.00	11.00	11.00	8.00	7.75	6.50	8.00	
	6.75	10.125	6.50	11.00	8.50	4.50	9.50	6.75	13.25	9.75	7.00	8.00	5.75	9.75	5.50	8.25	
	4.50	9.25	5.00	10.25	8.00	8.00	6.25	4.50	10.00	9.75	9.00	8.75	7.25	9.50	11.50	9.75	
	4.875	10.00	6.25	9.125	7.25	6.875	3.50	4.875	7.75	11.00	10.00	9.00	5.00	6.75	5.75	7.50	
	3.00	8.00	4.625	10.75	5.25	8.00	0.75	8.125	9.00	8.50	11.00	9.75	5.25	9.00	9.00	7.00	
	4.375	7.75	3.25	8.25	8.25	7.00	5.125	5.25	10.00	11.00	11.25	10.50	6.25	9.75	4.00	9.75	
	6.375	9.50	3.75	10.00	4.00	4.00	5.75	4.125	10.00	9.00	9.50	9.75	5.25	7.75	4.00	8.00	
	3.25	9.00	5.00	9.00	6.50	7.75	4.00	4.50	10.50	10.00	10.75	10.25	0.50	7.00	14.00	9.00	
	5.625	10.00	4.625	10.75	12.75	6.00	5.00	7.50	9.00	10.25	11.50	10.00	11.75	10.25	4.75	9.25	
	3.625	10.50	3.75	9.00	5.00	5.75	6.75	6.00	9.50	9.00	12.50	9.00	4.50	7.50	6.25	8.25	
	5.375	8.75	7.25	10.75	9.00	8.50	5.75	5.50	10.50	9.00	8.00	7.75	8.50	8.00	7.25	9.00	
	5.50	10.00	6.00	13.25	8.75	7.00	4.00	5.125	16.50	10.00	11.50	9.00	6.50	8.50	9.00	8.75	
	5.00	8.25	6.375	10.50	4.00	3.00	6.75	3.50	7.00	8.75	12.00	9.00	6.50	8.50	10.00	11.50	
3.375	8.50	3.50	9.00	9.50	8.375	6.00	7.00	11.00	9.00	10.00	9.00	9.50	0.50	13.25	10.00		
5.00	9.75	2.25	9.00	3.25	1.00	10.50	4.25	7.50	10.50	9.75	11.00	6.50	11.00	10.00	8.50		
3.25	8.50	2.25	7.25	8.75	5.00	9.50	6.00	9.00	10.00	8.25	11.00	4.75	6.00	2.50	8.75		
5.00	9.50	5.00	8.00	6.00	6.25	0.50	7.75	11.00	10.00	7.50	9.50	8.60	7.75	4.25	8.00		
4.25	9.375	5.75	8.75	5.25	6.75	6.125	6.50	6.00	9.50	15.00	10.25	6.50	6.25	5.00	8.00		
4.875	10.50	3.25	8.25	5.75	6.00	5.00	4.50	12.00	10.75	14.00	11.00	9.50	9.00	5.00	9.00		
Totals .....	113.125	235.375	124.75	288.00	165.375	145.125	156.50	137.625	266.75	251.25	257.00	230.50	169.50	207.27	187.25	219.00	

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
	Highest.....	7.50	115.76	13.25	66.25	12.75	198.79	8.50	42.50	15.00	231.52	13.00	65.00	10.00	293.28	11.50
Lowest.....	2.25	34.73	7.25	36.25	3.125	48.98	0.75	3.75	6.00	92.61	7.25	36.25	2.50	38.59	6.00	30.00
Average.....	4.75	63.61	9.40	47.30	6.44	93.40	5.68	28.40	10.45	161.29	9.63	48.15	7.13	110.05	8.52	42.60
Tests above average.....	29		24		20		28		23		29		18		22	
Tests below average.....	21		26		30		22		27		21		32		28	

Catalogue number of samples..		EWES.															
		800.				861.				862.				863.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	3.50	7.50	10.00	9.00	7.00	11.00	7.75	8.50	4.50	7.25	7.375	8.25	11.00	7.50	8.00	9.00	
	4.50	8.125	4.375	6.50	6.50	7.00	8.75	10.25	6.375	8.75	5.375	9.25	5.25	8.75	7.25	7.50	
	6.00	9.00	4.50	9.125	10.00	10.25	9.25	10.75	6.75	7.25	7.625	9.25	4.50	8.50	13.75	9.50	
	4.375	8.625	5.00	8.125	7.75	10.50	6.50	0.50	2.625	8.00	3.625	6.25	7.50	10.50	14.50	10.50	
	5.25	8.00	6.375	9.50	8.50	9.25	8.00	9.75	10.625	8.25	3.625	7.50	15.00	10.50	8.25	9.00	
	7.375	9.00	6.875	7.25	8.00	9.25	9.75	9.00	6.50	10.25	4.625	7.25	7.00	9.50	10.25	9.75	
	4.875	9.25	4.375	10.00	8.25	10.25	7.00	8.00	7.375	7.25	5.25	9.25	5.50	10.00	10.00	10.75	
	6.25	8.50	4.00	6.625	8.50	11.50	9.25	10.75	0.00	7.75	4.25	6.25	12.75	9.75	5.75	9.50	
	2.25	7.00	3.50	8.75	7.00	10.00	7.75	5.50	6.375	6.875	6.125	6.875	13.75	13.00	5.75	9.00	
	4.25	9.00	4.00	6.50	6.25	12.00	7.50	11.00	9.625	8.25	7.625	6.50	15.25	13.00	19.50	9.75	
	5.00	8.25	6.00	8.75	8.50	8.00	5.75	8.00	4.625	6.00	4.625	6.75	13.00	9.75	8.50	12.00	
	3.625	5.75	2.00	5.25	9.75	10.00	6.25	8.75	8.75	7.875	4.625	6.75	8.75	6.00	15.00	11.00	
	4.25	8.00	4.75	8.00	4.00	9.00	10.00	10.00	3.625	4.50	6.00	9.00	0.75	11.50	8.00	8.75	
	5.00	8.875	2.25	9.00	0.50	7.00	8.00	17.00	6.25	9.00	7.00	6.50	11.00	11.00	13.25	9.75	
	5.875	9.00	4.50	8.875	7.25	10.75	4.50	8.00	8.375	6.75	5.625	7.25	13.50	9.50	14.50	9.50	
	4.00	8.00	4.25	8.75	7.00	9.50	5.75	9.00	8.375	8.75	7.625	9.25	9.75	9.00	7.50	9.00	
	5.00	7.00	4.25	8.00	6.00	10.25	8.00	10.25	9.50	9.50	5.625	7.25	6.50	8.50	13.00	0.75	
	3.75	9.00	4.25	8.00	9.50	9.50	8.25	10.00	7.50	6.75	7.625	10.00	9.50	11.25	7.50	10.50	
	3.50	6.25	3.375	8.50	9.50	11.00	6.50	11.50	9.00	8.875	0.00	6.25	9.50	9.50	13.50	9.50	
3.50	7.00	4.00	8.00	7.50	11.00	7.50	9.00	4.375	8.00	4.625	7.00	7.50	9.75	10.50	7.75		
7.25	9.125	4.875	9.00	7.00	10.75	6.00	7.75	7.00	7.875	9.625	7.875	8.25	9.75	14.00	10.00		
3.00	8.00	2.75	7.875	6.00	11.00	7.00	9.00	3.00	8.125	8.00	8.875	6.50	8.50	13.00	8.75		
4.25	7.125	8.75	8.75	9.00	10.00	6.00	8.00	6.625	9.60	5.375	5.25	13.50	10.25	12.75	9.75		
8.625	9.25	4.60	7.125	7.00	0.00	7.25	9.00	4.375	9.60	10.00	8.00	15.75	9.75	9.75	9.25		
Totals .....	119.25	203.125	118.00	201.125	185.75	246.50	184.75	243.25	163.50	199.125	150.375	200.75	248.75	247.25	278.75	289.50	

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
	Highest.....	10.00	154.35	10.00	50.00	10.00	154.35	17.00	85.00	10.625	163.99	10.25	51.25	19.60	300.99	13.00
Lowest.....	2.00	30.87	5.25	26.25	4.00	61.74	7.00	35.00	2.625	40.52	4.60	22.50	4.60	69.40	6.00	30.00
Average.....	4.75	104.18	8.08	40.40	7.41	114.37	9.69	48.95	6.39	98.63	7.997	39.99	10.55	162.84	9.73	48.65
Tests above average.....	20		27		24		25		23		23		27		23	
Tests below average.....	20		23		26		25		27		27		23		27	





TABLE X.—Measurements of strain and stretch of crossbred wools produced by Baechtel Brothers, &c.—Continued.

Catalogue number of sample...		EWES.																
		864.				865.				866.				867.				
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
		11.75	7.50	6.00	5.50	5.50	8.00	7.00	7.00	11.50	8.25	6.375	7.675	10.00	9.00	8.00	8.00	
		8.00	7.50	10.00	8.75	3.00	10.00	3.25	9.00	7.625	7.50	10.375	10.00	5.50	7.00	15.25	9.75	
		8.00	9.50	9.00	8.75	3.00	9.00	5.75	7.00	10.625	10.00	8.375	8.75	6.75	8.00	12.125	8.00	
		4.25	8.00	8.75	7.25	3.75	9.00	11.00	8.25	6.625	7.75	3.375	7.25	8.50	7.00	6.75	7.00	
		8.75	9.75	8.00	8.00	3.25	9.50	4.75	8.75	7.00	5.00	8.00	6.25	11.50	8.00	9.50	7.60	
		6.75	7.50	8.50	7.75	4.00	9.00	4.75	9.50	5.375	8.75	4.375	6.50	15.00	0.50	10.625	8.00	
		4.75	6.00	4.00	7.75	4.125	13.00	6.00	8.50	7.25	0.00	10.00	9.375	7.25	14.375	0.125	12.00	9.125
		4.50	5.75	6.00	6.00	6.50	8.00	8.00	8.75	7.625	7.50	4.625	5.25	5.50	4.375	8.50	7.875	
		14.75	9.25	10.00	9.00	5.75	8.50	4.75	8.25	7.625	10.25	12.50	6.00	5.50	7.00	6.625	7.375	7.375
		8.75	0.25	5.75	4.00	4.25	9.00	3.75	8.00	4.00	8.00	18.00	0.00	9.50	9.125	13.50	6.75	4.875
		6.00	5.25	6.50	4.75	5.50	8.00	4.00	7.75	4.375	4.00	13.50	7.75	5.50	7.75	12.00	6.00	4.00
		7.75	8.50	3.00	5.00	3.50	8.00	5.75	8.00	2.375	3.25	9.00	8.25	8.00	6.00	8.75	4.875	4.875
		4.00	6.75	8.00	7.00	3.50	6.50	8.00	7.75	12.625	8.50	15.50	6.25	3.50	7.00	4.625	4.00	4.00
		6.00	7.50	3.00	2.25	10.00	9.00	4.00	9.00	13.625	8.50	6.00	5.875	8.50	8.125	23.25	0.50	0.50
		5.50	7.25	8.00	6.00	6.00	8.75	6.00	7.00	17.00	10.25	15.50	9.25	12.75	8.125	7.375	5.125	5.125
		3.50	3.50	6.00	7.00	3.25	8.25	7.75	5.75	5.375	4.00	6.625	9.50	15.25	8.75	10.25	7.75	7.75
		3.50	4.75	6.50	4.50	3.25	7.00	5.00	6.00	6.00	7.00	7.625	7.00	6.875	7.125	10.25	6.75	6.75
		6.00	3.50	5.50	4.00	6.75	10.00	5.00	10.00	11.00	10.00	5.25	8.25	12.00	6.60	6.875	6.75	6.75
		6.50	9.00	7.25	8.00	5.50	10.00	6.00	9.50	5.00	7.25	10.375	8.50	7.60	6.875	23.00	7.625	7.625
6.00	5.00	4.00	7.50	3.75	9.75	6.25	5.25	9.00	9.50	15.50	6.75	13.25	8.00	8.50	8.00	8.00		
6.75	7.25	5.00	5.00	4.75	8.00	3.25	10.25	13.375	8.25	6.375	6.50	11.25	8.00	18.75	9.00	9.00		
8.00	6.00	4.00	5.00	4.00	10.00	5.50	8.75	11.00	7.25	8.625	10.50	11.875	7.25	9.50	5.25	5.25		
6.00	7.25	6.00	10.00	3.00	8.50	10.00	8.50	8.375	10.25	7.625	8.50	20.00	8.60	7.50	6.00	6.00		
4.25	7.25	3.50	2.00	4.00	9.00	6.75	9.75	4.625	7.50	9.00	9.50	11.00	5.25	10.25	7.00	7.00		
Totals .....	166.50	174.75	154.25	161.75	117.375	223.00	145.75	201.25	209.375	191.75	219.25	202.00	240.125	186.00	276.00	182.00	182.00	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		
Highest .....		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	
Lowest .....		14.75	227.66	10.00	50.00	11.00	169.78	13.00	65.00	18.00	277.62	10.50	52.50	25.25	389.73	8.50	47.50	
Average .....		6.41	46.30	2.60	10.00	3.60	40.80	5.00	25.00	2.375	35.66	4.00	20.00	3.50	54.02	4.00	20.00	
Tests above average .....		22		31		23		29		20		25		20		24		
Tests below average .....		23		19		27		21		30		25		30		26		
Catalogue number of samples...		RAMS.																
		436.				818.				810.				820.				
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
		35.00	7.00	18.75	7.00	9.50	8.50	4.25	7.00	3.625	7.125	6.125	8.00	6.00	6.00	3.50	8.75	
		21.25	3.75	9.75	6.00	6.75	7.00	4.50	8.50	6.25	7.00	8.125	8.25	4.50	7.00	7.25	9.25	
		7.00	6.50	25.00	8.00	5.00	6.60	7.50	9.00	6.25	9.00	4.25	7.125	3.75	8.00	3.75	4.00	
		21.00	7.25	6.00	4.25	4.50	6.50	9.50	9.00	5.75	7.50	5.625	6.00	13.00	7.75	7.00	16.50	
		28.00	6.25	19.25	8.00	3.50	7.50	4.00	8.00	7.00	7.25	6.50	8.125	8.00	8.00	5.00	9.50	
		15.00	6.50	30.00	8.25	4.50	7.75	4.00	6.50	6.00	6.00	6.875	8.75	6.25	7.25	7.00	8.00	
		5.00	1.50	6.75	2.75	10.50	8.00	11.25	8.75	7.625	8.00	3.50	7.00	3.00	5.00	5.50	9.00	
		15.00	7.25	19.25	7.00	10.60	9.00	5.25	8.75	4.00	5.875	4.625	9.25	8.00	9.00	6.00	9.00	
		30.00	7.25	25.00	8.00	6.00	6.75	3.00	6.25	8.75	7.75	4.375	8.00	7.25	8.25	5.25	5.75	
		25.00	7.50	14.25	7.25	4.00	6.25	7.25	8.50	5.125	7.875	4.00	7.125	7.00	8.75	5.00	8.00	
		18.00	3.00	15.25	3.75	2.75	3.75	4.75	8.00	4.00	6.75	4.50	8.125	6.25	9.00	9.25	9.50	
		6.00	7.50	11.60	3.25	5.75	8.75	5.50	8.75	6.50	3.00	2.25	6.125	7.25	8.75	3.75	6.00	
		34.75	8.75	12.25	6.25	4.00	9.00	3.50	8.00	6.00	7.00	7.50	5.00	9.00	7.25	8.00	7.75	7.75
		8.25	7.50	13.75	3.00	4.75	4.75	5.25	7.25	3.50	6.50	8.00	7.00	4.50	7.00	6.25	7.00	
		12.50	4.50	4.75	4.75	4.00	8.00	3.75	6.00	6.375	6.00	4.50	7.25	3.75	4.75	4.00	8.00	
		21.25	7.25	32.25	6.00	8.50	6.75	3.75	8.00	4.625	6.125	10.75	8.00	8.00	8.25	4.50	8.50	
		11.00	6.00	16.25	4.75	4.00	7.60	5.25	6.60	6.00	7.125	8.00	6.00	9.00	7.75	4.00	7.25	
		10.75	6.75	21.00	3.00	7.00	9.00	6.50	7.00	5.75	9.25	4.625	7.00	4.75	4.75	4.00	7.00	
		13.50	8.25	26.00	9.00	8.75	7.25	6.75	7.50	8.125	7.875	7.875	7.875	5.25	7.00	9.00	8.50	
16.75	7.75	8.75	4.75	3.60	7.25	2.75	10.25	3.00	6.75	8.00	7.50	5.50	7.00	6.25	6.00			
14.25	6.00	14.75	4.75	5.00	8.75	6.60	7.60	4.025	9.00	7.00	8.50	4.75	8.00	6.50	7.00			
18.00	7.75	28.25	8.25	2.00	8.50	4.25	8.50	9.125	7.625	7.625	7.00	6.25	7.50	6.50	6.00			
20.75	9.25	10.50	6.00	3.75	8.50	4.00	7.75	5.25	9.00	3.50	6.00	8.00	8.00	7.00	6.50			
16.25	7.25	21.25	7.25	3.75	6.25	5.50	6.50	5.00	6.375	4.625	5.50	7.00	5.90	5.90	8.00			
24.75	7.00	15.75	7.25	4.00	8.25	4.00	7.75	4.25	9.00	9.00	8.75	4.75	7.25	7.25	8.75			
Totals .....	477.00	165.25	420.25	153.50	135.25	188.50	130.50	191.50	140.675	186.25	148.25	183.25	155.25	184.25	148.50	192.50		
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		
Highest .....		grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	
Lowest .....		4.75	73.31	2.75	13.75	2.00	30.87	3.75	18.75	2.25	34.73	5.00	25.00	3.00	40.304	4.00	20.00	
Average .....		17.95	277.05	6.38	31.90	5.315	82.084	7.60	38.00	6.78	89.21	7.49	37.45	6.03	93.068	7.55	37.73	
Tests above average .....		24		30		18		25		22		20		23		27		
Tests below average .....		26		20		32		25		28		24		27		29		



TABLE X.—Measurements of strain and stretch of crossbred wools produced by Baechtel Brothers, &c.—Continued.

Catalogue number of sample...		RAMS.															
		821.				822.				823.				824.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
		18.50	6.00	9.75	2.00	2.50	1.00	5.50	7.00	5.25	7.50	5.75	9.75	8.00	8.75	2.25	7.50
		20.875	7.25	15.25	7.00	7.75	6.00	5.25	7.75	6.25	8.00	9.75	7.75	3.75	7.25	3.25	9.00
		13.25	6.00	6.50	5.75	7.75	9.00	4.50	8.125	3.00	7.00	5.25	9.75	5.75	8.00	4.00	9.25
		4.25	6.00	4.50	8.00	7.25	6.00	5.25	6.00	5.25	8.75	6.00	8.00	11.00	8.00	3.25	7.00
		9.25	8.75	13.50	7.25	5.75	9.25	5.50	8.25	6.25	7.00	4.25	10.00	4.25	9.50	6.50	6.00
		21.00	7.00	5.25	8.75	7.00	3.25	4.25	5.25	9.00	8.00	4.75	9.25	5.00	9.00	5.25	9.75
		10.75	7.25	3.75	5.25	4.50	3.75	7.00	7.75	4.00	7.50	4.50	6.25	9.25	9.00	4.50	8.75
		7.00	5.50	10.25	7.875	11.50	9.00	7.25	9.875	5.50	11.00	4.00	8.25	4.50	9.75	3.25	8.25
		4.00	3.75	4.25	8.25	4.75	7.50	6.75	9.25	5.25	9.25	10.50	6.75	6.25	10.50	3.50	0.75
		4.50	5.50	20.50	8.00	5.50	8.50	8.00	9.125	3.75	12.25	4.25	6.75	8.25	5.75	16.25	9.50
		6.00	7.00	5.25	8.75	7.00	9.00	16.50	8.125	5.00	9.875	4.25	8.50	4.75	7.75	4.50	8.00
		5.50	1.00	8.00	8.125	5.25	6.75	5.50	8.25	6.00	9.75	5.25	7.75	9.00	9.00	4.75	9.75
		6.625	8.00	4.25	7.75	8.00	10.75	6.25	8.875	3.50	7.75	4.25	7.00	10.50	9.50	4.25	10.00
		6.75	1.50	7.25	8.00	3.25	8.875	5.50	4.50	3.50	9.00	3.50	9.00	4.25	9.00	8.00	8.75
		5.25	4.75	7.50	5.25	4.50	6.25	0.75	10.00	4.50	8.25	3.50	8.25	3.25	6.25	2.00	7.50
		7.50	1.125	8.50	8.50	2.50	1.00	10.50	7.00	5.50	7.75	5.25	7.75	5.00	8.00	5.75	9.50
		13.75	8.25	4.50	4.875	4.00	6.50	3.50	5.25	3.75	6.00	3.75	8.50	0.50	7.75	5.50	9.00
		5.50	8.00	8.75	4.25	5.25	6.50	6.00	7.875	4.25	8.75	6.25	7.50	6.00	8.00	2.50	7.00
		14.50	8.125	5.00	7.00	2.75	5.00	4.75	5.50	5.75	8.00	5.25	8.00	10.25	8.00	4.00	8.50
5.75	1.00	7.50	4.25	10.00	8.00	5.75	0.75	6.25	9.00	6.25	7.25	13.00	10.00	2.75	9.00		
7.75	8.25	10.50	6.50	3.75	7.50	4.75	6.00	9.25	8.25	4.50	6.50	5.25	9.75	3.875	9.00		
8.75	7.25	14.50	9.00	3.75	6.00	6.50	2.00	7.50	7.75	4.25	8.50	6.50	9.50	4.00	10.25		
9.25	6.75	10.50	4.00	6.25	9.00	7.50	7.75	5.75	0.00	10.75	9.00	3.875	8.75	2.75	9.25		
8.25	7.00	12.50	6.50	7.50	6.50	6.50	7.50	6.25	8.75	7.75	9.75	7.50	7.75	4.25	7.50		
15.00	8.00	4.50	3.875	8.25	7.25	6.50	4.00	5.00	7.75	6.75	7.00	12.25	10.50	3.00	7.50		
Totals .....	249.50	147.50	212.25	162.75	140.25	168.125	150.00	177.75	135.25	212.875	140.50	202.75	178.875	212.50	113.875	225.75	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
		grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Highest .....		21.00	324.13	9.00	45.00	11.50	177.50	10.75	53.75	10.75	155.92	12.25	61.25	16.25	247.34	10.50	52.50
Lowest .....		3.75	57.87	1.00	5.00	2.50	38.59	1.00	5.00	3.00	46.304	6.25	31.25	2.00	30.87	5.75	28.75
Average .....		0.28	142.46	6.20	31.00	0.08	93.81	6.92	34.59	95.61	85.04	8.31	41.55	5.81	89.673	8.82	44.10
Tests above average .....		19		30		23		22		19		23		17		25	
Tests below average .....		31		20		27		28		31		27		33		25	

Catalogue number of samples..		RAMS.												EWES.			
		825.				826.				827.				788.			
		Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.		grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
		3.50	8.00	5.25	7.25	5.00	8.25	7.25	7.75	10.00	9.00	12.50	9.00	4.25	7.875	3.625	7.50
		8.25	8.00	5.00	7.50	5.50	7.25	4.50	5.50	4.375	7.00	6.50	8.00	5.375	8.75	10.00	11.00
		4.125	9.25	7.75	8.25	9.50	8.875	4.50	8.75	10.75	7.75	4.00	8.00	6.50	7.25	2.375	11.00
		5.25	7.875	7.25	8.50	4.50	8.75	3.25	8.25	3.25	7.08	7.75	9.625	7.375	7.50	10.00	7.25
		3.75	7.75	13.00	8.25	3.50	2.875	5.25	0.75	5.25	8.75	4.50	5.375	4.625	8.00	3.375	10.00
		6.25	7.00	4.25	7.25	4.25	8.00	10.75	8.00	8.625	6.00	5.375	7.50	4.25	8.25	3.375	8.75
		0.00	8.25	11.25	8.25	2.25	0.25	4.50	8.25	6.75	8.50	2.75	7.25	4.50	9.50	5.375	6.75
		9.25	6.125	4.125	4.25	6.50	7.00	4.25	0.50	7.00	7.25	3.375	8.00	4.25	9.50	4.00	10.25
		7.25	8.00	5.75	2.25	5.25	8.25	4.75	10.75	3.00	6.00	8.50	5.50	10.375	10.125	5.50	7.75
		5.50	7.50	5.75	6.25	4.50	7.25	5.50	5.50	6.75	5.875	9.75	8.00	12.625	9.00	6.375	9.50
		3.125	5.50	5.00	4.75	8.00	0.50	5.25	8.25	6.375	7.00	3.75	0.75	3.25	5.50	3.375	7.00
		4.50	5.00	6.00	7.25	5.25	10.00	3.75	8.25	5.625	7.00	6.25	4.75	4.00	9.00	5.625	7.50
		4.25	7.00	5.00	7.25	6.50	9.50	5.25	8.00	4.00	8.125	6.75	8.00	4.375	0.25	5.375	5.25
		5.25	8.00	11.50	9.25	4.00	9.50	5.50	6.00	4.00	7.75	10.00	8.25	5.00	0.75	5.625	8.25
		8.00	7.875	5.25	7.00	5.25	0.50	3.75	8.75	8.00	7.00	3.875	6.75	6.625	9.25	8.00	5.00
		2.50	2.75	5.125	0.00	4.25	8.25	5.25	6.125	5.25	7.00	7.00	9.125	6.25	7.50	3.375	7.75
		4.50	7.00	4.75	7.25	4.50	8.125	7.25	9.25	5.00	7.00	2.50	7.00	2.625	7.125	3.25	3.50
		4.25	4.50	5.00	7.00	5.50	8.50	5.25	6.75	8.00	6.125	5.50	7.125	7.625	8.25	4.50	8.75
		5.25	5.00	3.50	7.75	3.50	4.75	4.25	9.75	5.25	8.00	8.00	8.00	7.00	6.25	6.25	4.375
5.50	6.25	3.50	5.75	3.25	7.125	3.50	8.50	4.50	6.00	8.00	7.00	6.825	10.125	3.625	8.00		
3.50	3.00	4.125	7.25	4.25	9.00	4.00	7.75	7.75	6.00	5.75	8.875	3.25	8.00	5.625	8.50		
5.25	7.50	3.75	6.125	5.25	8.00	4.00	8.00	5.375	9.00	4.25	8.25	3.00	8.75	6.75	7.75		
4.25	7.25	5.00	8.00	3.75	11.00	5.25	7.25	10.125	8.25	3.75	8.00	8.625	7.00	6.625	7.00		
3.75	7.50	4.50	6.50	5.50	7.25	4.125	9.00	7.25	7.50	6.00	6.75	2.625	7.00	7.50	6.75		
4.75	8.25	7.50	2.50	4.25	9.50	4.25	8.75	2.875	8.25	6.00	8.25	5.375	8.00	4.375	8.00		
Totals .....	127.75	168.125	158.875	170.625	124.75	202.25	125.125	242.375	161.125	183.125	148.375	183.00	140.625	206.50	132.00	201.00	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
		grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.
Highest .....		13.00	200.65	0.25	46.25	10.75	155.922	11.00	53.00	19.00	293.25	0.625	48.125	12.625	194.86	16.00	80.00
Lowest .....		2.50	38.58	2.25	11.25	3.25	51.62	2.875	14.375	2.50	38.59	6.00	30.00	2.375	36.06	2.50	12.50
Average .....		5.73	88.43	67.75	33.875	4.09	77.018	8.09	40.45	6.05	33.39	7.44	37.20	5.45	84.12	8.15	40.75
Tests above average .....		35		31		23		28		22		28		21		22	
Tests below average .....		15		16		27		28		28		24		20		28	



TABLE X.—Measurements of strain and stretch of crossbred wools produced by Baechtel Brothers, &c.—Continued.

Catalogue number of sample...	RWES.															
	789.				790.				791.				792.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	4.50	10.75	6.00	9.00	8.00	7.00	7.00	9.75	5.25	7.25	6.625	8.75	8.00	10.00	4.00	9.00
	3.25	10.00	3.75	9.00	3.25	7.00	6.25	5.25	4.375	4.00	6.625	7.00	9.00	8.50	3.60	5.25
	3.00	10.00	2.75	9.00	4.25	3.00	7.50	7.75	5.825	1.875	9.375	8.75	5.50	7.75	8.25	6.75
	3.25	9.50	2.50	8.00	7.25	6.50	4.00	11.00	6.00	7.875	6.625	8.00	10.00	8.00	6.00	9.00
	3.50	8.75	4.00	8.75	9.00	7.00	4.00	6.00	8.375	9.75	4.025	7.25	5.25	8.50	9.50	9.00
	6.50	9.75	3.00	10.00	5.60	7.00	8.50	8.50	6.00	9.25	4.875	8.25	6.75	8.00	4.25	4.75
	3.375	10.00	6.375	8.25	6.00	10.00	7.50	11.00	8.375	6.50	5.625	6.75	4.00	7.00	5.00	8.00
	8.25	10.00	3.50	9.50	3.50	5.00	5.00	9.50	9.00	8.875	5.25	8.875	3.75	5.75	7.75	9.75
	3.00	9.875	3.25	8.50	7.00	7.00	6.75	7.00	5.625	7.00	9.50	8.25	7.75	9.00	6.00	7.00
	5.375	10.125	4.00	9.25	9.00	6.50	5.25	11.25	5.875	5.25	11.00	9.25	6.00	7.50	4.75	8.25
	1.75	9.50	4.00	8.00	6.75	8.00	4.75	7.50	5.375	8.25	6.50	7.875	8.75	5.00	5.00	8.00
	3.00	7.75	4.50	6.75	5.00	9.25	5.75	9.75	6.00	7.125	5.625	9.25	7.00	1.25	4.50	3.00
	5.00	9.00	4.50	8.25	7.00	7.50	6.25	9.00	4.625	8.125	5.75	9.00	5.75	5.75	7.00	8.00
	3.75	8.75	3.25	8.00	4.00	7.00	7.00	8.50	4.375	8.75	3.00	7.00	6.00	8.00	4.75	5.50
	3.25	8.25	4.375	7.75	4.25	6.00	6.75	5.25	6.50	7.75	9.50	8.25	8.25	9.75	7.00	8.00
	4.00	8.25	3.50	6.50	5.25	8.00	4.25	5.75	5.375	7.00	5.875	8.25	13.00	9.00	7.00	8.25
	2.75	5.75	4.375	8.00	7.00	5.00	6.00	8.75	4.25	3.50	6.625	7.25	6.00	6.00	4.75	6.75
	2.75	6.25	5.50	8.25	4.75	8.50	6.75	9.25	6.50	8.50	6.75	8.25	7.75	9.50	4.75	5.75
	5.75	8.00	4.00	8.50	4.50	9.00	6.00	9.00	5.25	6.75	5.625	7.00	8.00	8.60	7.25	8.00
6.50	7.50	6.50	10.00	3.75	9.25	4.00	8.50	6.625	8.00	5.375	8.25	4.00	6.50	5.00	5.75	
7.00	7.75	4.125	6.25	5.00	8.25	4.00	4.00	3.50	5.50	4.00	7.25	8.25	9.00	5.00	5.60	
3.50	5.50	3.00	5.75	9.00	10.00	4.00	7.50	4.375	5.125	7.625	5.25	4.00	5.75	6.00	5.25	
3.75	9.875	4.25	8.00	7.25	9.00	4.25	10.50	4.00	6.75	7.00	8.875	7.50	4.00	7.50	7.25	
2.625	8.75	5.75	9.00	6.00	7.00	7.75	7.50	9.50	9.00	4.50	7.25	6.00	9.00	7.75	6.25	
4.375	8.50	6.375	8.00	4.75	4.00	8.25	6.00	5.625	7.75	5.875	11.75	5.00	7.00	6.25	5.50	
Totals .....	95.75	218.125	107.125	204.25	147.00	181.75	142.50	197.75	146.375	109.60	161.75	202.875	171.25	190.00	140.00	177.60

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	7.00	104.04	10.75	63.75	9.00	138.01	11.25	50.25	11.00	109.78	11.75	68.75	13.00	200.65	10.00	50.00
Lowest .....	1.75	27.01	5.50	27.50	3.25	50.16	3.00	15.00	3.00	46.304	1.875	9.875	3.50	54.02	3.00	15.00
Average .....	4.06	63.06	8.45	42.25	5.70	89.37	7.50	37.95	6.10	85.077	7.45	37.25	6.41	98.94	7.85	36.75
Tests above average .....	20		27		25		23		10		26		23		27	
Tests below average .....	30		23		25		27		31		24		23		23	

Catalogue number of samples...	RWES.															
	793.				791.				795.				796.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	9.25	8.50	6.375	6.00	6.50	8.00	4.25	7.00	3.50	5.25	5.00	4.00	6.25	9.00	8.25	10.60
	5.375	10.00	4.00	6.25	5.50	7.00	7.875	8.00	4.25	7.00	4.00	5.00	2.50	7.50	1.75	10.00
	9.25	7.75	4.625	8.00	4.00	6.00	4.375	7.875	7.00	5.25	7.00	6.60	5.50	8.50	2.50	7.75
	3.625	1.25	7.00	7.50	6.00	9.25	3.00	7.00	4.25	5.25	6.00	7.50	3.25	7.00	5.00	9.00
	8.375	9.25	17.00	9.25	5.00	8.00	5.25	6.00	7.25	10.25	4.00	3.60	7.75	9.75	2.75	9.875
	12.75	8.00	13.50	8.00	4.75	7.75	3.50	5.25	8.00	8.00	4.25	3.00	2.00	8.25	3.25	7.875
	4.75	9.00	5.375	7.25	4.25	5.125	7.25	4.00	6.00	9.00	8.50	7.60	6.50	9.25	5.625	9.75
	5.375	8.25	6.00	9.875	4.375	6.00	4.875	5.625	4.75	7.00	4.50	6.25	3.50	8.75	3.75	8.75
	5.25	8.75	3.375	8.00	8.50	8.125	4.60	7.75	2.25	2.50	4.50	8.00	4.75	8.25	3.25	6.00
	7.75	8.875	5.375	8.75	6.00	6.625	4.875	7.00	4.75	6.00	5.25	3.50	6.00	8.00	3.25	10.25
	10.625	7.50	5.625	8.50	4.00	7.00	4.875	6.00	3.50	2.50	4.50	3.25	5.75	9.75	6.50	11.00
	4.375	7.75	3.625	8.25	5.875	9.00	3.875	6.25	6.00	4.50	4.00	4.25	2.75	8.00	2.25	9.875
	4.875	5.75	8.375	7.00	3.00	5.00	4.00	5.50	2.25	6.00	6.00	5.60	4.125	7.75	5.00	10.00
	11.50	8.00	4.50	8.25	3.875	5.00	6.875	8.00	6.25	8.00	5.25	7.00	3.50	8.75	4.00	10.00
	7.00	8.00	6.875	3.50	4.25	7.00	3.125	6.00	5.00	5.00	5.00	5.25	2.25	10.00	7.00	7.75
	9.875	1.75	5.25	6.75	4.75	7.25	3.00	5.125	6.00	8.25	5.25	7.25	4.25	10.50	3.00	7.00
	8.625	3.50	4.375	7.75	4.50	7.00	4.375	5.75	3.25	5.00	3.25	6.00	3.625	10.00	3.00	7.00
	5.00	9.00	7.375	5.60	3.50	7.25	4.75	4.75	4.50	6.00	4.50	8.00	2.50	8.50	8.75	9.00
	7.75	8.75	2.875	5.50	4.00	5.875	4.00	6.60	4.00	4.75	4.50	7.50	1.00	10.00	3.75	10.00
4.75	9.25	3.50	6.25	4.75	8.00	4.75	7.00	3.00	3.00	6.50	6.50	2.25	8.25	2.625	9.875	
5.25	7.75	5.25	8.75	5.50	6.375	4.50	5.50	4.75	8.50	3.25	5.75	3.00	6.00	6.00	7.50	
6.625	8.00	5.375	7.50	5.625	7.50	3.25	7.25	5.00	6.50	5.50	8.25	3.25	10.00	4.50	8.75	
4.00	6.00	4.60	7.25	8.625	7.25	3.25	4.50	3.25	5.00	4.00	7.00	5.00	10.00	2.25	9.00	
5.00	9.50	8.50	6.50	4.50	7.00	4.00	8.00	4.75	5.50	6.00	4.75	5.00	9.50	1.75	8.125	
6.125	9.875	4.00	8.50	8.75	7.00	3.75	7.50	4.25	7.00	4.00	6.00	6.00	9.00	6.625	9.25	
Totals .....	172.125	190.00	155.625	183.625	125.25	173.375	111.125	159.125	117.75	150.60	122.25	146.25	98.50	223.25	65.875	223.875

	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	17.00	262.39	10.00	50.00	8.625	133.125	9.25	46.25	8.50	131.19	10.25	51.25	7.75	119.62	11.00	55.00
Lowest .....	3.375	52.09	1.25	6.25	3.00	46.304	4.00	20.00	3.00	46.304	2.50	12.50	1.60	28.15	6.00	30.00
Average .....	6.56	101.25	7.47	37.35	4.73	73.01	6.65	33.25	4.62	74.89	5.08	29.65	3.89	60.04	8.94	44.70
Tests above average .....	18		34		20		27		21		23		20		28	
Tests below average .....	33		10		30		23		29		27		30		22	



TABLE X.—Measurements of strain and stretch of crossbred wools produced by Baechtel Brothers, &c.—Continued.

Catalogue number of sample...	EWES.				RAMS.				EWES.							
	797.				434.				433.				798.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	7.00	9.50	3.50	8.00	2.875	7.00	6.75	4.75	19.00	8.00	10.25	6.50	9.00	4.75	5.00	10.25
	6.25	10.50	3.50	8.25	7.75	7.5	4.75	8.00	11.00	5.50	7.00	1.00	4.00	8.50	10.50	7.00
	4.75	9.75	3.50	9.00	4.00	8.00	0.75	8.375	8.25	7.50	12.75	7.50	0.00	6.75	15.25	7.50
	3.50	9.00	3.50	8.25	11.00	7.00	11.25	6.25	6.00	5.00	5.75	5.50	6.25	8.75	7.00	8.00
	4.50	5.75	7.00	11.00	10.50	7.25	11.00	8.75	8.00	9.00	7.25	4.00	11.00	9.00	4.00	8.75
	4.75	8.50	3.00	7.50	7.25	7.00	9.50	5.25	8.25	6.75	7.00	2.25	6.00	8.50	8.00	9.75
	3.75	4.75	4.50	8.75	8.75	2.00	4.25	2.50	15.25	3.75	12.50	6.25	4.75	7.50	5.75	9.00
	5.00	8.00	5.00	8.00	10.00	5.00	6.00	6.75	9.25	7.75	12.50	6.50	6.00	8.75	7.25	7.75
	4.25	7.00	6.00	8.25	9.75	7.125	8.75	5.50	8.00	1.00	9.25	3.75	10.75	8.25	5.75	8.25
	6.00	9.00	7.50	8.75	10.00	7.75	8.00	7.00	14.00	8.00	10.25	5.75	7.50	7.75	8.00	8.75
	7.25	9.50	4.75	9.50	9.50	3.00	11.25	7.75	8.00	2.25	12.00	8.00	5.00	7.00	5.00	8.75
	4.25	9.00	4.75	9.50	7.50	6.50	10.00	9.00	12.00	4.00	4.00	1.75	10.00	7.75	7.00	10.00
	7.00	9.00	4.75	5.50	8.00	6.00	3.75	7.00	10.25	3.75	10.00	3.50	5.75	0.25	3.25	6.50
	5.00	7.00	4.50	7.25	6.25	5.25	6.50	7.25	10.00	3.75	10.50	3.50	8.00	8.00	5.00	10.25
	7.25	9.00	4.50	7.00	6.25	2.75	4.00	4.00	18.75	7.50	12.75	4.25	6.00	0.00	6.00	8.00
	6.50	9.00	5.00	7.75	10.25	7.00	5.00	8.00	11.00	7.00	8.75	4.75	7.25	7.00	5.00	8.00
	6.00	8.00	0.75	9.00	7.00	6.25	9.75	7.875	10.00	2.75	7.50	4.50	7.75	6.50	10.25	9.75
	5.00	8.50	4.50	6.75	7.50	7.50	10.625	8.00	6.75	1.00	7.50	3.50	7.00	7.50	7.25	8.50
	4.25	10.00	8.75	7.00	11.00	8.00	15.00	6.75	18.25	8.75	9.75	3.75	6.00	6.00	7.25	9.75
4.00	8.50	4.00	9.00	12.50	7.625	7.00	8.25	12.25	7.00	5.00	4.75	6.00	7.00	7.25	7.75	
5.00	8.50	5.50	9.75	8.75	7.00	10.75	8.00	7.25	5.75	11.50	4.75	6.25	8.50	13.25	9.50	
6.50	11.00	7.00	8.25	17.25	3.00	4.50	8.00	4.00	4.00	5.25	15.00	6.75	9.00	6.75	10.25	
6.00	7.00	4.00	10.00	2.125	5.00	3.00	3.00	8.00	4.00	11.25	5.25	8.25	6.00	8.75	9.50	
4.50	9.00	5.75	10.25	8.00	5.125	5.00	5.00	11.25	5.25	8.25	6.00	6.75	7.25	3.50	9.50	
7.00	8.25	8.25	5.00	14.00	9.00	6.00	7.00	11.00	5.75	14.00	7.00	7.25	7.50	4.50	6.75	
Totals.....	135.25	218.00	141.25	207.75	216.75	157.85	161.625	171.00	262.50	133.75	250.00	119.00	178.00	102.75	182.50	217.25

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	per ct.	per ct.	per ct.	per ct.	per ct.	per ct.	per ct.	per ct.	per ct.	per ct.	per ct.	per ct.	per ct.	per ct.	per ct.	per ct.
Highest.....	9.50	140.63	12.00	60.00	17.25	266.25	9.00	45.00	10.25	297.12	9.00	45.00	16.25	250.81	10.25	51.25
Lowest.....	8.00	46.304	8.25	16.25	2.125	32.80	2.00	10.00	4.00	61.74	1.00	5.00	3.00	40.30	4.75	23.75
Average.....	5.53	85.35	8.52	42.66	8.17	126.10	6.58	52.00	10.25	153.20	5.00	25.30	7.21	111.28	8.20	41.00
Tests above average.....	22		24		24		31		21		25		21		26	
Tests below average.....	28		26		26		19		27		25		29		24	

Catalogue number of samples..	EWES.															
	799.				800.				801.				802.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	2.125	4.75	4.50	9.00	6.625	6.50	7.375	7.50	6.375	9.25	2.25	6.00	22.00	9.50	6.00	8.75
	4.625	3.50	11.25	9.00	7.00	6.00	8.625	9.00	6.25	8.75	5.75	8.00	14.00	10.00	5.50	8.00
	9.50	2.875	7.00	9.00	12.75	7.25	4.75	9.125	6.00	9.00	3.50	6.00	18.00	10.25	14.50	9.50
	15.50	9.25	9.625	9.00	9.375	7.25	4.375	4.625	7.875	9.875	4.25	9.00	12.50	8.50	6.75	9.50
	11.25	7.00	9.625	9.00	4.375	4.25	8.625	10.00	6.00	9.25	3.25	6.75	4.50	7.75	18.00	9.00
	10.50	7.125	6.00	8.00	9.50	8.00	9.375	9.50	4.00	10.00	0.75	10.75	15.00	0.75	10.75	9.00
	6.25	6.75	4.875	8.00	6.625	5.25	6.75	6.50	2.25	8.25	6.50	9.00	4.00	8.75	18.00	9.75
	11.625	6.00	6.375	10.125	7.375	6.50	10.625	10.50	3.25	9.50	4.75	7.50	10.00	9.25	8.50	8.75
	4.375	4.75	4.875	6.375	8.125	6.00	8.375	8.25	8.25	8.50	4.50	8.00	7.00	0.00	8.25	7.50
	7.625	9.00	5.625	8.00	12.25	7.75	7.375	10.25	3.00	7.25	4.00	8.00	12.00	8.50	14.50	6.75
	10.375	7.75	5.50	8.125	7.375	7.50	9.625	8.50	2.75	9.50	4.50	8.75	11.25	7.75	12.00	8.00
	5.00	7.00	10.50	8.75	10.625	9.00	9.75	7.75	2.00	7.75	5.75	8.00	6.25	10.50	11.00	8.00
	7.25	7.875	6.875	9.75	10.375	8.25	10.00	8.50	0.25	9.375	3.75	8.00	8.00	10.00	10.00	8.50
	14.25	9.00	4.25	7.75	6.00	5.875	9.625	9.00	6.25	0.00	2.50	7.75	14.75	8.00	13.00	9.00
	9.375	7.00	7.50	8.00	8.375	4.25	8.625	8.75	2.75	0.50	3.75	7.00	10.00	8.50	10.50	5.75
	13.50	8.875	9.75	7.50	8.625	8.00	9.00	10.00	8.25	9.75	10.00	10.75	11.00	8.25	23.75	10.00
	12.50	8.50	0.00	7.00	7.375	7.75	5.375	6.75	2.625	0.875	6.75	10.00	10.00	9.00	16.00	8.00
	9.75	9.125	7.625	9.00	5.50	8.75	8.50	10.00	5.25	7.875	4.25	7.75	17.00	0.75	11.00	9.00
	4.375	7.00	3.50	8.75	7.625	8.25	11.00	10.00	3.00	9.25	2.00	6.875	10.75	10.25	28.75	9.50
6.125	6.75	9.50	9.00	10.375	10.50	8.625	11.00	3.00	8.75	5.00	8.75	6.75	8.00	13.00	7.75	
5.125	8.25	9.50	6.875	0.375	8.25	16.25	10.25	5.25	9.50	7.25	10.00	10.75	9.00	10.75	9.00	
3.50	8.25	10.625	9.75	7.375	9.00	7.50	9.375	3.50	10.00	3.25	8.75	5.75	7.25	27.75	11.00	
11.875	8.625	6.50	9.00	10.375	10.25	6.375	8.25	3.75	9.00	2.75	7.25	17.50	10.25	11.00	8.75	
7.125	8.25	9.625	7.75	8.25	9.00	6.75	8.25	6.25	10.00	2.50	6.25	6.25	10.00	11.00	6.00	
6.50	9.75	11.875	8.00	7.00	9.25	3.75	0.50	4.60	10.25	3.00	9.25	11.00	9.00	8.50	6.50	
Totals.....	213.00	183.00	186.875	208.50	201.625	185.625	203.00	221.75	100.625	228.875	113.50	204.125	280.00	226.75	334.75	210.75

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	per ct.	per ct.	per ct.	per ct.	per ct.	per ct.	per ct.	per ct.	per ct.	per ct.	per ct.	per ct.	per ct.	per ct.	per ct.	per ct.
Highest.....	15.50	239.24	10.125	50.625	10.25	250.81	10.50	52.50	10.00	154.35	10.75	53.75	28.75	443.74	11.00	55.00
Lowest.....	2.125	32.80	2.875	14.375	3.375	52.00	4.25	21.25	2.00	30.87	6.00	30.00	4.00	61.74	5.75	28.75
Average.....	7.80	120.39	7.83	39.15	8.09	124.87	8.15	40.75	4.40	68.84	8.68	43.30	12.90	189.85	8.75	43.75
Tests above average.....	23		30		25		20		22		30		20		26	
Tests below average.....	27		20		25		21		28		2					



TABLE X.—Measurements of strain and stretch of crossbred wools produced by Baechtel Brothers, &c.—Continued.

Catalogue number of sample...	EWES.															
	803.				804.				805.				806.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	10.625	7.50	22.50	7.00	4.00	7.25	7.00	8.50	6.50	6.60	7.75	7.00	0.00	0.00	0.00	4.75
	9.50	7.00	9.50	8.00	8.825	9.50	5.375	4.00	12.00	8.60	13.00	5.75	4.50	5.00	13.00	7.25
	23.00	7.25	20.75	7.25	8.00	4.25	8.00	7.75	5.00	7.50	8.25	6.50	3.25	9.50	4.00	8.00
	10.25	6.00	21.125	7.25	10.25	7.00	7.50	6.125	10.00	6.75	4.00	8.60	11.75	7.25	4.75	0.75
	10.25	6.875	10.125	4.50	6.50	7.00	9.00	7.00	5.00	8.50	4.50	7.50	6.25	0.75	7.75	6.00
	6.125	5.125	14.00	6.00	12.00	8.00	8.375	9.00	3.00	3.25	13.50	7.00	11.00	7.75	5.25	6.75
	13.25	6.00	7.875	6.00	4.875	4.25	8.375	8.00	3.75	4.75	13.75	8.50	8.00	9.25	9.25	7.00
	11.50	7.00	17.75	7.875	13.00	9.875	5.50	1.00	6.75	3.50	6.75	7.50	7.75	5.00	10.75	6.25
	10.00	7.625	15.00	8.00	0.25	7.75	8.00	7.25	7.00	1.80	6.75	2.00	7.00	6.75	8.50	7.00
	9.875	6.25	13.75	7.00	0.375	6.25	7.75	4.00	9.60	7.75	13.75	7.00	11.25	8.60	9.75	6.75
	8.00	6.875	15.75	7.00	8.50	8.25	9.375	8.25	6.00	8.25	7.25	5.75	5.50	6.50	13.00	7.00
	10.25	7.00	13.25	7.25	11.375	7.00	4.375	7.25	0.50	6.00	4.00	2.50	5.25	6.75	5.50	5.75
	18.00	7.00	12.00	0.50	5.375	2.75	5.00	6.50	4.50	6.75	10.00	4.00	9.75	6.00	7.50	7.75
	29.25	7.00	10.00	7.00	0.50	8.75	8.625	7.125	9.00	7.00	4.25	8.00	13.75	8.75	4.50	4.75
	10.25	6.125	19.00	4.875	3.625	7.25	5.90	2.00	0.25	7.50	14.00	7.00	5.50	6.00	4.00	9.50
	12.00	6.00	13.25	8.00	4.25	8.75	3.625	6.125	0.00	3.75	11.50	7.25	13.25	7.50	3.00	7.00
	20.875	8.875	22.00	7.875	14.375	8.25	3.375	6.125	8.00	9.00	12.25	5.50	7.50	5.90	8.00	7.00
	19.75	7.50	10.00	4.25	8.375	6.75	14.00	9.25	12.00	8.00	5.75	5.25	4.25	5.00	4.00	7.50
	8.25	8.90	12.75	8.90	10.25	7.00	6.00	0.125	0.75	7.75	8.00	5.50	6.50	5.75	3.025	8.50
	8.375	7.25	10.50	7.25	8.375	6.25	14.00	7.00	4.00	8.50	7.75	4.00	8.60	7.60	5.00	8.60
	11.25	6.00	11.75	6.00	5.625	8.25	8.625	1.875	10.25	7.75	6.75	7.00	5.50	7.75	6.75	6.75
	12.00	8.875	16.00	7.00	6.00	8.00	4.375	3.00	5.00	3.00	7.00	7.25	8.75	8.25	4.00	5.00
	11.75	4.75	12.00	7.00	12.75	7.50	12.90	4.50	10.25	4.25	7.25	3.00	6.50	6.50	11.25	9.00
	8.00	6.875	10.75	5.50	5.25	6.75	10.75	3.25	10.60	3.75	9.00	3.50	15.25	7.50	7.00	7.25
	5.00	6.00	17.00	8.60	7.375	8.00	11.375	4.50	10.75	5.00	6.75	6.50	6.25	6.00	6.00	10.50
Totals .....	324.75	165.75	358.875	165.625	198.375	181.125	205.375	144.50	188.75	143.25	219.50	109.25	193.75	172.00	183.375	177.50
	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	29.25	451.46	8.875	41.375	15.00	231.02	9.875	40.375	14.25	219.94	9.00	45.00	18.00	254.67	10.50	52.50
Lowest .....	5.00	77.17	3.00	15.00	3.375	52.00	1.00	5.00	3.00	44.80	1.50	7.50	3.00	48.80	4.00	20.00
Average .....	13.00	210.81	6.63	33.15	8.08	124.71	6.51	32.85	8.17	126.00	5.99	29.95	7.52	110.67	6.99	31.95
Tests above average .....	19		32		24		32		22		29		20		25	
Tests below average .....	31		18		25		18		28		21		30		24	
	EWES.															
	807.				818.				819.				850.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	4.25	3.00	12.00	7.00	11.50	8.75	11.25	8.875	10.60	10.00	12.00	9.00	4.60	7.75	4.75	7.25
	11.25	8.75	8.50	3.50	8.00	10.75	9.50	6.60	6.25	8.00	11.07	9.75	4.00	10.75	6.50	9.50
	6.60	9.00	10.00	9.00	13.00	8.60	6.25	9.125	4.75	7.75	9.50	9.00	12.00	9.50	11.00	8.25
	4.50	6.00	5.00	6.25	16.25	7.00	10.25	9.00	0.50	6.25	8.00	11.50	9.50	8.50	8.50	8.75
	4.00	7.00	0.75	2.50	8.25	6.75	12.25	7.25	8.75	10.00	11.25	9.25	0.50	10.50	0.00	3.25
	7.50	9.00	10.00	8.00	21.25	7.875	13.75	7.00	8.00	10.25	8.75	8.50	0.50	9.00	6.00	6.50
	8.00	8.00	4.75	2.75	3.75	3.00	3.60	4.75	7.00	16.00	10.60	11.75	4.00	6.50	0.60	0.00
	5.75	12.75	7.00	8.50	7.75	8.25	21.75	9.75	8.50	9.00	6.25	11.75	5.75	9.50	4.00	6.00
	10.25	7.60	4.75	2.00	12.75	5.50	4.25	6.25	0.50	7.00	5.75	9.25	8.00	7.00	0.25	3.50
	4.75	1.75	10.50	9.00	14.50	8.25	4.75	4.50	4.75	8.75	9.60	9.50	5.75	10.00	6.75	8.00
	9.00	8.50	10.25	6.25	20.75	9.75	13.50	8.875	9.00	10.00	7.75	10.25	7.00	9.25	5.03	6.00
	8.00	8.50	8.60	6.00	10.75	8.75	10.50	7.50	8.50	8.00	5.00	10.00	8.00	8.75	8.25	9.00
	7.60	9.00	5.00	0.25	12.25	9.00	12.75	8.75	12.00	9.50	8.25	7.00	10.50	8.00	5.75	9.25
	13.50	6.00	0.75	7.00	8.25	8.25	23.00	0.25	5.75	6.50	10.75	10.00	14.75	9.00	10.50	8.00
	8.50	7.00	0.25	9.25	8.00	8.00	11.75	8.00	7.00	7.75	6.75	9.75	5.00	9.50	0.00	9.00
	9.75	8.00	5.50	5.25	10.50	8.50	10.50	8.60	0.25	7.00	7.75	9.00	9.00	10.00	5.50	5.50
	9.75	8.25	4.00	3.75	4.75	9.25	7.50	9.00	9.75	8.50	12.50	9.75	4.00	5.50	6.00	5.00
	9.00	8.25	9.75	8.75	12.00	8.75	12.50	8.75	8.25	8.75	7.25	10.50	6.00	9.25	6.00	9.50
	8.00	6.00	11.25	8.00	10.25	7.25	10.25	8.875	4.25	8.00	9.25	9.25	5.75	7.60	12.00	9.25
	6.25	4.25	4.50	5.25	2.25	3.00	9.00	9.00	8.25	9.75	7.00	10.25	8.25	8.25	12.00	7.50
	5.00	2.75	11.75	8.75	20.50	9.75	13.25	9.25	5.00	9.75	5.00	8.75	11.75	8.75	6.00	7.00
	3.00	4.25	7.25	4.00	8.60	8.25	12.00	0.75	6.25	7.75	3.75	10.00	13.00	7.75	10.50	8.25
	4.00	5.25	4.50	2.00	5.25	5.00	4.00	0.25	4.00	9.75	11.75	10.75	3.50	6.75	6.00	7.00
	7.75	9.00	3.00	4.25	12.00	7.50	20.50	8.00	6.25	10.00	5.60	7.75	4.60	10.25	3.75	6.50
	12.75	9.00	4.25	7.00	7.00	4.00	8.25	8.25	7.25	8.00	12.00	9.75	7.50	8.25	7.00	7.00
Totals .....	185.50	166.75	181.25	151.25	266.00	167.625	237.75	203.50	173.25	219.25	206.00	230.50	184.50	215.75	170.50	183.25
	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Recapitulation and reduction:	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.	grams.	grains.	mm.	per ct.
Highest .....	13.50	208.37	9.25	41.25	23.00	354.09	10.75	53.75	12.80	192.93	11.75	58.75	14.75	228.65	10.75	53.75
Lowest .....	3.00	46.30	1.75	8.75	2.75	42.44	3.00	15.00	3.25	50.16	6.50	32.50	3.50	51.62	3.50	17.59
Average .....	7.34	113.29	6.26	31.80	10.70	165.15	7.82	39.10	7.63	117.61	9.17	45.85	7.28	112.05	6.10	40.50
Tests above average .....	23		27		29		33		23		30		18		23	
Tests below average .....	27		23		21		17		28		20		22		22	



TABLE X.—Measurements of strain and stretch of crossbred wools produced by Baechtel Brothers, &c.—Continued.

Catalogue number of samples..	RAMS.																
	851.				852.				853.				854.				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	7.00	7.75	9.75	8.00	6.25	10.00	4.50	5.00	3.75	9.00	6.00	8.75	9.00	9.00	4.25	8.00	
	10.25	6.00	9.00	5.25	10.00	6.50	4.00	5.00	4.00	8.00	4.75	8.50	7.75	10.00	5.00	7.75	
	5.75	7.75	11.75	8.00	10.75	10.50	6.75	8.50	9.75	0.00	5.75	10.25	4.75	8.00	5.00	6.75	
	8.75	8.00	9.75	8.125	6.50	9.00	3.75	0.75	4.25	6.00	8.50	7.00	3.75	9.00	12.00	8.25	
	8.75	8.00	7.625	8.00	6.50	5.50	5.50	9.00	3.25	6.25	3.50	6.25	7.00	8.25	4.50	9.50	
	12.00	6.00	7.875	8.50	5.00	7.75	8.00	11.25	6.00	8.50	3.60	5.75	7.00	8.00	4.00	7.75	
	14.75	7.00	8.00	8.00	6.50	6.00	4.25	8.25	6.25	9.00	4.25	6.00	5.00	9.00	9.00	8.75	
	13.00	8.00	7.00	0.125	4.00	5.75	5.75	6.00	5.00	7.00	5.50	10.00	8.00	7.75	6.25	10.00	
	0.75	6.25	5.50	8.75	3.50	9.50	6.60	8.75	3.75	7.75	4.75	7.00	10.00	9.25	8.00	8.00	
	12.50	0.75	20.75	8.75	3.50	10.00	7.25	11.00	3.50	8.00	3.00	5.25	4.50	6.50	8.25	8.50	
	10.25	7.25	11.00	8.00	14.75	10.75	8.50	7.00	6.00	9.00	3.00	5.00	9.00	9.75	0.25	8.75	
	4.875	6.75	7.50	6.00	3.50	5.25	5.00	8.50	6.00	0.50	6.00	9.00	4.25	8.00	3.25	4.00	
	12.375	8.00	6.875	6.25	3.50	8.00	5.00	9.25	8.00	9.00	4.00	3.75	4.00	8.00	6.00	7.50	
	5.875	0.875	7.25	8.00	6.00	8.75	6.50	10.00	2.00	7.00	4.25	8.60	6.00	9.00	6.00	8.00	
	7.50	7.00	9.875	8.875	8.00	5.75	11.75	8.00	7.00	8.00	3.75	7.00	4.75	8.00	4.75	8.00	
	10.25	9.00	9.00	7.00	5.50	8.60	11.00	11.75	6.00	10.00	4.75	8.00	8.75	7.75	8.25	8.00	
	8.625	8.75	9.875	3.125	3.75	7.50	5.25	6.50	5.00	9.00	4.00	6.00	8.00	8.00	7.00	9.25	
	4.625	8.00	12.00	7.25	10.25	10.00	17.00	12.00	8.00	10.00	6.00	9.25	8.25	9.75	5.00	8.00	
	13.00	8.25	10.25	9.00	9.50	9.75	8.50	8.75	6.00	9.75	7.00	9.75	9.50	8.00	10.00	9.00	
8.25	8.875	14.00	8.875	9.00	7.50	6.00	10.00	3.50	7.75	7.25	9.25	7.00	10.00	7.00	5.00		
11.75	9.00	6.00	8.00	6.50	10.75	3.75	5.25	6.25	9.75	6.00	6.75	5.50	8.00	7.75	8.00		
18.00	8.00	9.00	6.75	3.25	8.00	5.75	7.75	4.00	7.00	4.00	7.25	3.75	8.25	10.00	8.00		
9.00	8.00	10.375	8.25	11.50	9.00	7.25	0.00	9.75	11.00	4.00	7.50	7.00	9.00	5.25	0.25		
15.50	8.50	15.00	7.00	6.00	8.00	7.00	0.75	3.75	7.25	9.75	8.75	8.50	7.75	5.00	5.00		
12.00	7.75	7.25	8.00	5.75	10.00	7.00	0.50	6.25	9.75	4.00	6.50	11.00	8.00	8.75	9.00		
Totals .....	256.50	188.75	243.25	187.875	167.25	207.50	171.50	215.60	136.00	212.25	127.25	186.50	172.00	212.75	166.25	195.00	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	
Lowest .....	4.625	74.859	5.25	26.25	3.25	50.16	5.00	25.00	2.00	30.86	3.75	18.75	3.25	50.16	4.00	20.00	
Average .....	0.00	154.19	7.53	37.65	6.77	104.49	8.46	42.30	5.26	81.18	7.97	39.85	6.76	140.04	8.15	40.76	
Tests above average .....	21		32		19		29		23		28		26		22		
Tests below average .....	29		18		31		21		27		22		24		28		
Catalogue number of samples..	RAMS.												EWES.				
	855.				856.				857.				808.				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	
	11.25	8.50	13.50	6.25	4.00	3.00	0.75	8.75	13.50	7.00	9.75	8.00	5.625	10.125	4.625	5.75	
	8.50	8.75	12.50	7.875	6.00	8.75	5.75	9.25	21.25	9.25	14.25	6.875	9.375	10.125	3.75	5.25	
	8.00	4.75	23.25	9.00	12.00	8.75	6.25	7.75	9.00	6.25	11.50	6.00	4.375	5.00	9.375	8.50	
	8.75	5.75	6.75	5.25	6.75	8.00	13.75	8.00	13.75	6.75	7.00	8.75	6.00	6.625	7.25	6.00	
	9.25	8.50	8.00	5.25	11.75	7.00	10.50	9.00	11.50	7.25	4.25	8.75	4.875	7.25	11.625	7.25	
	7.75	7.75	8.25	6.75	0.00	8.00	10.25	7.00	13.875	0.75	7.50	8.25	8.75	6.25	9.00	7.75	
	15.25	8.75	6.75	5.75	11.25	6.50	13.00	7.75	9.25	6.25	14.00	7.50	8.25	8.25	5.375	8.25	
	26.00	9.00	11.00	6.00	7.00	8.00	15.00	7.75	12.50	8.00	8.50	6.50	5.375	4.00	4.50	4.75	
	5.75	2.25	7.75	6.60	18.50	10.00	11.00	7.00	21.00	8.00	8.00	6.00	12.50	8.50	9.00	7.25	
	10.50	7.75	19.00	8.00	7.25	7.75	12.75	8.75	6.00	7.00	8.00	7.25	8.625	7.25	6.75	7.25	
	8.50	10.25	6.25	6.25	6.50	7.75	14.00	7.25	8.00	6.25	11.00	7.25	2.375	6.50	5.375	5.25	
	9.75	7.75	14.50	6.75	10.00	7.00	13.75	7.75	17.60	8.50	10.25	6.75	11.625	7.00	4.625	4.75	
	6.25	6.00	16.00	7.25	6.25	7.25	14.00	6.00	11.75	6.75	11.50	6.25	4.50	3.25	10.75	8.875	
	9.75	7.25	11.75	7.00	11.00	10.00	13.25	7.00	12.25	5.25	10.25	0.875	12.00	9.00	8.375	6.25	
	8.75	7.75	22.50	0.25	6.75	6.50	14.00	8.00	6.25	6.00	4.00	0.75	8.625	7.50	4.00	7.25	
	8.75	3.25	6.00	8.25	6.75	6.75	14.00	8.75	14.75	8.00	22.25	8.875	7.60	4.00	7.00	7.25	
	10.75	5.25	8.75	4.50	0.50	6.75	7.00	7.00	13.25	6.875	21.25	8.50	2.625	5.75	13.00	5.50	
	7.25	6.75	10.00	8.00	9.00	7.00	12.00	7.75	10.75	7.00	19.50	7.25	10.625	7.875	9.625	9.25	
	8.75	8.50	6.00	3.75	11.00	7.00	6.60	5.76	8.60	7.25	16.25	8.00	2.50	2.25	3.25	5.00	
17.50	0.50	0.00	10.25	0.00	8.25	11.25	6.25	8.60	6.75	14.00	5.125	10.00	9.75	7.00	6.75		
10.25	7.50	16.75	10.00	5.25	7.00	11.60	6.75	9.75	4.75	14.50	9.00	7.25	3.00	0.75	8.25		
9.25	8.25	9.50	9.75	6.50	8.50	12.00	7.50	7.50	7.00	11.25	5.25	6.00	8.75	1.625	5.25		
10.00	5.75	7.25	7.50	6.00	6.00	7.75	6.00	17.60	7.60	7.25	7.50	4.75	7.25	8.625	6.00		
9.00	7.50	11.75	7.50	6.00	6.60	14.00	8.00	7.75	6.00	10.50	6.50	6.625	7.50	7.50	2.25		
10.50	7.875	6.50	7.75	8.00	7.75	12.00	7.75	7.50	5.00	19.50	8.75	5.50	3.00	11.50	8.75		
Totals .....	250.00	178.625	279.25	180.375	208.00	185.75	271.50	189.00	286.125	171.625	207.75	179.50	175.875	159.875	177.125	165.125	
Recapitulation and reduction:		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
Highest .....	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	grams.	grams.	mm.	per ct.	
Lowest .....	5.75	88.74	2.25	11.25	4.00	61.74	3.00	15.00	4.00	61.74	4.75	23.75	1.625	25.08	2.25	11.25	
Average .....	10.70	165.15	7.18	35.90	9.55	147.40	7.89	39.45	11.68	172.25	7.02	35.10	7.06	108.07	6.50	32.50	
Tests above average .....	16		30		25		17		20		21		23		26		
Tests below average .....	34		20		25		33		30		29		27		23		



TABLE X.—Measurements of strain and stretch of crossbred wools produced by Baechtel Brothers, &c.—Continued.

Catalogue number of samples..	EWES.																				
	809.				810.				811.				812.				813.				
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	
Actual measurement in grams and millimeters.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.	gms.	mm.	
	7.25	8.75	6.00	8.00	8.25	2.75	9.00	6.00	8.00	8.00	9.00	6.75	9.75	4.00	9.75	4.25	9.00	3.50	8.25	4.875	5.00
	4.25	8.50	6.00	8.25	14.50	4.00	3.50	7.00	8.25	2.75	4.50	5.50	2.50	7.25	8.00	9.25	4.50	9.00	9.50	8.25	
	4.75	6.00	0.00	8.25	7.75	8.25	14.75	7.75	4.00	9.00	4.25	9.00	4.50	9.00	4.00	7.25	7.00	7.00	4.875	7.00	
	3.00	9.75	4.75	9.25	10.25	8.25	5.75	7.00	2.75	7.50	4.75	8.50	4.00	7.00	5.50	0.00	4.00	6.875	3.50	4.00	
	6.25	4.00	7.75	0.50	5.00	3.50	8.50	6.50	3.75	9.25	3.00	9.25	8.25	2.75	4.50	8.50	10.75	8.00	10.625	7.125	
	0.25	8.00	3.75	4.75	13.00	0.75	6.50	7.25	3.25	8.50	5.25	8.75	3.75	8.50	3.75	5.50	5.00	6.375	9.00	7.125	
	7.50	8.75	4.60	8.75	13.75	8.00	15.00	8.50	3.375	9.00	5.00	7.75	4.25	8.00	5.00	7.75	8.00	8.07	12.625	7.75	
	8.25	0.00	3.75	3.00	10.25	7.75	11.75	6.125	4.50	16.75	3.875	8.00	3.75	8.50	2.75	8.00	0.625	9.00	6.00	8.00	
	8.25	7.00	0.00	8.00	18.75	0.50	11.50	8.75	3.25	7.50	4.875	8.00	3.50	10.00	3.00	3.25	5.625	8.125	7.125	6.75	
	3.25	7.00	0.00	5.75	8.50	7.00	14.75	8.125	3.75	0.50	3.25	8.25	12.50	7.75	4.75	10.00	8.75	9.00	11.00	7.00	
	7.75	8.00	6.50	7.50	11.50	8.50	16.50	9.50	12.75	9.00	3.75	7.00	12.75	4.00	6.50	10.00	4.625	8.00	7.25	8.00	
	3.50	7.00	5.00	8.50	18.25	8.75	11.25	7.25	4.00	0.00	3.75	8.875	5.00	10.25	8.00	8.00	4.625	5.50	5.25	5.125	
	7.25	8.00	7.00	7.75	7.50	4.75	11.75	6.25	3.00	16.00	4.00	8.50	3.25	9.25	4.25	7.75	9.50	0.50	6.125	7.50	
	0.00	10.00	4.00	8.75	20.25	10.125	6.50	6.125	12.75	16.00	4.25	8.75	3.00	9.00	4.00	7.00	7.50	7.25	4.25	2.75	
	0.00	0.00	5.00	8.50	2.75	7.75	7.75	8.25	3.00	8.50	3.75	6.00	3.75	0.25	4.00	8.50	8.125	8.50	3.125	6.00	
	7.00	0.00	6.50	8.25	11.50	8.75	17.25	5.50	3.50	0.00	3.00	7.00	4.00	0.00	4.00	7.25	4.375	0.50	6.625	7.00	
	7.25	8.00	0.25	9.25	9.25	7.75	4.00	8.00	3.50	8.00	5.00	7.75	4.07	9.75	5.00	8.75	5.00	8.125	3.625	7.875	
	4.25	3.00	3.50	0.60	7.00	0.875	10.50	8.75	4.00	8.00	3.50	7.75	4.00	7.00	4.00	0.60	13.00	8.50	9.00	8.00	
	3.25	2.50	8.50	10.00	18.25	8.75	7.75	8.25	4.875	8.00	8.00	9.75	4.50	0.25	3.50	10.50	5.375	7.00	5.50	8.00	
4.00	8.50	3.00	6.00	5.625	0.00	20.25	10.60	4.25	9.50	2.75	9.00	4.25	7.00	3.75	9.75	2.375	4.75	9.25	8.25		
0.25	9.00	3.25	4.25	14.75	6.00	0.25	8.00	12.25	7.60	2.00	6.75	4.25	8.75	6.00	2.75	5.275	6.625	10.50	8.00		
5.75	7.00	5.60	9.50	10.00	8.50	7.75	7.00	5.375	10.60	4.00	8.00	3.00	8.00	3.00	7.00	13.25	8.60	5.75	7.00		
4.25	0.00	8.25	8.75	7.75	8.75	5.75	9.00	12.75	6.25	3.00	8.75	5.00	7.50	5.00	8.50	3.875	8.75	8.625	7.75		
8.00	10.25	6.25	8.50	0.75	7.75	6.00	5.75	5.50	9.00	3.00	8.75	6.25	9.25	4.00	9.50	4.75	6.00	6.25	6.00		
4.50	8.75	7.00	8.00	10.25	0.25	21.00	6.00	4.00	8.25	2.875	6.00	9.00	8.50	2.25	3.00	3.00	7.00	8.50	0.00		
Totals .....	147.00	192.75	139.00	196.00	282.375	180.00	266.25	173.125	95.375	218.25	102.125	201.375	102.00	202.25	108.75	213.25	168.875	181.75	178.75	168.875	

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.			
	gms.	grs.	mm.	p. ct.	gms.	grs.	mm.	p. ct.	gms.	grs.	mm.	p. ct.	gms.	grs.	mm.	p. ct.		
	Highest .....	9.00	138.01	10.25	51.25	28.25	408.16	10.125	50.625	8.25	127.34	10.75	53.75	9.00	138.91	10.50	52.50	13.25
Lowest .....	8.00	46.30	2.50	12.50	2.75	42.44	2.25	11.25	2.00	30.87	5.50	27.50	2.50	38.57	3.75	18.75	2.375	34.60
Average .....	5.72	88.29	7.78	38.00	11.30	170.50	7.16	35.80	3.95	60.97	8.45	42.25	4.22	65.16	8.31	41.55	6.85	105.73
Tests above average .....	29		34		22		30		22		29		20		29		20	
Tests below average .....	21		16		28		20		28		21		30		20		23	

Catalogue number of samples..	EWES.															
	814.				815.				816.				817.			
	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.	Strain.	Stretch.
Actual measurement in grams and millimeters.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.	grams.	mm.
	6.625	8.75	3.625	7.25	5.00	7.00	0.00	7.25	8.125	8.00	4.375	4.00	4.75	8.75	8.25	5.00
	7.25	8.25	8.00	8.25	4.00	9.00	3.00	5.50	0.00	4.00	6.625	7.50	4.75	7.50	12.75	10.00
	7.50	7.50	7.625	10.25	4.25	6.00	3.50	6.50	0.625	7.25	7.375	9.50	5.25	8.50	6.25	6.50
	2.375	0.75	5.625	10.00	0.25	7.25	5.50	8.50	6.625	8.00	3.25	8.00	3.75	7.50	4.00	5.75
	3.00	9.00	6.50	9.25	4.75	7.00	3.25	7.75	11.625	5.00	4.50	7.00	3.25	9.75	6.25	8.75
	7.75	8.125	9.30	10.75	3.00	5.25	4.25	7.75	0.625	6.125	3.50	7.25	8.25	3.00	10.00	5.00
	4.00	7.50	2.625	7.00	2.75	0.25	4.00	5.50	8.00	7.75	0.625	7.125	8.50	8.25	6.25	9.00
	4.00	6.50	4.00	5.25	4.00	7.00	3.75	6.25	11.375	8.00	7.375	8.25	8.25	7.25	3.75	7.25
	4.00	0.00	4.00	8.875	5.50	7.75	5.75	7.50	2.625	4.75	3.75	4.75	6.50	8.50	3.75	6.25
	6.00	8.875	3.60	8.50	3.00	7.25	3.25	9.00	6.00	6.75	4.75	5.25	4.00	4.75	4.00	6.00
	10.75	9.75	4.75	8.75	5.75	5.25	4.00	8.00	2.375	5.75	2.625	4.00	6.50	7.00	8.00	6.25
	10.625	10.50	1.025	4.25	5.75	9.00	3.50	8.00	2.625	7.00	3.375	5.75	6.00	4.00	7.00	9.75
	3.625	7.00	9.00	8.00	4.25	5.75	6.25	0.25	9.625	8.25	5.625	8.25	9.50	4.00	5.25	6.50
	2.625	1.125	6.00	7.00	4.00	7.50	3.00	7.25	3.375	3.75	3.375	3.125	3.75	0.25	8.25	5.75
	4.00	9.00	3.50	7.00	5.25	0.00	4.75	4.75	8.375	8.00	4.75	7.00	5.00	8.25	3.50	8.00
	2.625	4.50	3.375	2.25	5.50	8.00	3.50	5.00	5.25	7.50	7.00	5.75	8.00	7.50	5.00	7.50
	7.00	8.75	4.375	8.00	3.75	8.00	6.25	6.50	7.375	7.50	3.25	7.00	5.75	9.00	4.75	6.25
	8.625	8.00	5.00	8.50	3.75	7.00	6.50	8.50	5.625	6.00	7.00	6.00	7.75	0.00	4.75	6.25
	2.75	9.25	4.375	7.875	8.75	7.25	3.00	7.00	3.625	7.25	4.375	7.00	3.25	8.00	4.00	8.25
8.875	9.50	9.625	7.75	8.00	7.75	4.00	5.00	5.625	9.00	4.75	8.75	15.00	10.25	8.25	7.00	
1.875	8.00	6.00	6.00	4.00	9.00	4.50	7.50	9.25	7.75	5.375	7.75	10.00	7.00	4.50	8.00	
3.75	7.00	12.625	10.00	4.50	8.00	4.75	6.50	8.75	8.25	6.625	2.75	6.25	5.00	14.00	9.00	
3.375	5.75	3.50	8.25	6.00	8.00	6.00	6.00	6.25	10.00	2.375	2.25	3.75	6.50	5.75	9.75	
7.75	8.75	7.625	7.75	6.00	9.00	3.00	9.00	5.625	8.50	4.625	2.75	6.00	5.00	4.00	8.00	
8.375	8.75	6.625	8.00	4.00	4.25	8.00	7.00	6.375	4.00	3.125	7.75	3.50	8.50	3.50	7.00	
Totals .....	120.125	198.875	143.50	195.25	109.75	182.50	108.25	176.75	158.75	175.625	122.375	156.50	148.25	168.00	158.75	182.75

Recapitulation and reduction:	Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.		Strain.		Stretch.	
	grams.	grs.	mm.	per ct.	grams.	grs.	mm.	per ct.	grams.	grs.	mm.	per ct.	grams.	grs.	mm.	per ct.
	Highest .....	12.625	195.34	10.75	53.75	6.50	100.32	9.00	45.00	11.625	179.43	10.00	50.00	14.25	258.13	10.25
Lowest .....	1.025	28.55	1.125	5.625	2.75	42.44	4.25	21.25	2.375	34.65	2.25	11.25	3.25	50.362	3.09	15.00
Average .....	5.39	83.18	7.86	39.30	4.36	67.29	7.18	35.00	6.62	86.74	6.64	33.20	6.12	93.50	6.07	34.85
Tests above average .....	20		32		20		28		24		30		18		28	
Tests below average .....	30		18		30		2									



TABLE XI.—Extrem and average measurements of fineness of crossbred wools produced by Bacchelt Brothers, Willits, Mendocino County, California.

Catalogue number of samples.	Highest.						Lowest.						Average.																
	In centimillimeters.		In thousandths of inch.		In centimillimeters.		In thousandths of inch.		In centimillimeters.		In thousandths of inch.		In centimillimeters.		In thousandths of inch.														
THOROUGHbred WOOLS.													THOROUGHbred WOOLS.																
439	Yearling Merino ram		3.625		1.4271		1.25		0.4921		2.05		0.8070		430	Shropshire ram		5.00		1.9685		1.75		0.6889		3.60		1.4015	
437	4-year old Merino ram		3.625		1.4271		1.375		0.5413		2.018		0.7936		CROSSBRED WOOLS.														
438	4-year old Merino ewe		3.50		1.3779		1.125		0.4429		2.051		0.8074		$\frac{2}{3}$ Merino, $\frac{1}{3}$ Shropshire, $\frac{1}{3}$ Southdown.														
CROSSBRED WOOLS.													$\frac{2}{3}$ Merino, $\frac{1}{3}$ Shropshire, $\frac{1}{3}$ Southdown.																
$\frac{2}{3}$ Merino, $\frac{1}{3}$ Southdown.													$\frac{2}{3}$ Merino, $\frac{1}{3}$ Shropshire, $\frac{1}{3}$ Southdown.																
428	Ram, yearling		3.00		1.1811		1.50		0.5905		2.033		0.8003		818	Rams		2.75		1.0826		1.25		0.4921		1.905		0.7499	
425	Ewe, yearling		2.875		1.1318		0.875		0.3447		1.897		0.7468		819	do		3.125		1.2303		1.375		0.5413		2.018		0.7944	
Average for class													Average for class																
$\frac{2}{3}$ Merino, $\frac{1}{3}$ Southdown.													$\frac{2}{3}$ Merino, $\frac{1}{3}$ Shropshire, $\frac{1}{3}$ Southdown.																
427	Ram		3.50		1.3779		1.125		0.4429		1.95		0.7877		820	do		4.00		1.5748		1.375		0.5413		2.117		0.8334	
428	Ewe		3.00		1.1811		1.00		0.3937		1.827		0.7192		821	do		5.00		1.9685		1.375		0.5413		2.627		1.0342	
429	do		3.00		1.1811		1.25		0.4921		2.01		0.7013		822	do		4.25		1.6732		1.50		0.5905		2.425		0.9547	
Average for ewe													Average for ewes																
Average for class													Average for class																
$\frac{2}{3}$ Merino, $\frac{1}{3}$ Southdown.													$\frac{2}{3}$ Merino, $\frac{1}{3}$ Shropshire, $\frac{1}{3}$ Southdown.																
430	Rams		3.50		1.3779		1.375		0.5413		2.13		0.8985		788	Ewes		4.125		1.6240		1.25		0.4921		2.241		0.8822	
828	do		2.75		1.0826		1.00		0.3937		1.66		0.6535		789	do		3.00		1.1811		1.25		0.4921		2.147		0.8152	
829	do		2.50		0.9842		1.00		0.3937		1.659		0.6581		790	do		2.50		1.3779		1.25		0.4921		2.28		0.8976	
830	do		3.00		1.1811		1.00		0.3937		1.709		0.6728		791	do		3.50		1.3779		1.375		0.5413		2.13		0.8385	
831	do		2.75		1.0826		1.00		0.3937		1.715		0.6751		792	do		3.25		1.2795		1.50		0.5905		2.170		0.8566	
832	do		3.00		1.1811		1.125		0.4429		1.897		0.7408		793	do		3.50		1.3779		1.50		0.5905		2.07		0.8149	
833	do		3.00		1.1811		1.25		0.4921		1.918		0.7551		794	do		3.00		1.1811		1.50		0.5905		2.094		0.7859	
834	do		3.00		1.1811		1.00		0.3937		2.043		0.8043		795	do		3.00		1.1811		1.375		0.5413		2.091		0.8232	
835	do		2.875		1.1318		1.25		0.4921		1.809		0.7358		796	do		3.00		1.1811		1.125		0.4429		1.848		0.7275	
836	do		3.50		1.3779		1.375		0.5413		2.003		0.7885		797	do		3.00		1.1811		1.25		0.4921		1.913		0.7649	
837	do		3.50		1.3779		1.125		0.4429		2.081		0.8192		800	do		3.00		1.1811		1.25		0.4921		1.933		0.7688	
838	do		8.125		1.2003		1.125		0.4429		1.786		0.7031		Average for rams														
839	do		3.50		1.3779		1.00		0.3937		2.175		0.8562		Average for ewes														
840	do		3.00		1.1811		1.00		0.3937		1.801		0.7090		Average for class														
841	do		3.00		1.1811		0.875		0.3445		1.954		0.7692		$\frac{2}{3}$ Merino, $\frac{1}{3}$ Shropshire, $\frac{1}{3}$ Southdown.														
842	do		3.00		1.1811		1.25		0.4921		1.87		0.7362		434	Ram		4.25		1.6732		1.50		0.5905		2.40		0.9148	
843	do		2.875		1.1318		1.125		0.4429		1.755		0.6909		433	Ewe		5.00		1.9685		1.25		0.4921		2.901		1.1421	
844	do		8.00		1.1811		1.125		0.4429		1.908		0.7511		433	do		3.25		1.2795		1.00		0.3937		1.973		0.7767	
845	do		3.00		1.1811		1.25		0.4921		1.929		0.7594		798	do		5.875		2.5120		1.25		0.4921		2.293		0.8929	
846	do		3.25		1.2795		1.00		0.3937		1.841		0.7248		799	do		3.50		1.3779		1.00		0.3937		2.299		0.9169	
847	do		3.00		1.1811		1.25		0.4921		1.941		0.7641		800	do		3.25		1.2795		1.50		0.5905		2.092		0.8236	
Average for rams													Average for ewes																
Average for class													Average for class																
431	Ewes		3.625		1.4271		1.50		0.5905		2.378		0.9362		434	do		4.00		1.5748		1.25		0.4921		2.412		0.9496	
435	do		4.00		1.5748		1.50		0.5905		2.012		0.7921		801	do		5.25		2.0669		1.50		0.5905		3.026		1.1913	
868	do		2.025		1.0334		1.25		0.4921		1.819		0.7051		802	do		5.25		2.0669		1.50		0.5905		3.026		1.1913	
869	do		3.00		1.1811		1.125		0.4429		1.973		0.7767		803	do		5.25		2.0669		1.50		0.5905		3.026		1.1913	
870	do		2.50		0.9842		1.00		0.3937		1.607		0.6326		804	do		5.25		2.0669		1.25		0.4921		2.816		1.1066	
871	do		3.00		1.1811		1.25		0.4921		1.923		0.7570		805	do		4.00		1.5748		1.25		0.4921		2.412		0.9496	
872	do		3.375		1.3287		1.00		0.3937		1.821		0.7169		806	do		4.125		1.6240		1.50		0.5905		2.412		0.9496	
873	do		3.00		1.1811		1.375		0.5413		2.040		0.8031		806	do		4.00		1.5748		1.50		0.5905		2.54		0.9929	
874	do		3.00		1.1811		1.00		0.3937		1.836		0.7228		Average for ewe														
875	do		2.75		1.0826		1.25		0.4921		1.854		0.7299		Average for class														
876	do		8.00		1.1811		1.375		0.5413		2.112		0.8314		$\frac{2}{3}$ Merino, $\frac{1}{3}$ Shropshire, $\frac{1}{3}$ Southdown.														
877	do		3.50		1.3779		1.375		0.5413		2.107		0.8295		$\frac{2}{3}$ Merino, $\frac{1}{3}$ Shropshire, $\frac{1}{3}$ Southdown.														
Average for ewes													Average for ewes																
Average for class													Average for class																
$\frac{2}{3}$ MERINO, $\frac{1}{3}$ SOUTHDOWN.													$\frac{2}{3}$ Merino, $\frac{1}{3}$ Shropshire, $\frac{1}{3}$ Southdown.																
432	Ewes		3.625		1.4271		1.25		0.4921		2.412		0.9496		848	Rams		4.50		1.7716		1.625		0.6397		2.833		1.1151	
858	do		3.625		1.4271		1.50		0.5905		2.532		1.0105		849	do		3.25		1.2795		1.375		0.5413		2.253		0.8879	
859	do		4.00		1.5748		1.625		0.6397		2.532		0.9963		850	do		4.00		1.5748		1.375		0.5413		2.39		0.9199	
860	do		3.00		1.1811		1.125		0.4429		2.007		0.7901		851	do		4.00		1.5748		1.375		0.5413		2.52		0.9929	
861	do		3.75		1.4763		1.25		0.4921		2.407		0.9008		852	do		4.00		1.5748		1.375		0.5413		2.622		1.0322	
862	do		3.50		1.3779		1.125		0.4429		2.44		0.9008		853	do		4.00		1.5748		1.375		0.5413		2.295		0.9035	
863	do		4.375		1.7224		1.50		0.5905		2.687		1.0578		854	do		2.75		1.4715		1.50		0.5905		2.24		0.8818	
864	do		3.875		1.5255		1.25		0.4921		2.377		0.9342		855	do		5.00		1.9685		1.875		0.7389		3.117		1.2271	
865	do		3.00		1.1811		1.50		0.5905		1.907		0.7597		856	do		4.75		1.8700		1.625		0.6397		5.039		1.1064	
866	do		4.125		1.6240		1.50		0.5905		2.48		0.8793		857	do		5.00		1.9685		1.50		0.5905		2.760		1.0889	
867	do		4.00		1.5748		1.625		0.6397		2.503		0.9834		Average for rams														
Average for ewes													Average for ewes																
Average for class													Average for class																



TABLE XII.—Extreme and average measurements of strain and stretch of crossbred wools produced by Baechtel Brothers, Willits, Mendocino County, California.

Catalogue No. of samples.		STRAIN.						STRETCH.					
		Highest.		Lowest.		Average.		Highest.		Lowest.		Average.	
		grains.	grains.	grains.	grains.	grains.	grains.	mm.	per ct.	mm.	per ct.	mm.	per ct.
THOROUGHbred WOOLS.													
430	Yearling Merino, ram	14.00	318.08	8.00	46.30	6.31	97.30	8.75	48.75	8.75	18.75	7.15	85.75
437	4-year old Merino, ram	8.00	133.43	2.25	34.75	4.53	69.92	8.875	44.875	4.00	20.00	7.11	85.55
438	4-year old Merino, ewe	9.00	138.91	1.625	25.78	4.00	61.74	0.75	48.75	1.50	7.50	4.29	21.45
CROSSbred WOOLS.													
2/3 Merino, 1/3 Southdown.													
426	Ram, yearling	12.00	185.22	2.00	30.87	0.15	94.92	8.50	42.50	2.75	13.75	6.13	30.00
425	Ewe, yearling	7.50	115.70	2.75	42.45	4.95	76.40	8.00	45.00	5.75	18.75	7.28	36.40
	Average for class	9.75	150.40	2.375	36.06	5.55	85.66	8.75	43.75	3.25	16.25	6.70	33.50
1/2 Merino, 1/2 Southdown.													
427	Ram	14.625	225.73	2.50	38.59	5.85	90.29	9.25	46.25	1.00	5.00	5.61	28.05
428	Ewe	12.50	192.93	2.50	38.59	0.60	102.80	9.25	46.25	1.25	6.25	6.75	28.75
429	do	9.75	152.50	2.75	42.44	8.47	84.43	8.875	44.875	1.00	5.00	6.15	30.75
	Average for ewes	11.125	171.71	2.625	40.52	6.07	93.69	9.063	45.315	1.125	5.625	5.95	29.75
	Average for class	12.875	198.72	2.563	39.50	5.958	91.00	9.161	45.80	1.063	6.631	5.78	28.00
1/3 Merino, 2/3 Southdown.													
430	Rams	10.375	160.13	2.625	40.52	5.70	87.98	9.25	46.25	3.00	15.00	6.76	33.30
828	do	8.50	131.19	1.00	15.44	2.40	37.04	10.75	53.75	1.60	7.60	7.89	39.45
829	do	9.75	150.49	2.75	42.44	4.65	71.77	11.75	58.75	2.00	10.00	8.03	40.15
830	do	10.50	102.00	2.75	42.44	5.65	85.00	12.00	60.00	6.00	30.00	9.43	47.10
831	do	7.25	111.80	2.75	42.44	4.63	71.46	11.00	55.00	6.25	31.25	8.53	42.00
832	do	11.25	173.64	2.25	34.03	4.20	65.75	10.00	50.00	1.75	8.75	7.54	37.70
833	do	11.00	169.78	2.625	40.52	5.55	85.00	8.75	43.75	4.00	20.00	6.00	31.50
834	do	11.50	177.50	2.25	34.73	5.96	93.14	10.75	53.75	3.50	17.50	7.99	39.95
835	do	19.00	293.20	3.25	50.10	7.10	100.50	9.75	48.75	8.25	16.25	7.09	35.45
836	do	9.00	138.91	2.00	30.87	4.78	78.77	8.76	43.76	2.75	12.75	6.33	31.66
837	do	13.00	200.65	3.50	54.01	7.00	108.94	11.50	57.50	2.00	10.00	6.88	31.00
838	do	8.75	135.05	2.50	38.59	4.70	72.54	10.00	50.00	6.00	30.00	8.53	41.63
839	do	14.25	219.01	5.00	77.17	8.50	131.19	11.00	55.00	2.00	10.00	8.08	40.40
840	do	9.50	146.63	2.00	30.87	4.66	71.93	9.50	47.50	2.75	13.75	7.34	36.50
841	do	8.25	127.39	2.50	38.59	4.08	71.93	10.60	52.60	1.125	6.625	7.68	35.40
842	do	11.00	169.78	3.25	50.16	5.13	79.179	11.50	57.50	4.00	20.00	8.07	40.35
843	do	7.00	108.042	1.75	27.01	3.77	58.183	11.50	57.50	4.00	20.00	8.93	43.15
844	do	10.50	162.003	2.50	38.580	5.28	81.186	9.75	48.75	6.00	30.00	8.98	40.15
845	do	11.00	169.78	3.00	46.304	5.40	83.35	13.00	65.00	6.00	30.00	9.43	47.10
846	do	9.50	146.63	1.75	27.01	4.82	74.394	11.50	57.50	4.25	21.25	9.025	45.125
847	do	8.25	127.394	2.75	42.444	4.70	72.542	11.50	57.50	6.00	30.00	9.33	46.65
	Average for rams	10.435	161.06	2.607	40.24	5.199	80.24	10.67	53.85	3.72	18.00	7.913	39.505
431	Ewes	17.75	273.961	3.75	57.88	7.00	117.80	10.00	50.00	1.25	6.25	6.41	32.05
435	do	9.625	143.55	2.50	38.59	6.22	80.67	10.75	53.75	1.75	8.75	7.13	35.65
868	do	6.00	92.61	2.50	38.59	3.93	60.66	11.75	58.75	6.00	30.00	9.10	45.80
869	do	10.75	165.90	2.25	34.73	5.40	83.35	11.00	55.00	4.75	23.75	8.36	41.80
870	do	7.50	115.70	1.50	23.15	8.43	62.79	10.75	53.75	2.875	14.375	7.68	33.40
871	do	10.25	158.20	2.00	30.47	5.63	77.99	11.25	56.25	3.25	16.25	6.85	44.25
872	do	8.00	123.677	2.25	34.727	4.11	60.81	9.75	48.75	4.50	22.50	8.18	40.90
873	do	7.75	119.62	2.00	30.87	4.59	70.85	10.00	50.00	5.75	28.75	8.19	40.95
874	do	5.00	128.47	2.00	30.87	3.93	60.503	11.25	56.25	3.00	15.00	8.58	42.99
875	do	9.00	139.91	2.25	34.73	4.50	70.99	11.25	56.25	3.25	16.25	8.08	43.40
876	do	11.75	181.30	3.00	46.30	6.76	104.34	10.25	51.25	6.00	30.00	8.45	42.25
877	do	7.50	115.70	2.25	34.73	4.75	63.61	13.25	66.25	7.25	36.25	9.49	47.80
	Average for ewes	9.40	146.47	2.35	36.27	4.97	76.71	10.94	54.70	4.135	20.675	8.26	41.30
	Average for class	9.902	153.76	2.461	38.29	5.088	78.53	10.803	54.01	3.923	19.54	8.067	40.435
1/3 Merino, 2/3 Southdown.													
432	Ewes	12.75	196.79	3.125	48.03	6.44	99.40	8.50	42.50	0.75	3.75	5.68	28.40
858	do	15.00	231.92	0.00	92.01	10.45	161.29	13.00	65.00	7.25	36.25	9.63	48.15
859	do	13.00	203.28	2.50	38.59	7.13	110.65	11.50	57.50	6.00	30.00	8.62	42.60
860	do	10.00	154.85	2.00	30.87	4.75	104.19	10.00	50.00	5.25	26.25	8.08	40.40
861	do	10.00	154.85	4.00	61.74	7.41	114.87	17.00	85.00	7.00	35.00	9.69	48.35
862	do	10.625	163.00	2.625	40.53	6.39	93.83	10.25	51.25	4.50	22.50	7.997	39.00
863	do	19.50	300.00	4.50	60.40	10.55	162.84	13.00	65.00	6.00	30.00	9.73	48.65
864	do	14.75	227.60	8.00	46.30	6.41	98.94	10.00	50.00	2.00	10.00	6.73	33.65
865	do	11.00	169.78	3.00	46.30	5.26	81.18	13.00	65.00	5.00	25.00	8.48	42.40
866	do	18.00	277.82	2.875	35.68	8.57	132.27	18.50	92.50	4.00	20.00	8.23	42.10
867	do	25.25	389.72	3.50	61.02	10.32	159.20	9.50	47.50	4.00	20.00	7.36	36.80
	Average for ewes	15.08	232.75	3.33	61.40	7.61	117.47	11.48	57.40	4.70	23.60	8.192	40.46
THOROUGHbred WOOLS.													
436	Shropshire rams	35.00	540.21	4.75	73.31	17.05	277.05	0.25	40.25	2.75	13.75	6.38	31.00
2/3 Merino, 1/3 Shropshire, 1/3 Southdown.													
818	Rams	11.25	173.61	2.00	30.87	5.315	82.034	10.25	51.25	3.75	18.75	7.60	38.00
819	do	10.75	155.922	2.25	34.73	5.78	89.21	9.25	46.25	5.00	25.00	7.49	37.45
820	do	13.00	200.65	3.00	46.304	6.03	93.069	10.50	52.50	4.00	20.00	7.55	37.75
821	do	21.00	324.13	3.75	57.87	9.23	142.46	9.00	45.00	1.00	5.00	6.20	31.00
822	do	11.50	177.50	2.50	38.59	6.69	93.84	10.75	53.75	1.00	5.00	6.92	34.69
823	do	10.75	155.92	3.00	46.304	5.51	83.04	12.25	61.25	6.26	31.25	8.31	41.55
824	do	10.25	247.84	2.00	30.87	5.81	89.673	10.50	52.50	5.75	28.75	8.82	44.10
825	do	13.00	200.65	2.50	38.58	5.73	88.43	9.25	46.25	2.25	11.25	6.775	33.875
826	do	10.75	155.922	3.25	61.02	4.99	77.018	11.00	55.00	2.875	14.375	6.99	40.45
827	do	19.00	293.25	2.50	38.59	6.05	93.33	9.625	48.125	6.00	30.00	7.44	37.20
	Average for rams	12.73	211.91	2.68	41.36	6.053	93.43	10.238	51.19	3.788	18.64	7.52	37.60



TABLE XII.—*Extreme and average measurements of strain and stretch of crossbred wools, &c.—Continued.*

Catalogue No. of samples.		STRAIN.						STRETCH.					
		Highest.		Lowest.		Average.		Highest.		Lowest.		Average.	
		grams.	grains.	grams.	grains.	grams.	grains.	mm.	per ct.	mm.	per ct.	mm.	per ct.
THOROUGHbred WOOLS—continued.													
$\frac{1}{8}$ Merino, $\frac{1}{8}$ Shropshire, $\frac{3}{8}$ Southdown—Continued.													
788	Ewes	12.625	194.86	2.375	36.66	5.45	84.12	18.00	80.00	2.50	12.50	8.15	40.75
789	do	7.00	104.04	1.75	27.01	4.06	63.66	10.75	53.75	5.50	27.50	8.45	42.25
790	do	9.00	138.91	3.25	50.16	5.79	80.37	11.25	56.25	3.00	15.03	7.59	37.95
791	do	11.00	169.78	3.00	46.304	6.16	95.077	11.75	58.75	1.875	0.375	7.45	37.25
792	do	13.00	200.65	3.50	54.02	6.41	98.94	10.00	50.00	3.00	15.00	7.35	36.75
793	do	17.00	262.39	3.375	52.09	6.56	101.25	10.00	50.00	1.25	8.25	7.47	37.35
794	do	8.625	133.125	3.00	46.304	4.73	73.01	9.25	46.25	4.00	20.00	6.65	33.25
795	do	8.50	131.19	3.00	46.304	4.82	74.39	10.25	51.25	2.50	12.50	5.03	29.65
796	do	7.75	119.62	1.50	23.15	3.89	60.04	11.00	55.00	6.00	30.00	8.94	44.70
797	do	9.50	146.63	3.00	46.304	5.53	85.35	12.00	60.00	3.25	16.25	8.52	42.65
	Average for ewes	10.40	160.50	2.73	42.91	5.34	82.42	11.23	56.15	3.288	10.44	7.65	38.25
	Average for class	12.068	186.19	2.73	42.14	5.70	87.08	10.73	53.85	3.54	17.70	7.585	37.92
$\frac{1}{2}$ Merino, $\frac{1}{4}$ Shropshire, $\frac{1}{4}$ Southdown.													
434	Ram	17.25	260.25	2.125	32.80	8.17	126.10	9.00	45.00	2.00	10.00	6.58	32.90
433	Ewes	19.25	297.12	4.00	61.74	10.25	158.20	9.00	45.00	1.00	5.00	5.66	25.30
798	do	16.25	250.81	3.00	46.30	7.21	111.28	10.25	51.25	4.75	23.75	8.20	41.00
799	do	15.60	239.24	2.125	32.80	7.80	120.30	10.125	50.625	2.875	14.875	7.83	39.15
800	do	16.25	250.81	3.375	52.09	8.09	124.87	10.50	52.50	4.25	21.25	8.15	40.75
801	do	10.00	164.85	2.00	30.87	4.48	68.84	10.75	53.75	6.00	30.00	8.66	43.30
802	do	28.75	443.74	4.00	61.74	12.30	169.85	11.00	55.00	5.75	28.75	8.75	43.75
803	do	29.25	451.46	5.00	77.17	13.66	210.84	8.875	44.375	3.00	15.00	6.63	33.15
804	do	15.00	231.02	3.375	52.09	8.08	124.71	0.875	49.375	1.03	5.00	6.51	32.65
805	do	14.25	219.94	3.00	46.30	8.17	126.00	9.00	45.00	1.50	7.50	5.99	29.95
806	do	16.50	254.87	3.00	46.30	7.52	118.07	10.50	52.50	4.00	20.00	6.99	34.95
807	do	13.50	208.37	3.00	46.30	7.94	113.29	9.25	41.25	1.75	8.75	6.36	31.80
	Average for ewes	17.68	272.88	3.28	50.32	8.63	133.20	9.92	49.60	3.26	16.30	7.19	35.95
	Average for class	17.47	269.64	2.69	41.42	8.398	120.62	9.46	47.30	2.63	13.15	6.89	34.45
$\frac{1}{2}$ Merino, $\frac{1}{4}$ Shropshire, $\frac{1}{4}$ Southdown.													
843	Rams	23.00	354.99	2.75	42.44	10.70	165.15	10.75	53.75	3.00	15.00	7.82	39.10
849	do	12.50	192.98	3.25	50.16	7.62	117.61	11.75	58.75	8.50	32.50	9.17	45.85
850	do	14.75	228.65	3.50	54.02	7.62	112.05	10.75	53.75	3.50	17.50	8.10	40.50
851	do	20.75	320.267	4.625	74.859	9.99	154.19	9.00	45.00	5.25	26.25	7.53	37.65
852	do	17.00	262.38	3.25	50.16	6.77	104.49	12.00	60.00	5.00	25.00	8.46	42.30
853	do	9.75	150.48	2.00	30.88	5.26	81.18	10.00	50.00	3.75	18.75	7.97	39.85
854	do	12.00	185.22	3.25	50.16	8.78	140.04	10.00	50.00	4.00	20.00	8.15	40.75
855	do	26.00	401.80	5.75	88.74	10.70	165.15	10.25	51.25	2.25	11.25	7.18	35.90
856	do	18.50	285.28	4.00	61.74	9.55	147.40	10.00	50.00	3.00	15.00	7.89	39.45
857	do	22.25	343.42	4.00	61.74	11.68	172.25	9.25	46.25	4.75	23.75	7.02	35.10
	Average for rams	17.65	272.42	3.638	56.15	8.63	133.20	10.375	51.875	4.10	20.50	7.93	39.65
808	Ewes	13.00	200.65	1.625	25.08	7.06	108.97	10.125	50.625	2.25	11.25	6.50	32.50
809	do	9.00	138.91	3.00	40.30	5.72	88.29	10.25	51.25	2.60	12.50	7.78	38.90
810	do	26.25	405.16	2.75	42.44	11.39	176.80	10.125	50.625	2.25	11.25	7.18	35.80
811	do	8.25	127.34	2.00	30.87	3.95	60.97	10.75	53.75	5.50	27.60	8.45	42.25
812	do	9.00	138.91	2.50	38.57	4.22	65.13	10.50	52.50	3.75	18.75	8.31	41.55
813	do	13.25	204.50	2.375	36.66	6.85	105.73	9.50	47.60	3.25	16.25	7.07	35.35
814	do	12.625	195.34	1.625	25.55	5.39	83.18	10.75	53.75	1.125	5.625	7.80	39.30
815	do	6.50	100.32	2.75	42.44	4.36	67.29	9.00	45.00	4.25	21.25	7.18	39.90
816	do	11.625	170.43	2.875	36.65	5.62	86.74	10.00	50.00	2.25	11.25	6.64	33.20
817	do	16.25	258.12	3.25	50.362	6.12	93.66	10.25	51.25	3.00	15.00	6.97	34.85
	Average for ewes	12.56	194.17	2.43	37.51	6.07	93.69	10.125	50.625	3.013	15.065	7.392	36.96
	Average for class	15.112	233.25	3.031	46.78	7.85	113.44	10.25	51.25	3.56	17.80	7.66	38.30



TABLE XIII.—General results of all measurements of crossbred wools produced by Baechtel Brothers, Willits, Mendocino County, California.

Catalogue No. of samples.		Fineness.		Stain.		Stretch.		$\frac{D^2 \times S}{D^3}$	18100 $\frac{S}{D^3} = R$	$Z = \frac{R}{Y}$
		Centimillimeters.	Thousandths of inch.	Grains.	Grains.	Millimeters.	Per cent.			
THOROUGHbred WOOLS.										
439	Yearling Merino ram	2.05	0.8070	6.31	97.39	7.15	35.75	grams. 24.924	27,166	70,045
437	4-year-old Merino ram	2.016	0.7936	4.53	69.92	7.11	35.55	17.825	25,405	71,459
438	4-year-old Merino ewe	2.051	0.8074	4.00	61.74	4.29	21.45	15.249	17,260	80,447
CROSSbred WOOLS.										
$\frac{1}{2}$ Merino, $\frac{1}{2}$ Southdown.										
426	Ram, yearling	2.033	0.8003	6.15	94.92	6.12	30.60	23.808	26,048	88,067
425	Ewe, yearling	1.897	0.7468	4.95	70.40	7.28	36.40	22.149	25,069	68,873
	Average for class	1.965	0.7736	5.55	80.66	6.70	33.50	22.599	26,032	77,700
$\frac{1}{2}$ Merino, $\frac{1}{2}$ Southdown.										
427	Ram	1.95	0.7677	5.85	90.29	5.61	28.05	24.015	27,865	90,341
423	Ewe	1.827	0.7192	6.00	102.80	5.75	28.75	31.924	36,127	125,600
429	Ewe	2.01	0.7913	5.47	84.43	6.15	30.75	21.693	24,515	79,724
	Average for ewes	1.919	0.7555	6.07	93.69	5.95	29.75	26.988	29,852	100,343
	Average for class	1.929	0.7594	5.958	91.06	6.78	28.90	25.618	28,997	100,335
$\frac{1}{2}$ Merino, $\frac{1}{2}$ Southdown.										
430	Rams	2.13	0.8385	5.70	57.98	6.70	33.60	20.192	22,740	67,306
828	do	1.659	0.6535	2.40	37.04	7.80	39.45	13.935	15,767	39,094
829	do	1.659	0.6531	4.05	71.77	8.03	40.15	27.032	30,593	76,190
830	do	1.709	0.6738	5.55	85.66	9.42	47.10	30.404	34,497	73,057
831	do	1.715	0.6751	4.63	71.40	8.52	42.60	25.773	28,593	66,908
832	do	1.897	0.7468	4.20	65.75	7.54	37.70	18.940	21,437	50,861
833	do	1.018	0.7551	5.55	85.66	6.90	34.50	24.130	27,322	70,194
834	do	2.042	0.8043	6.90	98.14	7.99	39.95	23.924	27,073	67,767
836	do	1.869	0.7358	7.10	109.50	7.09	35.45	34.054	38,599	103,711
837	do	2.063	0.7885	4.78	73.77	6.32	31.60	19.068	21,081	68,137
838	do	2.061	0.8192	7.00	108.04	6.38	31.90	25.863	29,268	91,751
839	do	1.740	0.7031	4.70	72.54	8.33	41.65	23.569	26,070	64,050
840	do	2.175	0.8562	8.50	131.10	8.08	40.40	28.749	32,539	80,544
841	do	1.801	0.7090	4.66	71.98	7.34	36.70	22.987	25,428	69,666
842	do	1.954	0.7692	4.66	71.98	7.08	35.40	19.828	21,104	62,441
843	do	1.87	0.7362	5.13	79.179	8.07	40.35	23.472	25,950	61,334
844	do	1.755	0.6990	3.77	58.188	8.63	43.15	19.692	20,022	46,400
845	do	1.908	0.7311	5.26	81.186	8.03	40.15	24.298	27,401	68,247
846	do	1.929	0.7591	5.40	89.35	9.42	47.10	23.219	26,281	55,797
847	do	1.841	0.7248	4.82	74.394	9.025	45.125	22.680	26,060	56,879
847	do	1.841	0.7041	4.70	72.542	9.33	46.65	20.425	23,590	48,438
	Average for rams	1.888	0.7433	5.199	80.24	7.913	39.585	23.337	26,417	60,777
431	Ewes	2.378	0.9362	7.00	117.30	6.41	32.05	21.594	24,334	75,925
868	do	2.012	0.7921	5.22	80.57	7.13	35.65	20.636	23,361	65,527
869	do	1.810	0.7051	3.93	60.66	9.16	45.60	19.194	21,629	47,325
870	do	1.973	0.7767	5.40	83.36	8.30	41.80	22.145	25,069	50,975
871	do	1.607	0.6320	8.43	52.79	7.68	38.40	21.189	23,983	62,450
872	do	1.923	0.7570	6.52	77.99	8.85	44.25	23.884	27,028	61,079
873	do	1.821	0.7169	4.11	69.31	8.18	40.90	19.830	22,444	54,875
874	do	2.040	0.8031	4.59	70.85	8.19	40.95	17.647	19,976	48,783
875	do	1.836	0.7228	3.93	60.508	8.53	42.90	19.089	21,114	49,218
876	do	1.854	0.7299	4.50	70.99	8.68	43.40	20.040	23,711	54,635
877	do	2.112	0.8314	6.70	104.34	8.45	42.25	24.248	27,446	64,962
877	do	2.107	0.8295	4.75	63.61	9.40	47.30	17.119	19,376	40,965
	Average for ewes	1.957	0.7704	4.07	76.71	8.26	41.80	20.783	23,442	50,892
	Average for class	1.923	0.7670	5.088	78.53	8.087	40.435	22.014	24,011	61,600
$\frac{1}{2}$ Merino, $\frac{1}{2}$ Southdown.										
432	Ewes	2.412	0.9496	6.44	99.40	5.68	28.40	17.726	20,067	70,658
858	do	2.582	1.0165	10.45	161.29	6.63	48.15	25.070	28,374	58,829
859	do	2.532	0.9963	7.13	110.05	8.33	42.60	17.794	20,143	47,263
860	do	2.607	0.7901	4.75	104.18	8.08	40.40	18.868	21,337	52,864
861	do	2.407	0.8470	7.41	114.87	9.09	48.45	20.464	23,167	47,735
862	do	2.44	0.9690	6.39	92.63	7.997	39.99	17.173	24,465	61,177
863	do	2.687	1.0578	10.55	162.64	6.73	48.65	23.379	26,468	54,302
864	do	2.373	0.9342	6.41	98.91	6.73	33.65	18.213	20,610	61,240
865	do	1.997	0.7507	5.26	81.18	8.43	42.40	21.233	27,424	64,678
866	do	2.48	0.9763	8.57	132.27	8.22	41.10	22.295	25,229	59,951
867	do	2.593	0.9694	10.32	159.29	7.36	36.90	26.969	31,082	84,685
	Average for ewes	2.394	0.9425	7.61	117.47	8.192	40.960	21.245	24,051	58,718
THOROUGHbred WOOL.										
436	Shropshire ram	3.60	1.4015	17.05	277.05	6.83	31.90	21.10	23,938	59,606



TABLE XIII.—General results of all measurements of crossbred wools, &c.—Continued.

Catalogue No. of samples.		Finess.		Strain.		Stretch.		$\frac{D^2 \times S}{D_2}$	18109 $\frac{S}{D_2} = R$	$E = \frac{R}{P}$	
		Centimilimeters.	Thon-sandths of inch.	Grains.	Grams.	Milli-meters.	Per cent.				
CROSSBRED WOOLS.											
$\frac{2}{3}$ Merino, $\frac{1}{3}$ Shropshire, $\frac{1}{3}$ Southdown.											
818	Rams	1.005	0.7490	5.315	82.034	7.60	38.00	grams.	23.370	26.462	69,036
819	do	2.018	0.7844	5.78	89.21	7.40	37.45		27.709	31.363	83,745
820	do	2.117	0.8334	6.03	93.068	7.55	37.75		21.527	24.368	64,550
821	do	2.627	1.0342	9.23	142.46	6.29	31.00		21.309	24,219	78,131
822	do	2.425	0.9547	6.08	97.84	6.92	34.50		16.543	18,716	54,168
823	do	2.241	0.8322	5.51	85.04	8.31	41.55		17.554	19,863	47,806
824	do	2.064	0.8125	5.81	89.673	8.82	44.19		21.821	24,606	56,000
825	do	2.098	0.8259	5.73	88.43	6.775	33.875		20.829	24,707	72,928
826	do	1.943	0.7649	4.99	77.018	8.09	40.45		21.148	23,998	59,378
827	do	1.953	0.7688	6.05	93.38	7.44	37.29		25.379	28,725	77,218
Average for rams		2.139	0.8421	6.053	93.43	7.52	37.60		21.186	23,960	63,724
788	Ewes	2.241	0.8822	5.45	84.12	8.15	40.75		17.363	19,648	48,216
789	do	2.147	0.8452	4.06	63.68	8.45	42.25		14.420	16,320	38,540
790	do	2.28	0.8976	5.79	80.37	7.59	37.95		17.821	20,183	54,258
791	do	2.13	0.8385	6.16	95.077	7.45	37.25		21.724	24,563	65,994
792	do	2.170	0.8506	6.41	98.94	7.35	36.75		21.060	24,515	66,708
793	do	2.07	0.8149	0.56	101.25	7.47	37.35		19.457	22,538	60,343
794	do	2.004	0.7889	4.73	73.91	6.65	33.25		18.845	21,384	64,104
795	do	2.091	0.8232	4.82	74.39	5.93	29.65		17.638	19,965	67,337
796	do	1.848	0.7275	3.89	69.01	8.94	44.70		18.225	20,667	46,235
797	do	2.07	0.8149	5.53	85.35	8.52	42.65		20.649	23,372	54,799
Average for ewes		2.106	0.8291	5.34	82.42	7.65	38.25		19.264	21,798	57,456
Average for class		2.122	0.8334	5.70	87.98	7.585	37.92		20.254	22,919	60,441
$\frac{2}{3}$ Merino, $\frac{1}{3}$ Shropshire, $\frac{1}{3}$ Southdown.											
434	Ram	2.40	0.9448	8.17	120.10	6.58	32.90		22.695	25,692	73,091
433	Ewes	2.901	1.1421	10.25	158.20	5.06	25.30		19.044	21,549	85,177
798	do	1.973	0.7767	7.21	111.28	8.20	41.00		29.695	33,547	81,840
799	do	2.268	0.8929	7.80	120.39	7.83	39.15		24.262	27,468	70,135
800	do	2.299	0.9169	8.09	124.87	8.15	40.75		25.644	29,019	72,872
801	do	2.092	0.8236	4.46	68.84	8.66	43.30		16.305	18,460	42,692
802	do	3.026	1.1913	12.30	189.85	8.75	43.75		13.433	15,200	34,740
803	do	2.810	1.1086	13.66	210.84	6.63	33.15		27.502	30,483	73,041
804	do	2.412	0.9498	8.08	124.71	6.51	32.85		22.222	25,149	70,557
805	do	2.412	0.9496	8.17	126.00	5.99	29.95		28.287	32,019	106,907
806	do	2.54	0.9099	7.52	116.07	6.99	34.95		18.784	21,255	60,817
Average for ewes		2.474	0.9740	8.754	135.085	7.277	36.885		22.884	25,895	71,162
Average for class		2.437	0.9594	8.462	130.592	6.928	34.640		22.797	25,804	74,405
$\frac{2}{3}$ Merino, $\frac{1}{3}$ Shropshire, $\frac{1}{3}$ Southdown.											
848	Rams	2.833	1.1153	10.70	165.15	7.82	39.10		21.335	24,153	61,772
849	do	2.253	0.8870	7.02	117.61	9.17	45.85		23.989	27,152	59,219
850	do	2.39	0.9409	7.26	112.05	8.10	40.50		20.336	23,021	56,842
851	do	2.52	0.9929	9.99	154.19	7.53	37.65		25.756	29,155	77,438
852	do	2.022	1.0322	6.77	104.49	8.46	42.30		15.756	17,837	42,168
853	do	2.205	0.9635	5.26	81.18	7.97	39.85		16.732	18,935	47,516
854	do	2.24	0.8818	6.76	140.04	8.15	40.75		21.556	24,402	59,882
855	do	3.117	1.2271	10.70	165.15	7.18	35.90		17.621	19,945	55,558
856	do	8.039	1.1964	9.99	147.40	7.89	39.45		16.545	18,731	47,481
857	do	2.766	1.0889	11.68	172.25	7.02	35.10		24.426	27,650	78,775
Average for rams		2.608	1.0267	8.63	133.20	7.93	39.65		20.301	22,976	57,946
868	Ewes	2.414	0.9593	7.06	108.97	6.59	32.50		19.385	21,946	67,526
869	do	1.956	0.7700	5.72	88.29	7.78	38.90		23.921	27,073	69,596
810	do	2.880	1.1373	11.39	176.80	7.18	35.80		22.864	45,873	72,271
811	do	1.832	0.7212	3.95	60.97	8.45	42.25		18.831	21,312	50,443
812	do	1.912	0.7527	4.22	65.13	8.31	41.55		18.469	20,995	50,312
813	do	2.05	0.8070	6.85	105.73	7.07	35.35		25.980	29,404	93,181
814	do	1.794	0.7602	5.39	83.18	7.86	39.30		26.796	30,333	77,182
815	do	2.020	0.7976	4.36	67.29	7.18	39.90		16.995	19,241	48,223
816	do	1.954	0.7692	5.62	86.74	6.64	33.20		23.551	26,654	80,283
817	do	2.264	0.8913	6.12	93.56	6.97	34.85		19.104	21,617	62,030
Average for ewes		2.100	0.8303	6.07	93.69	7.392	36.06		21.835	24,719	66,879
Average for class		2.358	0.9283	7.35	113.44	7.66	38.30		21.150	22,938	62,509



TABLE XIV.—General averages of all measurements and computations for each class of crossbred wools.

Class.	Number of samples tested.	Fineness.		Strain.		Stretch.		$\frac{D^2 \times S}{D^2}$	18100 $\frac{S}{D^2} = R$	$E = \frac{R}{F}$	
		Centimillimeters.	Thousandths of inch.	Grams.	Grains.	Millimeters.	Per cent.				
Thoroughbred wools, Merino.....	Ram, yearling.....	1	2.05	0.8070	0.31	07.30	7.15	35.75	34.924	27,186	76,045
	Ram, 4 years old.....	1	2.016	0.7936	4.53	62.92	7.11	35.55	17.825	25,405	71,459
	Ewe, 4 years old.....	1	2.051	0.8074	4.00	61.74	4.29	21.45	15.249	17,260	60,467
Crossbred wools, $\frac{1}{4}$ Merino, $\frac{3}{4}$ South-down.	Average for class.....	2	1.965	0.7736	5.55	84.00	6.70	33.60	22.999	26,032	77,706
Crossbred wools, $\frac{2}{3}$ Merino, $\frac{1}{3}$ South-down.	Average for ram.....	1	1.05	0.7677	5.85	90.29	5.61	28.05	34.615	27,865	99,341
	Average for ewes.....	2	1.919	0.7555	6.07	93.00	5.95	29.75	26.928	29,652	100,343
	Average for class.....	3	1.029	0.7594	5.058	91.01	5.78	28.90	25.018	28,997	100,335
Crossbred wools, $\frac{2}{3}$ Merino, $\frac{1}{3}$ South-down.	Average for rams.....	21	1.888	0.7433	5.190	80.24	7.913	39.565	23.337	26,417	66,777
	Average for ewes.....	12	1.957	0.7704	4.97	76.71	8.26	41.30	20.763	23,442	56,802
	Average for class.....	33	1.923	0.7570	5.088	78.53	8.087	40.435	22.014	24,011	61,600
Crossbred wools, $\frac{1}{2}$ Merino, $\frac{1}{2}$ South-down.	No rams.....	0									
	Average for ewes.....	11	2.304	0.9425	7.61	117.47	8.192	40.90	21.245	24,051	58,718
	Average for class.....	11	2.304	0.9425	7.61	117.47	8.192	40.90	21.245	24,051	58,718
Thoroughbred wool, Shropshire.....	Ram.....	1	3.60	1.4015	17.05	277.05	6.38	31.90	21.16	23,938	59,606
Crossbred wools, $\frac{2}{3}$ Merino, $\frac{1}{3}$ Shropshire, $\frac{1}{3}$ Southdown.	Average for rams.....	10	2.130	0.8421	6.053	93.43	7.52	37.60	21.160	23,960	63,724
	Average for ewes.....	10	2.100	0.8291	5.34	82.42	7.65	38.25	19.264	21,798	57,496
	Average for class.....	20	2.122	0.8354	5.70	87.98	7.585	37.92	20.251	22,919	60,441
Crossbred wools, $\frac{1}{2}$ Merino, $\frac{1}{2}$ Shropshire, $\frac{1}{2}$ Southdown.	Average for ram.....	1	2.40	0.9448	8.17	126.10	6.58	32.00	22.005	25,693	78,001
	Average for ewes.....	11	2.474	0.9740	8.754	135.085	7.277	36.385	22.884	25,895	71,162
	Average for class.....	12	2.437	0.9594	8.462	130.592	6.928	34.64	22.791	25,505	74,495
Crossbred wools, $\frac{1}{3}$ Merino, $\frac{2}{3}$ Shropshire, $\frac{1}{3}$ Southdown.	Average for rams.....	10	2.608	1.0267	8.63	133.20	7.93	39.65	20.301	22,976	57,946
	Average for ewes.....	10	2.100	0.8303	6.07	93.09	7.392	36.90	21.835	24,719	64,879
	Average for class.....	20	2.358	0.9283	7.35	113.44	7.66	38.30	21.150	22,938	62,500

CONCLUSIONS.

These tables, like those which precede them, would seem to require no explanation. We have endeavored to arrange the results in them, so that all who examine them may follow them to definite conclusions. As a result of our study we arrive at the following :

(1) The extremes of fineness vary from 1 centimillimeter,  $\frac{1}{32.5}$  inch, to 5 centimillimeters,  $\frac{1}{50.8}$  inch.

(2) There is an apparent variation in the diameter of the same fiber of from 15 to 20 per cent. of the entire diameter.

(3) There is a great irregularity in the numbers occurring above and below the average of fineness, while a predominance of tests below the average frequently occurs.

(4) We find in this series an exceptionally high extreme of stretch, reaching 85 per cent. the length tested, while the minimum falls as low as 10 per cent. and even 5 per cent. the length tested.

(5) In the averages for fineness for the several classes we find less variation than might be expected. Until the Merino blood falls as low as  $\frac{1}{2}$  no influence of cross upon the fineness is discernible. And in no case does the variation in the average of fineness appear greater than might occur in animals of pure blood until the Merino blood is reduced from  $\frac{2}{3}$  to  $\frac{1}{3}$ .

(6) With an increase of Shropshire blood there is a regular increase in the diameter of the fiber.

(7) As might be expected, a comparatively wide margin occurs in the figures for all qualities, but all as a rule are high.

(8) The average ultimate resistance will vary from 15,000 to as high as 45,000 pounds per square inch, and the modulus of elasticity from 35,000 to 125,000. If we compare the general averages as regard fineness, ultimate tensile resistance, and moduli of elasticity, the grades stand as follows :

	Fineness.	Ultimate resistance.	Modull of elasticity.
	Centimillimeters.	Lbs. per sq. in.	
Pure Merino.....	2.039	23,269	76,323
$\frac{1}{4}$ Merino, $\frac{3}{4}$ Southdown.....	1.965	26,032	77,706
$\frac{2}{3}$ Merino, $\frac{1}{3}$ Southdown.....	1.029	22,997	100,335
$\frac{2}{3}$ Merino, $\frac{1}{3}$ Southdown.....	1.023	24,911	61,600
$\frac{1}{2}$ Merino, $\frac{1}{2}$ Southdown.....	2.304	24,051	58,718
Shropshire.....	3.60	23,938	59,606
$\frac{2}{3}$ Merino, $\frac{1}{3}$ Shropshire, $\frac{1}{3}$ Southdown.....	2.122	22,919	60,441
$\frac{1}{2}$ Merino, $\frac{1}{2}$ Shropshire, $\frac{1}{2}$ Southdown.....	2.437	29,774	74,495
$\frac{1}{3}$ Merino, $\frac{2}{3}$ Shropshire, $\frac{1}{3}$ Southdown.....	2.358	22,938	62,500



(9) If we compare this table with that of Messrs. Baechtel, we find that the highest value, as represented in the ultimate strength (modulus of elasticity), corresponds with the highest net money return per head per annum.

(10) The variations here noted are no greater than might occur from individual to individual.

(11) For the production of medium wools the grade animals here described will yield as good a product as animals of pure blood.

(12) These results, taken in connection with the similarity of structure of the fibers in the several breeds shown elsewhere, indicate the possibility of profitable and valuable results in the crosses between the Merino and Down breeds.

(13) If we arrange the moduli of elasticity in order from highest to lowest, we find that the grade wools stand in the following order :

$\frac{3}{8}$ Merino, $\frac{1}{8}$ Southdown .....	100.335
$\frac{1}{2}$ Merino, $\frac{1}{8}$ Southdown .....	77.706
$\frac{3}{8}$ Merino, $\frac{1}{4}$ Shropshire, $\frac{1}{8}$ Southdown .....	74.495
$\frac{2}{3}$ Merino, $\frac{1}{3}$ Shropshire, $\frac{1}{3}$ Southdown .....	62.500
$\frac{2}{3}$ Merino, $\frac{1}{3}$ Southdown .....	61.600
$\frac{1}{2}$ Merino, $\frac{1}{8}$ Shropshire, $\frac{3}{8}$ Southdown .....	60.441
$\frac{1}{2}$ Merino, $\frac{1}{4}$ Southdown .....	58.718

(14) If we arrange the fineness in order from the lowest average diameter to the highest, the several grades will assume the following order :

$\frac{3}{4}$ Merino, $\frac{1}{4}$ Southdown .....	1.923
$\frac{2}{3}$ Merino, $\frac{1}{3}$ Southdown .....	1.929
$\frac{1}{2}$ Merino, $\frac{1}{8}$ Southdown .....	1.965
$\frac{1}{2}$ Merino, $\frac{1}{8}$ Shropshire, $\frac{3}{8}$ Southdown .....	2.122
$\frac{2}{3}$ Merino, $\frac{1}{3}$ Shropshire, $\frac{2}{3}$ Southdown .....	2.358
$\frac{1}{2}$ Merino, $\frac{1}{4}$ Southdown .....	2.394
$\frac{3}{8}$ Merino, $\frac{1}{8}$ Shropshire, $\frac{1}{2}$ Southdown .....	2.437

Other conclusions may doubtless be drawn from these figures. Our object has been simply to develop here the true value of the material represented, leaving to others the matter of the practical application of the results. But we believe they offer very much of encouragement to those especially interested in the combination of mutton production with the production of moderately fine wool. Here is simply a beginning of what should be done. The variations in the ultimate value of the fiber of Merino by the infusion of the coarser wool blood, and even in the fineness, is so slight as to appear almost insignificant. The first cross appears to have a marked influence upon the quality of the fiber, but the later crosses appear to produce very nearly an equilibrium in this respect.

With these facts before us, together with the facts set forth in the record table of increase of fleece, percentage of lambs, net return from flock, &c., furnished by Messrs. Baechtel Brothers, we repeat that the wool-grower who cares to add the production of good mutton to his industry must find much of value in the results. And we cannot help feeling impressed by the fact that the time is ripe for the extension of these experiments. Every farmer should keep a flock of sheep, and every farmer should thus lend a hand in the advancement of the production of cheap wool. Careful experiment in this line will cause no loss to either the experimenter or the agricultural world in general.



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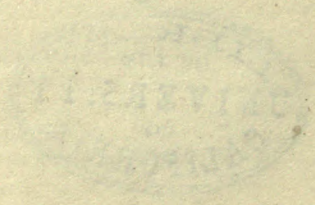
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