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REPORTS  
OF THE  
WORCESTER NORTH  
AGRICULTURAL SOCIETY,  
FOR 1854.

PUBLISHED BY ORDER OF THE TRUSTEES.

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FITCHBURG:  
PRINTED BY E. & J. F. D. GARFIELD,  
1854.

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## REPORTS OF COMMITTEES.

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### P L O W I N G .

COMMITTEE.—Ezra Kendall, *Sterling*,—James P. Putnam, *Fitchburg*,—Samuel P. Gibson, *Ashby*,—John Minot, *Westminster*,—Samuel M. Dole, *Fitchburg*.

The Plow holds the same relative position among the implements of the husbandman, that Charity does among the the cardinal virtues—it is the greatest of them all. Although it may not cover a multitude of failings, it does, if rightly managed, root up and enrich the earth. To the working-farmer, capital invested in its shares, and their operations, returns the best dividends; besides, while he directs its management, he is sure of no false or fraudulent issues, and if he doubles his shares he is not compelled to do it in order to save his old ones, but does it with the assurance of increasing his capital at the same time without an increase of his debt, or scarcely of an increase of cost in cultivation. Deep cultivation is the order of the day, but so managed as to pulverize and mix the soil, by a succession of plowings, as in the end, to make a deep rich soil, which will afford a supply of food as well as drink, as the roots of plants descend.

The field selected for the trial this day, was well adapted for a trial of skill and workmanship. The field was laid in lands, twelve rods long and twenty feet wide; and twelve teams having been entered according to the rules of the

Society, arranged themselves to proceed. And nobly, and in fine order, they started and continued to work until they had done. The average depth was about nine inches. Time in plowing about twenty-eight minutes. So well was the work done by all, that it was with great difficulty that the Committee came to any conclusion. But after discussing the matter, they come to the following conclusions:—

To Joel Page, of Fitchburg, we award the first premium of seven dollars. Cattle six years old; with a Michigan plow; time twenty-three minutes.

The second premium of six dollars, we award to Charles Flagg, of Sterling. Oxen six years old; Ruggles, Nourse & Mason's plow; time twenty-three minutes.

The third premium of five dollars, we award to Samuel Shattuck, of Fitchburg. Oxen six years old.

To Wm. W. Watson, of Princeton, we award the fourth premium of four dollars. Oxen four years old; Ruggles, Nourse & Mason's plow.

The fifth premium of three dollars, we award to Levi Downe, of Fitchburg. Cattle four years old; rather light Michigan plow.

The last, but not the least deserving, we award the sixth premium of two dollars, to Wm. S. Downe, of Fitchburg.

Had the rules of the Society allowed, we should have been compelled to give one of the first premiums to Josiah Sheldon, of Fitchburg, and those splendid cattle of his, but as he received the second premium last year, we thought justice forbid.

Mr. Rodney Fuller showed himself a workman, and his cattle under fine training, but his plow would not dig deep.

Mr. John Brooks, Jr., of Princeton, much to the regret of the Committee, did not enter his team soon enough to be permitted to compete for premiums, but had he complied, would have been a powerful competitor.

Mr. Joel Hayward, of Ashby, with his four beautiful four years old cattle, attracted much notice, and the Committee



hope the Society will grant him a gratuity, and that provision may in future be made for such teams.

All which is submitted,

EZRA KENDALL, *Chairman.*

## WORKING OXEN.

COMMITTEE.—J. T. Everett, *Princeton*,—Isaac B. Woodward, *Fitchburg*,—Norman Stone, *Fitchburg*,—Joseph Davis, *Baldwinville*,—Moses Sawyer, 2d, *Sterling*.

The Committee on Working Oxen and three years old Steers, present the following Report:—

There were entered for trial, fifteen pairs of oxen, and four pairs of three years old steers.

After witnessing a fair and honorable competition of the strength and work of the oxen, and of the skill and management of their drivers, the Committee with perfect unanimity, award the following premiums, viz:—

To Nathan B. Reed of Princeton, for his oxen, weighing 2,250 pounds, the first premium of	5 00
To Joel Page, of Fitchburg, the second premium, for his four years old oxen, weight 2,270 pounds,	4 00
To Daniel Lowe, of Fitchburg, for his oxen, weighing 2,943 pounds, the third premium of	3 00
To Samuel Shattuck, of Fitchburg, for his oxen, weighing 2,600 pounds, the fourth premium of	2 00

They also award the premiums on three years old steers, as follows:—

To Henry Boyles, of Princeton, the first premium on his steers, weighing 2,400 pounds,	4 00
To Isaac B. Woodward, of Fitchburg, on his steers, weighing 2,560 pounds, the second premium of	3 00
To Nathan B. Reed, of Princeton, for his very well matched, and thoroughly trained steers, weighing 2,050 pounds,	2 00

Mr. Benjamin Wyman, of Westminster, offered a very fine pair of three years old steers, which, but for want of more thorough training, would have taken the first premium. We recommend a gratuity to Mr. Wyman of two dollars.

There were two or three other teams that performed their labor remarkably well, and nearly as well as some of their more successful competitors.

Respectfully submitted by the Committee,

J. T. EVERETT, *Chairman.*

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## STEERS AND STEER CALVES.

COMMITTEE.—Giles H. Whitney, *Babtwincville*,—Ephraim Turner, *Phillipston*,—J. W. Foster, *Ashburnham*,—John Hayward, *Ashby*,—Solon Carter, *Leominster*.

The Committee on Working Oxen having witnessed the trial of the three years old steers, and reported premiums for the same, the Committee on Steers and Steer Calves report the premiums only on two years old steers, yearling steers, and steer calves.

They report, that the first premium of three dollars, should be paid to Josiah Page, of Westminster, for the best pair of two years old steers, weight 2,252 lbs., one-half Durham, and one-half native.

That the second premium of two dollars and fifty cents, be paid to Samuel C. Nash, of Princeton, for his pair of steers, one-half Durham, and one-half native, weighing 2,125 lbs.

That the third premium of two dollars, should be paid to Samuel Osgood, of Sterling, for his two years old steers, native, and weighing 1,720 lbs.

They further report, that the first premium of three dollars, should be paid to W. W. Watson, of Princeton, for the best yearling steers, Durham, weighing 1,540 lbs.

That the second premium of two dollars, should be paid to

Samuel Shattuck, of Fitchburg, for the next best pair of yearling steers, one-fourth Durham, and three-fourths native, and weighing 1,400 lbs.

And the third premium of one dollar, to Nathan B. Reed, for the next best pair of yearling steers, one-half Devon, and one-half Native, weighing 1,230 lbs.

That the first premium of four dollars, should be paid to C. Nicholson, of Leominster, for his twin calves.

And that the third premium of two dollars, should be paid to Josiah Page, of Westminster, for the next best calves.

There being but two competitors, the second and fourth premiums have not been assigned to any one.

All which is respectfully submitted,

GILES H. WHITNEY, *Chairman.*

## B E E F C A T T L E .

COMMITTEE.—Nathaniel Wood, *Fitchburg*.—K. Harward, *Fitchburg*.—Samuel Osgood, *Sterling*.—Daniel Miles, *Westminster*.

The Committee on Beef Cattle make the following Report:

They find entered for premium the following cattle, viz.

Levi Hayward, of Gardner, two fat oxen, four years old, weighing respectively, 2,012 lbs, and 1,852 lbs.

Wm. W. Watson, of Princeton, two fat oxen, four years old, weighing respectively, 1,950 lbs., and 1,775 lbs.

Josiah Sheldon, of Fitchburg, two fat oxen, eight years old, weighing jointly, 4,070 lbs.

Joel Heyward, of Ashby, two fat oxen, four years old, weighing jointly, 2,540 lbs.

J. T. Everett, of Princeton, one gray fat cow, eleven years old, weighing 1,200 lbs. One red cow, nine years old.

Henry Boyles, of Princeton, one fat cow, ten years old, weighing 1,251 lbs.

No fat three years old steers offered for premium.

J. T. Everett, also, offered two other cows for exhibition only, which presented a fine appearance.

Ephraim Buss, of Leominster, presented for exhibition, a pair of superior fat oxen, weighing 3,970 lbs.

Premiums awarded as follows :—

To William W. Watson, of Princeton, for best fat ox, four years old, first premium,	7 00
To said William W. Watson, for second best fat ox, four years old, second premium,	4 00
To Levi Hayward, of Gardner, for third best fat ox, four years old, third premium,	3 00
To Henry Boyles, of Princeton, for best fat cow, first premium,	6 00
To J. T. Everett, of Princeton, for second best fat cow, second premium,	3 00

The Committee are of opinion that no other cows offered are entitled to premium.

Josiah Sheldon's oxen presented a very fine appearance, but by the rules of the Society, they could not receive any premium except the first, because the same oxen received the second premium last year.

All which is respectfully submitted,

NATHANIEL WOOD, *Chairman.*

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## H O R S E S.

COMMITTEE.—E. Torrey, S. F. Atherton, Caleb W. Jaquith, *Fitchburg*,  
— Levi Burr, *Ashby*,— Franklin Wyman, *Westminster*.

The Committee on Horses found a vacancy in their number by the absence of Silas Hale, of Royalston, but this was at once filled by the appointment of Caleb W. Jaquith, of Fitchburg, when the Committee proceeded to the discharge of their duties, and respectfully submit the following Report :

They were at the outset agreeably disappointed by the unprecedented number of horses and colts entered for premi-

um; the whole number being fifty. As may well be supposed, the labor of carefully examining so great a number of animals—some of them very fine ones—and of justly and truly discriminating between them, was no light task. They have endeavored, however, so to perform their duties; and have awarded for the best stud horse, to Levi Smith, of Ashby, the sum of ten dollars.

Another stud horse, offered by Messrs. J. & O. Merriam, of Westminster, was a very beautiful and graceful animal, and the Committee cannot but regret that there is not another premium to bestow upon him.

For the best draught horse, to Charles W. Wilder, of Fitchburg, six dollars.

For the best breeding mare, to B. F. Wood, of Westminster, five dollars.

For the best three years old colt, to J. A. Richardson, of Templeton, three dollars.

For the second best three years old colt, to Charles Nicholson, of Leominster, two dollars.

Another very fine three years old colt was offered by Joel Hayward, of Ashby, between which, and the last named, the Committee found it a very nice question to decide.

For the best two years old colt, to Daniel Works, of Fitchburg, three dollars.

For the second best two years old colt, to Francis Buttrick, of Fitchburg, two dollars.

Mr. Joel Foskett, of Westminster, also, offered a very fine colt of this age, which will probably make a very valuable animal.

For the best yearling colt, to Joel Hayward, of Ashby, two dollars.

For the second best, to Benjamin Wyman, of Westminster, one dollar.

For the best colt, three to six months old, to George Kendall, of Sterling, two dollars.

For the second best, to Ohio Whitney, of Ashburnham, one dollar.

Messrs. Whitney & Russell, of Ashburnham, and Mr. John Brooks, Jr., of Princeton, each offered a beautiful pair of matched horses, which were fine and well broken animals, but by the terms and rules of the Society, no premiums could be awarded to them.

For the Committee,

E. TORREY, *Chairman.*

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## NEW MILCH COWS.

COMMITTEE.—George Kendall, *Westminster*,—Howard Gates, *Ashby*,—Charles Flagg, *Sterling*,—Handel Winship, *Westminster*.

The Committee on New Milch Cows report that there were three entries of new milch cows for premiums, viz.:

One by William W. Watson, of Princeton, eight years old, Native and Holderness breed, being driven one mile each day to pasture, and giving the first ten days of June thirty-five lbs. of milk per day, yielding two lbs. of butter, making fourteen lbs. per week; also the first ten days of September, giving twenty-four lbs. of milk per day. We, therefore, award him the first premium of five dollars.

Another cow was entered by Nathan B. Reed, of Princeton, seven years old, breed one-fourth Ayrshire and Holderness, calved in April, was kept in a dry pasture until the 20th of August, when she was fed with corn-fodder once a day, giving the first seven days of June, 33 2-7 lbs. of milk per day, yielding 12 1-2 lbs. of butter per week. Also the first seven days of September, giving 13 1-2 lbs. of milk, yielding 9 9-16 lbs. of butter per week; and we award him the second premium of four dollars.

Another cow was entered by Joseph P. Reed, of Princeton, six years old, one-half Ayrshire breed, has had corn-fodder once a day since the 20th of August, giving, the first seven days of June, 32 5-28 lbs. of milk per day, yielding 11 9-16 lbs. of butter. The first seven days of September she gave

28 3-4 lbs. of milk, yielding 9 lbs. of butter; and we award him the third premium of three dollars.

All of which is respectfully submitted,

GEORGE KENDALL, *Chairman.*

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## TWO AND THREE YEARS OLD HEIFERS.

COMMITTEE.--Alvah Crocker, *Fitchburg*,--Otis Bemis, *Royalston*,--W. W. Watson, *Princeton*,--Marshall White, *Westminster*,--Levi Kendall, *Fitchburg*.

The Committee on two and three years old Heifers have attended to their duty, and report as follows :

For best three years old heifer, having had a calf, the first premium of \$1,00, to Henry Boyles, of Princeton. She gave the first week in June, 215 lbs. milk, making seven lbs. of butter. The first week in September, 132 lbs. milk, which made 4 lbs. 10 oz. of butter. Her keeping was two quarts cob-meal from time of calving till 15th of May, and a small quantity of Southern corn-stalks once a day to August 19th, in addition to ordinary pasture feed.

For second best three years old heifer, having had a calf, second premium of \$3,00, to Joseph Upton, Jr., of Fitchburg. Aggregate weight of her milk first week in June, 138 1-4 lbs. Milk in September 98 lbs. Her feed was very ordinary pasture, and cow-corn; her breed Native, and weighing 810 lbs.

For third best three years old heifer, having had a calf, the third premium of \$2,00, to Nathan B. Reed, of Princeton. This heifer gave in June 151 3-4 lbs. of milk, yielding 9 1-2 lbs. butter, the first seven days thereof; and the first seven days of September, 110 lbs. of milk, yielding 8 1-2 lbs. of butter; and is of the Holderness breed.

For best two years old heifer, having had a calf, the first premium of \$1,00, to Henry Boyles, of Princeton. This heifer produced 213 lbs. of milk the first week in August, yielding 6 lbs. 6 oz. of butter. First week in September,

150 lbs. milk, yielding 5 lbs. of butter. Her feed was hay during the winter; common pasture in summer, with few corn-stalks since 19th of August.

For the second best two years old heifer, having had a calf, the second premium of \$3,00. As also the third best two years old heifer, having had a calf, the third premium of \$2,00. No awards have been made as no one of the various competitors for those premiums had certified to your Committee the weight of milk, as provided by the rules of the Society, to entitle them to said premiums, though on the ground from 10 A. M. to 1 P. M.

For best two years old heifer, not having had calf, the first premium of \$3,00, to Abel F. Adams, of Fitchburg. Breed Durham and Native; weight 780 lbs.

For second best two years old heifer, not having had a calf, \$2,00, to Samuel Haws, of Fitchburg. Breed, Native; weight 800 lbs.

In lieu of the five dollars not awarded, owing to want of compliance with the rules of the Society, the Committee ask leave to recommend gratuities to the amount of seven dollars, as follows, to wit:

To Hon. John Brooks, of Princeton, for four two years old heifers, two of which were twins, seven-eighths Ayrshire and one-eighth Native; <i>universally admired</i> , one dollar each,	4 00
To Joseph P. Reed, of Princeton, for two, two years old North Devon heifers, of same age, of beautiful form and color, one dollar each,	2 00
To Henry Brewer, of Fitchburg, for his three years old heifer, having had a calf, one dollar,	1 00

Your Committee regret that Mr. Brewer did not comply with with the requisitions of the Society, giving the weight of milk in June and September, but feel constrained thus to notice an animal, which otherwise would probably have been entitled to the first premium in the gift of the Society.

Fifty-two heifers have been entered for premiums, of two



and three years old, many of which were of a high grade of excellence, affording gratifying evidence of increasing interest in this important branch of husbandry, so well adapted to our rock-bound hills. While the growing and rapid prosperity of the Worcester North Agricultural Society warrants us to expect hereafter still larger premiums to reward, may we hope and trust, still higher attainments in stock-growing.

Submitted by

A. CROCKER, *Chairman.*

### YEARLING HEIFERS AND HEIFER CALVES.

COMMITTEE.—Amasa Norcross, *Fitchburg*,—Benjamin Wyman, *Westminster*,—Solomon P. Burpee, *Princeton*,—Daniel Works, *Fitchburg*,—John M. Stevenson, *Sterling*.

Your Committee on Yearling Heifers and Heifer Calves, have attended to the duties assigned them, and beg leave to report as follows :

For the best yearling heifer, \$3,00, to George Chandler, Shirley.

For the second best yearling heifer, \$2,00 to Hosea Green, Ashburnham.

For the second best heifer calf, more than four months old, \$2,50, to Levi Smith, Ashby.

For the second best, \$2,00; to Levi Kendall, Fitchburg.

For the third best, \$1,50, to Abel F. Adams, Fitchburg.

Fourth best, to Nathan Danforth, Princeton, \$1,00.

The Committee deem it proper to state that in making the above awards they were obliged to do injustice to their own convictions of the merits of the enteries that were made; and that the limited character of the premiums offered, prevented awards to the following persons :

Joel Page, of Fitchburg; George M. Gregory, of Princeton,

and Abel F. Adams, of Fitchburg, each of whom have entered yearling heifers of rare beauty and size.

All which is submitted,

AMASA NORCROSS, *Chairman.*

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## BULLS AND BULL CALVES.

COMMITTEE.—Leonard Burrage, *Leominster*,—Joel Hayward, *Ashby*,  
—Thomas Whitney, *Sherley*,—David Parker, *Gardner*.

The Committee on Bulls and Bull Calves, have attended to that duty, and submit the following Report:

The Committee examined twenty different animals put in for premium, and many of them very superior animals. Judging from the stock that came under their particular notice, they think that Worcester North will not suffer in comparison with other parts of the County.

After careful examination, they have awarded the premiums on the first class of bulls as follows, viz.:

To Rodney Fuller, of Fitchburg, the first premium of \$5,00, for his two years old bull, one-half Devon and Native.

The second premium of \$3,00, to Henry Boyles, of Princeton, for his two years old bull, one-half Devon, one-half Native.

The third premium of \$2,00, to Joseph Upton, Fitchburg; for his Native bull, three years old.

There were others of the same class worthy of premiums, if they had had them to bestow.

The second class of premiums on bulls over one year, and under two years, they award as follows:

To Sewall Richardson, of Princeton, the first premium of \$5,00; a part Devon, and a part Native, weight 812.

The second premium of \$3,00, to Stephen Stanton, of Ashby.

The third premium of \$2,00, to Solomon F. Towne, of

Westminster, for his bull nineteen months old, weighing 1000 lbs., three-fourths Durham, one-fourth native.

Third class of premiums they award as follows:

To Joel Page, of Fitchburg, the first premium of \$2,00.

The second premium, of \$2,00, to George Chandler, of Sherley, for his Alderney calf.

The third premium of \$1,00, to Nathan Danforth, of Princeton, for his Hereford calf, four months and fourteen days old.

The Committee also noticed a fine calf, Devon and Native, put in for exhibition by Daniel Works, of Fitchburg.

For the Committee,

LEONARD BURRAGE, *Chairman*.

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## S W I N E,

### EIGHT MONTHS OLD AND OVER.

COMMITTEE.—E. Foster Bailey, *Fitchburg*,—Luke Wellington, *Ashby*,—Harlow Skinner, *Princeton*,—Rufus Hastings, *Sterling*,—P. P. Gould, *Phillipston*.

After carefully inspecting and comparing the merits of that portion of the swine over which the jurisdiction of your Committee extended, we have decided to award the following premiums.

To William J. Clifford, for the best boar, over one year old,	4 00
To Joseph Pierce, for the best fat hog,	4 00
To do do for the second best fat hog,	3 00
To Moses Wood, for the third best fat hog,	2 00
To David Low, for the best breeding sow,	3 00
To Enoch Whitmore, Ashburnham, for the second best breeding sow,	2 00
To Warren C. Upton, for the third best breeding sow,	1 00

E. F. BAILEY, *Chairman*.

## S W I N E,

LESS THAN EIGHT MONTHS OLD.

COMMITTEE.—Charles H. Merriam, *Leominster*,—C. Marshall, *Fitchburg*,—Israel Everett, *Princeton*,—Timothy Brown, *Westminster*,—Gilman Jones, *Ashburnham*.

The Committee on Swine less than eight months old, have attended to their duties, and report the following award of premiums :

To Benjamin Safford, of Fitchburg, for the best fat pig, six mos. six days old, part Suffolk, weighing 336 lbs., the first premium,	3 00
To Henry Brewer, for second best, five mos. twenty-four days old, part Suffolk, second premium,	2 00
To Levi Kendall, of Fitchburg, for third best, five mos. old, part Suffolk, third premium,	1 00
To Natt Cowdin, of Fitchburg, for best weaned pigs, first premium,	2 00
To S. F. Atherton, of Fitchburg, for second best,	1 50
To J. Smith, for third best,	1 00

All of which is respectfully submitted by,

C. H. MERRIAM, *Acting Chairman*.

## S H E E P .

COMMITTEE.—C. H. B. Snow, *Fitchburg*,—Samuel R. Damon, *Ashby*,—Aaron Jones, *Royalston*,—George O. Skinner, *Princeton*,—Enoch Whitmore, *Ashburnham*.

The Committee on Sheep submit the following Report :

The whole number of entries was six. The prizes are awarded by the Committee as follows :

To Liberty Wellington, of Ashby, for best cosset sheep,	2 00
To Addison Hoar, of Ashburnham, for second best cosset sheep,	1 50

To Josiah Page, of Westminster, for third best cos-  
set sheep, 1 00  
All of which is respectfully submitted by  
C. H. B. SNOW, *Chairman.*

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## F O W L S.

COMMITTEE.—Charles W. Wilder, *Fitchburg*,—Amasa Bancroft, *Gardner*,—Joseph M. Stewart, *Princeton*,—Wm. W. Comee, *Fitchburg*,—Paul Gates, *Ashby*.

The Committee to whom was assigned the duty of awarding premiums on Fowls, have attended to that duty, and report as follows:

To Samuel Shattuck, of Fitchburg, for six best dung-  
hill fowls, Native breed, first premium, \$1 50  
To Edward P. Downe, of Fitchburg, for thirty-five  
second best dung-hill fowls, Black Spanish breed,  
second premium, 1 00  
To Joseph Smith, of Fitchburg, for seven third best  
dung-hill fowls, one-half Shaughai, one-half Na-  
tive, third premium, 50  
To Thomas E. Teel, of Winchendon, for six best  
turkeys, 1 50  
To Charles K. Sawyer, of Fitchburg, for fourteen  
second best turkeys, 1 00  
To Samuel Osgood, of Sterling, for eleven third best  
turkeys, 50  
To Reuben G. Chessmore, of Westminster, for four-  
teen best geese, 1 00  
To Simon Marshall, of Fitchburg, for six best ducks, 1 00  
All of which is respectfully submitted,

CHARLES W. WILDER, *Chairman.*

By D. H. MERRIAM.

## FRUIT.

There were 703 specimens of Apples.				
do	do	119	do	Pears.
do	do	65	do	Peaches.
do	do	42	do	Grapes.
do	do	32	do	Plums.
do	do	8	do	Quinces.
do	do	2	do	Tomatoes.
do	do	1	do	each of Cranberries, Nectarines, Currants, and Lemons.

The premiums, amounting to \$40,00, were distributed among sixty-seven persons, in 127 sums.

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## VEGETABLES.

COMMITTEE.—Moses G. Lyon, Abel Marshall, *Fitchburg*,—Joseph Foster, *Ashby*,—J. A. Marshall, Joel Page, *Fitchburg*.

MR. PRESIDENT, AND GENTLEMEN:—

The service required of your Committee, as understood by them, was simply to examine such vegetable productions as were offered to their notice, and award the bounty of the Society for them, in such manner as they might think most suitable and expedient. Your Committee may well express their gratification at the handsome display spread out for their consideration,—and, as no established premiums were offered by the Society for any of these productions, it seemed not so much necessary to institute a strict comparison of character and quality, as to reward whatever appeared meritorious in character, or new in its variety. In this view, many contributions claimed consideration, not only by the specimens offered, but by the fact that they were brought, some of them, from a distance without the stimulus of established premiums.

Your Committee have not thought it their duty, or the best method of promoting the objects of this Society, to encourage by their premiums the growth of merely mammoth specimens, especially since most vegetables of that description are really less desirable and less valuable for use than well grown specimens of medium size and of a vigorous and natural growth. It is well understood to be an easy matter to *force* the growth of vegetables as well as of plants, and we have felt it our duty to award the funds appropriated by the Society, for specimens of fair and smooth exterior and solid character, grown in the ordinary manner, and the results of judicious cultivation, rather than for merely large specimens, nothing being known of the manner of cultivation or of the quantity and quality of the whole crop compared with the expense of raising it.

Among other things deserving special remark, your Committee believe the exhibition of potatoes and squashes, which are perhaps, the most important of the products of the garden, to be remarkably good, whether we consider the variety or the quality of the specimens. We have rarely seen potatoes of better appearance,—and this too, notwithstanding the peculiarly unfavorable nature of the season for their production and growth.

We recommend to award the following premiums :

Walter Heywood, ten marrow squashes,	\$1 00
Lawrin Pratt, six do do	1 00
Jabez Fisher, four do do	75
Joshua T. Everett, of Princeton, four marrow and four butter squashes,	50
Benjamin Snow, Jr., ten marrow squashes,	50
Jonas A. Marshall, three crookneck squashes,	75
do do two acorn squashes,	25
Jesse Lyon, one large crookneck squash, raised in 1853,	25
Edward P. Downe, ten custard squashes,	50
Hosca Greene, marrow squashes.	25
Alvah Crocker, do do	25

Moses M. Gage, one pumpkin,	25
Alvah Crocker, pumpkins,	25
Walter Heyward, pumpkins,	25
Ivers Phillips, pumpkins,	25
R. Fuller, twelve citrons on one vine,	50
Hosea Greene, citrons,	25
F. F. Woodward, citrons,	25
Benj. Snow, Jr., five watermelons, and three musk- melons,	75
L. H. Bradford, watermelons,	25
Jonas A. Marshall, watermelons,	25
Jonas A. Marshall, potatoes, four varieties,	1 00
Amory Davidson, potatoes, four varieties,	75
J. S. Brown, potatoes, four varieties,	62
Norman Stone, potatoes, three varieties,	50
David Battles, potatoes,	37
L. Burrage Leomiuster, wild Mexican potatoes,	37
Daniel Works, potatoes, from the ball fourth year,	37
Jabez Fisher, early white potatoes,	37
Loriston Stockwell, potatoes,	25
Joel Haywood, Ashby, potatoes,	25
B. Safford, lady-finger potatoes,	25
L. Winship, Westminster, potatoes,	25
William Woodbury,	25
Thomas E. Daniels, black potatoes,	25
Lawrin Pratt, onions,	50
John Minot, Westminster, onions,	37
Jabez Fisher, beets,	25
David Battles, white pea beans,	25
Mrs. W. G. Wyman, Lima beans,	25
Nathaniel S. Boutelle, horticultural beans,	25
Moses Wood, tomatoes,	25
Mrs. W. G. Wyman, tomatoes,	25
Charles Flagg, Sterling, peppers,	37
Alvah Crocker, peppers,	25
Jonas A. Marshall, sweet peppers,	25



Mrs. T. Palmer, bouquet of flowers,	62
Mrs. H. F. Coggshall, bouquet of flowers,	50
Mrs. F. Perkins, bouquet of flowers,	50
Respectfully submitted,	

MOSES G. LYON, *Chairman.*

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## MECHANICAL & MANUFACTURED ARTICLES.

COMMITTEE.—Alfred Hitchcock, *Fitchburg*,—Charles Winchester, *Ashburnham*,—Levi Heywood, *Gardner*,—Salmon W. Putnam, *Fitchburg*,—Joel Merriam, Jr., *Westminster*,—Abel Simonds, *Fitchburg*,—S. W. A. Stevens, *Gardner*,—Walter Heywood, N. F. Ackley, *Fitchburg*.

In the examination of the articles in this department, the Committee were somewhat embarrassed by the tardiness of individuals in presenting their specimens for exhibition. Notwithstanding the pretty general disregard of the rule of the Society limiting the time when articles could be entered for premiums, the Committee were disposed to be lenient, and continued to make entries on their catalogue till a late hour on the morning of the exhibition.

The number and variety of articles, though highly respectable in character, and, compared with former years, somewhat large in quantity, yet in the opinion of the Committee, falls far short of what might have been anticipated from the decided predominance of the manufacturing interest in Worcester North.

The Nashua and Miller's Rives and their tributaries have, since the era of Railroads, yielded their latent powers and given a new impulse to manufactures and the mechanic arts. The towns of Ashburnham, Gardner, Winchendon, and others still further west in this County, owe much of their present thrift and prosperity, to the recent successful use of the heretofore unappropriated water power which these streams afford. New factories and shops have sprung into existence, and now

dot their valleys and river-sides like so many bee-hives. The capitalist receives in most cases, a satisfactory dividend for his investments, and the mechanic is richly repaid for his daily labor; and the enterprise and industry of both is abundantly manifest in the beautiful and useful productions of these establishments.

The town of Fitchburg is eminently a manufacturing town, and the Committee exceedingly regret that a more general exhibition of specimens of products of our factories and shops has not been made at these annual Fairs. By the United States census of 1850, it appears that the annual value of manufactured articles in the town of Fitchburg, was \$1,540,668. Since that period an increase of at least 30 per cent. has been made by means of new power, new mills, the enlargement of old ones, and the introduction of new branches of productive industry; so that the sum total of the value of manufactures in this town for the present year will exceed \$2,000,000. It may be proper here to state that three new mills are now nearly finished, one for hose, and two for paper, that are built with a capacity of manufacturing \$250,000 in value of goods annually. Within the limits of this town there are about eleven miles of available mill-stream—the Nashua and its branches. At the present time it is estimated that not more than one-half of the available power of these streams is appropriated. Notwithstanding this abundance of unappropriated water-power, steam-power is now being introduced in this village to considerable extent for manufacturing purposes. Of the single article of paper, *half a million* in value is annually made in this town. Of scythes it has been stated, and we believe the last census bears out the assertion, that this town produced in 1850 the *best* and the *most in value* of any town in the Union. This assertion would not hold true at the present time, as two large establishments have dropped scythe-making for the edge-tool business. Putnam's machinery, Kimball's & Simonds' scythes, Blackburn's cotton duck, Ackley's sheetings, and Hayward's

chairs are well known throughout the Union; and wherever known, find a ready sale, and are universally esteemed for excellence of quality and workmanship.

Our catalogue comprises a list of forty exhibitors in this department. Many of them were not members of the Society, and consequently could not be entered for premium. Some of the articles thus excluded from premium, received, very deservedly, the highest commendation from the Committee, and added not a little to the completeness and attractiveness of the show of manufactured goods. Among this class we would mention a quantity of patent and enamelled leather, dressed by Oakly Gardner, at Fitzwilliam, N. H. A. J. Spooner and S. D. Willis, exhibited fine specimens of furniture and upholstery. Warren Simonds, of Templeton, displayed a finely dressed calf-skin, weighing 11 3/4 pounds. Greenwood & Sargent, of Templeton, exhibited some strong and beautiful baskets, made from rattan piths, as dressed out by the American Rattan Company of this village.

Capt. Joseph Wood exhibited the floating-ball, or knuckle-washing machine. An article recently patented, which by its rapid sale bids fair to have its utility speedily tested.

Messrs. J. P. & J. Whitney, the celebrated musical instrument makers of this town, exhibited two of their instruments. It is but justice to these ingenious and skillful mechanics to say that their instruments, for elegance of finish, quality of touch, evenness and fineness of tone, are not surpassed by any manufactured in this country. They combine all the advantages of other instruments for performing rapid music; responding to the slightest touch of the player, and are rendered capable of the softest tones of the *Æolian* harp, and of being increased to great power. We trust all these enterprising mechanics will soon join our Society.

The Committee awarded premiums as follows:

To the Putnam Machine Company, for engine lathes, iron planing machine and engine regulator, &c., (all from original designs,) \$5,00. These machines were of the most

thorough and highly finished workmanship, and are only casual specimens of their work as prepared for the market.

To Alba C. Wright, for a beautiful twist-rifle, \$3,00. Every part of this rifle was made by Mr. Wright himself at his manufactory in this village. The Committee, besides making their award, could with truth say very much in praise of Mr. Wright's skill as a gunsmith. Good policy, however, prevents further eulogy, lest his fame should endanger the impressment of so valuable a mechanic to the service of the Emperor Nicholas in the present state of his martial necessities.

To S. G. Frost, for a perfect harness, \$2,00

To Z. P. Spaulding, for five specimens of copper work, \$2,00. Mr. Spaulding's pumps and boilers, and copper pipe were all of very superior workmanship.

To Palmer & Brown, for dentistry, \$2,00. This rich display of dental work was on exhibition, and won a diploma at the Crystal Palace in 1853. The teeth gums and plate were all manufactured at their dental establishment in this town. Rollstone furnishes the *feldspar*, and Fox Hill, the *silex* from which these beautiful teeth are manufactured. A new feature in this large and beautiful collection of dental work, is the use of platina for plate instead of gold. Platina being harder and equally indestructible with gold, has the advantage of fusing with the material for gums and thereby making *plate, gums* and *teeth*, one continuous and solid piece without seam, or joint, of course leaving no space for food or impurities to collect. This certainly seems to promise well, as no fear can be apprehended of platina as a safe and innocuous metal. If no new objection arises to the combination, it would seem that it must ere long take its place as one of the radical and very useful improvements in the dental art.

To Davis, Page & Co., Rollstone foundry, for beautiful specimens of large and small iron castings, \$2,00.

To Elliot Wood, for ox and horse shoes, \$1,50. We thank

this son of Vulcan for exhibiting these beautiful specimens of his craft. We could wish that the art of horse shoeing was *more studied*, and *better practised*. Whoever *shoes a horse well* has exercised more skill, and is deserving of more praise, and better pay, than was ever awarded to the *smith of Ephesus*, who made shrines for the goddess Diana.

To S. W. Ruggles, for a rotatory fan blower, patented August 8, 1854, \$1,00.

To J. C. Moulton, for his superior collection of life-like daguerreotypes, \$1,00.

To Miss L. N. Clapp, for best specimens of bonnets, \$1,00.

To Mrs. Thomas Trees, for second best bonnets, 50 cts.

Miss Clapp's bonnets elicited many compliments for the skill and good taste displayed in the arrangement of trimming.

Mrs. Trees' bonnets were evidently in the extreme of city fashion, but were *too much adorned*. We admire a beautiful bonnet, but cannot tolerate a profusion of "fuss and feathers." We do not exactly like the present fashion of making ladies' bonnets. They seem neither intended to protect the face from sun or rain; but have the misfortune of imparting to many faces an air of *defiance*. We dislike to see a lady's face exposed like a full-blown dahlia upon its naked and leafless stem. We would rather see it like the rose or the lily, partly concealed by its calyx and foliage.

To Mrs. James D. Cowdin, for reeds of very superior workmanship, \$1,00.

To Wm. H. Vose, for cassimeres, \$1,00.

To D. F. Lowe & Co., for paper hangings, \$1,00.

To Levi Burr, Ashby, for calf skins, \$1,00.

To J. B. Richardson, for boots and shoes, 50 cents.

To J. L. Tenney, fine and thick boots, 50 cents.

To F. W. Haskins, daguerreotypes,—very good—50 cts.

To Mrs. Ward Russell, Ashburnham, for twenty yards home-spun and wove flannel,—very fine and even—50 cents.

To S. W. Ruggles, self-acting cheese-press,—patented July 4th, 1854—50 cents.

To A. Partridge, for one pair very fine ladies' gaiters, 25 cts.

To Mrs. Geo. B. Hubbard, Ashby, rag carpet, 25 cents.

To Mrs. Rebecca Pratt, aged ninety years, for one pair feeting, 25 cents.

To Wm. Woodbury, for very well made wire sieves, 25 cts.

Mr. Charles Livermore brought into the fair, after the awards had been made, two pair of ladies' gaiters which were beautiful, and very thoroughly made, and were well deserving a premium.

Messrs. Crocker & Burbank exhibited some very fine samples of envelope paper from their manufactory. A premium would have been awarded, had it not been magnanimously declined.

The Committee had occasion to regret that a larger sum of money was not placed at their disposal, as in many cases the awards seemed very meager and disproportionate to the real merits of the articles exhibited. We wish, however, that the idea was more generally understood and acted upon by mechanics and manufacturers, that the *pecuniary award* at these fairs should be regarded as a *secondary* matter. Excellence of workmanship in every department of productive industry will lose nothing by such public exhibitions, but, on the contrary, will be more sure of having merit appreciated, and ultimately find an appropriate reward.

For the Committee,

ALFRED HITCHCOCK, *Chairman.*

FITCHBURG, SEPT. 13, 1854.

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## FANCY ARTICLES.

COMMITTEE.—J. J. Piper, in place of G. F. Bailey,—Mrs. Edwin Upton  
Mrs. Joseph Baldwin, of *Fitchburg*,—Mrs. Benjamin Wyman, *Westminster*,  
—Miss Lizzie Hill, *Fitchburg*,—Mrs. J. T. Everett, *Princeton*,—J. J. Har-  
don, L. Sprague, *Fitchburg*.

Your Committee on Fancy Articles, of domestic manufac-

ture, are happy to state that many of the contributions are superior in style and workmanship to those of any former exhibition of the Society; and they take great pleasure in expressing their admiration of the taste and industry of the fair contributors, whose magic fingers have produced such a variety of beautiful ornamental work. Many articles not noticed in this report would have received premiums had they been entered in season. In the division of the small sum allowed to this department, your Committee have departed somewhat from the custom which has generally been adopted at these exhibitions, of dividing their funds into insignificant gratuities to every contribution on the tables, believing that the only way to promote the objects of the exhibition, and encourage excellence, is to distinguish what is really meritorious, from the ordinary and inferior.

The absence of several members of the Committee at the examination of the contributions, imposed too much upon those who were present; but we have endeavored to discharge our duty impartially, and respectfully submit the following report of awards:

Miss Mary Briggs, of Fitchburg, for one knit bed-spread,	\$1 00
Mrs. A. W. Sidney, of Fitchburg, for one knit bed-spread,	75
Mrs. Lucy Winship, of Westminster, for one patch-work quilt,	50
Mrs. John Scism, of Fitchburg, for one transferred quilt,	75
Mrs. Dr. Snow, of Fitchburg, for one wrought skirt,	1 00
Miss Mary E. Crocker, of Fitchburg, for one wrought skirt,	75
Mrs. James Comee, of Fitchburg, for one embroidered flannel skirt,	75
Mrs. Dr. Snow, for one embroidered vest, and two cravats,	50
Miss Lizzie Hill, of Fitchburg, for one wrought frock,	1 00

Miss M. Pierce, of Fitchburg, for one embroidered cape, and pair of slippers,	1 00
Mrs. J. J. Hardon, of Fitchburg, for one wrought collar,	50
Mrs. T. R. Boutelle, of Fitchburg, for two wrought collars, and three handkerchiefs,	1 00
Mrs. S. S. Bennett, for one tufted worsted work ottoman, and lamp mat,	1 00
Miss Martha Gerry, for one piece of worsted work,	50
Miss Mary S. Haskell, for one worsted work chair,	1 00
Miss Susan H. Hayward, for one worsted work cricket,	50
Mrs. A. S. Dole, for two dressing cases,	50
Mrs. Betsey Merriam, (82 years old) for two pairs knit woolen hose,	50
Mrs. Anna P. Wyman (70 years old,) for wrought skirt and knit woolen hose,	75
Mrs. W. G. Wyman, for double palmleaf hat,	50
Mrs. L. Kendall, for woolen yarn,	50
Miss N. M. Haynes, for worsted work boquet,	50
Mrs. Amasa Norcross, for shell work,	75
Miss Mary A. Phillips, for pyramid of imitation shell work,	50
Miss M. D. Stone, for papier mache tea poy, and portfolio,	1 00
Miss A. M. Lawrence, for painted mosaic portfolio,	1 00
Miss Sarah E. Hayden, for pencil drawing,	1 00
Pencil drawing, by Mr. E. I. Garfield, and wrought leather frame, by Miss M. R. Garfield,	50
Miss M. D. Stone, for several crayon drawings, oil and water color paintings, and wrought leather frames,	75
Mrs. M. A. Beckwith, for bead work,	50
Miss M. D. Stone, for hair work,	50
Mrs. Charles Saunders, for Wax flowers,	50
Mrs. F. L. Tyler, for wax fruit,	50



Miss Fannie J. Tolman for crochet mats,	50
Miss Helen A. Adams, of Winchendon (eleven years old) for pair of worsted work ottoman covers,	75
Mrs. J. Sawyer, of Fitchburg, for manufactured silk, and cocoons,	50

Among the articles to which no premiums are awarded, but which showed much taste, skill and fine workmanship, were specimens of wrought collars, embroidered skirts, worsted and crochet work, knit and patch work quilts, shell work, papier mache work, with a great variety of articles put in simply for exhibition.

J. J. PIPER, *Chairman.*

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## CHEESE, BUTTER, BREAD, HONEY, & PICKLES.

COMMITTEE.—Thornton K. Ware, Mrs. L. H. Bradford, Mrs. E. Torrey, Mrs. Joseph Upton, Jr., Mrs. I. B. Woodward, Mrs. Levi Downe, *Fitchburg*,—Hobert Spencer, *Ashby*,—William H. Brown, *Princeton*,—Joseph Upton, Jr., *Fitchburg*.

Your Committee having examined the articles submitted to them for inspection, report that they award the prizes allotted to them for distribution, as follows :

### FOR BUTTER.

The 1st prize to Ezra Kendall,	\$3 00
“ 2d “ Nathan Caswell,	2 00
“ 3d “ George Miles,	1 50
“ 4th “ Ward Russell,	1 00

### WHEAT BREAD.

The 1st prize to Miss Mary T. Wood,	1 00
“ 2d “ Miss Emily J. Upton, 11 years old,	50

### RYE AND INDIAN BREAD.

The 1st prize to Miss S. M. Garfield,	1 00
“ 2d “ Miss Lizzie Howard,	50

## UNBOLTED WHEAT.

The 1st prize to Miss Jane A. Upton,	1 00
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## BOLTED RYE.

The 1st prize to Miss Eliza Kendall,	1 00
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## CHEESE.

The 1st prize to George Miles,	2 00
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“ 2d “ Daniel Works,	1 50
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## PICKLES.

The 1st prize to Mrs. John Prichard,	75
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“ 2d “ Mrs. Lydia Hawes,	50
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No honey was offered for examination by the Committee.

T. K. WARE, *Chairman.*

## R O O T C R O P S.

COMMITTEE.—James M. Woodbury, Daniel Messinger, Samuel Burnap  
N. S. Boutelle, *Fitchburg*.—Jonas Patch, *Ashby*.

The Committee on Root Crops have attended to the duty assigned them, and would respectfully submit the following Report:

Four entries of carrots were made to the Secretary of the Society—two pieces by Mr. Isaac B. Woodward, and two pieces by Dr. Jabez Fisher, both of Fitchburg.

The two pieces entered by Dr. Fisher weighed as follows, viz: From a square rod of piece No. 1, 279 3-8 lbs. From a square rod of piece No. 2, 293 3-8 lbs. This on piece No. 1 gives 5587 1-2 lbs. to the one-eighth, and 44700 lbs., or 812 8-11 bushels of 55 lbs., to the acre. On piece No. 2, 5867 1-2 to the one-eighth, and 46940 lbs., or 853 5-11 bushels to the acre. The Committee, therefore, unanimously award the first and second premiums, of \$3,00 and \$2,00, to Dr. Jabez Fisher, he having on each piece more than any other one entered.

The whole measure of carrot ground is one-half acre. Piece No. 1, (one-fourth acre) was manured with fifty bushels of ashes, and one cord of compost composed of woolen waste and salt ley. Piece No. 2, in addition to the cord of compost, received a dressing of 160 lbs. of improved super phosphate of lime, at the cost of \$4.00. Expense of cultivation \$18.00. The carrots were sown on 1st day of June, and the Committee are of the opinion that the loss from being dug so early was ten per cent. The application of super phosphate of lime on the one-fourth of an acre, was considered an experiment by Dr. Fisher, and the result shows a difference in its favor of 14 3-8 lbs. to the square rod; 287 1-2 lbs. to the one-eighth acre, and 2300 lbs. or 41 9-11 bushels to the acre. The carrots were sown thick and not thinned at all at weeding, and did not appear to have suffered from the drought, which was not the case with the other pieces visited. The soil is a sandy loam, resting on a sub-soil of a clayey nature. It was plowed ten inches deep.

Submitting the above facts, your Committee would inquire, does the cultivation of roots receive that attention which its importance demands? We believe that every one, who knows the value of good roots for stock, will answer in the negative. This being true, would it not be well for *every farmer* to look about him, and not let another seed-time pass without attending to this important branch of husbandry? Says the late Judge Buel: "This is the culture that has done more for agriculture and stock raising, than any thing else in England, and is second only to steam in its results in both Scotland and England." It may be urged that the root culture needs an additional outlay of expense which to the farmer of small means is not practicable. To this we do not assent, for the reason that experience contradicts it. Call, as a moderate estimate eighteen tons to the acre; these at \$12.00 per ton amounts to \$216.00; deduct \$75.00 for fitting the land, and this gives \$141.00 profit for a single acre at low estimates, besides leaving the soil in fine order for any crop

which we may desire; and establishing the principle that it is better to cultivate one acre *well* than three acres *poorly*.

J. M. WOODBURY, *Chairman*.

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ISAAC B. WOODWARD'S STATEMENT.

GENTLEMEN:—

The ground upon which my carrots were raised has been sown with carrots for four years past, and has been treated in nearly the same manner each year. It was manured this year with three and one-half loads of green manure which was spread and plowed in on the 25th of May. On the 27th it was plowed again with a side-hill plow as deep as possible. It was sown on the 31st, after being all raked over with a hand-rake. The rows were placed about fifteen inches apart. They were hoed three times during the summer. On the 10th of October, the amount dug from an average rod was 198 1-2 lbs., which would be 3970 lbs. on an eighth of an acre, and 31760 lbs. or 577 5-11 bushels of 55 lbs. to the acre. At that time the carrots had not attained their full size, it being nearly one month earlier than the time for harvesting them.

Expenses for raising one-eighth of an acre are as follows:

Three and one-half loads of manure,	\$3 50
Plowing twice,	1 00
Seed, raking, and sowing,	50
Hoing three times,	3 00
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Total,	\$8 00

The tops I think pay for harvesting,

ISAAC B. WOODWARD.

## G R A I N .

COMMITTEE.—Edwin Upton, *Fitchburg*,—Benjamin F. Wood, *Westminster*,—Moses M. Gage, Benjamin Safford, *Fitchburg*,—Antipas Maynard, *Ashburnham*.

The Committee on Grain, appointed by the Trustees of the Worcester North Agricultural Society, have attended to their duty, and submit the following Report :

INDIAN CORN.—This valuable crop, which makes the farmer's fields look so rich at harvest-time, lays such a solid foundation to his pork, contributes so essentially toward furnishing a supply of warm dough-nuts, and loads his table with such healthful and delicious puddings, has, we are happy to say, received increased attention the past season, in the opinion of the Committee, and although the season in some respects, has been rather unfavorable for large crops, still the Committee have had the pleasure, they think, of seeing one field of corn that would come full up to one hundred bushels per acre, raised by Lewis G. Tuttle, of *Fitchburg*, the weight of which in the ear to the square rod was, 55lbs.; the number of hills, 20 to the rod. This corn was the Tuscan white. Another field of the same kind of corn, raised by Joseph Upton, Jr., weighed 50 1-2 lbs. to the rod; number of hills 29. Another field, of Benjamin Wyman, of *Westminster*, of the common yellow corn, weighed 40 1-2 lbs. to the rod; number of hills 38; and one of the same kind of corn raised by Daniel Works, of *Fitchburg*, weighed 35 1-2 lbs. to the rod; number of hills 22 1-2. These four fields, the Committee were unanimous in awarding to the owners thereof the premiums of six, four, three, and two dollars, in the order in which they stand.

They also, had the pleasure of viewing some other very good fields of corn, and had the Society offered any more premiums the Committee would have considered Joel Hayward, of *Ashby*, and I. B. Woodward, of *Fitchburg*, (the weight of whose corn was 35 lbs. to the rod) entitled to them.

In looking over the several fields entered for premiums,

and comparing the weight of each, the Committee are satisfied that many of the farmers do not plant their corn near enough together, while others plant too near; had Mr. Joel Hayward, instead of planting 21 hills to the rod, planted 30, he would have taken a premium this year; and had Mr. Benjamin Wyman, instead of planting 38 hills to the rod, planted 30, he would have had as much as he now has, with less expense in cultivation.

Of the other kinds of grain for which premiums were offered, there were four in number, viz: Wheat, Rye, Barley, and Oats; and contrary to the expectation, and greatly to the disappointment of the Committee, but two lots were entered for premium,—one of rye, and one of oats. The specimen of rye exhibited was raised by Mr. Abel F. Adams, of Fitchburg, on land that had been used for a pasture for several years. In August 1853, the ground was broken up, and sowed on the 8th of September following, with two bushels of white rye, on 263 square rods, the ground being harrowed and rolled without disturbing the sod, or any manure being applied to the land. The amount harvested from the above was 49 bushels, weighing 58 lbs. to the bushel, equal to 29  $\frac{3}{4}$  bushels to the acre; the expense of which he reckons as follows, viz:

Expense.—Two bushels of seed,	\$2 25
Plowing, man and oxen three days,	6 00
Harrowing and rolling,	2 25
Cutting, binding and carting,	8 00
Threshing and cleaning,	6 50
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	\$25 00
Credit.—By 49 bushels of rye at \$1,25 per bushel,	\$61 25
Straw estimated at 2 $\frac{1}{4}$ tons at \$9,00,	20 25
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	\$81 50
Deduct expense,	25 00
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Profit of crop,	\$56 50

And your Committee award to him the first premium of three dollars.

The specimen of oats exhibited was raised by Mr. Charles Flagg, of Sterling, being 57 bushels per acre, and weighing 32 lbs. to the bushel. The whole expense of cultivation, including seed, he estimates at \$14,00; the 57 bushels of oats at 55 cents per bushel would amount to \$31,35; deduct the \$14,00 for cultivation, and you have left the sum of \$17,35, not including the value of straw, which he did not estimate, nor charging for manure applied the previous year. And your Committee award to him the first premium of three dollars.

All of which is respectfully submitted,

EDWIN UPTON, *Chairman.*

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#### LEWIS G. TUTTLE'S STATEMENT.

The ground on which I raised my best piece of corn was broke up in the fall, cross-plowed in the spring, turning under about twelve loads to the acre of green manure. Planted about the 25th of May; laid about two-thirds of a shovel-full of compost in each hill. Thirty pounds of guano and eight bushels of ashes were applied to the corn just after it came up. The corn was hoed three times. I estimate the labor of cultivating the crop at twenty-one days' work.

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#### JOSEPH UPTON'S STATEMENT.

The ground on which the acre of corn grew which you examined on my farm, was mowed last year, and plowed up in the fall nine or ten inches deep. Last spring it was cross-plowed about the same depth. Wishing to try an experiment with guano in raising corn, I manured that acre as follows: On two-thirds of it I spread twenty cart loads of manure from my barn cellar, and plowed in lightly; on the other one-third I sowed 200 lbs. of guano, and harrowed it in. I then planted

twenty-three hills in rows one way, with corn called the Tuscan white, putting a small handful of plaster and ashes in each hill. I hoed it but twice—the first time about the middle of June, the second about the first of July. The expense of cultivation is as follows, calling labor one dollar per day :

Plowing three times,	\$7 00
Harrowing and furrowing,	1 00
Twenty loads of manure,	20 00
Carting and spreading the same,	3 00
Two hundred pounds guano,	6 00
Plaster and ashes,	4 00
Hoeing and plowing twice,	6 00
	\$47 00

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#### BENJAMIN WYMAN'S STATEMENT.

The acre of land on which I raised my crop of Indian corn which I entered for premium the present year, is a gravelly soil, and was planted last year partly with corn, and partly with potatoes. It was manured by about twenty-five loads to the acre. The present year I spread thirty-five loads of winter manure, and dropped fifteen loads of compost manure in the hill to the acre, twenty-five bushels to the cart load. I plowed the land twice, and planted it on the 23d and 24th days of May. It was hoed but twice. The expense of cultivating the acre is as follows :

Fifty loads manure,	\$50 00
Carting and spreading the same,	10 00
Plowing twice, man and oxen,	4 00
Harrowing and furrowing,	1 00
Two days planting,	2 00
Hoeing and plowing twice,	6 00
	\$73 00
Deduct two-thirds for manure not exhausted,	33 66
	\$39 34



## DANIEL WORKS' STATEMENT.

To plowing one acre for corn,	\$1 50
furlowing out the same,	42
Spreading seven loads of manure,	1 00
Planting the same,	3 50
Hoing the same twice,	5 00
	<hr/>
	\$11 42

A part was planted the year before; the remainder, new ground. One-half was manured with compost; the other, winter manure.

## ISAAC B. WOODWARD'S STATEMENT.

The field of corn I present for your consideration was grown on one acre of land, and was treated in the following manner: The ground was broken up about the middle of Sept. 1853, with the Michigan Double Plow. On the 15th of May last the field was harrowed preparatory to cross-plowing, planting, &c. Twenty-six loads of manure, (loads for a pair of three years old steers,) were spread on and plowed in. The field was furrowed but one way, the rows being placed about 3 3-4 feet apart. Nine small loads of compost were laid out, putting a small shovelfull in each hill. Where no manure was thus laid out, a little guano and plaster of Paris was used. Finished planting the corn on the 27th of May. The corn was hoed three times, using the common cultivator each time, and going through once with the plow. The last hoeing was simply to kill the weeds. Stalks were cut on the 16th and 25th of September.

The cost of cultivation, &c., stands as follows:

Thirty-five loads of manure, (allowing one-half for the benefit of the land,	\$17 50
Harrowing,	1 00
Spreading the manure,	1 00
Plowing,	3 00

Furrowing and putting manure in hill,	3 00
Seed and planting,	2 00
Guano and plaster,	2 00
Cultivating and plowing the corn,	3 00
Hoeing three times,	7 25
Total,	<u>39 75</u>

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JOEL HAYWARD'S STATEMENT.

The corn which I offer for the Society's premium was raised on one acre of ground ; it being of a deep loam, and inclining towards the east. It was broken up in the fall of 1852. In the Spring of 1853 applied twenty-seven loads of compost. Planted to corn, and raised 78 bushels per acre. In the Spring of 1854, May 9th, plowed eight inches deep. May 14th and 15th spread thirteen loads of green manure and plowed ten inches deep. May 17th and 18th furrowed both ways three feet and three inches apart, put thirteen loads of compost in the hill, and planted with the Tuscan white corn, putting four and five kernels to the hill. Hoed twice.

Estimated expense :—

Plowing twice,	\$3 50
Twenty-six loads of manure,	26 00
Spreading the same,	2 00
Planting,	3 00
Plowing and Hoeing twice,	5 00
Total amount,	<u>\$39 50</u>

There was also raised on the same ground four bushels of beans worth \$8,00, and one load of pumpkins worth \$1,00.

## AGRICULTURAL EXPERIMENTS.

COMMITTEE.—Jabez Fisher, L. H. Bradford, Asher Green, John P. Sabin, Leonard Day.

The Committee on "Experiments connected with the pursuit of Agriculture," have attended to the duty assigned to them, and herewith present their Report.

The offer of a premium for experiments, the specific character of which is left to the experimenter, is a new feature in the proceedings of this Society; but we are inclined to hope and believe, that though the first, it may not be the last time at which it will occupy a position among the bounties annually distributed.

That individual who thoroughly and understandingly institutes or conducts an experiment, and gives to the public a careful and reliable report of it, adds something to the general stock of information; and more especially, if such experiment be an original one. The whole of our knowledge, not only agricultural, but that pertaining to every department of life, has been slowly and laboriously derived from the results of a continued succession of experiments; or, in one word, from experience. It is immaterial whether Nature, unaided, places the experiment before us, or whether she merely suggests. If we are but able to grasp the whole in such a manner as to learn the lesson which it is capable of teaching, we can then communicate it to the world as so much experience or knowledge.

While very few persons are able to originate an experiment of any importance, almost any one can carry it through when full directions are given for the purpose. Many however, perform anything of the kind in such a careless manner that their results are worth little or nothing when obtained. This arises from the fact that such persons are not in the habit of making observations upon any subject with the care that is requisite for success in cases of this kind. Every agricultural operation, the results of which are to be

recorded for the benefit of others, should be carried on with all the precision and exactness which characterizes the chemist in his operations in the laboratory.

Every complete experiment in the cultivation of crops should be performed comparatively, in order to make it of any use. Because one farmer raises a superior field of grain, or other product, under the use of some special manure, it does not necessarily follow that the manure is to account for that superiority. It may have been that differences in soil, locality, season, cultivation, or some other influence, has contributed to bring about this result.

Not only should the experimenter use every precaution in conducting his labors, but he should confine himself to the strict letter of truth in making up his record, and he should be as willing to give the public the statement of an unsuccessful experiment as where the result is of the opposite character. Says Von Thaer, "Science would have made much greater progress if the false shame with which agriculturists conceal every unsuccessful experiment, and the exaggerated manner in which they often relate all those in which they have succeeded, had not retarded its progress."

Your Committee regret that there have been but three entries made for their consideration; but they are disposed to think that another season will witness an increase in the number of experimenters, and, as a consequence, an increase in the interest and value of a report.

The first entry was that of the chairman of this Committee, relating to his farm buildings, a statement concerning which accompanies this report. The subject of this experiment is of a character that should interest every one who contemplates building, either now or in the future. If the work is permanent and durable,—and we see no reason to question it if due care is exercised according to the suggestions of that statement,—it is certainly a very important matter. There are very few farms in this region of our country which would not afford the principal materials required, merely for the

picking up and carting, sufficient to construct all the ordinary buildings desirable. And when the house or barn is completed it is not a perishable wooden structure, requiring frequent repainting, but it appears to be of such a nature as to equal brick or stone in its durability. The Committee would award for this experiment the sum of \$15,00.

The second entry was made by Joseph Upton, Jr., from whose statement we learn that in raising corn 200 lbs. of guano were about equal in effect to 10 ox cart loads of compost manure. The kind of soil is not stated. The result would have been more exact if a rod of the corn from each portion had been weighed and compared. So far as one experiment goes, and this is a very good one, it should induce among our farmers a more extended use of guano—not, perhaps, to supersede the use of ordinary barn yard manures, but in addition to them. Our own observations would seem to indicate that money expended for guano, or Mapes' improved super phosphate of lime, is more judiciously and profitably used than when paid for stable manures at anything like their ordinary prices.

We award to Mr. Upton for this experiment \$5,00, and recommend that he should treat the whole field alike next season, and report upon the comparative crops of the two portions; for it is possible that in the long run, guano will not sustain the reputation which it acquires during the first season.

The last entry was made by Calvin M. Woodward, a minor, whose experiment in raising potatoes was very satisfactorily conducted. The only thing lacking, as indicated in his statement, is the want of information relative to the comparative cost of the different manures, which is really an important item. So far as we can judge, however, the most expensive manure proved the most profitable one by far.

The Committee award to C. M. Woodward the special premium of \$4,00 offered by the Society.

JABEZ FISHER, *Chairman.*

## JABEZ FISHER'S STATEMENT.

I submit for the consideration of the "Committee on Experiments connected with the pursuit of Agriculture," my farm buildings, with reference mainly to the materials of which they are constructed.

I do not pretend to anything like originality in this experiment, but merely claim to have demonstrated to whomsoever will take the pains to examine the work, the feasibility of the plan as first published to the world by O. S. Fowler, in a work entitled "Homes for All," &c.

In some of the practical details I have differed somewhat from the plans as laid down by the author of that work, but in the main leading features, we are agreed. I propose, however, to offer some general considerations such as have been suggested by my experience, and at the same time point out certain difficulties which might occur to the embarrassment of the builder, and which would tend to destroy the confidence of the public in the whole plan.

Instead of the ordinary quality of shell-lime recommended, I would use in all cases where it could be obtained, the best of stone lime, as being the more profitable article. After slaking this lime in the manner proposed, instead of adding the stones and gravel together, I should prefer, unless the stones were all quite small, to add the gravel alone, in the proportion of eight or ten parts to one of unslaked lime. The gravel ought to be coarse and sharp, free from fine sand or anything of the character of loam. After being thoroughly mixed, I shovel a layer of this mortar into the mould in which the wall is to be formed, some two or three inches deep. Stones of any shape or size, limited only by the thickness of the wall, are then bedded firmly into the mortar in such a manner that the stones may occupy all the space possible, with only just enough of the mortar to bind the whole firmly together and render it solid. A second layer of the mortar is then put in as before, followed by more stones, and this process is repeated until the mould is filled.

By this mode of proceeding, the stones form rather more than half of the bulk of the wall, so that one part of unslaked lime will build from 16 to 20 parts of the work, and one cask of it weighing about 300 lbs., will be sufficient to construct from 80 to 100 cubic feet.

This proportion of lime is, I am aware, larger than that recommended; but, although perhaps the lesser proportion would, after the building should be finished, answer as good a purpose, yet it renders the walls less stable in the process of construction, and permits a greater liability to the occurrence of accidents.

One peculiarity in this mode of doing the work consists in placing each stone into the wall by hand, rather than by mixing them up with the bulk of the mortar, and throwing the whole into the mould with a shovel. There is but little gained in the saving of labor by the latter plan, while there is a decided difference in the solidity of the whole work in favor of the former.

Another point to which I would call attention, is that in reference to the thickness of walls. If the ground is of a dry, gravelly nature, I would commence this wall upon the cellar bottom, making it from 16 to 20,—24, or even 30 inches thick, according to the size or height of the proposed building. Above the first floor, the thickness should be from 10 inches, (the least for a small two story house,) up to 18 or 24 inches thick, which latter would probably be sufficient for large stores or other heavy buildings of more than two stories. By being over confident in the strength of the wall, or two sparing in the amount of material used, we may lose the whole of our labor, as has unfortunately occurred in one or two instances during the past season, by the falling of the whole structure after the walls had been completed. This result should be the less excusable, from the fact that the difference in the cost between a substantial, and an imperfectly constructed wall, is, as will hereafter appear, but trifling, and bears no comparison with the difference of the risk in the two cases.

If the ground be of a wet or springy nature, the wall, as high as the top of the ground, or at least for a foot or two, might be formed in the ordinary manner, of large stone. A preferable mode, however, would be to under-drain the land so as to render the cellar bottom always dry. One material advantage possessed by the gravel wall for enclosing cellars, aside from the great saving in expense, is to be found in the perfect protection which it affords against the depredations of rats and other vermin, which are entirely excluded by it.

One other consideration to which I will allude, is that regarding the season of the year at which this work ought to be performed. The proper and best time is during the hot summer months. It should not only be begun during this time, but completed. My own work was deferred too long, and has suffered in consequence. The whole of the outside ought to be finished before the time of the fall rains, and especially the grading which is to turn the water from the building.

The last subject to which I will refer, is that which relates to the cost. This, of course, varies in different localities, according to the price of lime, the facilities afforded for obtaining gravel and stones, and the price of labor. I used the Pittsfield and South Adams lime, at an expense of about \$2,00 per cask. My gravel I was obliged to draw one-fourth of a mile. The stones were obtained in clearing the surface of the farm. The labor was all done by ordinary farm hands, no masons being employed, except in putting on the finishing coat. My estimate of cost does not exceed 5 cts. per cubic foot for the rough wall, and from 1 1-2 cts. upward, per superficial foot, for the covering, according to the kind of material and style of workmanship. This makes a saving of at least one-half as compared with wood, in the ordinary style of finishing a dwelling house; and it would not differ materially from the cost of barn walls well boarded and matched, or battened. As compared with brick, by which it is not surpassed in any respect, there is a saving in expense



of from two-thirds to three-fourths of the entire cost, so far as regards the walls.

As no mere statement of this kind will enable any one to judge fully of the character of the work, or to gain much information of the detail of its construction, I would invite the Committee, and all others interested, to visit and examine the buildings at any time when it may meet their collective or individual convenience. The location is a mile and a half northerly from the village in Fitchburg.

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STATEMENT OF JOSEPH UPTON, JR.

Wishing last spring to try an experiment to test the value of guano compared with compost manure from my barn cellar, I manured one acre of land in the following manner : On two-thirds of the acre I spread 20 common ox cart loads of compost manure from my barn cellar, and plowed it in. On the other one-third, I sowed 200 lbs. of guano, broadcast, and harrowed it in ; I then planted the whole acre with corn, putting a small handful of plaster and ashes into each hill, and cultivating the whole alike. On the 10th day of October the Committee on grain examined that acre, and, in their judgment, there was but very little difference in the corn on the two parts. They selected one square rod, the ears on which weighed 50 1-2 lbs. ; and they gave me the second premium. As near as I can calculate the expense per acre manured as the above two-thirds was, would be about \$40,00, and the cost per acre manured as the one-third was, with guano, about \$25,00, showing a difference of \$15,00 per acre in the expense in favor of the guano.

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CALVIN M. WOODWARD'S STATEMENT.

*To the " Committee on Experiments."*

GENTLEMEN,—I here present for your consideration the following statement of an experiment in raising potatoes :

The land upon which my potatoes were raised was broken up on the 5th of June last with a Michigan plow, plowing very deep. Young apple-trees had previously been placed in the piece, at the distance of 36 feet each way. The different squares between the trees,— which contained about 4 4-5 rods each — were planted on the 6th of June, and treated alike in every way, except in the application of different manures. Two squares were manured by a small handful of plaster in each hill at the time of planting. In the next one I put the same quantity of plaster, and in addition, one table spoonful of guano, placing the plaster under, and the guano over the seed. To the next square, only guano was used, being applied in the same way as with the plaster. On the fifth square no manure of any kind was used. The potatoes were hoed twice, and dug on the 17th and 18th of October.

The average amount dug from 4 4-5 rods, on which plaster alone was used, was 4 4-5 bushels, or at the rate of 160 bushels to the acre. The amount raised on the piece on which both plaster and guano were used, was 6 bushels, or 208 2-3 bushels to the acre. On the piece on which only guano was used, was 5 bushels, or 173 11-12 bushels to the acre; and on the piece on which no manure was used, was 3 3-4 bushels, or 130 10-13 bushels to the acre.

The potatoes were of the kind called "round reds." They were large and fair, though much larger where the manure was used than where it was not. The seed potatoes were very small ones, having been separated from the good potatoes last year.

The cost of the manures I am not prepared to give, but it could not have been very large. The difference in the products of the several pieces can be attributed to nothing except the manure, as the land was of about the same quality, being a light deep loam upon a clay sub-soil.

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WORCESTER NORTH AGRICULTURAL SOCIETY, FOR 1854.

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One hundred new members have been added to the Society since the annual meeting in February last.

The permanent fund has been increased during the same time by admission-fees of new members, and by contributions, about \$700,00, making the amount now, November 1854, about \$2500,00.









