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DESCRIPTIVE CATALOGUE  
OF  
HORTICULTURAL  
AND  
AGRICULTURAL  
IMPLEMENTS AND TOOLS,  
AND

FIELD AND GARDEN SEEDS;

WITH BRIEF DIRECTIONS FOR PLANTING, SOWING, AND CULTURE:  
AND RULES FOR THE APPLICATION OF GUANO, LIME,  
PLASTER, BONE-DUST, AND OTHER MANURES.

ALSO A CHOICE LIST OF

FRUIT TREES,

WITH DIRECTIONS FOR PLANTING OUT AND CULTURE.

WITH A DESCRIPTION OF

THE BEST BREEDS OF DOMESTIC ANIMALS,  
AND THE BEST TIME AND MANNER OF TRANSPORTING THEM SOUTH.

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NEW YORK:

A. B. ALLEN,

NEW YORK AGRICULTURAL WAREHOUSE, 157 WATER STREET, N. Y.

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1846.

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S. W. BENEDICT, Agricultural Printer,  
16 Spruce Street.

## DESCRIPTIVE CATALOGUE.

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### PLOWS.

THE plow is the most important implement the farmer uses, he cannot therefore be too particular in choosing it. They are now generally made of cast-iron, and these are not only much the cheapest, but the best. There are upward of *fifty* different kinds of plows kept in the New York Agricultural Warehouse, among which are the Root-Breaker, Prairie, Sward, Meadow, Stubble, Self-Sharpener, Centre-Draft, Corn, Cotton, Rice, Sugar-Cane, Double-Mouldboard, Trenching, Paring, Ditching, Side-Hill, Horizontal, and Subsoil Plows. They are of various sizes, from one horse to six, and are calculated for all kinds of soils. Some of these plows have the common, and some the Scotch clevis; others have the draft-rod fixtures; others again have a crane clevis attached so that the off ox can walk on the sward instead of a miry furrow, in turning up wet meadows; these plows can also be run close along side of a fence. The prices vary from \$2 to \$20, according to the size and finish.

The most celebrated plows are manufactured by Ruggles, Nourse & Mason, of Worcester, Massachusetts. These have taken more premiums where exhibited, and are more generally approved of, than any others used in America. Indeed they are considered by the best plowmen as unrivalled.

Mr. Nourse, of the above firm, was one of the earliest improvers of the plow in the United States, having commenced on them in the year 1827. They have the largest manufacturing establishment in the United States, some account of which it may be gratifying to the reader to see copied here, from the fourth volume of the *American Agriculturist*. It was written by that distinguished friend of the farmer, SOLON ROBINSON, Esq., of Indiana.

*A Visit to a Yankee Plow Factory.*—While in Boston, the other day, I called in to take a look at the extensive sales-rooms of Messrs. Ruggles, Nourse, and Mason, which are kept in the great hall of the Quincy Market House, where I found the greatest assortment I ever saw of plows, harrows, hoes, shovels, spades, forks, churns, cheese-presses, straw-cutters, and an immense variety of agricultural implements and seeds, of a quality worthy of all commendation. Not being personally acquainted with either of the partners of this concern, and feeling at a loss to know where to look over such a host of farming tools as I had never before seen together, I inquired for one of the proprietors, when a man in his shirt-sleeves, hard at work, was pointed out to me as Mr. Nourse. Not having the fear of meeting a man above his business, I approached and

made known my name to him, and instantly received the welcome of an old acquaintance, though known before only on paper.

After spending the day examining this museum of specimens of what mechanical skill has accomplished for the benefit of farmers, I accepted an invitation from Mr. Nourse to go out next day to Worcester, 44 miles by railroad, to see where and *how plows are made by machinery*. At Worcester I found the other two partners personally superintending their extensive establishment. They are all practical mechanics, as well as farmers, and Messrs. Ruggles and Nourse were born, if not plow-makers, of plow-making fathers, and early bred to the business. But in those days the plow was a very different implement from what it now is.

I found them occupying part of an immense four story building, using both water and steam power, and leasing out the surplus over their own wants to other mechanics, so that the whole building is full of active machinery. They have invented, patented, and have in operation, machinery for making the woodwork of plows so perfect and complete, that the timber is taken as it comes from the saw-mill in plank of suitable thickness; for instance, the beam of any particular numbered plow is first cut upon one machine into suitable length, upon another it is sawed the right crook, then it is planed upon a machine that planes a crooked stick as well as a straight one, and almost as rapid as thought. Upon another the double tenon is finished, as it were, by one stroke of their saws; on another the corners are taken off; and again, every hole is bored, as well as every part of the work done so exact to a gauge, that it requires scarcely any after fitting by hand, and will suit any casting of the size for which it is intended.

The handles and rounds also pass through appropriate machines, and when they finally come to the hands of the workman who fits them to the irons, he has a set of pattern-irons upon a form where every piece being exactly fitted by fixed gauges, is passed over to another to be attached to the irons to which they respectively belong—consequently every plow of the same number, no matter when made, *must be exactly like every other one*.

Such is the perfection of the machinery, that the fourteen hands employed in this branch can wood from 50 to 80 plows per day, working eleven hours. The castings are made in a separate building, and about twenty hands are employed in this branch. From the foundry the castings are brought to the grinding room and cleansed of sand by vitriol, and then polished upon grindstones. This is a tedious, though important process, as by it the whole of the exposed parts are made so smooth that the dirt is not likely to adhere, and the plow runs vastly easier.

The irons are all made of the best quality of hard tough iron, while the edge of the wing part and base of the land-side is made so hard, by being chilled in the mould, that the hardest steel will not cut it, and the point never wears blunt.

In the blacksmiths' shop I found eleven men at work, some by charcoal and others by Lehigh coal fires, blown by one machine which furnishes wind to each forge through pipes, and is let on or shut off by stop-cocks.

In the paint shop seven men are employed painting and varnishing, the latter being preferred by some because they can see the quality of the wood—though I must recommend paint as far preferable; and where all the work is done by upright men who put their names upon every article, buyers need have no fear that bad timber is covered up with paint and putty.

Never have I spent a day more to my satisfaction, than in looking over this establishment for the manufacture of that first and most important of all implements—the plow; and where I found near forty different kinds and sizes adapted to all kinds of land and work, including five sizes of side-hill plows, some of which are peculiarly adapted to that remarka-

bly light soil found upon the steep side hills of Mississippi. Messrs. Ruggles, Nourse, and Mason, are also making some excellent cast-iron road scrapers (ox-shovels), and several sizes and kinds of cultivators and harrows, among which I rank the Geddes Harrows as the very best.

They also make or have made almost every other kind of agricultural implement; though as you will readily perceive, the principal energies of their active minds are devoted to manufacturing the most perfect set of plows that human ingenuity is capable of producing. There are two other plow establishments in the vicinity which, in consequence of my feeble health, I was unable to visit.

I was rejoiced to see, that Messrs. Ruggles, Nourse, and Mason are so constantly crowded with orders for their plows, that they cannot accumulate a stock on hand, which certainly shows that the spirit of improvement is actively at work among my brother farmers, who I hope will be interested in this visit to a Yankee Plow Factory by their old friend,

SOLON ROBINSON.

### REMARKS ON PLOWING.

In order to perform good work in sod plowing, the clevis or caps at the end of the beam of the plow, or the draft-rod (if one is used instead of a clevis), must be adjusted and confued at that point, by moving it to the right or left if necessary, that will cause the plow to take the proper width of furrow slice, which should be wider or narrower according to the depth of furrow, or rather the thickness of the furrow slice required; for as the thickness is increased so also must be the width, in order to turn it easily and perfectly over, particularly when the furrow slices are required to be laid over level, and side by side. The proportion in ordinary sod should be 6 inches by 12 inches, or 7 inches by 13 inches, and so on. In determining the width of furrow slice, some regard must be had to the strength of the particular sod to be turned; for the same plow will turn over a wider slice in a strong, stiff sod, than when running in a more tender sod, which is more easily broken, or will cripple and double when raised to a perpendicular position by the mould-board, thus only doing the work called "cut and cover." When the slices are required to be laid inclining and to lap, each one upon the one preceding, the proportion of width should be less, say about 6 by 10 inches: the narrower the slice in proportion to the depth, the more steep will be the inclination of the slice as it is lapped on the preceding one.

As the power applied by the team forces the end of the beam (at which point the chain is attached) into a straight line of draught from the point at which the chain is attached to the breast of the team, to the point where the furrow slice offers the greatest resistance on the share or breast of the plow, much care should be had to place the ring in the proper place in the *clevis*, higher or lower; or if a draft-rod be used to raise or lower it, so as to produce naturally the straight line of draught, thereby causing a flat, direct, and easy movement of the plow, any irregular or struggling motion will be prevented; for if the end of the beam or rod be above the straight line, it will cause the heel of the plow to lift; if below, the point will incline upward and out of the ground.

The cutter, simple as it appears to be, is a very important appendage to the plow, as it cuts the furrow slice off from the main land with great ease and precision, requiring much less power of team than when the slice is broken or torn off (which is always done when a cutter is not used), and the precision adds much to the quality and beauty of the work, leaving the slices true and straight upon the edges. Much depends upon the cutter being properly formed and set so as to cut the furrow slice in the proper form and shape to turn and lie as required.

In order to turn the furrow slice completely over, and do what is termed

"flat work" or "planing," the cutter should pass down from the centre of the beam, about three inches forward and above the point of the plow, *standing out* in a line with the face of the land-side, so that by placing a straight edge along the face of the land-side, and forward past the cutter, it shall touch the point of the cutter; this position causes it to cut under the main land a little, and leave the furrow slice bevelling upon the edges, and when turned over the upper corner has receded a little from the main land, and admits the succeeding slice to drop in *flat* by its side.

To lay the furrow slices inclining, and lap them one upon the other, the cutter should pass down perpendicularly from the land side of the beam, in such a way as to cut the edges of the slice at right angles with the sides. Whether the cutter be attached at the side or through the beam, it can be bent so as to stand in either position.

Many advantages are realized in the use of the wheel upon the plow, particularly in turning sod; it serves as a gauge to regulate the depth, and can be raised or lowered to conform to any depth required. It admits of the plow being drawn by a proper length of chain, with which, and the aid of the wheel, the plow moves steadily and accurately along, being less affected by any irregular movement of the team, performing the work more uniformly and with greater ease, both for plowman and team. The plow is thus drawn at a convenient distance from the cattle.

It must be remembered, in plowing a stiff clay or loamy soil, especially in the fall of the year, that each furrow slice should be *lapped* on the preceding one at an angle of about 45 degrees. Thus laid, each furrow acts as a *drain*, and leaves the land light and dry. The sod of sandy or very light loamy soil should be turned *flat* over; as this kind of soil is already too porous, and the object is to retain the moisture, which a flat and compact surface will better do than an open and angular one.

Mr. Colman, in vol. i., part v., of his Report on European Agriculture, thus speaks of the plowing of his countrymen:—

"I have seen very good plowing in the United States, and perhaps in no department of agriculture has greater improvement taken place than in plowing, and in the construction of plows. Formerly, nothing could be more slovenly executed. *A straight line was not to be seen.* The land was not *half* turned over. The furrows were of such depth or thickness as they might *chance* to be; and the plow itself, when in action, resembled very much a live animal, with a sort of grasshopper motion, which one man at the stilts, and often *two men* riding upon the beam, were struggling to *keep down*, and, like police officers, to prevent its escape. A man was always required, likewise, with a hoe, to *assist* in turning the furrow-slice at the end of the share, or in the discouraging duty of raising again and turning over by main force, those furrow-slices which, notwithstanding they had been raised by the plow, like a reluctant boy pulled out of bed in the morning, with his eyes half open, insist upon getting back again as soon as his master's back is turned. I remember many a thump on the breast from the handles of the plow, and many a sudden jerk, which has thrown me upon the furrow, when I have been riding on the beam, and many a *splitting* of a beam, and many a *breaking* of a share; and have looked back with dismay upon a long furrow-slice obstinately turning back into the furrow, after I had supposed it securely laid over. Somewhat of this experience may have been necessary, to enable me to estimate properly the excellence of English plowing, when the implement seemed to move through the ground with as much quietness, directness, ease—I may almost add grace—as a boat through the water, with its sails spread to a favoring breeze, and an accomplished steersman at the helm. Some allowance is to be made for the condition of our fields, compared with the English fields. Here there are no stumps of trees, and no stones to impede or derange the plow. With us, alas! in many cases, the stumps and stones remain in resolute opposition, to dispute our entrance, and, like bad tenants, can be dispossessed only by main force.

Plows.	Name.	Plain, with common clevis.	Wheel or Cutter.	Wheel and Cutter.	Draft-rod, Wheel, & Cutter.
Medium Horse,	No. 15,	\$4 50			
Small do.,	" A 1,	3 25			
Medium do.,	" A 2,	4 50			
Seed or Stubble,	" A 3,	7 00	8 25	9 50	
Horse,	" 1 B,	6 00	7 25	8 50	
Stubble,	" 2 B,	7 50	8 75	10 00	
Light Sod,	Imp. Eagle, No. 1,	8 00	9 25	10 50	12 00
" "	" E. No. 0, Coul.,	9 00	10 25	11 50	13 00
Medium Sod,	" " 2,	8 50	9 75	11 00	12 50
" "	" " 2, Coul.,	10 00	11 25	12 50	14 00
Large "	" " 2,	10 00	11 50	13 00	14 50
Medium "	" Sward C,	9 00	10 50	12 00	13 50
Large "	" " B,	10 00	11 50	13 00	14 50
" "	" " D Coul.,	12 00	13 50	15 00	16 50
One Horse,	Eagle Self Sharpener,	5 00			
Light Sod,	" " "	6 50	7 75	9 00	11 50
Medium do.,	" " "	7 50	8 75	10 00	10 50
Large do.,	" " "	9 50	11 00	12 50	14 00
Heavy do.,	" " "	10 50	12 00	13 50	15 00
One Horse,	No. 0 Side Hill,	5 00			
Two do.,	" A 1, "	9 00	10 25	11 50	
Sod,	" A 2, "	10 00	11 50	13 00	14 50
Large Sod,	" A 3, "	12 00	13 50	15 00	
Heavy Road,	" A 4, "	14 00			
One Horse,	" 0 Sub Soil,	5 00	6 50	8 00	
Two do.,	" 1 " "	7 00	8 50	10 00	
Six Oxen,	" 2 " "		12 00	13 50	
Cotton,	Davis 6 inch,	3 25			
" "	" 7 " "	3 50			
Rice,	Trenching,	6 00			
Ridging,	No. 1 Double Mould,	3 50			
" "	" 2 " "	7 00			
			W. or D. Rod.	W. & D. Rod.	

*Prices.*—The prices affixed to these plows are those at which they are retailed with the common clevis. An extra point is always given with each plow. A liberal discount to dealers. *Extras.*—Under this head we class the cutter, lock-cutter, wheel, Scotch clevis, crane-clevis, &c. Land-sides, mould-boards, and points furnished on fair terms when wanted.

The following table shows the number of premiums awarded to competitors contending for the prizes before the several different Agricultural societies named, and the number awarded to those who used plows made by Ruggles, Nourse, and Mason.

Name of County.	Year.	No. of premi- ums offered.	No. of premi- ums awarded as above.
Essex County, Mass.,	1843	10 premiums,	9 premiums,
do. do. do.	1844	8 do. do.	6 do. do.
do. do. do.	1845	11 do. do.	11 do. do.
Middlesex do.	1843	8 do. do.	5 do. do.
do. do. do.	1844	8 do. do.	5 do. do.
do. do. do.	1845	8 do. do.	6 do. do.
Worcester do.	1840	9 do. do.	9 do. do.
do. do. do.	1841	9 do. do.	9 do. do.
do. do. do.	1842	9 do. do.	9 do. do.
do. do. do.	1843	12 do. do.	12 do. do.
do. do. do.	1844	11 do. do.	7 do. do.
do. do. do.	1845	10 do. do.	8 do. do.
Plymouth do.	1844	6 do. do.	6 do. do.
Bristol do.	1845	11 do. do.	7 do. do.
Hampden do.	1844	3 do. do.	2 do. do.
do. do. do.	1845	6 do. do.	3 do. do.
Berkshire do.	1845	8 do. do.	7 do. do.
Barnstable do.	1845	4 do. do.	3 do. do.
Hartford do. Conn.,	1845	3 do. do.	3 do. do.
Dutchess do. N. Y.,	1845	4 do. do.	2 do. do.
Windham do. Vt.,	1845	the highest,	the highest.

It is but just to remark that the competition was as great between the different plow-makers as between the plow-men; and, in most instances noted, the plows above named were strongly contested by Prouty and Mears' (so called) "Centre Draught," Martin's imitation of our "Eagle" plows, and that in every case the first premiums were awarded to plowmen, who performed their work with plows made by Ruggles, Nourse, and Mason.

At the most thorough trial and investigation of plows ever made in the United States, held in Essex County, Massachusetts, the Judging Committee, in speaking of the EAGLE PLOW, to which they unanimously awarded the highest premium, say:—As near as we can ascertain, this Plow combines all the good qualities manifested in either of the others, with some peculiar to itself; and further, "our attention was called to

the quality of the castings on the Plows of RUGGLES AND CO., their *Finish and Durability*. Their appearance is certainly more perfect than anything we have elsewhere seen. The process of *Chilling the Point*, the entire *Edge of the Share and Flange or Base of the Landside*, gives a permanence and durability to the work that renders it of a decidedly superior character," "and we think there is no hazard in saying, that the value of the parts thus made is more than doubled by the process."

#### DESCRIPTION OF PLOWS.

We will now give a short description of the different kinds of plows manufactured by Ruggles, Nourse, and Mason, and we wish our readers to be cautioned against IMITATIONS of their Eagle and other kinds; such are made of coarse, inferior materials, in this city and elsewhere, and offered at a lower rate than a good plow can be afforded. A. B. Allen, No. 187 Water Street, is *sole agent* for the GENUINE article in the city of New York, and any other person offering them for sale here is *deceiving* the public, and if they purchase of them they may depend upon getting spurious plows. Ruggles, Nourse, and Mason have their own *exclusive* patterns, constructed from their own designs, in perfecting which, they have spent much time and money. The woodwork is made by peculiar machinery, patented by themselves, each part being made *exactly alike*, and can be immediately supplied by another when broken or worn out. It is the same with the castings and wrought iron work, the metal of which is of the best quality. Another great merit in these plows is, that the castings are *ground smooth and polished*; so that they run easier and smoother for it in any ground, and can work in the finest and most adhesive soils without having the dirt stick to them and impede their progress. They are now rapidly taking the place of the polished wrought iron mould-board plows, so much used in the rich lands of Kentucky, Missouri, and other western States. These polished cast iron plows answer the same purpose as the polished wrought iron ones, and only cost about two thirds as much. To prevent rusting, the castings are colored with blue varnish, which gives them the appearance of blue-steel.

No. 14.—A light single one horse or mule plow, calculated to carry a wide furrow in a light or sandy soil, and well adapted to Northern and Southern culture. The mould-board is longer and more curved than other kinds of plows. The advantage of this is, it packs the furrows down tightly and smoothly as it moves along, and prevents any of the soil boiling over the mould board into the open furrow, and thus partly filling it up to the injury of the succeeding furrow slice. Price \$3 25.

No. 15.—A single horse or mule plow of same construction as above, but one size larger. Price \$4 50.

No. A 1.—A light one horse or mule plow calculated for a loamy, clayey, or gravelly soil. It is much used among cotton and corn, as well as for furrowing out or drilling. Price \$3 25.

No. A 2.—A single horse or mule plow, same construction as the above, but one size larger. Price \$4 50.

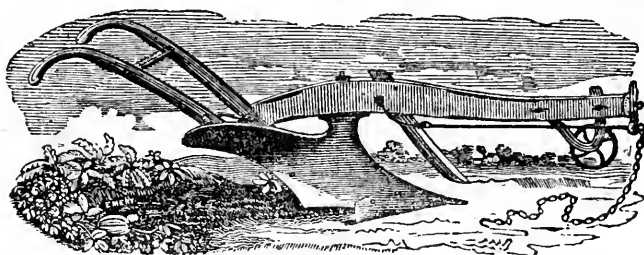
No. A 3.—A two horse sward or stubble plow. It is much used at the North for general plowing, and highly approved for breaking up the rice lands at the South. Price \$7 00.

No. 1 B.—A large one horse plow; is frequently used with two horses, and for the same purposes as No. A 3. Price \$6 00.

No. 2 B.—A small two horse plow, same as the above, but one size larger. It is much liked at the North and South. Price \$7 50.



EAGLE PLOW. (Fig. 1.)



EAGLE PLOW. (Fig. 2.)

The two cuts above represent the Eagle Plow. Fig. 1, shows the common clevis and method of attaching the wheel; fig. 2, shows the late improvements of a draft-rod, regulated by a simple dial, recently patented by Ruggles, Nourse, and Mason, attached to the end of the beam, by which the plowman can easily and quickly place the end of the rod in a position that will cause the plow to take any required width or depth of furrow, gauging it to a quarter of an inch, if necessary to be so exact. This draft-rod makes, in *reality*, a PERFECT CENTRE-DRAFT PLOW, of the *best possible* construction. Combining the dial-clevis and the draft-rod, it enables the plowman to run his plow close alongside of a fence or ditch, and turn up wet meadows or rice lands, with the off as well as the near horse treading on the *unbroken* ground, instead of the miry open furrow, so very fatiguing to him. The cutter is requisite at the North in plowing sod ground, as it cuts the sod clear through in a line with the plow, and thus enables the plowman to turn it over more easily, and also lay it smoother and nicer. By using a cutter the furrow can be laid flat over, or lapped at any angle required. The cutter can be raised or lowered at pleasure, to cut shallower or deeper, or it can be taken out of the beam entirely, which always should be done in plowing rocky, or very rough or rooty land. The cutter is very useful at the South in cutting up the crab, and other tough grasses, thus enabling the plowman to cover them up completely with the soil. The wheel is used to gauge the depth of the furrow; it also makes the plow run much easier and steadier; it can be raised or lowered at pleasure. In fig. 2 it is fastened on the outside, and can be raised so high as to admit the plow-share nearly up to the

beam, if desired. With all these improvements we now consider the Eagle plow unrivalled for general work. It runs with an extraordinary light draft, and does its work in admirable style.

**EAGLE No. 1.**—Is called at the North a *medium* sized sod or stubble plow, and is easily drawn by a pair of horses or oxen. At the South it would be considered a large size, and it would generally require three mules to turn a furrow with it six inches deep and eleven inches wide, although this has often been accomplished with a single pair. It cuts a furrow any required depth to seven inches, and ten to twelve inches wide. Price \$8 00.

**EAGLE No. 1, WITH LOCK-COULTER.**—Is the same size and shape, and performs the same work as Eagle No. 1 with *cutter*. Price, \$9 00.

*Explanation of Cutter, Coulter, and Lock-Coulter.*—And here it may be proper to explain the difference between a *cutter*, a *coulter*, and a *lock-coulter*, as the terms are loosely used by many as synonymous. The *cutter* in fig. 3, is of wrought iron, edged with steel of the best quality. It passes through a mortice in the centre of the beam, where it is fastened by an iron clamp, and reaches nearly down to the point of the share. It can be raised or lowered at pleasure, or be taken out of the beam entirely. It is also clasped on the side of the beam when required.



Fig. 3.

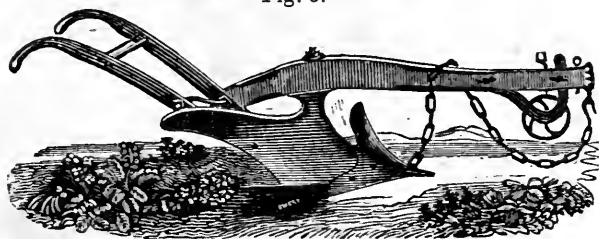


Fig. 4.

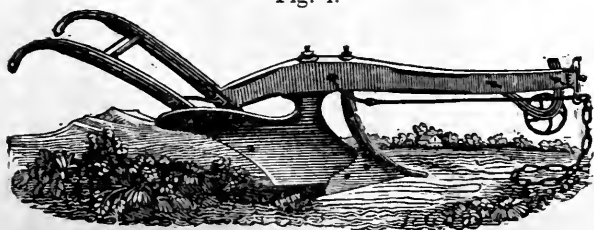


Fig. 5.

The *Coulter*, in fig. 4, is cast on to the point of the plow-share, and thus forms a part of it.

The *Lock-Coulter*, in fig. 5, is also made of wrought iron, steel-edged in Eagle No. 2, and sizes larger having them; in Eagle No. 1 it is made of cast iron. It passes through the beam, and is made fast with a nut and

screw, or key, and locks through the point and mould-board where they join. This gives it great strength, and makes the plow suitable to be used among rocks, and especially the roots of newly cleared land; for the lock-coulter cannot be turned one side or forced out of its place, but will instantly sever roots of an inch or two diameter, and thus enable the plow to turn the furrow smoothly and with great ease. The lock-coulter can be taken out at pleasure.

EAGLE No. 2.—A two horse sod or stubble plow, of same construction, but one size larger than Eagle No. 1. It cuts a furrow any required depth to eight inches, and twelve to fourteen inches wide. Price, \$8 50.

EAGLE No. 2 WITH LOCK-COULTER.—The same in form as Eagle No. 1, with *lock-coulter*, but one size larger. Price, \$10 00.

EAGLE No. 25.—A four horse sod or stubble plow. It is also admirably adapted for breaking up rough ground and trench plowing. It is the best plow for covering up a *great growth of weeds and grass* we know of. It cuts a furrow any required depth to twelve inches, or even deeper if wished, and sixteen to eighteen inches wide. Price, \$10 00.

EAGLE SELF-SHARPENING AND ADJUSTING STEEL POINTED PLOWS.—These plows are of the same superior form of construction as the Eagle plows usually made by Ruggles, Nourse, and Mason, with the exception that the point and share consist of two pieces which are constructed upon an *improved self-sharpening principle*. The point is a *wrought straight bar of iron, steeled* at each end, about twenty inches in length, and passes upward into the body of the plow. As it wears away it is easily shoved forward; and as it becomes blunt it is turned over on the other side, thus always presenting a sharp point of *full length* and proper shape. When one end of the point or bar is worn off five inches, it is reversed, and the other end performs a like service. The wing or share is also reversible, and can be used either end forward, or either side up. Both point and share are so very simple in their construction, that any blacksmith can renew them at trifling expense, with wrought iron or steel. We particularly commend these plows for Southern plantations, for their own blacksmiths can at any time easily repair them. There is also a *cast iron* coulter on the share of the plow, a little back and above the point, so arranged as to be easily replaced when worn out, which is much less expensive and in many kinds of soil quite as serviceable as a wrought coulter. They are also made with *wrought cutters* in common form.

Self-sharpening plows heretofore may have been considered objectionable, inasmuch as they have not possessed sufficient strength, owing to their *complicated* construction; but a single glance at these plows will convince any person, by their construction, and the point being of *wrought metal*, that they combine *strength* and *durability* unequalled in any other form or construction of point and share, and that they are kept in repair at much less expense.

EAGLE SELF-SHARPENER, No. 1.—A light one horse or mule plow, more particularly calculated for the South. Price \$5 00.

EAGLE SELF-SHARPENER, No. 2.—A medium sized one horse plow, useful at South and North. Price \$6 50.

EAGLE SELF-SHARPENER, No. 3.—A medium sized two horse plow, for sod or stubble land. Price \$7 50.

EAGLE SELF-SHARPENER, No. 4.—A large sized two horse plow. Price \$9 50.

EAGLE SELF-SHARPENER, No. 5.—A three or four horse plow, according to the toughness of the soil. It is an admirable implement for breaking-up or deep stony plowing. Price \$10 50.

SIDE-HILL OR SWIVEL PLOWS.—ALSO SUITABLE FOR HORIZONTAL PLOWING AT THE SOUTH



Fig. 6.

Of the above plows we make five different sizes. They are so constructed that the mould board is easily and instantly changed from one side to the other, which enables the operator to perform the work horizontally upon side-hills, going back and forth on the same side, and turning all the furrow slices with great nicety downward. This prevents the washing of the soil by heavy rains, to which all side-hills are more or less liable when plowed as level ground. They are much liked at the South for *horizontal* plowing; for by this system of turning up and laying the soil, it is prevented from being washed into those deep gullies, so destructive to the general face of the country. They are also highly useful, and by many much approved for level plowing, as this leaves the field

without any *centre deal* or finishing furrow; nor does it make banks or ridges by turning two furrows toward each other. They are likewise

useful in enabling the plowman to turn the furrow *from* his walls and fences. Another advantage, they save much trouble in enabling the team to turn short about at the end of the furrows, instead of obliging it to travel across the wide ends of each land in the field.

No. 0. SIDE-HILL.—A light one-horse or mule plow, particularly designed for *horizontal* plowing at the South. Price \$5 00.

No. A 1. SIDE-HILL.—A light or medium sized two-horse sod or stubble plow. Price, \$9 00.

No. A. 2. SIDE-HILL.—A large two-horse plow—is sometimes used with three or four horses, according to the nature of the soil. Price, \$10 00.

No. A 3. SIDE-HILL.—A large four or six-horse plow, made very strong. It is suitable for heavy rugged farm or road work. Price, \$12 00.

No. A 4. SIDE-HILL.—A heavy six horse road plow. It is made very strong, and is especially designed for the roughest road work.

Price, \$14 00.

*Cutters* are an extra charge of \$1 50 each for the above; but having a sort of half *coulter* cast on the point of the plow, they are rarely necessary.

SWARD C.—A strong three-horse plow, particularly calculated for breaking up rough or stony sward land. It is a size larger than Eagle No. 2. Price, \$9 00.

SWARD B.—A strong four-horse plow of same construction nearly as sward C, but one size larger. Price, \$10 00.

SWARD D.—A strong four horse plow, same size and form as sward B, with the addition of a wrought *lock-coulter* as attached to Eagle No. 2. To this plow is affixed, when required, a sharp steel-edged share or point, cutting very wide, and a reversed or drag *cutter* for the purpose of plowing and completely turning over the surface of wet meadows when reclaimed by ditching. A crane clevis is attached to the end of the beam to pull by, which enables the off horse to keep clear of the miry open furrow, so very fatiguing to him, and tread on the *unbroken* ground as well as the near horse; thus making it comparatively easy work for the team, and obviating the great objection to breaking up wet meadows or swampy ground. The newly invented dial-clevis and draft-rod, as described in Eagle No. 1, page 9, will enable the off horse to tread on solid ground in plowing wet meadows, nearly as well as the crane clevis. It also enables the plowman to run the plow close alongside of a fence or ditch. This would be an admirable plow for the rice lands on the Mississippi, and for the prairie lands of the West. When the meadow fixtures are removed, and the original point or share replaced, the plow is again adapted to the rugged upland soils, thus answering the double purpose of an upland and meadow plow. Price, with lock-coulter, \$12 00. Wheel, cutter, and draft-rod \$1 50 each, making the whole cost \$16 50. With lock-coulter, steel-edged share, and crane-clevis, for reclaiming meadows, the price is \$16 00.

#### RIDGING OR DOUBLE MOULD BOARD PLOWS.

No. 1 DOUBLE MOULD BOARD.—A light one horse plow, used for opening drills to plant potatoes, corn, &c.; also for covering seed in the drills. In plowing out between narrow rows, it throws the dirt both ways to the crop, and thus does the work of *two* plows. It is also very useful in digging potatoes. \_ Indeed, it is a very convenient implement for various

kinds of work, and should always be kept on the farm and plantation  
Price \$3 50.

NO. 2 DOUBLE MOULD BOARD.—Of same construction and use as the above, but one size larger.  
Price \$7 00.

#### COTTON PLOWS.

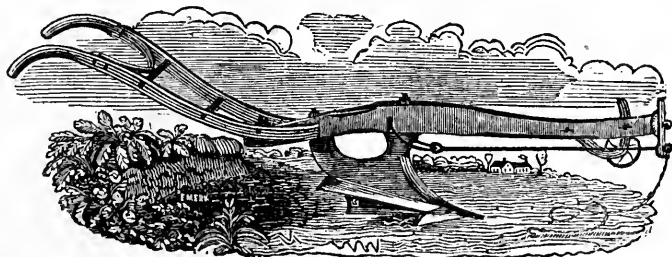
DAVIS 6 INCH.—A light one horse or mule plow, particularly designed for the South.  
Price \$3 25.

DAVIS 7 INCH.—Of nearly same construction, but a trifle larger than the above.  
Price \$3 50.

#### RICE TRENCHING PLOW.

This plow is made from a pattern furnished by an eminent Southern planter. It will do the work of six or eight hands with hoes, in trenching a field for the rice crop, and will be found a great labor saving implement for the South. It is an excellent implement, also, for opening drills for corn or cotton, and for various root crops at the North. Price, \$6 00.

#### SUB-SOIL PLOW. (Fig. 7.)



We manufacture three sizes on the precise principle of the most approved Scotch Sub-soil Plow, one of which we imported from Scotland in 1840. This cost us \$50 in Edinburgh.

By modifying and simplifying its construction, at the same time making some important improvements in it, we are now able to supply the farmers and planters of this country with plows lighter and better suitable for our people, and at the same time of equal capacity, and at a much less price than the Scotch Plow. The Sub-soil Plow, imported by us, we believe to be the first real Sub-soil Plow ever in this country. They have since been used in the different sections of the United States and Canada, with great satisfaction; and the demand is constantly and rapidly increasing. These Plows are used by following directly after the team, turning up the surface soil, and in the same furrow. This is of great advantage to the crops, both in dry and wet land. In the former, the sub-soil being deeply broken up, and well pulverized, the moisture is retained much longer than it otherwise would be, and the roots of plants can descend much lower and wider for their food, while in the latter the excess of moisture filters below and is readily carried off.

NO. 0 SUB-SOIL.—A large one-horse, or small two-horse plow. It will break and pulverise subsoil any required depth to nine inches below the previously turned furrow. Price, with Scotch clevis, \$5 50. With draft-rod, \$6 50.

We would recommend the Scotch clevis, or draft-rod; for by the use of

these the off horse can walk on the even ground, making it much easier for him to do his work than travelling in the surface soil furrow. A cutter or coulter is never necessary in a subsoil plow; a wheel is not material, though some prefer it.

**No 1 SUB-SOIL.**—A large two-horse, or medium sized four-horse plow. It should always be used with the draft-rod. Price, with draft-rod, \$8 50.

**No. 2 SUB-SOIL.**—A large four-horse, or medium sized six-horse plow. It will break and pulverise the soil any required depth to eighteen inches. Price, with draft-rod, \$12 00.

An extra plow point is always *given* with each plow. Any irons or any of the wood parts, will be supplied at fair prices for repairing. Every part of these plows being made by the same machinery and of *uniform* patterns, each single piece, whether of wood or iron, will suit any part of the plow either broken or worn out. This is a great advantage to the purchaser of these implements, as a part of the plow may thus be supplied at a trifling cost, which, if broken or worn out in most other plows, could hardly be replaced at all, or if so, at a greatly increased expense.

We sum up by earnestly recommending these Plows to the public. They are made of the best materials, in the most substantial manner, and are warranted to perform all that is here said of them.

#### NEW YORK PLOWS.

*Manufactured expressly for the Agency of A. B. Allen.*

As many Farmers and Planters demand a plow, the *first cost* of which shall be less than those manufactured by Ruggles, Nourse & Mason, of Worcester, Massachusetts, a manufacturer has undertaken to supply the market for such, through my agency. The public are assured that I am also *SOLE AGENT* for them, in this city; and they are *particularly cautioned* against all other manufactures of the kind, either here or elsewhere. The woods of these plows are got out by *patent machinery*, and every part of them, as well as the irons, are made *exactly alike*, to supply the place of others as in the Worcester Plows, of which they are a close imitation—I having the permission of Messrs. Ruggles, Nourse, & Mason, thus to make them. With these prefatory observations, it now only remains for me to give the prices of the New York Plows, as a full knowledge of their construction may be gathered by the preceding remarks on the Worcester Plows; but I wish to be understood that I do not recommend them as *equally* well finished, nor as strong and as enduring. They are simply recommended as fair, serviceable Plows; but superior for the price to any others made in this market, or that can be manufactured here by others.

**NEW YORK No. A 1.**—A light one-horse or mule plow, well calculated for loamy soils and clay. Price \$2 25.

**NEW YORK No. A 2.**—A size larger than the above, and calculated for the same kind of soils. Price \$3 00.

**NEW YORK No. 14.**—A light one-horse or mule plow, calculated for light sandy lands. Price \$2 25.

**NEW YORK No. 15.**—A size larger than the above, and calculated for the same kind of soil.

**NEW YORK No. 2 B.**—A light two-horse plow calculated for general

work. Price, plain, \$4 00. Cutter an extra charge of 75 cts., wheel, \$1 25. With coulter cast on the point of the share, \$4 25.

NEW YORK EAGLE No. 1.—A medium two horse plow, calculated for general work. Price, plain, \$5 00. Cutter extra, 75 cts., wheel, \$1 25. With coulter cast on the point of the share, \$5 25.

NEW YORK EAGLE No. 2.—A large two horse plow, calculated for general work. Price plain, \$5 50. Cutter extra, 75 cts., wheel, \$1 25. With coulter cast on the point of the share, \$5 75.

A point extra is given with these plows. Castings are sold at 4 cts. per pound. A liberal discount made to dealers.

#### OTHER NEW YORK PLOWS.

*Manufactured for the Agency of A. B. Allen.*

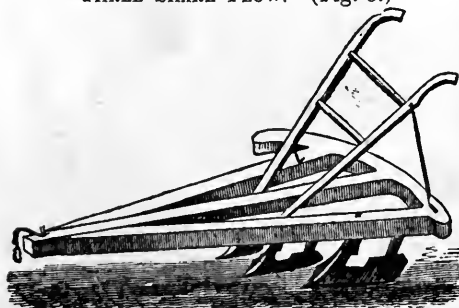
These are done by patent machinery, same as the above, and need no particular description.

ONE HORSE PLOWS.—No. 1, J. M. & Co.,			Price, \$2 25.
“ 2, do.	with coulter,	“	3 50.
“ 10½, do.		“	2 00.
“ 11½, do.		“	2 25.
Corn,		“	2 50.
TWO HORSE PLOWS.—No. 3, J. M. & Co., with coulter,			“ 4 50.
“ 4, do	do	“	5 00.
“ 19½, M. & H.	do	“	4 50.
“ 20, do	do	“	4 50.
“ 21, do	do	“	5 00.

BERGEN PLOWS.—For two horses and general work. Price, with cutter, \$8 50.

Castings for the New York Eagle and other plows, Minor and Horton's, Mayher & Co., Freeborn and Hitchcock, and the Dutcher Plows, at 4 cts. per lb. A liberal discount made to dealers.

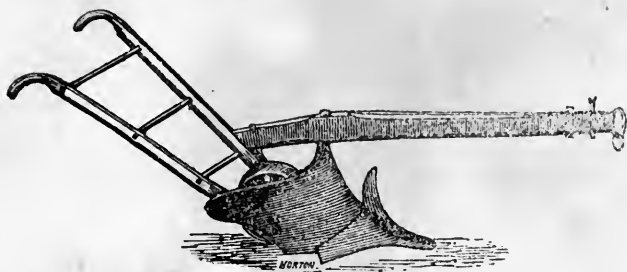
THREE SHARE PLOW. (Fig. 8.)



This machine spreads 2 feet 6 inches wide, with three shares; but if made with four shares it would be proportionably wider. It is used for plowing in wheat and rye at the North, after sowing, and taking so many furrows at a time it gets over the ground very rapidly. Three to five acres per day may be covered with it. Grain plowed in is not so likely to winter kill. The ground

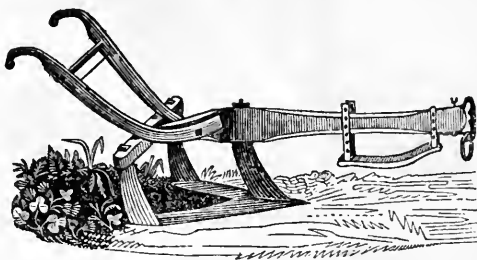
should not be harrowed in the fall, but be left rough. In the spring it may be harrowed and rolled. It is drawn by two horses. One or two wheels are now placed at the end of the beam, which makes it run easier and steadier, and enables the plowman to gauge the furrow slices to an exact depth. It has been supposed that this plow would do well for the South to work out between the corn, cotton, and sugar-cane rows; but we are of opinion that it would be found too heavy for such work, as long as light mule teams are kept on the plantations.

SHELL WHEEL PLOW.—(Fig. 9.)



**BURRALL'S SHELL WHEEL PLOW.**—This plow runs very easily, and is much liked in smooth land, where there are no stones or other obstructions. Price \$12 50.

PARING PLOW. (Fig. 10.)



The above plow is used for paring turf lands preparatory to burning. The share is thin and flat, made of wrought iron, steel-edged. It has a lock-coulter in the centre, and short coulter on the outward edge of each wing of the share, cutting the turf as it moves along into two strips about one foot wide, and as deep as required, there being a sliding apparatus put on the end of the beam instead of a wheel to regulate the depth of cutting. This is much preferable to a wheel for this particular purpose. After the turf is pared off into strips, men follow with sharp spades and cut it into suitable lengths, say of two or three feet. These pieces they then throw into heaps, after drying of which they are burned, and the ashes spread broad-cast on the land. Paring and burning is a very ameliorating process for stiff clay soils; it changes their mechanical texture almost entirely, and renders them friable and suitable for cultivation. The paring plow is also an excellent implement for cutting off meadow bogs and grass bunches and turf for covering a grass plot.

**LANGDON'S CULTIVATOR OR HORSE-PLOW.**—This, in reality, is a plow with a light, wide, flat share, sharp at the edges, and coulter on the mould-board. It is used for running between the rows of different crops, to cut up the weeds and loosen the soil. It is an excellent implement also for digging potatoes. It is only recommended for light soils free from stones. Price, \$7 00, with clevis, \$7 50.

**SCOTCH PLOWS.**—These are made of iron throughout, and will be imported to order. They cost from \$25 to \$40 each.

Any kind of plows will be constructed to order whenever desired. Any

hints by way of improvement in these implements will be gratefully received.

### HARROWS.

Of these there are many kinds. Of the common triangular form we make various sizes, from the light one horse up to the large four horse harrow.

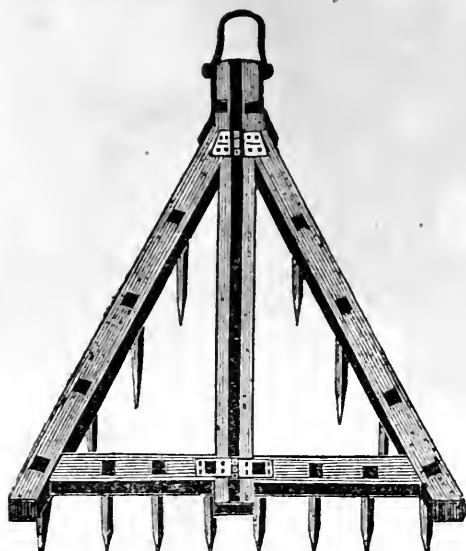
Fig. 11 shows the triangular folding, or Chandler harrow.

Price, \$4 00 to \$12 00.

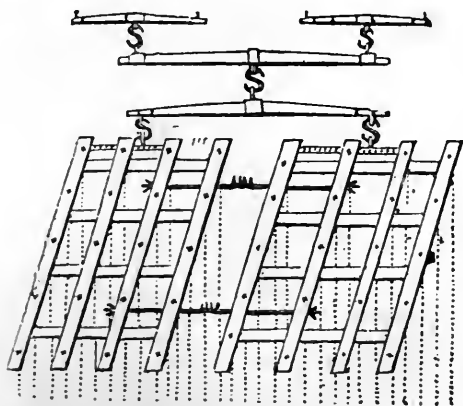
Fig. 12, the square harrow, which may be used single or double. Prices vary according to the size, from \$5 00 to \$15 00.

Fig. 13 is the Geddes Folding Harrow, which upon the whole we esteem the best. Some of the larger sizes are so constructed that the front and rear parts can be detached, forming two single harrows, which can be used separately when desired. The cuts show their construction so well that they render a particular description unnecessary. The following rules should be observed in making harrows.

1. Let the frames be joined together in the centre with hinges, so that the two halves may be able to move up and down independent of each other. This enables the harrow to pass over quite uneven ground, and *touch it all* with its teeth; but if the harrow were made of pieces put together without hinges, it could not do it, and thus,



(Fig. 11.)

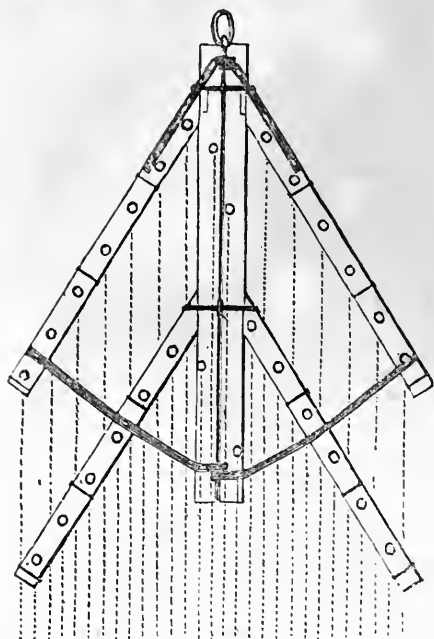


(Fig. 12.)

in passing over uneven surfaces, one half of the land would scarcely be touched.

2. The teeth should be of the best Swede's iron, steel-pointed, drawn to fit a mortice in the beam, largest at the lower or under side of the beam, and gradually tapering to the top; with a screw cut on the top of the tooth, and then made fast with a nut screwed down tight over a

(Fig. 13.)



thick washer. Teeth which are not fastened into the arms of the harrow with nuts and screws through a tapering mortice, are continually getting loose, more especially in rough or stony ground; and when loose they present an unequal surface, and not only do the work imperfectly and unevenly, but make the harrow harder to draw, and therefore more tiresome for the team, especially when the forward teeth slip up, as they are most likely to do, and the hind ones keep fast. The teeth are also liable to drop out (if not screwed in) when the harrow is turned over double to be carried in or out, or from field to field. The loss of a single tooth is sometimes a serious injury to a day's work.

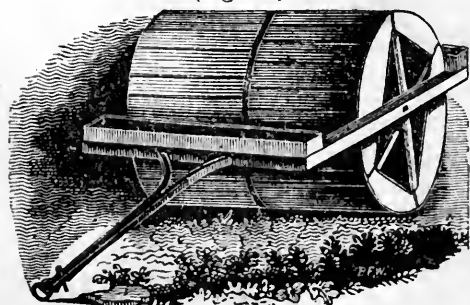
The Geddes harrow is superior to the square harrow, as it draws easier, moves steadier, and without shaking of the whiffle-trees. It is also more readily cleaned of foul stuff, and can be more easily weighted when necessary.

Sufficient attention is not paid to harrowing. It is the next most important operation after plowing. The harrow should run from four to six inches deep, cutting up all the lumps, and leave the ground in a finely pulverized state.

The price of these harrows varies from \$5 to \$14. They have from fourteen to thirty teeth.

## FIELD AND GARDEN ROLLERS.

(Fig. 14.)



more than three feet long. Twenty to twenty-four inches is the best dia-

Rollers are of various kinds; of wood, stone, and iron. The last are most esteemed, as they do their work best, and endure, with little repair, for a half century or more. They should be made in two sections, at least, and more would be better, as separate pieces facilitate in wheeling round at the end of the field, and leave the ground smooth, especially if the roller be

meter, and from three to six feet the best length. We are now constructing our rollers of separate cast iron sections, about one foot long, and can thus make them up of any required length.

*Rollers for Distant Transportation.*—Iron sections, about 20 inches diameter, and one foot wide, are furnished with or without the arbor or axle-tree, to which the framework can easily be attached by any carpenter or smith.

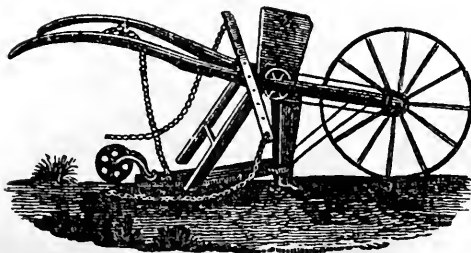
Stone rollers are made of one solid piece of stone, and are more proper for gravel walks or lawns than for the field; iron, however, is to be preferred in every instance. Wooden rollers may be made in the most simple manner from a smooth, round white oak log, 20 to 30 inches diameter. Saw off the ends perpendicular with the surface of the log, and then insert iron gudgeons of about an inch and a half or two inches diameter, and for these to roll in, make a square frame of 4 by 6 inch stuff, boring holes to fit the gudgeons in the side pieces. These are held together by cross-pieces, one of which is placed immediately before and the other directly behind the roller. They are sometimes made like drums for carrying belts to move machinery.

It is surprising that so little attention is paid to the use of so serviceable an implement as the roller. It tends to bind a sandy soil, and finely pulverizes the lumps of that of the most adhesive clay. In passing it over recent sown crops, it has a tendency to keep out insects, especially from the turnip crop, as it binds the surface so close that they are not likely to penetrate it. It should always be used after seeding down meadows, as it leaves a much smoother and more level surface for the scythe and rake to pass over. It would be well to pass it over meadows every spring, in order to roll down any upheavings from the frost or poaching of the cattle. The ground should always be dry when the roller is used, especially in a soil where there is the slightest admixture of clay, otherwise it would so bind the ground together that the crop would find it difficult to shoot up through the surface after germinating.

Prices vary from \$16 to \$65.

### SEED SOWERS.

(Fig. 15.)



Seed sowers are of many kinds, and prices vary accordingly, from \$3 to \$15. The cheaper kinds we consider as entirely *worthless* to sow any but the *smallest* seeds, such as onions and turnips. We have recently got up an improved seed sower, something like the annexed cut. The person

using it takes it by the handles, the same as he would a wheel-barrow, and trundles it rapidly along, sowing from two to five acres per day, according to the distance of the rows apart. These implements save half the seed or more, over hand-sowing, thus making a double saving. The seed is put into a hopper, and falls through a funnel into a drill made by the share, and is then covered by the roller. It can be set to plant at different depths. It is useless to attempt to use it in a stiff clay soil; the ground must be fine and well pulverized to ensure its working well. In the Improved Seed Sower, there are two cylinders; one is used for sowing onions, turnips, carrots, parsnips, millet, and other light grain. This is then taken out and another cylinder is inserted for sowing beets, peas, beans, corn, &c. The price with single cylinder is \$12 00. With extra

cylinder \$15 00. It is very strong and complete, and we do not hesitate to say the best now in use.

(Fig. 16.)

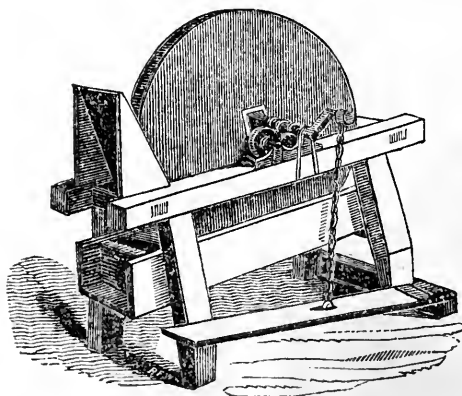


**BACHELDER'S CORN-PLANTER.**—This is the best machine we have yet seen for planting corn. The seed is put into the hopper above the beam, and as the horse moves along, the share below opens

the furrow; the corn is then dropped by arms moving horizontally. These arms have holes in them of a proper size to receive any required number of grains, and as they pass in and out of the hopper the holes are sure to be filled with the seed, which as surely drops into a tube conducting it to the bottom of the drill made by the share, which is so formed that it passes under the surface at any required depth, and deposits the grain without turning over the earth. A triangular iron follows to remove all lumps and stones, and a roller to compress the earth over the seed. The dropping of the seed is always visible to the operator, and thus ensures his work being perfectly well done. The arms are made to drop the corn nearer or farther apart by different sized wheels fastened on the crank, moving the arms quicker or slower as required. Those usually made here drop from two feet to four feet apart, as wished. The machine requires a small horse or mule to draw it, and with a boy to tend it and drive, will plant two to four acres per day, according to the width of the rows apart.

Price, \$14 00 to \$16 00.

GRINDSTONE.—(Fig. 17.)



These are now generally hung on friction rollers, and are moved with a treadle. The person grinding can thus turn his own stone without the assistance of another.

The friction rollers render the movement of the stone very easy. Any one can hang the stone on these rollers.

Price of rollers \$2 50 to \$4 00.

## BULL-RINGS.—(Fig. 18.)



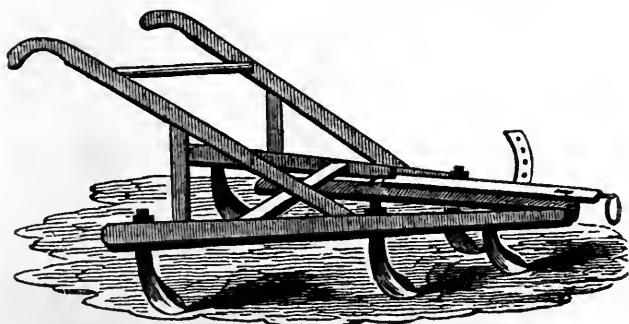
Every bull should be rung after attaining the age of one year. It is easily done by punching the cartilage between the nostrils, and then inserting the ring and screwing it together. With a ring in his nose, the most fractious animal is easily manageable.

Price 50 to 75 cents.

## CULTIVATORS.

Cultivators are of various kinds; we could enumerate at least twenty. The object of them is to run between the rows of beets, potatoes, and other roots; corn, cotton, cane, &c. They are admirable implements to stir the ground and destroy the weeds, and for these purposes they will do the work of two or three plows. They are absolutely indispensable on the farm and plantation, and in the garden.

The celebrated Tull was the first who used cultivators to any extent. He contended that repeated stirrings of the earth were equivalent to manuring it; and in triumphant evidence of this, he pointed to a *poor* field where he had grown crops for thirteen years without manure, or summer fallowing, or plowing in a single green crop to fertilize it; and yet his last crops were the best. He even sowed wheat and other grain in drills or rows so wide apart as to be able to work the cultivator between them, and thus obtained on a poor soil 48 bushels per acre!



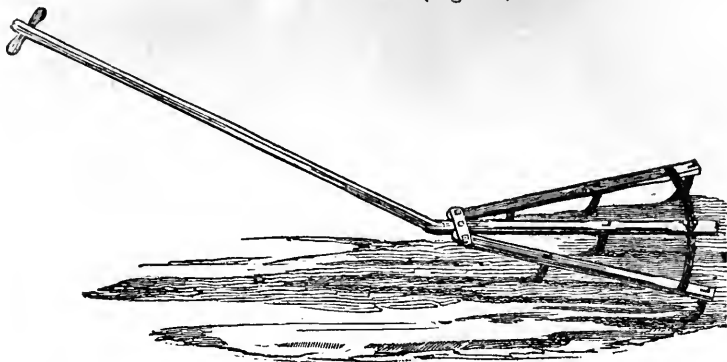
HORSE CULTIVATOR.—(Fig. 19.)



HORSE CULTIVATOR.—(Fig. 20.)

Figs. 19 and 20 show different kinds of teeth, and with or without the wheel. The wheel we consider essential, as it makes the cultivator move easier and steadier, and also gauges the depth of the teeth entering the ground. Some have harrow teeth in them; others with flat knives like a small hoe blade; others again, with reverse teeth, which, when the point of one end is worn off, can be reversed, and used at the other end. In addition to these, coulter teeth are added; and sometimes the two hind teeth are made like a plowshare, to throw the dirt towards the rows of corn, cotton, &c., while the middle teeth cut up the weeds between the rows. They are made to expand from  $2\frac{1}{2}$  to 5 feet. Price of cultivators like figs. 19 and 20, without wheel, \$5 00; with wheel, \$5 50. The Reversed Tooth Cultivator, with wheel, costs \$6 50. Others vary in price according to their make.

HAND CULTIVATOR.—(Fig. 21.)

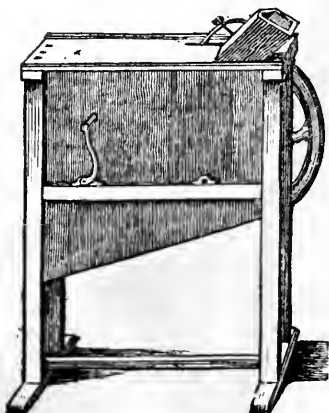


This is made entirely of iron, except the handle, and will expand from 10 to 18 inches. It is a very useful implement in the garden for clearing out the rows of beets, carrots, parsnips, and indeed everything sowed in drills, raking up beds, &c. It will do the work of four men at least.

Price, \$3 00.

### CORN SHELLERS.

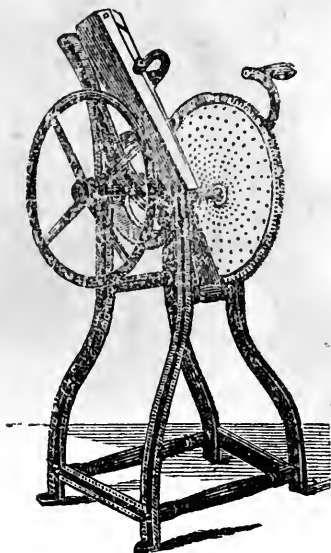
HAND CORN SHELLERS.—(Fig. 22.)



These are of various patterns and prices. That in most common use is upon the same principle as fig. 23. Some like the cuts are made with cast iron frames, and some with wood. The last are preferable, as any one can repair them when broken, and the grain does not fly or scatter, as it is shelled, the shelling plate being encased with wood, like fig. 25. They will shell from 100 to 150 bushels of ears per day, moved by hand.

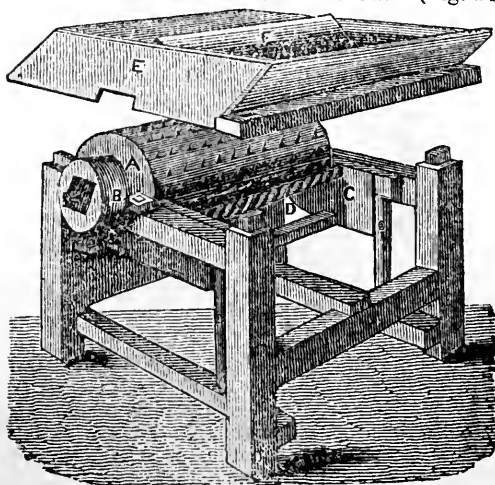
Price from \$7 00 to \$10 00.

HAND CORN SHELLER.—(Fig. 23.)



BURRALL'S HAND CORN SHELLER.—This is a recent improvement, as it separates the corn from the cob in shelling. Will shell the same quantity per hour as other hand-shellers. Price, \$10 00.

CORN SHELLER. (Fig. 24.)

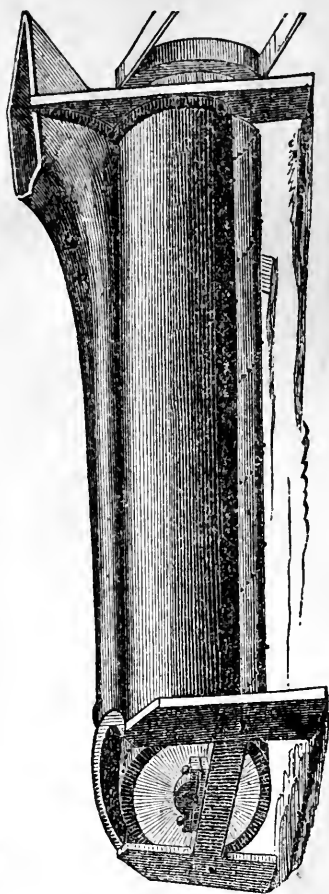


The annexed figure represents Goldsboro's Patent Cylindrical Corn Sheller and Husker, for horse power. This machine is worthy the attention of extensive corn growers; they are capable of shelling 130 bushels per hour, and are warranted to shell 1200 bushels per day, without any extra effort; they break no corn and leave none on the cob. This machine will also husk and shell about half the above quantity in a day.

Price \$40 00.

BALDWIN'S CORN SHELLER AND CLEANER.—A horse power machine—separates the cob and chaff from the corn, and puts it in complete order for market by one operation. Price, \$40 00.

SMITH'S CORN SHELLER AND SEPARATOR.—(Fig. 25.)



This machine consists of a horizontal toothed cylinder 6 feet long, and one foot two inches in diameter. The ears of corn, in the operation, are confined to a part of the upper and rising side of this cylinder, by means of a cast iron concave extending the whole length of the machine, and being shovelled or let in the machine at one end, they are driven through, and the cobs discharged at the opposite end, while the grain falls below, being admitted on either side of the cylinder. The operation is governed by elevating or depressing the discharge end, which causes the machine to discharge the cobs fast or slow, and of course operates more or less upon them; thus securing to the operator the power of finishing his work. This machine is capable of shelling two hundred bushels of ears per hour. Upwards of one hundred of them have been already sold, and they may be seen at work in New York, New Orleans, and other Northern and Southern cities and towns, where they have given great satisfaction. They are very simple and strong in their construction. Price, \$50 00.

There is another kind of Corn Sheller on something the same principle as Smith's; the cylinder, however, is upright instead of horizontal. We cannot recommend it as highly as Smith's. It will shell about 100 bushels of ears per hour. Price, from \$25 00 to \$30 00.

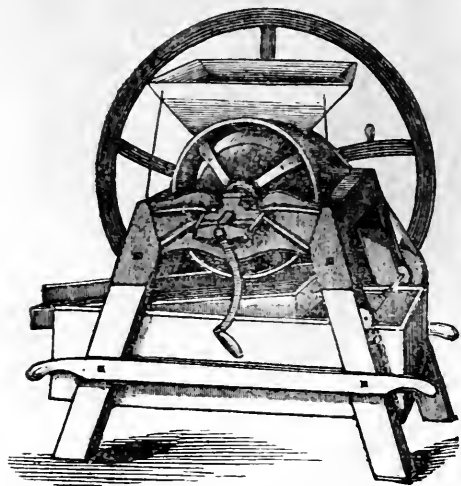
### MILLS.

**CAST IRON MILL.**—This is the best kind of mill for hand use. It is a recent invention. It has a double action, and grinds all kinds of grain in the most perfect manner, except wheat for flouring. It will grind one and a half bushels per hour. It is admirable for cracking corn for hominy, and grinding meal for fowls. Every farmer and planter should have one of them, it being very convenient to do the little jobs of grinding. Price, \$7 00.

Those made to work by horse or water power, grind five to six bushels per hour. Price, \$30 00. The plates will last one or two years, and when worn out with grinding, new ones can be supplied for what it would cost to dress the face of a pair of burr mill-stones.

**SPICE MILLS.**—The cast iron hand mill above is admirably adapted for grinding spices.

**PATENT CORN MILL. (Fig. 26.)**



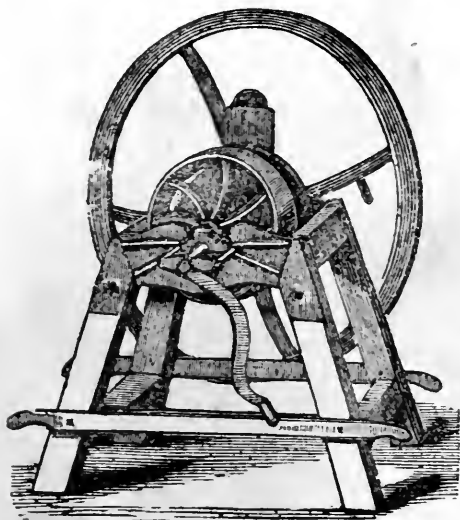
The annexed cut represents Sinclair & Co.'s new Corn Mill, which is admirably adapted for plantation use, or as a Marylander says of them, "every planter having this useful machine becomes his own miller." They grind coarse or fine meal with equal facility, perfection and despatch, at the rate of  $2\frac{1}{2}$  or 3 bushels per hour.

When the screen is attached (as shown in the centre of the cut) and fine meal is required to be ground, it will be necessary to drive the Mill by horse-power (say two horses); coarse meal for horses may be ground by two

men with good success.

The grinding plates which are made of the hardest composition metal, will last about two years without renewing; after they are worn smooth new ones may be put on without difficulty. A feeder is attached to the axle which is intended to pass the grain into the plates at regular intervals. The feeder is important, and obviates the difficulty and objection to Cast Iron Mills generally. Price, with one set extra plates, \$40 00.

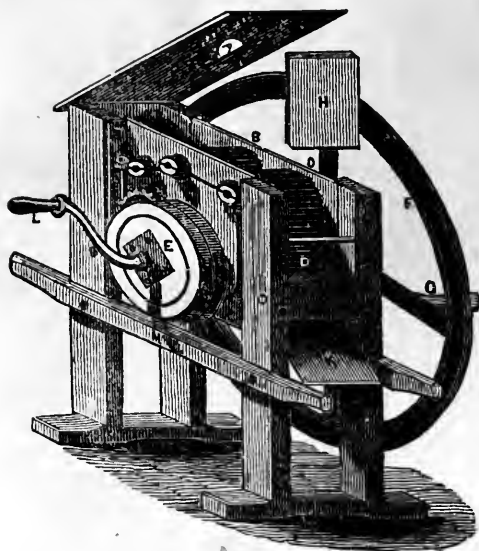
**CORN AND COB CRUSHER.—(Fig. 27.)**



The annexed cut represents Sinclair & Co.'s Corn and Cob Crusher, which is admirably adapted for plantation use; the construction is very simple, compact, and not easily put out of order. The grinding plates are made of the hardest composition metal, which will last from two to three years. After they are worn smooth new plates may be substituted without difficulty; on the axle is attached a strong spiral knife, which cuts the cob in small pieces, preparatory to entering the plates. Price, with one set extra plates,

\$30 00.

## BALDWIN'S CORN AND COB CRUSHER.—(Fig. 28.)



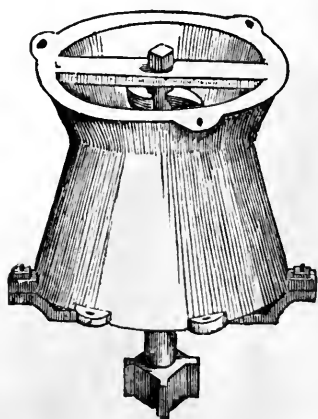
This valuable machine is capable of grinding (by a light two horse power) 20 to 25 bushels of corn and cobs per hour, and can be regulated by a pinch screw to give coarse or fine at pleasure. It occupies a space of four by two feet, and is about four and a half feet high. The first impression on the cob is made by two fluted cylinders, placed horizontally, that operate similarly to the nuts of an apple grinder; these are intended merely to crush the cob; after this process it passes immediately through two finer fluted or ratched cylinders, and a cast iron concave, which last process

leaves the article ground on an average as fine as a common early garden pea, the coarsest being as fine as a grain of flint corn, and the finest ground entirely into meal.

Price, \$65 00.

Corn and cob meal will go farther in feeding all kinds of stock than pure corn unground. Mules and horses kept upon it are not near as liable to colic as when fed on the corn alone. Cobs are quite nutritious, and to grind them up with the corn is a great saving, more especially if the meal be cooked before feeding it to the stock.

## BARK MILL.—(Fig. 29.)



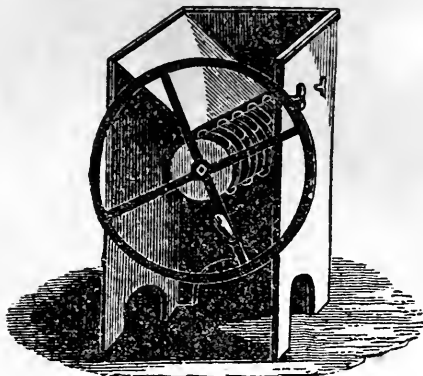
This is much used at the South for grinding bark. At the North and West it is used for breaking up the corn and cob preparatory to grinding it with common mill-stones. It requires a power equal to eight or ten horses, to break up the corn and cob; a two-horse power is sufficient to grind bark. It is made of cast iron. Price, \$12 00 to \$50 00, according to as it may be rigged.

**BURR STONE MILLS.**—These mills grind all kinds of grain and wheat for flouring. 12 inch stones grind 2 bushels per hour. Price, \$45 00

16	"	"	3	"	"	"	70 00
20	"	"	4	"	"	"	90 00
24	"	"	5½	"	"	"	110 00
30	"	"	7	"	"	"	150 00

### VEGETABLE CUTTERS.

VEGETABLE CUTTER.—(Fig. 30.)



RUGGLES, NOURSE, AND MASON'S VEGETABLE CUTTER.—(Fig. 31.)

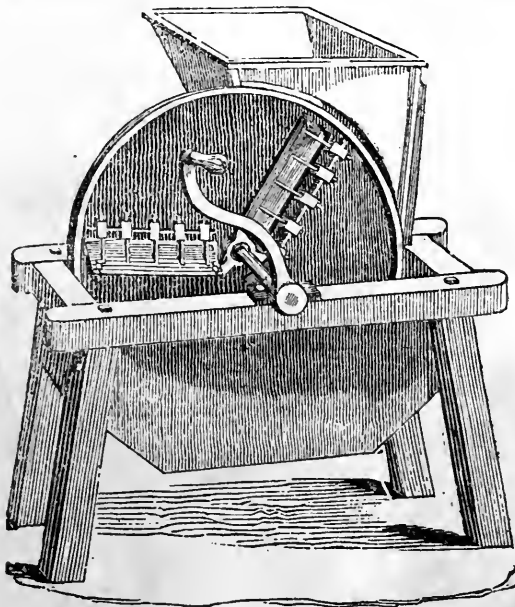
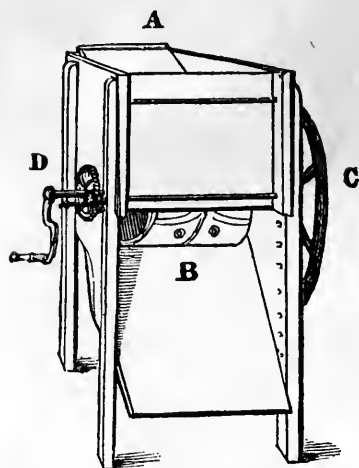


Fig. 31 shows Ruggles, Nourse, and Mason's Vegetable Cutter. The cutting wheel is made of cast iron, faced on one side, through which are

inserted three knives like plane-irons. These cut the vegetables into thin slices with great rapidity, and then by cross-knives they are cut into slips of convenient form and size for cattle or sheep to eat, without danger of choking. The pieces after cutting lie loosely and angling together, and can easily be taken up by the animals. This machine cuts one bushel in two minutes.

Price, \$12 00.

CYLINDRICAL VEGETABLE CUTTER.—(Fig. 32.)



These machines will cut about 800 bushels of beets, turnips, &c., per day. They can be regulated to cut thick or thin pieces at pleasure.

Price, \$8 00 to \$20 00.

Roots should invariably be cut previous to feeding; there is no danger then of animals getting choked with them. When they are merely sliced the pieces adhere close together, and it is difficult for the animals to get hold of them. It is much better to cut them into angular pieces, which is easily done by figs. 30 and 31. The latter cuts two ways, and is a very superior machine, of a recent construction.

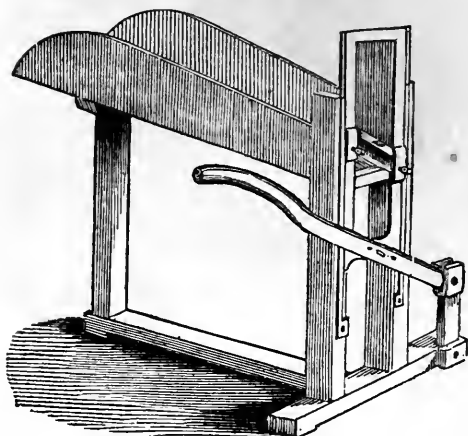
CORN STALK, HAY, AND STRAW CUTTERS.

There is great saving in the cutting of corn stalks, hay, and straw, in two ways. The animals do not waste it by drawing it out of their mangers, and trampling it under their feet, and time and labor are saved them in masticating. They obtain their supply of food readily, and then lie down to digest it. Fermentation also develops the nutritive matter and leaves much less work for the stomach to perform, and this, by saving muscular exertion, leaves more strength with the animal to be expended on his ordinary work. The same principle holds with milk cows, sheep, &c. If the food be given to them in a form more carefully adapted to assimilation in the animal system, the greater product of milk, wool, flesh, &c., they can yield from the same quantity. Cutting, bruising, grinding, fermenting, and cooking the food, all tend much to fit it for easy and rapid digestion, and whenever it can be thus prepared without too much expenditure of labor, it should be done. By adopting a mixed food, much of the coarser products of the farm can be worked up, which are now suffered to be added to the manure heap. Indeed, scarcely any of the vegetable productions of the farm need be suffered to run to waste, till they have first contributed all the nutriment they contain to the support of animal life. Cutting hay is like making mince meat. There is nearly the

same nutriment in the tough pieces, and even gristle, as in the tender ones. Now chop these up fine, and properly cook, and season them, and the dish is eaten with peculiar relish, easily digests, and goes twice as far as in the ordinary method of taking the meat in slices.

In feeding hay and straw it would be well to wet it slightly, and *season* it with a little meal. If the weather be not so cold as to freeze, this should be done a day or two beforehand, and allowed partially to ferment.

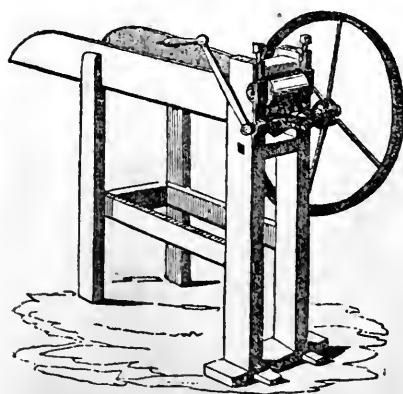
COMMON HAND STRAW CUTTER.—(Fig. 33.)



With these the straw is moved up by hand, and the knife is used by hand lever. Of course one can cut the straw, &c., as long or as short as he pleases. It is a very simple machine, and easily kept in order; though when more than three or four animals are fed it cuts so slow we should recommend other machines in place of it.

Price, \$3 00 to \$4 50.

STEVENS' SPIRAL STRAW CUTTER.—(Fig. 34.)



This is the best cutter for hay and straw that we know of; but we cannot recommend it for corn stalks, though many who have used them say, that they cut corn stalks perfectly well. It is simple in its construction, and easily kept in order. It feeds itself, and the whole process of cutting is performed by turning a crank, which is light work for a boy. The knives are spiral, and set in an iron cylinder, cutting against a raw hide cylinder placed on top. It cuts from one to one and a half inches long, according to the number of blades in

the cylinder. It cuts with great rapidity.

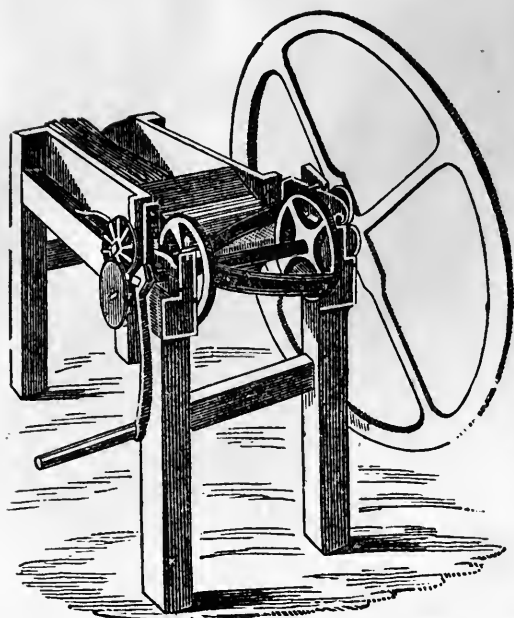
Price, \$10 00 to \$20 00.

We have the same kind made larger and stronger, and rigged to go by horse power. It has cut one ton of hay in 50 minutes, by a fair trial, and may be calculated upon for cutting a ton any time in an hour and a quarter. We have no doubt that this size would answer well to cut corn stalks.

Price, \$20 00 to \$26 00.

**CYLINDRICAL STRAW CUTTER.**—This cutter we can highly recommend for corn stalks, hay, or straw. It is simple in its construction, very strongly made, and upon the whole is the most suitable for the South.

CYLINDRICAL STRAW CUTTER.—(Fig. 35.)



Sinclair & Co.'s Cylindrical Straw Cutters are self-feeders, knives are of spiral form, and act on a bed-steel in such a manner as to cut with great ease, without a very keen edge; many thousand bushels have been cut with them without sharpening the knives.

20 inch Cylindrical Straw Cutters suited to horse or steam power, capable of cutting from 1500 to 2000 bushels per day, \$75 00.

Extra knives per set, \$8 00.

14 inch Box same construction, suited to manual or horse power, \$45 00.

Extra knives per set, \$5 00.

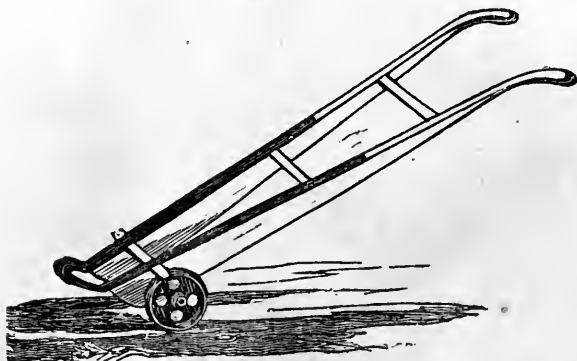
11 inch Box same construction, suited to manual power, \$30 00

Extra knives per set, 4 00

9 inch Box same construction, 25 00

Extra knives per set, 3 00

TRUCK.—(Fig. 36.)

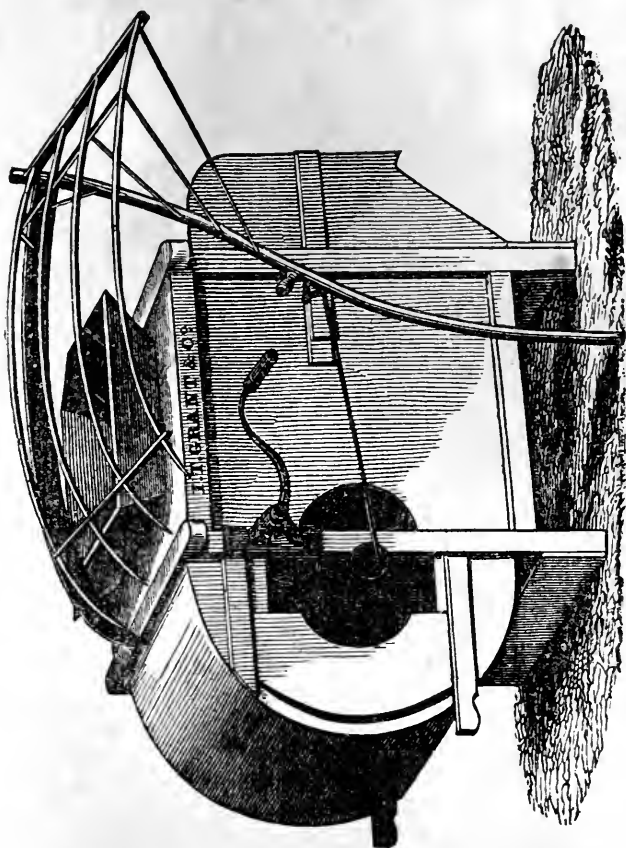


For trucking by hand, boxes, bales, &c., in the store.

Price, \$3 00 to \$7 00

## FAN MILLS.

GRANT'S PATENT FAN MILL.—(Fig. 37.)



Considering the simplicity of its construction, and complete efficiency in all its operations, we think the above fan mill is the best in use. It has taken the first premiums for three successive years at the State Agricultural Society shows, and we believe at no less than seven county fairs. Mr. Grant has recently made some im-

provements in it, which consist in adding to the screen and other parts in general use in fan mills, an additional screen, and what is denominated a chess-board, which are arranged in such a manner as to cause a much stronger blast of wind to act upon the grain at the lower part of the shaking sieves or screens than at the upper, and thereby to aid the action of said sieves in effecting the screening, by which means the chaffing and screening are performed simultaneously. All other fan-mills require that wheat should be run through twice, to clean it thoroughly, while the Patent Fan Mill will chaff and screen wheat more effectually in one operation than other mills will in two operations, thereby saving half the time and labor required by old mills. The Patent Fan Mill will also clean all kinds of grain, such as rye, buck-wheat, oats, corn, peas, beans, clover, timothy, and flax-seed, in one single operation. Oats and peas are separated by being run through the mill once.

*Directions for Cleaning Grain and Seed.*—For chaffing and screening wheat, put No. 2 sieve in No. 1 groove, No. 4 in No. 3 groove, No. 9 in No. 4 groove, and the board in No. 5 groove pushed back even with No. 9 sieve. If cleaning for seed, put No. 7 in No. 6 groove; if for market, put No. 8 in No. 6 groove—give it the middle shake, and open the air slides.

For rye and buck-wheat, put No. 2 in No. 1 groove, No. 4 in No. 3 groove, No. 8 in No. 6 groove, and give it the long shake, if you want to screen rye the same as you do wheat for market.

For oats, put No. 1 sieve in No. 1 groove, No. 2 in No. 3 groove. If to separate oats and peas, or take out thistle heads, put No. 4 in place of No. 2—give it the long shake, and close the air slides part way up.

For corn, peas, and beans, put No. 2 sieve in No. 2 groove, the board in No. 6 groove—open the air slides and give it the short shake.

For flax seed, put No. 4 sieve in No. 2 groove, No. 8 in No. 4 groove, No. 12 in No. 6 groove—shut up the air slides and give it the long shake.

For timothy and clover seed, put No. 4 sieve in No. 1 groove, No. 12 in No. 3 groove, and the board in No. 6 groove—shut the air slides and give it the long shake. If you want your timothy seed perfectly clean, you must put a No. 20 sieve in place of No. 12.

Be careful that the mill stands level, that the grain works equal on the sieves, and keep it well oiled with winter strained lamp oil. The sieves are numbered according to the number of meshes to the square inch.

Price, \$20 00 to \$27 00.

There are various other kinds of fan mills. Price, \$12 00 to \$35 00.

### REAPING MACHINE.

HUSSEY'S REAPING MACHINE.—(Fig. 38.)



It is worked by two horses with ease, requiring one man to attend the machine, and a boy to drive. It will cut 20 acres per day or more. The advantages derived from its use are, the expedition of harvesting the crops, the small number of men necessary to employ, and the clean and even surface in which stubble is left. The straw also is gathered in better condition, which is a matter of some consideration. That the economy of the machine may be better understood, the following statement is subjoined of harvesting Mr. Delafield's wheat crop of 104 acres. The reaping machine cut the whole in eight days, equal to an average of thirteen acres per day. He estimates the cost as follows:—

1 Man and team,.....	\$1 50
1 Boy to drive,.....	50

---

\$2 00 per day,

which for 8 days is .....\$16 00

Add interest for 1 year on the cost of the machine, .....7 00

---

Cost of cutting 104 acres of wheat by machine,.....\$23 00

If the same had been cradled, and supposing the average quantity, per man, per day, to be about two acres, it would require six cradles to cut 104 acres in eight days. At 13 acres per day the cost of six cradles, including board and lodging, at \$1 50 per day, is \$72 00. This shows a gain of \$49 00 in favor of the machine. If, however, farmers employ men who day after day can cradle more than two acres per day, the estimate can readily be made in accordance with the greater manual power. It would seem that the usual quantity may be assumed at two acres per day for continued labor. In addition, we may estimate that six cradles would require nine rakers and binders; whereas the machine thus far has required but seven followers, making a saving of two men at \$1 00 each, is \$2 00 per day, which for eight days gives \$16 00 in favor of the machine. If these calculations are correct, it will be perceived that Mr. D. saved \$65 00 in harvesting his wheat crop alone.

Since the ingathering of the wheat, we understand he has used the machine for cutting oats and flax. The farmers for many miles around Geneva came to examine the machine while at work, and were all surprised at the rapidity and neatness of its execution; but above all, the facility with which it cuts the lodged grain, leaving nothing in the fields to be gleaned, which is another great advantage in its use.

Price, \$110 00 to \$120 00.

**THRASHING MACHINES.**—These are made with spikes or beaters. The first is considered the best, as they thrash the cleanest, although the beaters do not break the straw as much. They will thrash from 50 to 100 bushels per day.

Price, \$25 00 to \$35 00.

A separator is attached when ordered, which separates the grain from the chaff, and makes it much more easy to clean with the fan-mill.

Price of thrashers with separator attached, \$40 00.

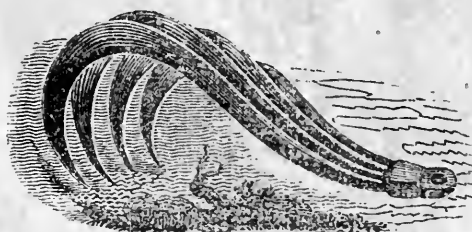
**CLOVER MILLS.**—These will clean from 5 to 15 bushels per day.

Price, \$35 00 to \$65 00.

**RICE AND COFFEE HULLERS.**—Hulls from 2 to 10 bushels per hour.

Price, \$80 00 to \$200 00.

#### THE BUSH OR ROOT PULLER.—(Fig. 39.)

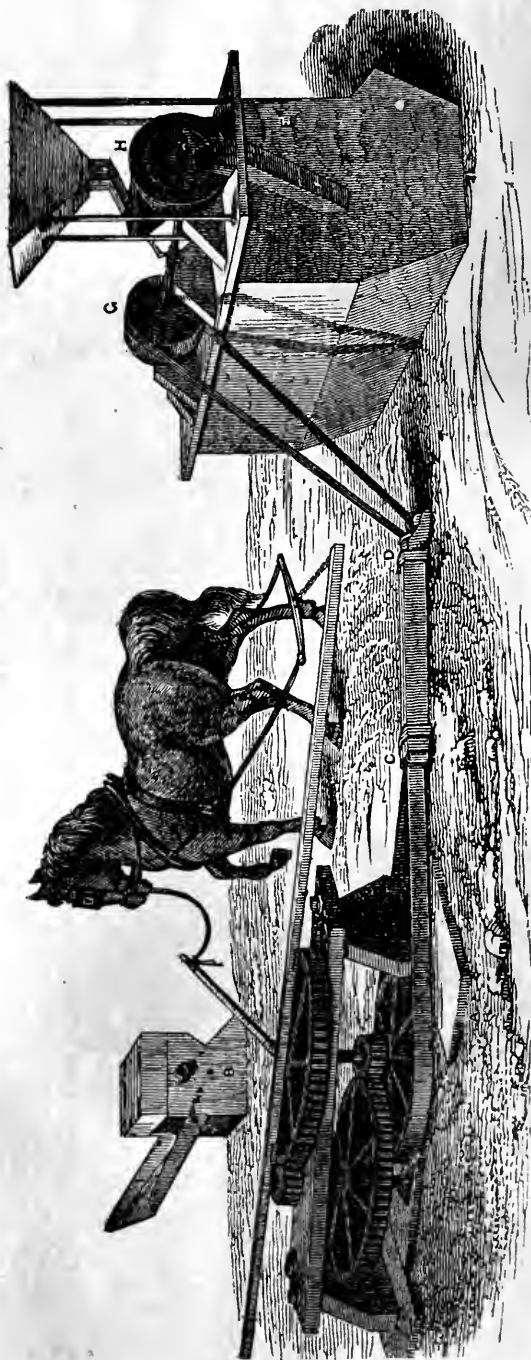


This is a very useful implement to attach to bushes, clumps of roots, and bogs, for the purpose of pulling them out of the ground. It is made with two, three, or four claws. These are hooked to the bush close to the ground, an ox-chain is then hooked into a hole at the other end of the puller, the cattle attached, when the bush and roots are easily hauled out. It will do the work of half a dozen men in clearing and grubbing.

Price, \$3 00 to \$4 00.

## HORSE POWERS.

HORSE POWER.—(Fig. 40.)

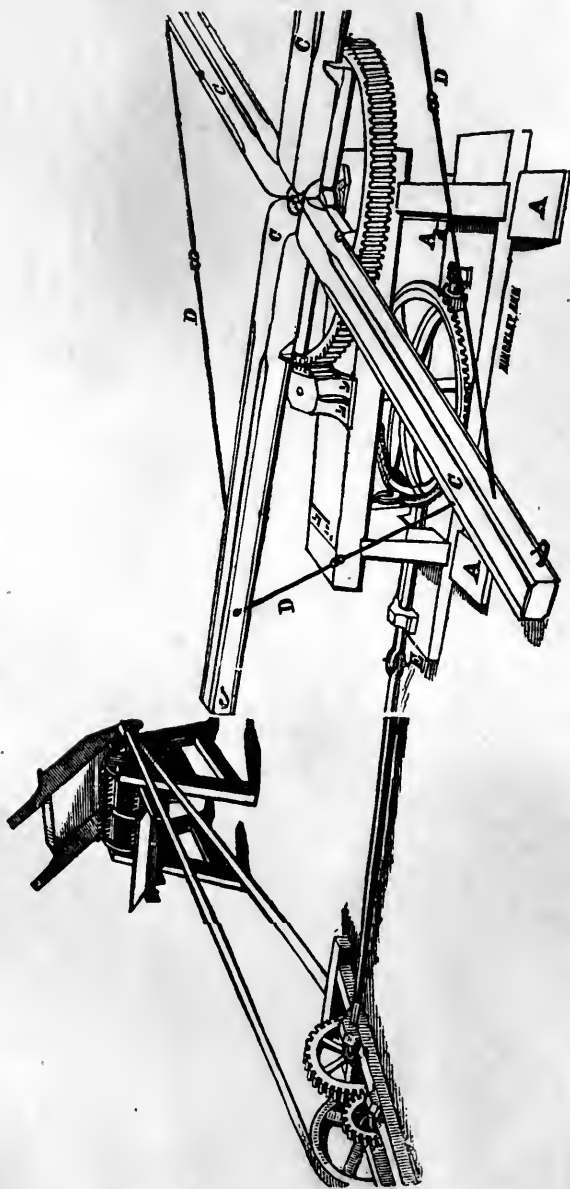


Figs. 40 and 41 show the construction of cast iron horse powers so plainly as to render much description unnecessary. They are moved by one or more horses, attached to wooden arms inserted in sockets in the upper wheel. The belt is of leather, and bands the lower wheel, and then passes crossed through a box (c d), with rollers in it, on to the wheel e, moving the mill h. The belt sometimes runs from an upright wheel set on to the horse power by double gearing. The horse walks over the box (c d) in moving round. Another method of gearing may be seen in fig. 41. An iron shank (e) running out from the horse power. This is more expensive, and the extra gearing requires more power to move it.

Fig. 40 may be packed up and carried easily in a two horse wagon from one place to another. Price of two horse cast iron

powers, with belt, complete, from \$55 50 to \$60 00. The latter is recommended as being the strongest and most desirable. Price of four horse cast iron power, \$95 00. If made cheaper than this they will be light and very liable to break and get out of order. These powers are particularly recommended for the South.

HORSE POWER.—(Fig. 41.)

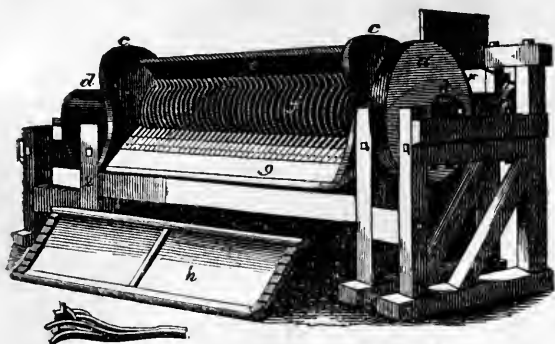


There is another kind of circular horse power, with a wooden rim, of a circle of about twenty feet diameter, to which cast iron segments are bolted. They gear into a cog wheel which moves the machine by a belt, or may be made to gear on to it by cast iron wheels. From one to four horses can travel round inside of this rim, and thus move the power. Many prefer this power to all others, although it requires more room, and is rather more complicated in its construction.

Price, \$85 00.

**ENDLESS CHAIN WOODEN HORSE POWER.**—These are made in the shape of a long box, into which the horse is placed, and as he walks in it, turns the chain which gives the power. Price of single horse power, \$75 00. Price of two horse power, \$110 00. These powers may be worked out of doors, though it is best to have them under cover, if it be only an open shed.

**IMPROVED EAGLE COTTON GIN.**—(Fig. 42.)



*Description.*—*a*, driving brush pulley; *b*, slide; *c, c*, end boards; *d*, cylinder pulley; *e*, top board; *f*, saws; *g*, grate fall; *h*, seed board, with a section of the patent grate below it; *i*, idler pulley.

After carefully unpacking the different parts of the Gin, put the front pieces into the posts and fasten them securely with the joint-bolts.

The Saw Cylinder should be first placed in the frame, then the piece having the false grates upon it, and then the brush. The top timbers may then be put on and fastened. See that all parts of the frame are square. The grate fall should then be hung in its place, and the top boards and slides fitted in, so that the marks on their ends will correspond with those on the timbers. Then adjust the saw cylinder and false grates with the tempering screws at the ends, so that the saws and grates will exactly correspond, taking care not to turn the screws any farther than is sufficient to keep them steady and in their places.

See that all joints of the frame are screwed up tight—place the Gin in the position in which it is to stand, and fasten it securely to the floor or platform, so that it will stand perfectly level. See that the shafts turn freely on their axes, and that the saws run freely in the centre of the spaces between the grates.

The oil cups at the axes of the shafts should be nearly filled with oil when the Gin is started, and the wick which conveys the oil to the axes should be enlarged or diminished, until the proper quantity is supplied to prevent friction. The tube containing the wick should be withdrawn when the Gin is stopped, and dropped into the cup to prevent wasting the oil, and replaced again when the Gin is again put in operation.

The saw cylinder and the piece having the false grates upon it, may be moved endwise and adjusted by the screws at their ends.

Place the mote-board 3 to 5 inches below the brush, slanting down toward the front part of the Gin, and extend another board from beneath it down to the floor; it must then be moved either forward or back, and the slant of it varied until the motes and false seeds are separated from the seed cotton and fall under the saw cylinder.

The seed-board may be raised or lowered by means of the small bolts on which it rests at the ends, and it may be varied so as to enlarge or diminish the space containing the seed cotton.

A 10 inch saw cylinder should run about 180 revolutions per minute.

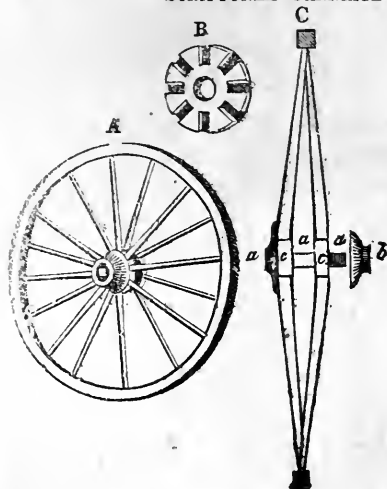
A 12 inch " " " 160 " "

A 13 inch " " " 150 " "

Great care should be taken to fix the mote-board in a proper position to separate the notes from the clean cotton, as well as to adjust the seed-board, so that the seeds will be discharged as fast as ginned, and it is essential that the speed of the brush should be very rapid, and that all the axes should be kept oiled and prevented from heating.

Price of Hand Gins, with 14 to 18 saws each, \$60 00. Power Gins, with 30 to 100 saws each, \$3 70 per saw.

SCRIPTURE'S CARRIAGE WHEEL.—(Fig. 43.)



*Description.*—A, is a perspective elevation of the wheel entire.

B, is a detached, or one-half part of the nave or hub, in which rests the ends of one-half of the spokes.

C, is a cross section of the entire wheel, showing the position of the spokes and the separate parts of the hub.

*a, a, a,* represent the pipe-box, passing through the two naves, or cheek pieces, *c, c,* having on the inside a connected flange of the same diameter as the naves, and covering the open end of the one next the vehicle, while at the other end a screw thread is cut to receive the screw flange, or front of the hub, represented by *b*, which, by means of a wrench, is screwed firmly upon the pipe-box; by

which means the two naves being accurately fitted to the pipe, are made to approach each other, thereby causing the spokes to act as powerful levers, and producing the same effect that is sought to be obtained by resetting the tire of the ordinary wheel, but with the very important difference, that while the one is effected by a considerable expense of time and money, and with a positive injury to the wheel, the same result is brought about in the other by a few minutes' application, and without incurring any expense or injuring the wheel.

Ordinary wheels become rim-bound in consequence of inadequate support in the hub; while by this method of constructing wheels, this difficulty is obviated at once, by applying the wrench to the hub, and turning it up, more or less, as the case requires.

In dry weather, wheels are apt to become loose, from the shrinking of the wood, and one day's use in that condition damages them more than a month's wear when in good order; which can always be maintained by a proper pressure of the spokes to the rim. The felloes of wheels may become loose under the tire, also by the settling of the spokes in the hub; but constructed on the above principle, it is maintained that by the most ordinary attention the spokes are kept constantly to their proper bearing, and the felloes firm to the tire, in consequence of which the tire will not require to be reset until worn out, and the woodwork being kept firmly in its place will wear much longer.

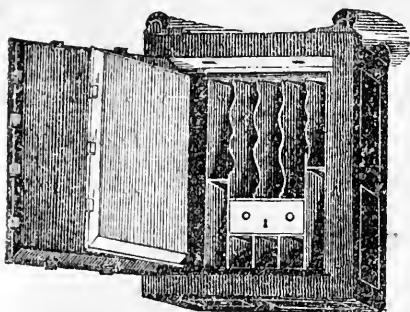
In case of an accident to a spoke requiring it to be replaced, unscrew the nut flange, draw the pipe-box from the nave, remove the broken spoke, insert a new one, then replace the pipe-box, and screw up the hub, and your wheel is at once as firm and strong as ever. The ends of

the spokes do not require to be tenoned where they rest in the hub, but enter with their whole size, giving them all the bearing surface they can have, and adding to their durability. In all other respects the wheel is put together and tired, as is the wheel now in use. Any farm or plantation hand is fully competent to keep the wheel in order; and in case of the breaking of a spoke, the most ordinary skill is sufficient to repair the damage, without resort to the wheelwright.

Among the advantages claimed for this wheel is its great economy in use, consisting in the durability of the hub, which will last for a generation, the saving of two or three visits to the wheelwright, while each tire is wearing out, and his bills for resetting the tire, &c., as many times, and the consequent protection of the woodwork from the burning and the shrinking of the tire.

In its construction the wheel presents far greater strength than the common wheel, besides having the convenient application of mechanical power, as before set forth, to keep the wheel in constant order for use until the tire is worn too thin to be run any longer with safety. This wheel is applicable to *every description* of vehicle, both light and heavy, and will prove of great importance in warm climates, where the alternate wet and dry seasons are very destructive to ordinary wheels, the evils of which are without expense avoided by the above method.

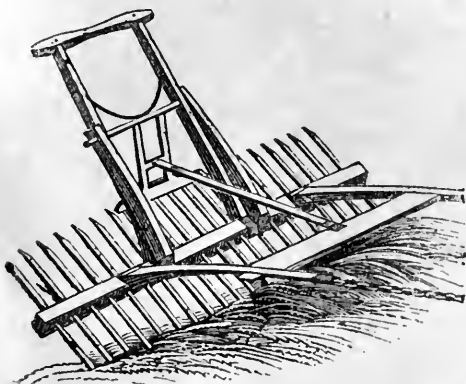
FIRE-PROOF IRON CHEST.—(Fig. 44.)



Every farmer and planter who has money, jewelry, or other light valuables to keep, should have an iron chest in his house. In this they are safe in case of fire; and it is almost impossible for a thief to open them.

Price \$50 to \$300.

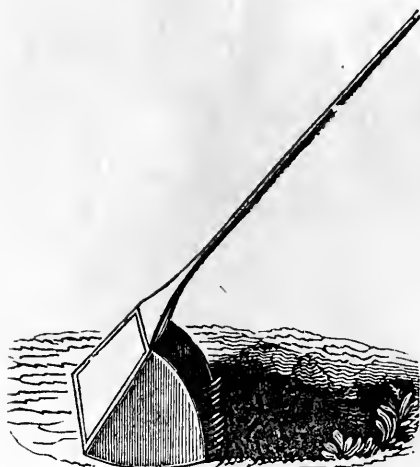
REVOLVING HAY RAKE.—(Fig. 45.)



This implement, with a horse, a man, and boy, will rake from fifteen to twenty-five acres per day. It can be used to good advantage even on quite rough ground.

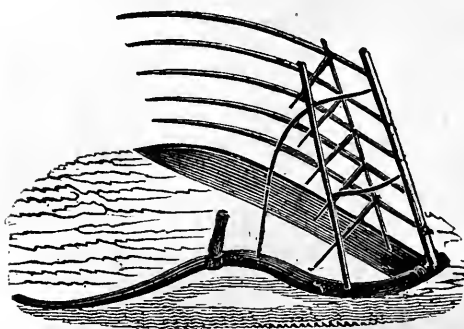
Price \$7 50 to \$9 00.

CRANBERRY RAKE.—(Fig. 46.)



An excellent article for gathering cranberries, and saves the labor of half a dozen persons.

GRAIN CRADLE.—(Fig. 47.)



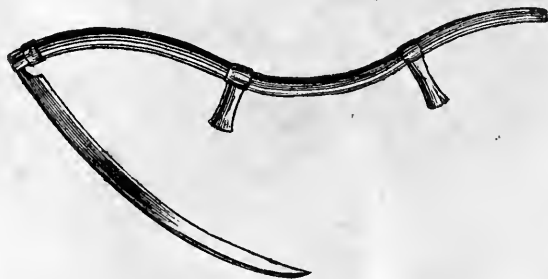
The annexed is of the latest and most approved make, with a superior scythe.

Price, \$3 50.

Four finger ditto.

Price, \$3 00.

SNATH AND SCYTHE.—(Fig. 48.)



Snath, with scythe attached, Price \$1 50 to \$2 00.

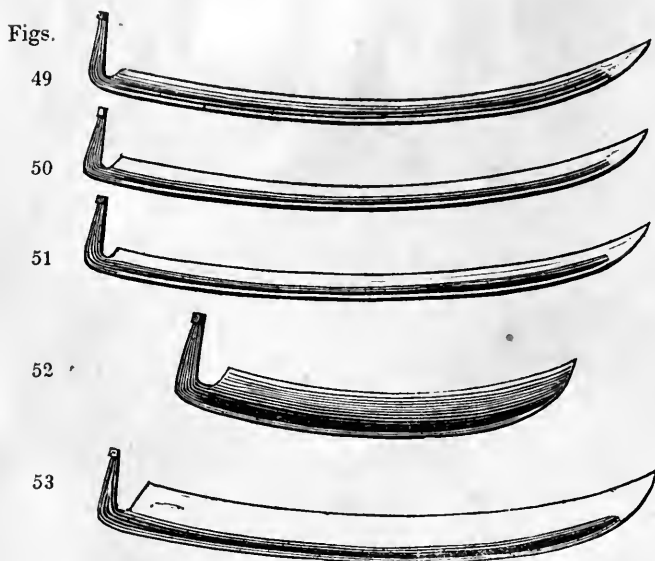
Lampson Snaths, with screw nibs, 63 to 87 cts.

Aikens', a superior article, with screw nibs, 75 cts. each.

" plain snaths, 50 cts.

Barker's, " 37 to 50 cts.

(SCYTHES, SNATHS, AND CRADLES.—Figs. 49, 50, 51, 52, 53.)



The above figures represent the most approved scythes in the market. They are made of the best cast and German double refined steel, with a double and single ribbed back; also plain ditto.

Fig. 49, Blood's double refined German steel double ribbed back scythe. Price, 87 cts.

Fig. 50, Phillips', Messer's, and Collys' shear steel, single ribbed, heavy steel back, a superior article: Price, \$1 00.

Fig. 51, Harris' single ribbed scythe. Price, 75 cts.

Fig. 52, Blood's, and Phillip's, Messer's, and Collys' bramble or bush scythe, from 22 to 30 inches in length, very stout and heavy, steel back, with a thick and substantial heel. Price, \$1 00.

Fig. 53, Waldron's English scythe, a superior article for the cradler. Price, \$1 00.

Alson, Newton, Darling, and Goddard scythes.

#### CATTLE TIE.—(Fig. 54.)

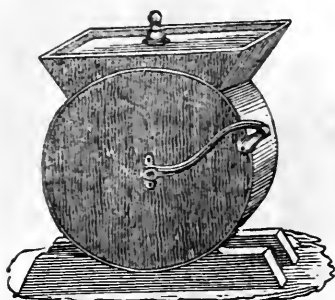


Fig. 54 is a chain for tying up cattle in their stables. The large ring goes over a stationary round post set up by the manger, and the chain is then put round the horns. The hook at the end of the lower length of the chain is passed through either of the rings in the upper length, according to the width of the animal's head at the base of the horns. It is often thought at first sight that

this chain wears off the hair round the head of the animal, but such is not the fact. It is the neatest and most secure fastening that we know of, and at the same time the most comfortable; as the animal slips the chain up and down the stationary post, by the large ring, as it wishes to move its head in feeding or getting up and lying down: it can also turn and lick itself thus fastened. Such a chain will last an age.

Price, \$4 00 to \$4 50 per doz.

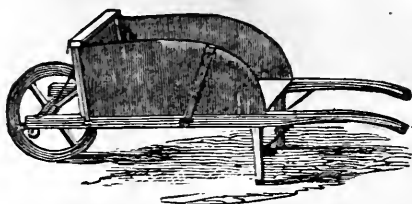
CYLINDRICAL CHURN.—(Fig. 55.)



This is the best in use, as it is simple in its construction, and combines all the good qualities of other cylindrical churns with this additional advantage, that the dasher can be taken out in a moment, any time it is required to be cleansed. This is important after every churning, in order to keep it sweet and from tainting the cream.

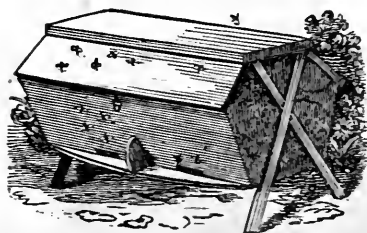
Price \$2 00 to \$4 00.

WHEEL AND CANAL BARROW.—(Fig. 56.)



Of these we have several kinds. Price \$1 75 to \$5 00.

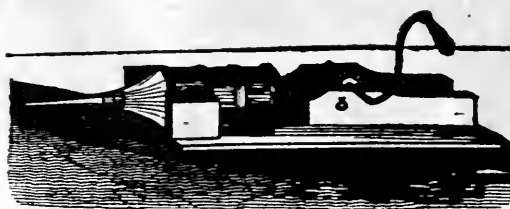
BEE-HIVES.—(Fig. 57.)



We have of this shape, and the square box with sets of drawers, glass cases, &c., after the most improved plan.

Price \$3 00 to \$5 00.

SAUSAGE STUFFER.—(Fig. 58.)



This will save the labor of eight or ten persons in filling sausages, and the work is done with great ease.

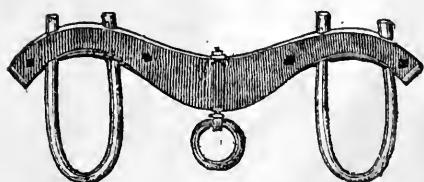
Price \$4 50 to \$5 00.

**OX BALLS**—These are of brass or composition. They are screwed on the ends of the horns, and thus prevent cattle from injuring each other by hooking. They are also very ornamental. Price per pair 20 to 75 cts.

**ROAD SCRAPERS**.—This is a very important implement to the farmer, for throwing up dirt on roads, levelling hills, filling up hollows, digging wide, deep ditches, cellars, &c.

Price, \$4 50 to \$5 50.

OX-YOKES.—(Fig. 59.)



Ox-Yoke, with bows and ironed complete. Price \$2 50 to \$5 00. Bows per pair 25 to 75 cts.

BOG HOES.—(Figs. 60, 61.)

POST SPOONS.—(Figs. 62, 63.)

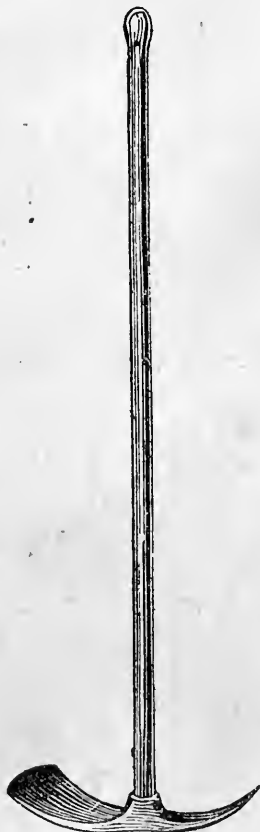


Fig. 60, Bog Hoe, price, 75 cts. to \$1 50.

Fig. 61, Bog Hoe and Pick attached, price, \$1 50 to \$2 00.

Fig. 62, Post Spoon for digging post holes, price, \$1 25.

Fig. 63, Round Pointed Shovel, price, \$1 00 to \$1 50.

Common Hoes, 25 cts. to \$1 50.

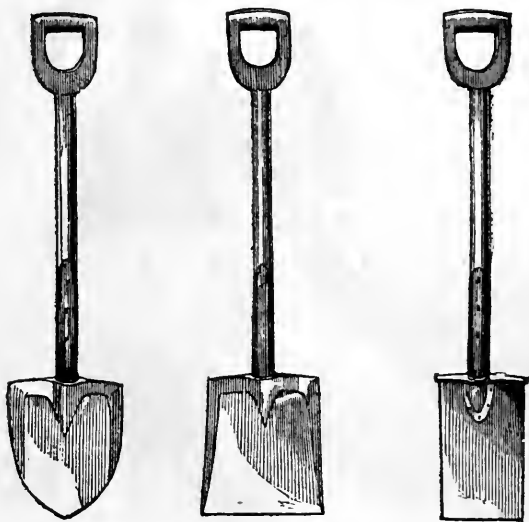
DUTCH OR SCHUFFLE HOES.—(Fig. 64.)

From 3 to 12 inches wide.

Price, 37 cts. to \$1 00.

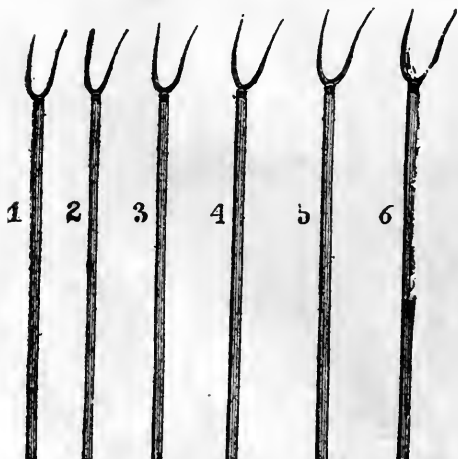


## SHOVELS AND SPADES.—(Figs. 65, 66, 67.)



Of these we have Ames', Carr's, Stone's, Addams', and several others.  
Price, 75 cts. to \$1 50.

## PITCHFORKS.—(Figs. 68 (1), 69 (2), 70 (3), 71 (4), 72 (5), 73 (6).)



Pitchforks of different sizes, very strong and elastic. They are made by the following manufacturers:—Partridge, Hopkins, Clark, and Harper.

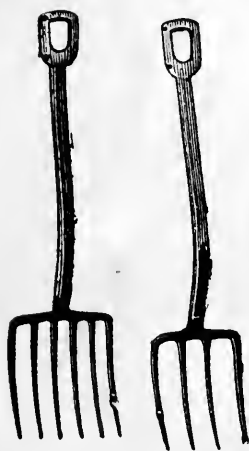
Price, 38 cts. to \$1 00.

## BUSH HOOK.—(Fig. 74.)



This is useful for under brushing forest lands, doing the work much more expeditiously than it can be done with an axe. Price, \$1 00 without handle, \$1 50 with handle.

## PARTRIDGE'S MANURE FORKS.—(Figs. 75, 76.)



These forks are cut out of a plate of cast steel, and have from four to eight tines each. It is a beautiful article for a gentleman farmer, using it with his own hands. The tines have all the elasticity of a steel ramrod. They are strong, and very durable if properly handled.

Price, \$2 00 to \$3 00.

Common manure forks, most of which are very superior.

Price, 63 cts. to \$1 50.

## SCRAPER, TROWEL, AND HOE.—(Figs. 77, 78, 79.)

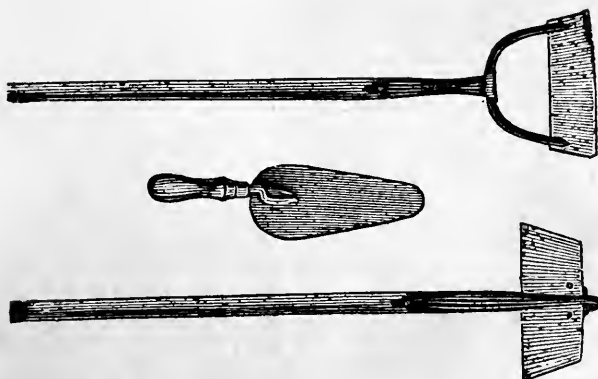


Fig. 77, Floor Scraper, Price, 50 cts.

Fig. 78, Transplanting Trowel, very useful for transplanting flowers and plants. Price, 37 cts. to \$1 25.

Fig. 79, Weeding Hoe. Price, 25 cts. to \$1 00.

## FRUIT GATHERER.—(Fig. 80)



A small net is attached to this implement into which the fruit drops as it is cut from the tree.

Price, \$2 50 to \$3 50.

## FRUIT GATHERER.—(Fig. 81.)



Price, 50 to 75 cts.

## PRUNING SAW AND CHISEL.—(Fig. 82.)



The blade of the saw is about 12 inches long, attached to the blade of the chisel at one end, and to the socket of the chisel handle at the other end. The chisel is 3 inches wide by 4 inches long, made thin, and of the best cast steel. A wooden handle of convenient length is inserted in the socket handle, enabling a person to stand on the ground and trim his trees at his convenience.

Price, \$2 00.

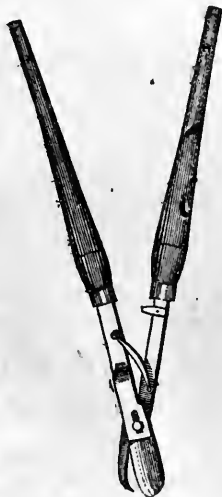
## LOPPING OR BRANCH SHEARS.—(Fig. 83.)



Fig. 83 is very strongly made, with long wood handles, and is used for cutting thick branches from trees, shrubbery, hedges, &c.

Price, \$2 50 to \$3 00.

## SLIDING PRUNING SHEARS.—(Figs. 84, 85.)



Figs. 84, 85, with wood handles, differ from the Lopping or Branch Shears, in having a moveable centre for the motion of one of the blades, by which means, instead of a crushing cut, they make a draw cut, leaving the section of the part attached to the tree or shrub smooth, as if cut off with a knife; they are also much lighter and better finished than the Lopping Shears.

Price, \$2 00 to \$5 00.

## PRUNING SCISSORS WITH BOWS.—(Fig. 86.)



Fig. 86 is adapted to pruning small twigs, cutting flowers, &c., and is a very useful and cheap article for ladies' use.

Price, 25 cts. to \$1 25.

## GARDEN OR HEDGE SHEARS.—(Figs. 87, 88.)

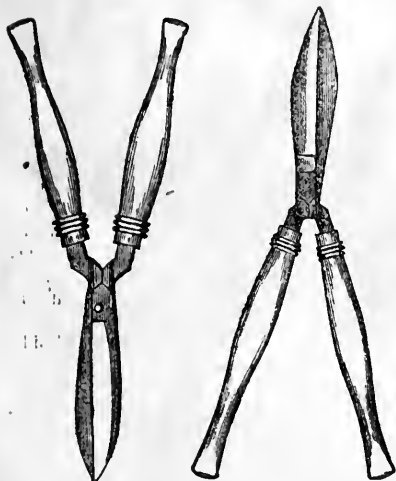


Fig. 87 represents this article without the Pruning notch. Fig. 88 has the Pruning notch, which is of considerable advantage, when used for trimming hedges or shrubbery, as it enables the operator to cut much stronger twigs than could otherwise be cut by the shears.

Price, \$1 25 to \$3 00.

## GRASS EDGING OR BORDER SHEARS.—(Fig. 89.)



Fig. 89 is chiefly used for trimming the sides of box and grass edgings, and is constructed so that the operator may stand upright whilst using them; the one figured here has a wheel attached, which is generally considered an advantage.

Price, \$2 00 to \$3 00.

## LADIES' GARDEN SHEARS.—(Fig. 90.)



Fig. 90 is small, light, and neatly finished, and is very useful for trimming box trees and bushes, as well as for many other purposes.

Price, \$1 00 to \$1 50.

## LADIES' PRUNING SHEARS.—(Fig. 91.)

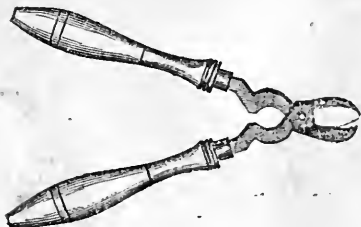


Fig. 91, with wood handles, is handsomely and lightly made, they are very useful in trimming shrubbery, &c., which is too large to be cut by the Hand Shears.

Price, \$1 75.

## AVERRUNCATOR—POLE PRUNING SHEARS.—(Fig. 92.)

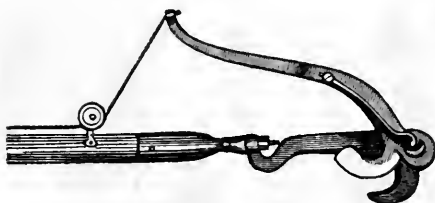


Fig. 92 is attached to a pole and operates by means of a lever moved by a cord and pulley: its use is to enable a person, standing on the ground, to prune trees, some of the branches of which could not, perhaps, be readily pruned by any other process: branches of one

inch and a half in diameter may be easily cut off with this instrument. Averruncators of small size are also very useful in cutting off from shade and fruit trees small branches to which insects have attached themselves; they are also used for gathering fine fruits, which, when cut, will fall into a basket attached to the instrument when used for this purpose.

Price, \$3 00 to \$4 50.

## POLE PRUNING NIPPERS.—(Fig. 93.)



Fig. 93 is a very effective instrument, and possesses the advantage of having a sliding cut, which lessens the labor of the person pruning, and leaves the branch which has been cut as smooth as if a knife had been used; this instrument is much superior to the Averruncator, but will not cut a branch of greater diameter than one inch.

Price, \$6 50.

## PRUNING SCISSORS.—(Fig. 94.)

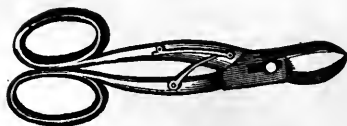


Fig. 94 is very handsomely made, with sliding centre and spring, and is fitted with sheaths; these scissors cut as smoothly as a pruning knife, and for pruning rose bushes, &c., are superior, especially for ladies.

Price, \$2 00 to \$2 50.

## VINE SCISSORS.—(Fig. 95.)



Fig. 95 is used for thinning out grapes, when they have grown too closely on the bunch; also for removing superfluous leaves, twigs, &c.

Price, 50 to 75 cts.

## FLOWER GATHERER.—(Fig. 96.)



Fig. 96 is a pair of scissors combining tweezers or pincers; they are of great advantage in gathering roses and other flowers which have thorny stems, as the flower cut by the scissors, is held fast by that part which acts as pincers.

Price, 62 to 87 cts

## HAND-SLIDING PRUNING SHEARS.—(Figs. 97, 98.)



Fig. 97 represents a pair of the iron handled shears. Fig. 98 a pair with cocoa handles; they are

similar in all respects except the style of finish, and for gentlemen's use, are the very best instruments for pruning roses, &c.; they have the sliding centre and spring, and make a perfectly smooth cut.

Price, \$1 37 to \$2 00.

## THE GRASS EDGING KNIFE.—(Fig. 99.)



Fig. 99 is fitted to a straight handle, and used for paring the edges of grass bordering walks, &c.; also for cutting the outlines of sods, which may then be readily raised by the spade.

Price, \$1 12 to \$1 25.

## BRIER OR BILL HOOKS.—(Fig. 100.)



Fig. 100 is of various forms, though the one represented here is the kind most approved; they are used with either long or short handles, as circumstances may require, and are very useful for trimming the sides of

hedges, cutting bush, brambles, &c.

Price, 75 cts to \$1 25.

## GARDEN RAKES.—(Fig. 101.)



Fig. 101, vary in the length and strength of their teeth, as well as in their number: they are used for covering seed, raking of weeds or cut grass, smoothing and pulverising surfaces, &c.

Price, 25 cts. to \$1 50.

## GARDEN TROWELS.—(Fig. 102.)



Fig. 102 is used to plant or take up for replanting, herbaceous plants, very small trees, roots, &c.; they are also used for stirring the soil among tender plants, in confined situations, loosening the roots of weeds, &c.

Price, 25 cts. to \$1 00.

## THE GRASS LAWN RAKE.—(Fig. 103.)



Fig. 103 has teeth sharpened on both edges like lancets, and is used for raking the grass in order to tear off the flower heads or buds of daisies, dandelions, and other plants in grass lawns.

Price, 50 cts. to \$1 50.

## GARDEN HOES.

Figs. 104,



105,



106,



107,



108,



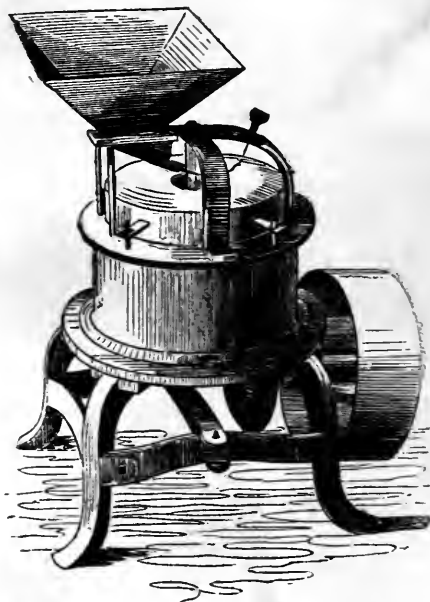
109.



Fig. 104, Square Hoes, cast steel; fig. 105, Half round Hoe, cast steel; fig. 106, Turnip Hoe, cast steel; fig. 107, Triangle Hoe, cast steel; fig. 108, Forked back Hoe, cast steel; fig. 109, Pronged back Hoe, cast steel.

Price, 25 to 87 cts.

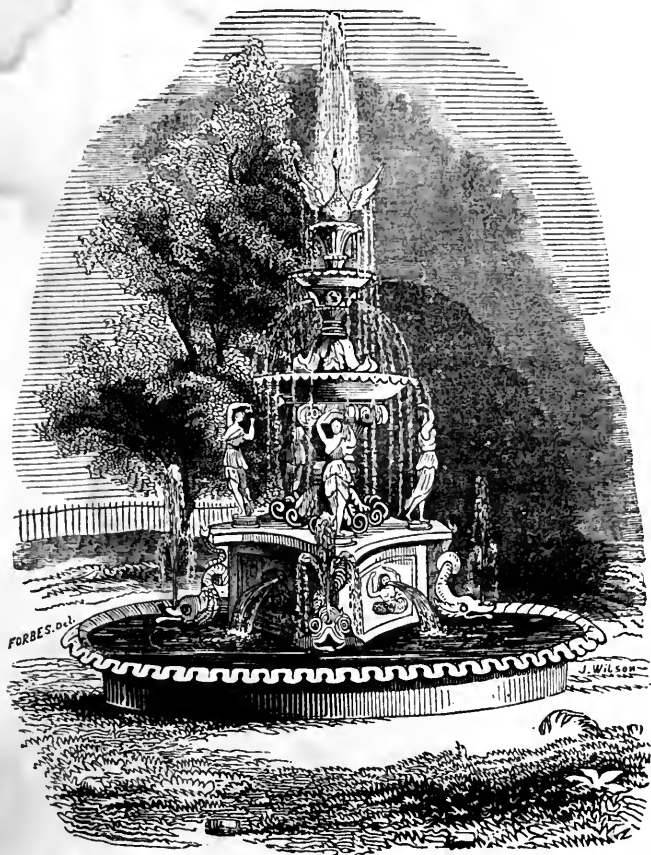
## RICE HULLER.—(Fig. 110.)



This machine has been greatly improved recently, and will hull from two to ten bushels per hour, according to its size. The prices also vary according to size. They may be had from \$80 00 to \$200 00.

COFFEE HULLER.—The same machine hulls coffee equally as well as rice. The sizes and prices are the same as the above.

FOUNTAINS.—(Fig. 111.)



These are made highly ornamental for the garden and lawns. The one we introduce to our readers is of the composite order, embracing a great variety of figures, each of which might be taken for a single fountain. They are made in this city after any desirable pattern, and cost from \$10 up to \$1500.

#### RAISING WATER BY HORSE POWER.

Having a pump of sufficient capacity for two horses, the same quantity of water can be raised in half the time that one can do it; but one horse can work the same pump as easily as a smaller one, if the stroke of the pump be shortened so as to bring the quantity within his power, which can be readily done by having the crank pin so fixed that it may be taken out and placed in a hole prepared for it nearer the centre, so as to give the requisite shortness to the stroke.

Horse powers should be strong, and every part of the work well made, as all unnecessary friction is so much loss of power; and to work a pump, they should, in all cases, have a balance wheel to regulate the motion, as without one the draft is unequal, and the jerking movement produces unnecessary wear, both of horse and machinery—while une-

qual motion, being more liable to break the parts, calls for more strength in them, and consequently expense.

Machines to work pumps are generally calculated to be stationary, and can be made on more simple plans than those that are intended to be moveable.

(Fig. 112.)

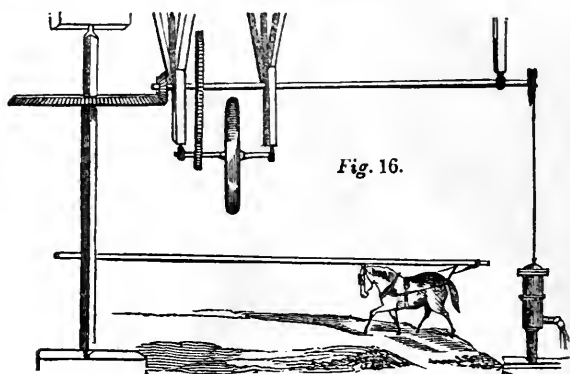
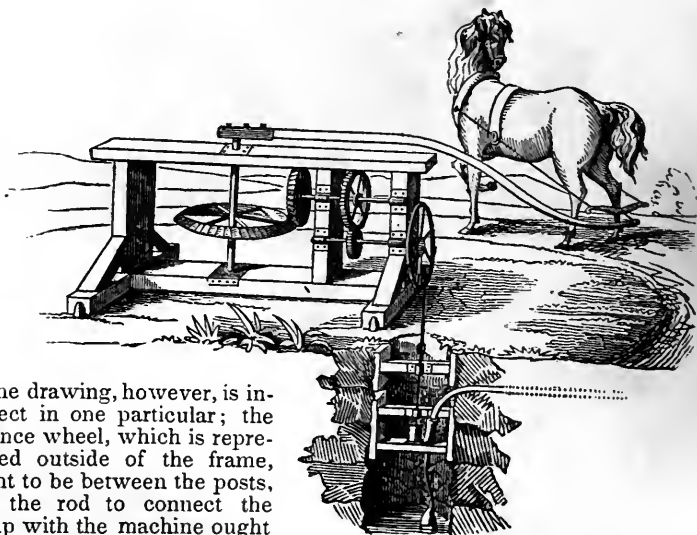


Fig. 16.

Here is a plan of one now in use for raising water 137 feet, to which is attached a lift pump for drawing water from wells 80 to 180 feet deep, or from springs or rivers at a short distance.

Another plan of a horse power is here given, which may be preferable in many situations.

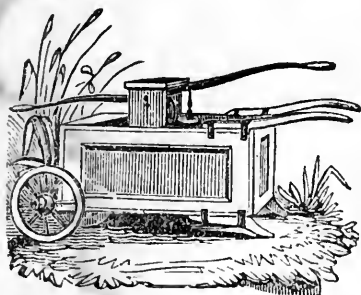
(Fig. 113.)



The drawing, however, is incorrect in one particular; the balance wheel, which is represented outside of the frame, ought to be between the posts, and the rod to connect the pump with the machine ought to be attached to the crank on the upper shaft; because the speed of the balance wheel on the shaft, as represented, would not be sufficient unless it was very large. The circle for a horse to travel in, to work a power to advantage, ought to be 25 feet diameter, and a horse will pass around on an average about three times a minute. In order to get 25 revolutions to the crank, the large wheel must be eight times the diameter of the small one, or 8 feet and 1 foot, if of cast iron. But if made on the plan represented in cut, Fig. 113, the large wheel may be made of wood with iron

segments. In that case it would be well to make the large wheel 12 feet and the pinion 18 inches, as the friction is less as the pinion is larger.

#### GARDEN ENGINE.—(Fig. 114.)



The box of this engine will hold 40 gallons—with cast iron wheels, and handles so that one person can wheel it;  $2\frac{1}{2}$  inch double action pump, and will throw water 70 feet horizontally and 40 feet high, with one person to work it. They are well calculated for watering gardens, washing windows, destroying worms on trees or shrubbery, protecting buildings against fire from other buildings, &c. Sulphur put in water and thrown on plants, will destroy the worms on them.

This engine would prove very useful to horticulturists, and may be made serviceable, in a drouth, for watering gardens, nurseries, &c.

Price, \$40 00 to \$50 00.

#### SOILS.

Stiff clays should always be kept in grass, for, owing to their adhesiveness, it is so difficult to cultivate them, they will not pay for doing so at the present prices of produce and labor; besides, if properly taken care of and occasionally manured, their average yield of grass is a good one, and it does not run out as in most other soils. Loamy and sandy soils should be kept in a rotation of crops: and the lighter the soil the harder it may be worked in this way, provided it be well manured after each crop is taken from it, as it exhausts itself more rapidly than a loam, and above all, a clayey soil. The latter is cold, inert, and sluggish, and like an unwieldy animal, cannot be roused beyond a certain production.

We are great advocates for stirring the ground deep. This is best done with the subsoil plow, which loosens the substratum without turning it up to the surface. Subsoils are rarely as rich as surface soils; they should therefore be brought up and mixed with the surface soil no faster than they can be enriched and made equal to them. A rich surface soil may be turned up to any depth. For example, in alluvial bottoms, when a depth of six inches of soil has been cultivated till it has become somewhat exhausted, by turning up an additional inch or more it gives fresh rich earth to the cultivated surface, and is equivalent to a good manuring. Trench or deep plowing, under such circumstances, is very beneficial.

#### THE GARDEN.

In garden culture greater pains should be taken than in field culture, because the products there are required to be of superior quality, and it is desired to make the most of the land, to say nothing about the eye being gratified with its tidy appearance. It should be sheltered from cold winds; have a southern or eastern aspect if possible, and a warm dry soil for all early vegetables. Later products may be put on a colder soil. The deeper the ground is stirred and enriched the better. One foot is the least depth that a good gardener will be satisfied with, and if he can turn up and enrich the soil to eighteen inches or two feet, so much the better. Indeed, with asparagus and some other products, the latter depth is absolutely necessary to produce a good crop.

FIELD AND GARDEN SEEDS, WITH BRIEF OBSERVATIONS  
ON THEIR CULTURE.

*Advertisement.*—In selecting our seeds we use the utmost care we possibly can to ascertain, 1st, that they be true of their kind; 2d, that they be fresh and certain to generate; 3d, that they be free from all foul seed. We, however, do not claim infallibility, and by being deceived ourselves may occasionally be the innocent means of deceiving others. Whenever such a case occurs we beg to be immediately apprised of it, and the party complaining shall be ensured prompt redress.

*Observation.*—Seeds often do not generate in consequence of the extreme dryness or dampness of the ground; from excessive heat or cold; from being covered too deep or too shallow; sometimes they are burned up by coming in too close contact with hot manures; or the soil may be too poor; or they may be eaten up by underground insects; or if they escape these, as soon as the embryo bursts from the shell, and before it can appear above ground, it may be destroyed by worms or flies, frequently so minute that the naked eye cannot perceive them; or after coming up they are choked and destroyed by weeds. All these causes should be inquired into thoroughly before complaint is made; for it is more often the fault of anything else than the seed, which prevents its germination and growth. Where there is any doubt upon the subject, a small quantity of seed should be sown in a flower pot, and carefully guarded in a conservatory or some proper place, till a sufficient time has elapsed to prove whether it be good or bad. Our customers will do us a very great favor by particularly attending to these points.

## PRICES OF FIELD SEEDS, ETC.

*Observation.*—It must be remembered that we give the *retail prices of choice selected seeds*, and these vary considerably in different years, and frequently in the same season. The prices of *selected seeds* are usually from 50 to 400 per cent higher than the *common kinds*. For instance, good common oats may be had for 30 to 50 cents per bushel; the Imperial oats cost from \$1 00 to \$1 50 per bushel; and so of several other things. We will execute orders for the common kinds of seeds, &c., at the lowest market prices when desired. We make these preliminary observations so that our customers *may know how to order*; and to avoid the complaint about prices. For wholesale prices see the monthly Price Current in the American Agriculturist.

## GRASSES.

*Remarks.*—There are many kinds of grasses that belong to the clover family, such as the scarlet, yellow, cow-grass, Bokhara, sainfoin, trefoil, &c.; but for various reasons, which we have not space to enumerate here, they have not flourished well in the United States, and we forbear encumbering our pages with them. The same remarks will hold good in respect to rye grass, rib grass, &c., &c. We have either tried on our own farm, or seen tried by our friends, nearly all European grasses and clovers, and the result is, that they are not equal to those we mention below, and our farmers, therefore, have nearly abandoned their culture. We believe that some of the indigenous grasses of America may be profitably cultivated, and we recommend experimenting with them in preference to European grasses already so often tried and found wanting.

BLUE GRASS of the West, or JUNE GRASS of the Northern States.—This is deemed invaluable at the Southwest, providing by its luxuriant growth,

a winter forage which is cropped by the stock on the ground. It is a valuable pasture grass at the North, being hardy and self-propagating, and with the white clover spontaneously filling up every vacant space of waste ground in our good clay lands. But as a meadow grass it is highly esteemed, coming to maturity some weeks before the timothy or clover, and by the time they are fit to cut yielding only a small quantity of withered grass. Like the white clover it ripens and sheds its seed so as to give a prolific growth of fresh plants for the fall and spring feed, below the latitude of  $41^{\circ}$ , on calcareous soils. No grass equals this and white clover for fattening qualities, or to make cows produce a superior quality and a large quantity of butter. When cut with white clover, for hay, it should be housed as green as possible, and be well salted. Although it yields a comparatively small quantity per acre, it is exceedingly nutritious for sheep.

Blue or June grass makes the best lawns; growing fine and thick, the turf is firm and elastic under the feet, coupled with a velvety smoothness and softness which no other grass in the United States can produce. It should be sown at the rate of 5 to 10 lbs. per acre in the autumn or winter at the South, and early in the spring at the North. Top dress with plenty of lime, plaster, and ashes. Price, 25 to 35 cts. per lb.

**RED CLOVER.**—This is one of the most important crops in the United States. It grows readily on almost any soil, from Maine to Texas, and under proper treatment almost anywhere yields profitable returns. By large numbers of farmers, especially in New York, New Jersey, and Pennsylvania, it is used extensively as a fertiliser in their rotation for wheat, and for this purpose nothing is better adapted. It also affords one of the most profitable crops of hay. For this purpose it is usually raised in connection with timothy, a practice which is objectionable, except it be wanted as a fertilizer, on account of its maturity for the scythe being some time earlier than this grass. It does well sown with orchard grass, as the two ripen about the same time. All soils are suited to it, if dry and fertile. It may be sown in the autumn or winter at the South; or on open ground, or new subdued meadows at the North, in winter wheat, or rye, while the snow is just disappearing in the spring, and while the earth is still thrown up by the effects of the winter's frost, or as early thereafter as possible. No subsequent harrowing is necessary. It may also be sown with oats or barley after the latter have been harrowed in. It should be cut when the bulk of the blossoms are turning brown, and after lying in the swarth until wilted, turned over without spreading, raked and cocked the same day, and when sufficiently cured in the cock, put in store, with the addition of a few quarts of salt to every load. There are several kinds of red clover; the large or northern, the meadow, and the dwarf. The two former are usually cultivated. Clover and all other crops sown upon light or sandy lands are greatly improved by the use of the roller. From 8 to 16 lbs. of good seed is required for an acre, more being necessary on stiff or old soils than on new and lighter ones.

Price, 9 to 13 cts. per lb.

**WHITE CLOVER.**—This is a valuable herbage for pastures, but does not grow to a sufficient size for profitable hay, except for sheep stock. Clays and calcareous soils are best adapted to it, and on these, if in good condition, it grows spontaneously in great abundance. Plaster, with a reasonable degree of fertility, will always insure a luxuriant growth of the clovers, often bringing them into existence where their presence had scarcely before been noticed. Sow from 4 to 8 lbs per acre.

Price, 35 to 50 cts. per lb.

**LUCERNE.**—This is cultivated to considerable extent in the neighborhood of our cities. It requires a very deep, rich loam, as it sends down its

long tap roots to a depth of 2 to 5 feet. It must be kept clear of weeds the first year, after which it completely covers the ground. It may be cut several times in the course of the season, and yields a large quantity of fodder, somewhat inferior in its nutritive qualities to the red clover. Plaster, or bones in considerable quantities, ground and scattered broadcast, and other manures, are essential to its continued productiveness on the same land. It requires ten to fifteen lbs. of seed to the acre, broadcast, or in drills at the rate of fifteen lbs.

Price, 20 to 35 cts. per lb.

**TALL OAT GRASS.**—This is one of the best grasses for early soiling. It grows rapidly and produces a constant succession of luxuriant fodder, whether cut or fed on the ground. A stiff clay, as well as other soils, is suited to it. It should be sown in the spring, either by itself or on winter or spring grain. It should be fed green, as it is too coarse and dry when cured to make good hay. Sow from 12 to 16 quarts per acre.

Price, \$3 50 to \$4 50 per bushel.

**ORCHARD GRASS** of the United States, **ROUGH COCKS-FOOT** of England.—It comes forward earlier than any other grass in the spring, and produces most abundant crops in quick succession, yielding several large cuttings of excellent hay in one season, and furnishing a great quantity of nutritive pasturage. It requires a dry and good soil, and should be cut before it ripens, or closely fed, to secure its full value. Sow at the rate of one and a half to two bushels per acre, for if the seed is not sown thick it will come up in tufts. It is more important that this grass covers the land well than any other that we know of.

Price, \$1 25 to \$1 75 per bushel.

**RED TOP.**—This is also called **Herd's Grass** in the Middle and Southern States. It is a valuable grass for very moist soils, yielding a large return of good hay. It is cultivated similarly to the Timothy. It makes a thicker and superior pasture to Timothy, and forms a pretty good turf for a lawn. Sow from 12 to 16 quarts of seed per acre.

Price, \$1 25 to \$1 75 per bushel.

**RYE & WHEAT.**—These are extensively cultivated for late and early grass pastures. They are preferable, on the whole, to the Italian or any other rye-grass we know. They should be sown distinct, the same as for a grain crop. The earlier this is done in August the better, when designed for pasture.

**TIMOTHY, HERD'S GRASS, FOXTAIL, MEADOW CAT'S TAIL.**—By all these names this grass is known. It is the king of grasses for hay in the northern parts of the United States and the Canadas. Good clays or loamy lands are best suited for it. Unless sowed late in the season it will not require harrowing, the rains planting it with sufficient depth where the surface is light or well mellowed with the harrow. It should be suffered to remain till the seed is rather past the milk, and getting into the dough, when it may be cut, and in this state much of the seed will germinate. Enough of the seed is thus scattered upon the ground to renew and keep the permanent meadows in high condition as to productiveness. It is suited either to a moist or dry soil. If sown with clover, at the proper season, 8 quarts of seed, with 6 to 10 lbs. of clover, on a well pulverised surface, will give a good coating of grass; but on a stiffer soil, or when an immediate thick growth is desired to keep all weeds down, this quantity of seed may be increased to nearly double without being considered as wasted on the land. Timothy yields little or no after-math, and makes rather a poor, thin pasture. It may be sown in August or September, or early in the spring, at the rate of 12 to 16 quarts per acre.

Price, \$2 25 to \$4 00 per bushel.

## GRAIN.

**BARLEY.**—Grows well on a light, rich soil, but is probably more tenacious of a fertile clay. Both wheat and barley affect a clayey loam, and contrary to the prevalent opinion in this country, we must believe with antiquity, “*Dame Ceres joys in heavy ground, and Bacchus in the light.*” But the ground for barley should be well pulverised, and be naturally rich, or made so from former years’ cultivation. No manure should be added to the crop itself, unless it be a light top dressing of liquid or solid manure after it is fairly up and on its way. The sowing should be done as soon as the ground can be worked advantageously in the spring, at the rate of  $1\frac{1}{2}$  to  $2\frac{1}{2}$  bushels per acre. Poor ground, heavy clays, and late sowing require the heaviest seeding. A previous soaking in a strong solution of saltpetre materially helps forward the growth. The four or six rowed is the best kind. Price, 75 cts. to \$1 50 per bushel.

**BUCKWHEAT.**—This crop is generally cultivated on light land. It may be sown after the middle of May. Some sow it as late as August with wheat, and find that it will frequently mature and yield a good crop without injury to the wheat. It is a valuable crop for family use, farm stock, and poultry. It has heretofore been used to some extent as a fertiliser, being plowed in green, but the superior quality of clover for this purpose has superseded it entirely of late years. It is sown either broadcast or in drills, at the rate of 1 bushel per acre in the former, and 2 or 3 pecks if in the latter case. Price, 50 cts. to \$1 00 per bushel.

**MILLET.**—This requires a dry, light soil; but a heavy crop can only be realized on a rich one. It is sown from 1st May to 20th June to ripen the seed; but a good crop of hay may be secured by sowing as late as the last of July. It may be sown in drills or broadcast. Owing to its ripening unequally, and the consequent loss of harvesting, injury by birds, &c., it is not often raised for grain, but is usually cut while the seed first begins to ripen. It will produce from  $1\frac{1}{2}$  to 4 tons fodder per acre, equal in value to grass, and from 20 to 60 bushels of grain, equal to corn for many kinds of feeding. Sow from 12 to 24 quarts per acre. When the ground is in proper condition, and the season favorable, the former quantity in drills and 16 quarts broadcast will insure a full crop. Price, \$1 00 to \$1 50 per bushel.

**OATS.**—These do best on a very strong soil, and clayey loams are well adapted to them. If plowed in the fall they may be sown on the field without further stirring the land, as early as the ground will admit of harrowing. They should, like all other grain, be cut as soon as the lower part of the stalk turns yellow. This secures the attachment of the grain to the head without wasting, till harvested, and gives a better quality of fodder for the stock. The common white oat is better than the black, though this last is extensively cultivated. If cut in a green state, the berry in the milk, the straw and grain make a fodder for horses equal to the best Timothy and clover hay. Scotch Potato and the Imperial oats are considered the best. Sow from 2 to 4 bushels per acre. Price, \$1 00 to \$1 50 per bushel.

**RYE.**—This grain is never advantageously raised unless upon dry, light soils. These may be rich or poor, a crawling sand or once floating bog, if the former is somewhat compacted by ashes or saline or putrescent manures, or by the accumulation of vegetable matter, and the latter has been thoroughly drained and received a coating of sand or loam. It should be sown from the middle of August to the middle of September. Rye is useful for soiling, or feeding off on the ground; and when the soil is good it may be thus fed in the fall and again in the spring, and after-

wards allowed to ripen, when it will often produce a good crop of grain. It is sometimes sown between the corn hills in August, and by harrowing between the rows each way, it may be got into quite a state of forwardness by the time the corn is taken off the ground; or the corn may be cut up by the root and shocked on the field, and allow the rye to occupy the whole space. Sow from 5 to 6 pecks per acre.

Price, 75 cts. to \$1 00 per bushel.

**MULTICOLE RYE.**—Considerable has been said of this lately introduced grain, but we have few facts to relate concerning it. We doubt whether it will supersede our common rye for pasture or soiling, and it is not near equal to it as a grain.

**WHEAT.**—This is sown from the 15th of August to the 10th of November; but the most suitable time in a northern latitude is from the 5th to the 20th of September. If sown earlier it is liable to attack from the fly; if later it does not tiller so well, and is more liable to winter-kill. Wheat, and indeed all small grains, yield best when cultivated in drills from 6 to 18 inches apart. Large crops have been raised sown in drills 3 feet apart. It is not near so liable to rust or mildew when sown in drills, as the air circulates more freely among it, giving a waving motion to the stalks, which is pretty certain to prevent mildew and rust. These diseases usually attack the wheat in calm weather, when the sun comes out hot after a rain. The grain should be cut when the stock first changes color near the ground. The berry is then in its dough state; but if cut then it will be found to be heavier, plumper, and yield more flour of a better quality than if permitted to stand longer, while the straw is more valuable for feeding. Wheat intended for seed should be allowed to stand till it *fully ripens*. A clover ley previously limed or plastered, is the best preparation to turn under for wheat. Calcareous soils, that is, such as have lime in them, are the most suitable for this grain; and where these do not exist naturally, lime, ashes, charcoal, and plaster, in suitable quantities, must be added. Before sowing, the wheat should be thoroughly cleansed, and every particle of foreign seed removed. Then wash it three successive times in the strongest brine, mix with a coating of slaked lime, and spread out to dry. If spread out in the sun it will dry in two or three hours, if in the shade it will require longer. This preparation secures the crop against smut, and promotes the growth. The quantity of seed found most judicious as a general rule for sowing, is 5 to 6 pecks per acre; on the heaviest clay soil two bushels per acre is none too much, the same causes requiring variation as in barley and other grain. Some kinds of seed tiller better than others, which of course should vary the quantity sown. Some pertinaciously adhere to sowing the largest, plumpest berry, when it has been found that a medium size, or even shrunken berry, of a choice kind, will give quite as good a crop. The best kind of wheat is the Improved White Flint.

Price, \$2 00 to \$2 25 per bushel.

Other kinds may be had for \$1 00 to \$1 50 per bushel.

**SPRING WHEAT.**—This does best on land which has been plowed in the autumn, and should be sown immediately after the frost has left the ground in the spring, while it is still rough and uneven from its effects. The seed will fall into the little depressions thus formed, and as soon as the harrow can be put on it may be dragged in. It should be brined and limed before sowing, the same as winter wheat. The best varieties are the Italian and the Siberian; but in consequence of these having been more subject latterly to the ravages of the fly, they have given place to the Black Sea wheat. Sow 5 to 6 pecks per acre; on a stiff clay soil 2 bushels per acre.

Price, \$1 25 to \$2 00 per bushel.

## GARDEN AND FIELD SEEDS.

**ARTICHOKE** (*for the Garden*).—The Large Globe is the best variety. It is propagated either from seeds or offsets. It requires a rich soil and a good deal of room. Plant the seed early in the spring, three or four inches apart, in rows from 1 to 1½ feet apart. The next year transplant the roots or offsets to beds highly manured, placing 3 or 4 roots in a circle of 6 inches, and these circles three or four feet apart. Protect during the winter by raising over them a mound of litter or light dry earth.

**ARTICHOKE, JERUSALEM** (*for the field*).—This root is cultivated precisely like the potato, in hills or drills. At the South and West it is fed off by turning swine on to the fields, who root them up and consume them at pleasure. A winter's supply of food is thus easily provided for their hogs, and the crop fed off the land greatly enriches it. The artichoke is considered one of the best of fertilizers, as it derives a large amount of its carbon and nitrogen from the atmosphere. It should be cultivated extensively in well grown orchards. After the fruit is gathered turn the swine on to feed them off. Their rooting them up is nearly as beneficial as plowing; they destroy, at the same time, nearly all the insects harboring round the trees, and the manure they leave is equivalent to a good top dressing. Frost does not injure them, and they will propagate themselves. They grow well on the poorest land. Price, \$1 00 to \$2 00 per bushel.

**ASPARAGUS**.—There are, it is said, several varieties of asparagus, but the difference mainly arises from the nature of the soil. On strong loamy land the growth is more robust, and the shoots more tender than on sandy soil. Early in the spring soak the seed in warm water for 24 hours, then drill it thinly, in rows sufficiently wide apart to admit the hoe—when two years old they may be transplanted into permanent beds, which should be so situated as to cast off an excess of moisture. A convenient width for the beds is four feet; the plants placed twelve inches apart in each direction; they should be planted at least four inches beneath the surface, well manured at the time, and annually thereafter. Salt spread broadcast over the beds at the rate of 1 to 3 lbs. per square yard, after forking them over early in the spring, adds to the growth of the plant, and makes it much sweeter and more delicate to the taste. A compost of guano and charcoal is also an excellent top dressing.

**BEANS**.—These may be planted in hills or drills. The former is somewhat more convenient for the field, as it admits of easier culture with light plows or cultivators. When land is in good condition, it is better to place the hills so near to each other, that only a first or second plowing can be performed before the spreading of the vines will prevent any other cultivation than with the hoe. They should never be hoed when they are wet or dew is on them, as it makes them liable to rust. The best beans as bearers, as well as for nutriment and actual value, are the garden beans; and among these there are none better than the long white kidney. They are early ripe, sure and prolific bearers. Any good soil is suited to them, but it must be a dry one. They may be planted as soon as all danger from frost is removed, and early planting generally gives the greatest yields. They are often planted among corn in New England at the second time of hoeing; but this is a practice we cannot recommend. Price, \$1 00 to \$4 00 per bushel.

**BEETS**.—All roots require a deep, rich, mellow, and sufficiently dry soil. It should be worked at a time that will insure its being left finely pulverised. The use of long or unfermented manure is not objectionable if it can be laid sufficiently deep in the furrow to be out of the way of subsequent tillage. The great supply of the nutritious gases afforded to the

growing crop while it is undergoing decomposition, renders it a valuable manure. For field culture throw the land into beds about a rod wide, just before sowing. Pour boiling water on the seed and let it stand afterwards at blood heat for two or three days at least, when it will be fit for sowing. Mix plaster, ashes, or fine dirt, with the seed before sowing, then plant with a seed sower, or sow by hand, putting two seeds in a place, three to four inches apart, in drills two and a half or three feet apart, and about one inch deep, and set the earth compactly over them. After the young plants make their appearance, stir the earth frequently with the horse plow or cultivator, and keep the weeds well cleaned out. But one plant should be left to grow by itself, and if any are deficient their places may be supplied by transplanting in a moist or wet day. They should be harvested before severe frosts set in, the tops trimmed off and laid in pits or in a coal cellar. The best kind for stock feeding is the sugar beet, and it produces as large a crop as the mangold wurtzel. Four pounds of good seed is enough for an acre. The long blood red, and orange turnip-root beets, are the best for the garden, where they may be sown in drills one foot apart. Price, 75 cts. to \$1 00 per lb.

**BORECOLE.**—Under this head we have the dwarf kale, which is an excellent green for winter and spring use; being dwarf it is easily preserved during severe weather; and Scotch kale, which is sown in May and transplanted and treated as winter cabbage.

**BROCCOLI.**—This produces heads like cauliflower in autumn. The large purple cape appears to be the best adapted to our climate. Sow in seed-beds middle of spring, transplant into very rich ground when eight or twelve inches high, and manage generally as is usual with winter cabbage.

**BRUSSELS' SPROUTS.**—Are cultivated for the small heads which spring in considerable numbers from the main stem. Much esteemed in some parts of Europe, but here it has attracted but little attention. Sow in seed-bed middle of spring, and transplant and manage as with winter cabbage.

**CABBAGE.**—For the garden sow the early sorts in a hot-bed, and transplant from two to three feet apart in a wet or cloudy day, as soon as the weather will permit, on well manured or rich land. For field culture sow the later and larger kinds of seed in beds as soon as it will do, out of doors, and transplant about the first of June somewhat farther apart than in the garden, so as to admit the cultivator running between the rows.

**CARROTS.**—These should be sown in soil similar to the beet, except that it requires to be somewhat lighter and looser than is essential to the beet. Soak the seed in warm water for a day or two, and then thoroughly mix it with plaster, ashes, or dirt, to break the little adhesive fibres, and allow of sowing early. The drills may be two to two and a half feet apart, and the plants allowed to stand about six or eight inches apart in the drill, if of the largest kinds, or if of the smaller they may stand nearer. Sow in rows one foot apart for the garden. Frequent hoeing or stirring the ground, and thorough weeding, are all that are essential subsequently. The white or Belgian carrot is the greatest producer at the least expense of soil, as it draws largely from the atmosphere for its support, and growing high out of the ground is easily harvested. It is not, however, as nutritious for stock, pound for pound, as the other kinds. The long orange or red is a choice kind for the field. About 2 lbs. of seed is required per acre. Price, 75 cts. to \$1 00 per lb.

**CAULIFLOWER.**—Sow the early sort in hot-beds, and transplant into rich soil. The late sort to be treated like the cape broccoli, which it resembles.

**CELERY.**—Sow in hot-beds, and transplant into a rich, moist place. This vegetable is a favorite salad.

**CHERVIL.**—Is used as a salad. Sow in narrow drills in May.

**CORN SALAD OR VETTIKOST.**—Used as a small salad throughout the winter and spring. Sow thickly in drills first of autumn, and sprinkle with straw on the first approach of severe weather.

**INDIAN CORN.**—This should be planted for ripening as soon as the spring frosts are out. The soil must be light, dry, and rich, to produce a good crop. It is always best to soak the seed before planting, in a strong solution of saltpetre. This gives an early, vigorous growth, and if crows and other foragers incline to depredate on the fields, this will give them so rank a condiment that they will hardly go beyond the first crop full. An absurd principle is adopted by some farmers to set up scare-crows, or kill off the birds visiting the fields. Even if they take some of the seed they will probably more than make up for it by the quantity of worms and bugs they will also destroy. But by soaking in saltpetre, or pouring into a barrel, containing a bushel or so of seed, a quart or more of very hot tar, stirring the whole mass rapidly, every kernel will have become coated, and the plunderers after picking up a few and finding them all of one pattern, will gladly give up the pillage and betake themselves to an extermination of their rival enemies to the corn, the worms, bugs, and beetles. Corn should be planted on well plowed ground, in hills, with three to six stalks in a hill, according to the kind of seed used; three to four feet apart each way, so as to admit of weeding and stirring the earth both ways with the plow or cultivator. For light land, even cultivation (not hilling) is best. The tops of the corn should never be cut off till the corn is newly ripened; but instead of the top the whole stalk close to the ground should be cut as soon as the grain is thoroughly glazed and well into the dough state. It will, if shocked up in the field in this state, fully mature the grain and yield good fodder from the stalk. The Dutton, or many other kinds of eight rowed, large eared, and early maturing corn, is the best for the north-eastern States: while the choicest varieties of the gourd seed are the best and most productive for the warmer climate of the South and West. Sugar or sweet corn is the best for cultivating in the garden for table use. Sowing corn for soiling or fodder has been adopted of late years. This is best done by sowing in drills, say eighteen inches to two feet apart, and quite thick in the rows, or broadcast at the rate of three to four and a half bushels per acre. The best kind for soiling is the sweet corn, as its stalks are the sweetest, most juicy, and tender. Where it has taken well, and the season has proved favorable, an enormous quantity of fodder is thus raised. Every farmer ought to sow at least one acre to every five head of cattle he may design to winter. This will ensure him against a drought and the loss of his hay crop.

Price, 50 cts. to \$2 00 per bushel.

**BROOM CORN.**—Should be planted on land similar to the preceding, and somewhat later, as a spring frost, which could be resisted by the greater vitality of Indian corn, might effectually destroy this more unresisting plant. The rows should be about three feet apart, and the hills about two feet distant from each other; 15 to 20 good seeds should be planted in a hill, so as to ensure 8 or 10 good plants, to which number they should be thinned on a second weeding. Early and frequent stirring of the ground is essential.

Price, 50 cts. to \$2 00 per bushel.

**CURLED CRESS, OR PEPPER GRASS.**—Used as a small salad. Sow very thickly in shallow drills, at short intervals throughout the season.

**CUCUMBERS.**—To obtain them early, plant the seed in a hot-bed, or in elevated hills, well manured with rotten horse-dung, and covered with glazed frames. But in order to grow fair, handsome cucumbers, the soil should be rich, light, and warm, and well mixed with manure; or a good shovel full or more may be put into each hill, and thoroughly mixed with the soil in the hill. Plant in hills about four feet apart each way, elevating the hills a little above the level of the ground. Put in eight or ten seeds into each hill, and cover them half an inch deep with fine dirt, and, as in all other planting, press the earth a little over the seeds with the back of the hoe. When the plants are up examine them closely, as they are frequently attacked by the yellow bug or fly. To prevent this, take soot or rye flower, sifted ashes, and ground plaster, equal parts of each, well mixed together, and dust the plants all over with it. If the plants are dry, sprinkle them with water before you dust them. Keep the ground loose and clear of weeds, and in dry weather water your plants freely. After they have attained a vigorous growth, and the danger from insects is over, they may be thinned out, leaving two or three of the most thrifty in a hill. Those intended for pickling may be planted later. The cultivation and management of these is the same as the others, excepting that the hills should be at least five feet apart each way. Some gardeners recommend nipping off the first runner bud of cucumbers and melons, from an idea that they will become more stocky and fruitful.

**EGG PLANT.**—Sow in hot-bed or other protected place very early in the spring, and late in spring transplant into very rich ground, two to three feet apart. The seed does not vegetate freely—repeated sowings are sometimes necessary.

**ENDIVE.**—Sow from May to July in shallow drills; thin out the plants to stand eight to ten inches apart; tie up to blanch as needed.

**KALE.**—Plant in hills two feet apart. It is forced into growth in the spring, blanched and used as asparagus.

**LEEK.**—This is a wholesome and useful herb, and is so hardy as to endure the extremes of heat and cold without injury. Sow early in drills eighteen inches apart, and thin the plants so that they may be six inches apart. The stalks of the plant are much used in soup.

**LETTUCE.**—This requires a mellow soil. It should be sown as early in the spring as possible. To insure a very early supply it may be sown late in the fall—it will then start early in the spring; but to obtain a constant and regular supply through the season, it should be sown every month from March to September. It may be sown broadcast, moderately thin, or in rows from twelve to eighteen inches distant, according to the usual size of the different kinds. Rake in the seed lightly with a fine tooth garden rake. When the plants are up stir the ground lightly when it is dry, and clear out the weeds: thin the plants where they crowd each other. Those intended for large heads should stand eight or ten inches apart; the hardy kinds, such as the large green head, ice cross, and brown Dutch, may be sown in September, and covered with straw at the approach of severe winter. Any kind may be sown in hot-bed in March, and transplanted in the open ground at the proper season.

**MELONS.**—Treat the same as cucumbers, except planting wider apart, say six to seven feet.

**MUSTARD.**—The white and broad leaf kinds are excellent for salad or greens. They should be sown very early in the spring, in a rich, warm soil, in shallow drills, ten inches apart, and kept clear from weeds. After

the crop is off, the ground may be planted for cucumbers for pickling, or used for a succession of salad or radishes. The brown mustard seed is the best for grinding: it is a palatable and healthy condiment, and may be sown broadcast or in drills, and kept clean from weeds. Mustard is now cultivated extensively as a field crop, by sowing it broadcast or in drills from one foot to eighteen inches apart. Mow it when ripe, and cure it like grain or hay, and thresh out the seed in a grain thresher. It yields from ten to fifteen bushels per acre, worth \$3 00 to \$4 00 per bushel. It is a great exhauster of the land when grown for seed, and requires a rich soil. It is sometimes plowed in green to enrich the land. When sown in drills, from one and a half to two quarts of seed are enough per acre, broadcast it would require four quarts per acre.

Price, \$3 00 to \$5 00 per bushel.

**NASTURTIUM.**—The flowers and young leaves are used as a salad. The seed-pods are gathered while green and tender, and pickled.

**OKRA.**—This vegetable is used in soups and stews, and deemed unusually wholesome. Plant in May or June, in hills two or three feet apart, allowing two or three plants to stand in a hill. The seed is liable to rot in the ground, and should be put in thickly to secure the requisite quantity of plants. Very rich ground is demanded by this vegetable.

**PARSLEY.**—Sow early in the spring, in rows or beds. If the seed is soaked in warm water some hours immediately before sowing, it will vegetate more speedily. It is not uncommon for it to lie in the ground two or three weeks before it vegetates if not well soaked previous to sowing.

**PARSNIPS.**—This root is among the most valuable raised for farm stock. They require a deep, rich, loose soil, and may be sown about the same distance from each other as carrots. The seed need not be soaked before sowing; but it should be put in the ground early, while the ground is wet, which will ensure its immediate vegetation. Unlike all other roots, except the artichoke, the parsnip may remain in the ground throughout the winter, without injury from frost; but care is requisite for the removal of all standing water from the ground over them, or decay will inevitably follow. About two lbs. of seed are required per acre.

Price, 50 to 75 cts. per lb.

**PEAS.**—These are adapted to almost any dry soil; yet they will give a much greater yield on rich, than on moderately fertile land. As with beans, fresh dung is not so good for them. They will bear a much heavier soil than the bean, good clays being highly favorable to their growth. The lands intended for peas should be prepared by fall plowing, and the seed may be sown on the field as soon as the land is sufficiently settled in the spring after the heavy frosts. They may be sown either broadcast or in drills, and harrowed or plowed in two or three inches deep. In the latter case they will admit of light plowing or harrowing immediately after they are up, by which weeds may be exterminated and the growth of the crop be measurably promoted. Where the soil is eminently adapted to them, and the seeds take well, the broadcast sowing is equally productive and efficient in preventing weeds, as their vigorous growth effectually overshadows the weeds and keeps them in subjection. The best kinds for field sowing are the grass pea, and marrow-fat is the best kind for garden culture. Earlier kinds should be selected in part for the garden. Sow at the rate of two to four bushels per acre.

Price, \$1 00 to \$4 00 per bushel.

**PEPPER.**—Sow each kind in drills, on a warm border late in spring or

commencement of summer, and thin them to stand 16 or 18 inches apart. Or they may be sown early in the season in a frame or flower-pot, and transplanted.

**POTATOES.**—This root is the product of almost every soil, although a dry, rich one is best suited to them. A sod turned over in the preceding autumn, so as to become well rotted in the spring after the grass has well started, is perhaps the best suited to give a fair yield, and at the same time a fine, healthy, well matured return. They may be planted in hills or drills, according to the judgment of the cultivator. Whole potatoes of a medium size are better for planting than small, or large cut ones. They should be well hilled up in hoeing. The hills may be about three or three and a half feet apart; or if in drills, they may be three and a half feet asunder, and the potatoes placed about ten inches apart. There are a variety of choice potatoes which are at times popular in different parts of the country, and which, from the introduction of new and favorite varieties, or the older ones becoming poor bearers, or from other causes, fall into disuse. Among the best of the present time may be mentioned the kidney, the pink eye, the carter, the mercer, &c. It requires from twelve to twenty bushels of seed, for planting, per acre.

Price, 50 cts. to \$2 00 per bushel.

**PUMPKINS.**—This is a valuable field crop for fall and early winter feeding, for cattle, sheep, and swine. It is usually planted among corn and potatoes, which is a good practice. But it may be advantageously grown by itself on a rich, dry, well pulverized soil, planting in hills, at a distance of six to seven feet apart each way. The cultivator can do all the work for them. The large yellow pumpkin is the best.

Price, \$2 00 to \$4 00 per bushel.

**RADISH.**—They should be sown early in the spring, in a warm situation. The land should be well manured, deeply dug, and raked free from clods and stones. For a succession of crops sow once in two weeks.

**RHUBARB.**—This is cultivated for the stalk of the leaf, which possesses an agreeable acidity, and resembles the gooseberry when made into pies or tarts; it is an excellent substitute, as it is fit for use before green fruit can be had. The roots continue vigorous many years.

**RUTA BAGA, OR SWEDISH TURNIP.**—This may be sown broadcast on land prepared similarly to beets, and then thinned out with the hoe, or sown in drills. The former method is preferable in one respect, as it gives a much larger supply of food to the turnip beetle or fly, which may still leave enough for the farmer after it has eaten his fill, or if it is cut off by drought or the fly, it leaves sufficient time for resowing. Early sowing is best, as it insures a good crop of large roots; with proper attention and soaking the seed in the most offensive curriers' oil for two or three days, and then rolling in plaster, is a help to the young plant, as they both assist its rapid growth, and the oil is nauseating to the insects in its first tender leaves, which are most liable to destruction. About one and a half lbs. per acre of seed is required. Price, 50 cts. to \$1 00 per lb.

**SALSIFY, OR VEGETABLE OYSTER.**—The roots are boiled like carrots as a vegetable dish, or after being parboiled made into cakes, with paste, and fried like oysters, which they closely resemble in both taste and flavor. Cultivated in all respects like the carrot.

**SORREL.**—The garden sorrel is used as a salad. Sow in June, in drills, and thin the plants to twelve inches apart.

**SPINACH.**—Sow at any time of the year when the ground is in a proper condition to be worked. It produces thick, succulent leaves of a large size. May be sown either broadcast or in drills. For spring and summer use, sow as early as the ground can be tilled, and afterwards at short intervals. For winter and early spring use, sow middle of autumn. The latter sowing will need a sprinkling of straw or long manure on the arrival of cold weather. Spinach is one of those vegetables for which the ground cannot be too rich; the stronger it is the more succulent will be the leaves, and of course the more delicate and tender.

**SQUASH.**—Cultivate the same as cucumbers and melons.

**TOMATO.**—For early use sow in hot-beds and transplant into warm soil, setting the plants in rows three feet apart.

**WHITE, OR ENGLISH TURNIP.**—This crop is raised most successfully on newly cleared land, which is well coated with ashes and charred vegetable matter; or on a fresh sod which has been long in grass and turned over the last of May or early in June, and on which sheep have been folded till they have covered it well with manure. Good seed sown on this, after thorough reploting and harrowing till it is sufficiently mellow, at the rate of one and a half lbs. per acre, and brushed in, will generally insure a good crop. Price, 30 to 50 cts.

For further particulars on the culture of grass, grain, and roots, we would refer to the American Agriculturist, where the most minute directions may be found for all these different kinds of crops.

## FERTILIZERS.

We shall merely treat of such fertilizers as are usually kept on sale, and in doing this it is impossible to give anything more than brief, general directions, as climate, the nature of soil, the crop to be raised, and many other particulars must be taken into consideration in their proper application. Great waste is often made in applying manures. For example, bone dust, where there may already be sufficient of the phosphates in the land; lime, where the soil is full of it; plaster, where potash is more requisite, &c., &c. In such cases these manures have little or no effect, and in a measure are lost to the land. Barn-yard manure, peat, and muck are often applied to wheat and other small grain crops, when they only serve to injure the grain by forcing a large growth of straw. Grass, corn, and roots will take any kind and quality of manure without injury; and as a general rule, the small grains should succeed these crops, at which time ashes, plaster, bones, or lime may be applied; and if the soil be poor, a top dressing of guano, rotted barn-yard manure, or composts of fish with peat and muck, may be added. For minute descriptions of all these points, we would again refer to the American Agriculturist.

**ASHES.**—These may be used leached or unleached, with good effect at all seasons, and on all kinds of soils, though they best suit lands of a light sandy or gravelly nature. From ten to one hundred bushels per acre are applied. Grass and turnips are most benefited by them, and they have a marked effect on corn, wheat, and other small grains. They should be spread on grass lands early in the spring, or just after mowing; be put round the stalks of corn after the first or second hoeing; spread broadcast over the turnip crop after sowing, or be bushed in with the seed; and applied in the same way to wheat, rye, and other small grains, in the fall or spring. Anthracite coal ashes have lately been experimented upon, and found to have a marked effect on grass and corn. Price of wood

ashes, 10 to 13 cts. per bushel in this market; anthracite ashes may be had for the gathering.

**BONE DUST.**—This substance may be applied precisely like ashes, except not in so large quantities; ten to thirty bushels per acre is the most that we could recommend. Its effect on Indian corn is not as good as ashes. It best suits grass, wheat, and turnips.

Price, 40 to 45 cts. per bushel.

Savings of bone are fifty per cent more powerful.

Price, 50 to 55 cts. per bushel.

**CHARCOAL DUST.**—This also may be applied like ashes, and in any quantity, from ten to two hundred bushels per acre. It is a great absorber of moisture and ammonia from the atmosphere, and is therefore particularly valuable on light soils. Keep it as near the surface as possible. It is an admirable mixture in composts of all kinds, especially such as abound in putrescent manures. It fixes the ammonia in them, and takes away all unpleasant smell.

**GUANO.**—*Caution in application.*—Be very careful to place the guano so that it will not touch the embryo, or young roots, or stalks of corn, potatoes, cabbages, tobacco, sugar cane, cotton, or any plant that has but one stem from its root; for it is of such a burning nature, that if a portion no larger than a small pea comes in contact with the plant, before being watered or rained on, or undergoing partial decomposition, it instantly kills it. With grass and small grains this caution is not important, as other shoots from the roots will immediately supply the place of those killed.

*Preparation.*—Before using guano, pass it through a fine sieve, and all lumps remaining break up, and these pass through the sieve. Now take at least four times its bulk of sand, or dry sandy, or light loamy soil, and pass this through a coarser sieve, if you have one, and mix it in layers with the guano. Let this compost lie a few days—several weeks would be better—then toss it over and beat up well together, and it will be fit for use. Some prefer mixing the guano with ten or twenty times its bulk of soil for a compost, and do not take the trouble of sifting it, but mix them together in alternate layers as well as it can be done with a shovel. Sifting, however, is best, as it is done so much more evenly. Sawdust is an excellent material with which to mix guano; but powdered charcoal is perhaps the best of all, as it fixes the ammonia, absorbs its unpleasant smell, and is in itself an excellent manure. When convenient to be obtained, plaster of Paris ought to be used in the compost, at the rate of thirty to fifty lbs., for every one hundred lbs. of guano; it acts in the same way as charcoal. Lime and ashes must be avoided in composts, as they rapidly expel the ammonia, the most valuable part of the guano. Muck, if possible, should not be used for the compost, as it is too moist and tenacious to form a proper mixture. The same objection holds good against clay or any tenacious soil. Nevertheless, if there be no other soil at hand, muck or clay may be thoroughly dried and pulverized, and then used. Guano should not be mixed with barn-yard manures, or indeed with any moist substance, as these cause it to undergo the very decomposition requisite to promote vegetation. The compost should be made under cover, unless the weather be dry. Rain would be quite injurious to it, in hastening the decomposition of the guano, and expelling its ammonia in the atmosphere.

*Quantity Applied per Acre.*—This depends upon the kind of soil and its condition, and the kind of crop to be grown. From two hundred and fifty to four hundred lbs. of guano per acre is the safest quantity to apply. It acts quickest in a light sandy soil or loam, and is excellent to start crops on cold, moist land. It hastens the ripening of crops on all kinds of soil.

Guano should be spread broadcast upon grass lands, early in the spring, and directly after mowing. On grain, early in the spring, or in the autumn directly after being sown. When applied to corn, either pure or in compost, a table spoonful or so may be put into each hill, and a little dirt thrown over, and then drop the seed, or it may be hoed in round the corn the first time hoeing. Apply it in the same way to peas, beans, potatoes, and other root crops, melons, &c.

*Steeps and Liquids.*—For one pound of guano use five, ten, or even twenty gallons of water; or at the same rate for a smaller proportion. Stir it up well and cover over the vessel tight, so as to prevent the escape of the ammonia, and let it remain from one to three days before being used. Now water *around* (not *upon*) the plants as occasion may require. If this liquid touches the plant, or its leaves, it is apt to burn it. Previous to watering, stir the earth well around the plant. Corn and other seeds may be steeped in this liquid from three to twenty-four hours before sowing. It then comes up unusually quick and grows rapidly.

Price, 2 to 3 cts. per lb., according to the quality.

**LIME.**—This may be applied at any season, at the rate of twenty to two hundred bushels per acre; but we would prefer moderate doses of not over fifty bushels, and put it on the oftener. Like charcoal, it does best kept near the surface, and in other respects may be applied like it. It best suits a clayey or loamy soil; its efficacy on light sands and gravel is much doubted. Lime is easily kept in large heaps in the open air by throwing a little water on the top, which slakes sufficient to make a fine smooth crust over the whole. This soon dries hard, and forms a roof impervious to the rain. When the lime is to be used, the heap is broken into near its base, and whatever is wanted is taken out, and another crust formed over this broken part in the same way as above. There is very great difference in lime, and an analysis of it should be required before purchasing, as some qualities are three times as valuable as others. It may be had in this vicinity, at three and a quarter to four cents per bushel, air slaked, delivered on board vessel, in bulk, the only cheap way to transport it in any considerable quantity. About thirty-three bushels go to the ton.

**PLASTER OF PARIS.**—Sow this broadcast upon grass or grain, early in the spring, at the rate of two or three bushels per acre. It requires to be sown early, so as to have the benefit of moisture, and to ensure its decomposition. It best suits clover, and is very good for potatoes and turnips. On corn it has little effect. Price, \$2 50 to \$3 50 per ton, unground. Ground, and in barrels of 250 to 300 lbs., \$1 25 to \$1 50 per bbl.

**POUDRETTE.**—This is an excellent manure to start corn and other products, and give them a quick growth, but its effects are not lasting; a second dose, therefore, ought to be added at the second time hoeing. Two or three barrels are enough for one acre. For corn put one gill into the hill, over or under the seed, when planted. Potatoes should have two gills per hill, and other crops in proportion. For soaking seeds, dissolve in the proportion of one quart of poudrrette thoroughly in a gallon of water, to an extent sufficient for the purpose required, and then soak the grain or seed in the solution according to its nature—as more particularly given in the following instructions. The soaking must take place immediately before planting or sowing. By this previous operation the corn, grain, or other seeds, will start sooner, be stronger, and less liable to attack from worms or birds. But if kept in the solution too long it may injure the germinating quality of the grain or seed. It will increase the yield, and the liquid after the soaking has taken place, may be applied to anything in the garden or on grass ground. The seed after it comes out of the liquid may be rolled in ashes, plaster, or sand, to sepa-

rate them. Price, \$1 75 to \$2 25 per barrel, according to the quantity taken. Every farmer may make his own poudrette by mixing the faeces with peat or muck, or by drying it with charcoal dust, or plaster of Paris. Either of these substances takes away all unpleasant smell.

**SALT.**—This may be used at the rate of five to forty bushels per acre, though five to fifteen bushels is better. It is inoperative applied near the seashore, where salt water or spray is already in excess on the land; but everywhere else it is beneficial. It can be sown broadcast on the land, or be incorporated in the manure or compost heap. Mixed with lime and its compounds, it undergoes decomposition, producing soda or its combination with carbonic acid, or with humus, all more powerful digesters or feeders than the salt itself; and the muriate of lime, which has the strongest attraction for moisture of almost anything known. Salt and lime work vegetable matters to decay quicker than salt alone. With plaster it will supply soda and sulphuric acid cheaper than any other material, besides the muriate of lime, so valuable for its moistening quality.

In 1839 we commenced a series of experiments with salt; but soon after, being called to a distant part of the country, and returning to our farm only at long intervals, they were not carried out with that particularity with which they ought to have been. Sufficient, however, was known to prove that, applied at the rate of ten bushels per acre to grass and vegetables, it made them much more sweet and nutritious, and added as near as it could be estimated, about one fifth to the first crop of grass cut for hay, and full one half to the growth of the aftermath, and increased the vegetable crop about one fourth in its yield. When salt can be obtained cheap we recommend its use. We have seen thousands of gallons of fish and other brine thrown away in our towns and cities, which would be well worth saving, and adding to the manure heap.

Price, 25 to 30 cts. per bushel for the common kind by the cargo.

## FRUIT TREES.



For the directions on transplanting and pruning, below, we are chiefly indebted to the catalogue of Messrs. Parsons and Co., of Flushing, from which we have copied them with slight additions and alterations.

**TRANSPLANTING.**—It is frequently the case that a tree which has received all the care and attention which can be bestowed upon it by the most experienced nurseryman, is transplanted to a soil of very inferior character, and being thus stunted in its growth is the frequent cause of dissatisfaction to the purchaser. The planter should therefore bear in mind that, with the exception of very fertile alluvial bottoms, like those of the Mississippi, &c., it is difficult for the soil in which a tree is planted, to be too rich, and that the rapidity of its growth, and its subsequent productiveness, are very much influenced by the proportion of fertilizing matter contained in the soil.

Before planting an orchard, the ground should be thoroughly *subsoiled* or *trench plowed*, to the depth of eighteen inches or two feet. This is always done in Europe, but scarce ever thought of in the United States; and yet we consider it the first and most important operation in the preparation of ground for an orchard, unless it be so rocky as to render this impossible.

After the trees are set out the ground should be well cultivated, and if a poor soil, as highly manured as the means of the cultivator will admit. It is impossible for a tree to flourish, as it should, when the roots are surrounded and covered with a thick sod. When the tree is isolated, as in a garden or lawn, a rich compost of earth and manure should be dug in

around it, care being taken that no pure manure be allowed to come immediately in contact with the roots. The ground about these also, for the space of two or three feet, should be kept mellow until the tree is of large size; and it would also be well to dig in a portion of manure about the roots every spring.

Many of the most experienced cultivators regard the fall, immediately after the first hard frost has arrested the growth, as the best season for transplanting every variety of trees but evergreens, which should be planted in the spring. Where, however, it is not convenient for the cultivator to give them attention in the fall, deciduous trees may be deferred until spring. In sections where the cold is somewhat severe, as on the western lakes, and in some parts of New England, it is more safe to plant in the spring the stone fruits and pears; and if they are imported in the fall, to keep them in a dry cellar until spring.

The reason for the preference for the autumn is obvious: when trees are transplanted at that season, the earth becomes during the winter properly settled about the roots, and they are ready to throw out fibres in the spring. The spring is preferred for evergreens, for the reason that their period of hibernation differs from that of deciduous trees, and experience has shown that they succeed best when thus planted. When a tree is removed, great care should be taken to preserve the roots uninjured and entire; if this precaution has not been observed, the top should be lessened in proportion to the loss sustained by the roots.

When the tree has been some time out of the ground, it is well to immerse the bodies and roots in water for about twenty-four hours; this will much benefit it, and advance its vegetation. The holes for receiving them should be sufficiently large to admit the roots without crowding or bending,—from three to six feet in diameter, and from one to two feet deep, according to the size of the trees. The subsoil should be entirely removed to this depth, and its place filled with rich mould, well combined with compost or manure fully fermented. All bruised or broken roots should be shortened and smoothly pared with a knife. Let a person hold the tree upright, while the operator pulverizes the earth, and scatters it among the roots. Let the tree be shaken gently while this is being done, and let the earth be carefully filled in around every root, even the smallest fibre; it is all-important that the soil should come in contact with every portion of the root. When the hole is three quarters filled, pour in a few gallons of water, according to its size, and after it has settled away fill up the hole, pressing the earth around the tree with the foot. Earth watered in this way will retain its humidity a long time, while water poured on the surface, after the hole is filled, is very injurious, causing the top of the soil to bake to such a degree as to prevent the access of air and moisture, both of which are highly essential to the prosperity of the tree. When the weather is very dry, put straw, hay, leaves, or even fine brush, if nothing else is to be had, round the bodies of the newly transplanted trees, to retain the moisture. This is infinitely better than watering them. One of the most universal and fatal errors in planting trees is placing them too deep; we have known many fine and thrifty trees die from this cause alone; they should not be planted more than an inch deeper than they stood in the nursery, and if the frost is likely to heave them the first winter, a small mound can be heaped about the stem, to be removed again in the spring.

In attending to the preceding suggestions, we feel assured that the cultivator will be amply repaid for any extra trouble or expense, by the consequent increased growth, beauty, or productiveness of the tree.

#### SOILS PROPER FOR DIFFERENT KINDS OF FRUIT.

**THE APPLE.**—This will succeed on almost any soil not too wet; a rich gravelly loam will, however, ensure the finest trees and fruit. For garden

cultivation, we have always on hand a moderate quantity of apples on dwarf or Paradise stocks, but the best place for this tree is the orchard. Before planting, the ground should be well cultivated and mellowed, with corn or potatoes, and enriched, if necessary, with a good quantity of manure. After the trees are planted, the orchard should be kept in cultivation for some years, and even after the trees become large and are in full bearing condition, the ground should not be kept in grass more than three or four years successively. Some few years since an old orchard of our own almost ceased bearing, or bore only small and imperfect fruit, while several varieties, including the Newtown pippin, exhibited every symptom of deterioration and premature decay, that is apparent in the Virgaliu pear. We immediately broke up the sod, cultivated the ground with corn and potatoes, and applied a heavy dressing of manure, when the following year we were rewarded with a fine crop of perfectly sound apples, the Newtown pippins being of immense size, and entirely free from the least symptom of blight or decay; nor have such symptoms made their appearance since that time. Where there is leisure, it is a good plan to thin out the fruit when the crop is too abundant.

**THE CHERRY.**—This does best in a dry, rich soil, but bears abundantly even in stiff clays, when well drained.

**THE PEAR.**—This succeeds best on a rich, clayey loam, with a gravelly subsoil, but will grow and bear fruit on even a poor soil, provided it is not too wet. A heavy clay soil should always be avoided, unless well drained, as this is known to be very retentive of moisture, and is frequently so highly saturated as greatly to injure, if not to kill the tree.

**THE PLUM.**—A clayey soil well drained, or rich loam, best suits the plum.

**THE PEACH.**—A sandy or light gravelly soil, not over rich, is decidedly the best for the peach, though we have seen it flourish very well in a warm climate in rolling, clayey soils, where no surface water could remain to their injury.

**PRUNING AND TRAINING.**—All trees require more or less pruning. With young trees the knife is required to form a symmetrical head, to induce luxuriance of growth, and to cause early fruit bearing. Bearing trees in orchards also require frequent pruning, to relieve the tree of all branches which are weak and crowd upon others, or uselessly consume the nourishment afforded by the root. It is also frequently required to check too great luxuriance of growth, which often induces disease and seriously affects the longevity of the tree. Care and judgment, however, are necessary, and there may be often danger of too much pruning. When a tree is healthy, produces well, not too much crowded in its branches, and free from suckers on its boughs, it will in general require very little pruning. No suckers should be allowed to grow from the root, as they divert a material portion of the sap from the branches. There is much question respecting the proper season for pruning, but our experience is very decided that the early part of summer is the best; the sap being then in full operation, the wounded part quickly heals over, while in winter the branch to which the knife has been applied will be frequently found dead several inches below the wound.

Pruning, to induce early fruit bearing, may be advantageously practised when the growth is so luxuriant that few or no blossom buds are formed. In this case the branches only are frequently shortened, and the sap being accumulated in a smaller portion of wood, forms fruit buds. We have seen pear and apple trees of great age in France and Belgium, which were pruned to a pyramidal form, and presented a mass of fruit spurs,

while the branches would scarcely cover a space of six feet in diameter. The most effective mode of pruning, however, is applied to the roots. We have seen this mode practised successfully in the grounds of T. Rivers, an English nurseryman, to whose kindness, during repeated visits to his establishment, we are indebted for much valuable information respecting his *modus operandi*. He digs a trench, early in November, around his fruit trees to be root pruned, then cuts off the roots with a sharp spade or knife made for the purpose, and then applies manure. By continuing this practice every year, he not only obtains early fruitfulness, but brings his trees into so compact a shape, that, being planted five to eight feet apart, a sort of miniature orchard may be formed on a comparatively small piece of ground.

The Quenouille mode of pruning and bending down of the limbs we have seen practised in France and Belgium with much success. By it the circulation is impeded, nutritious matter accumulates, and flower buds are formed. The branches are bent down and tied below the horizontal line any time during summer, while the shoots are flexible, and after being thus confined a short time, retain themselves this pendent position. This is a most certain mode of inducing fruitfulness, but though very ornamental, is a somewhat troublesome form of tree. In Great Britain, and on some parts of the Continent, where they have not the heat of our Summers, fruit trees are trained as espaliers, either upon a trellis or upon walls, and it is no uncommon thing to see large gardens, as those of the King, at Versailles, divided into numerous small compartments by brick walls, on which are trained a variety of fruit trees. In our fine climate this is unnecessary, and nearly all trees will succeed well as standards. In some localities, it is well known that the curculio prevails more than in others. Where such is the case the farmer or gardener may advantageously cover all his stone walls or wooden fences with plums, peaches, apricots, or nectarines. When trained in this way, the curculio will not readily attack them. We know of a number of plum trees in our vicinity, which for ten years or more had always lost their whole crop by the ravages of this insect. When, however, transplanted and placed against a wall, they matured a fine crop of beautiful fruit the first year. When trees are planted thus against a wall or fence, it is well to have them a year old, and to train the branches either horizontally, or in the fan mode, in which the branches are made to radiate from the root as a common centre. We are so convinced of the utility of fences as preventives of curculio, that we contemplate erecting a quantity of wooden wall for fruiting those kinds which are subject to its ravages.

REMARKS.—We intended to have given a select list of Fruit Trees in this catalogue, but we find that these vary so much in different latitudes that it would be of little use to our readers; we beg, therefore, to refer them to the catalogues of the Nurserymen for this, as well as many other things we are obliged to omit for want of space. For the same reason we cannot treat of other fruits, such as the apricot, nectarine, fig, raspberry, gooseberry, currant, strawberry, &c., &c.,

ORDERS.—It is very desirable that all orders should be sent *very early* in the season, that we may have as much notice as possible, and send the trees to their destination at an early period after the opening of the season of transplanting. For want of care on this head, many orders arrive when it is no longer safe to take up trees, and are necessarily left over until the next season. We would urge upon the attention of Southern and Western purchasers, the great importance of sending their orders as early as August or September. In the spring, vegetation is often far advanced at the South and West, before the frost will allow the trees to be taken up at the East; and if sent at that season, they frequently vegetate on the passage, and cause great loss to the purchaser. In the fall no difficulty of this kind will occur, and trees are annually sent to the far western States at that season with entire success. The utmost care is taken

to label distinctly, according to the invoice sent, every variety of tree or plant ordered; they are packed in matted bundles or boxes, according to the distance and probable exposure, for which a reasonable charge will be made.

### ORNAMENTAL TREES AND SHRUBS.

These can be had of every variety. To fully treat of them would require a large book; we therefore recommend our readers to the catalogues of Nurserymen, and books upon these subjects. It is gratifying to observe an increased attention throughout the country to these beautiful objects of nature; and that tastefully arranged grounds, adorned with trees and shrubbery, are now considered indispensable around the family mansion, however humble it may be. The rudest log cabin is an object of interest, and a picturesque feature in the landscape, when embowered by trees or shrubbery; and for these, nothing is more beautiful than such as abound in our own native forests and fields, so that all that is required for this purpose is merely to transplant them. Few can say that they have not time for this.

### DOMESTIC ANIMALS.

Our advice to the purchasers of domestic animals is, to *always choose good ones*, even at a much higher price than ordinary; for with select males one can rapidly breed good ordinary stock from rather indifferent females of the country. The cost of transportation, and the keep afterwards, is no more on a good animal than a poor one; and there is the additional satisfaction about their possession, that one has something for his money worth breeding from.

SEASON FOR PURCHASING AND SHIPPING SOUTH.—The best season for purchasing is in the fall of the year, as stock is then not only cheaper but more plenty. Orders if possible, should be addressed us at least *two months* before it is wished to have them executed, so as to give sufficient time and opportunity to look about and make selections. For want of this we are often obliged to execute orders at great disadvantage to the purchasers. It must be recollected, also, that our rivers *freeze up early in December*, making it quite impossible to procure choice stock after this period, as most of the good breeders reside at a considerable distance from the City in the interior of the country. Many an order for stock which has come to us in the winter we could not execute till the following autumn. We hope our southern friends will bear this particularly in mind, as it will save them disappointment, and us considerable trouble.

September, October, and November, are the best seasons for shipping stock south, as the animals acclimate much better than when sent out in the spring. It is very hazardous, and almost certain death, to take cows or bulls south at any other season, for the following reason: The average pulse of the ox is about forty in a minute at the North, while at the South it increases to seventy or more, and rises upon excitement to eighty—just double what it is here. This is a very important change in the arterial system, and if the animal be loaded with flesh, he is much more liable to disease and death. They should be shipped in moderate condition, and carefully kept so, the first year or two. Valuable animals have died soon after arriving at the South, merely because they were in too high flesh, when taken there, and foolishly kept so for the purpose of making a better show. They must be stabled at night as well as during the heat of the day, for the dews are as injurious to them as a fierce vertical sun.

HORSES.—*Thorough-breds* may be bought at various prices, from \$200 up to \$5,000, according to their age and reputation on the course, and as breeders. We have had the advantage of looking over much of the blood stock in England, and some on the continent, and though not a sporting man, we trust we should be able to give satisfaction in any purchases we might make of blood stock.

**ROADSTERS**—from 15 to 16½ hands high, vary in price according to their style, action, and speed. Single horses that can go a mile in 4 minutes, or ten miles in an hour, will command from \$200 to \$500; such as can do a mile in about 3 minutes, and 14 miles in an hour, are held at \$300 to \$700; while those still faster, are worth from \$500 to \$1500, according to circumstances. Some of the fastest sporting horses sell as high as \$3,000 to 4,000 each. Match horses are held under the same circumstances and prices as single horses. Good handsome pairs, six years old or so, may be had from \$500 to \$600; superior, from \$700 to \$1500 according to fancy. The expense of shipping a fine horse South is high. The items are something thus: Stall on deck must invariably be built at shipper's expense, costing from \$8 to \$15. Freight, \$20 to \$30; feed \$7 to \$12. When a number are taken the expense is proportionably lessened. A groom should always accompany horses, as no dependence can be placed upon any one on board ship, to take care of them.

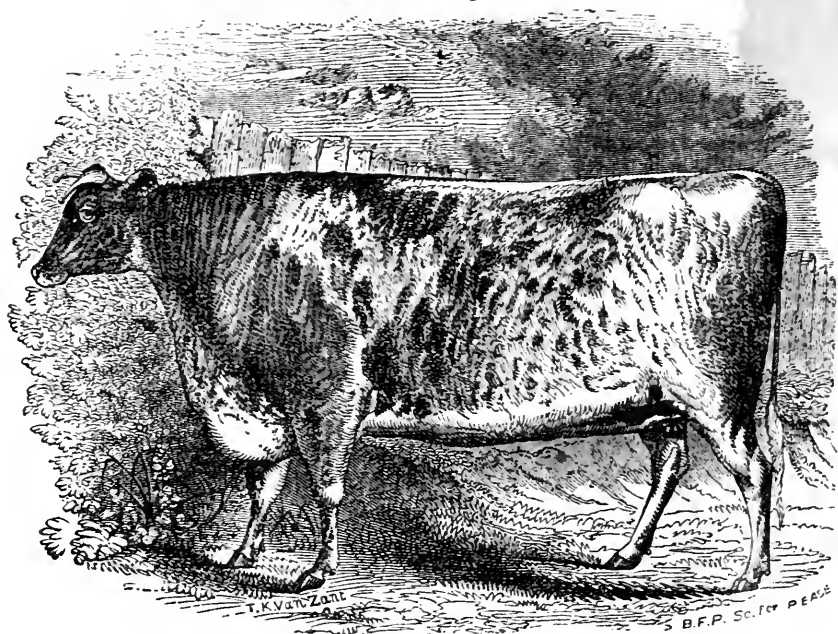
DURHAM BULL.—(FIG. 115.)



**CATTLE.**—For great milking qualities and good beef we recommend the *Durham*, and would prefer sending them South, from six months to one year old—never above eighteen months old. The price for good Herd Book animals will range from \$100 to \$200; very choice, about \$300 each.

The *Herefords* are superior in the yoke to the *Durhams*, make excellent beef, and are fair milkers. Prices same as *Durhams*.

DURHAM COW.—(Fig. 116.)



*Devons.*—The same may be said of the Devons as of the Herefords, except they are not so large in size by one fourth. Being a smaller breed than the two others above, they are well adapted for the light pastures of the South. Prices 25 per cent less than Durhams or Herefords.

MERINO BUCK.—(Fig. 117.)



Good milking cows for family use are worth from \$40 to \$50; very superior and well bred, \$60 to \$75 each.

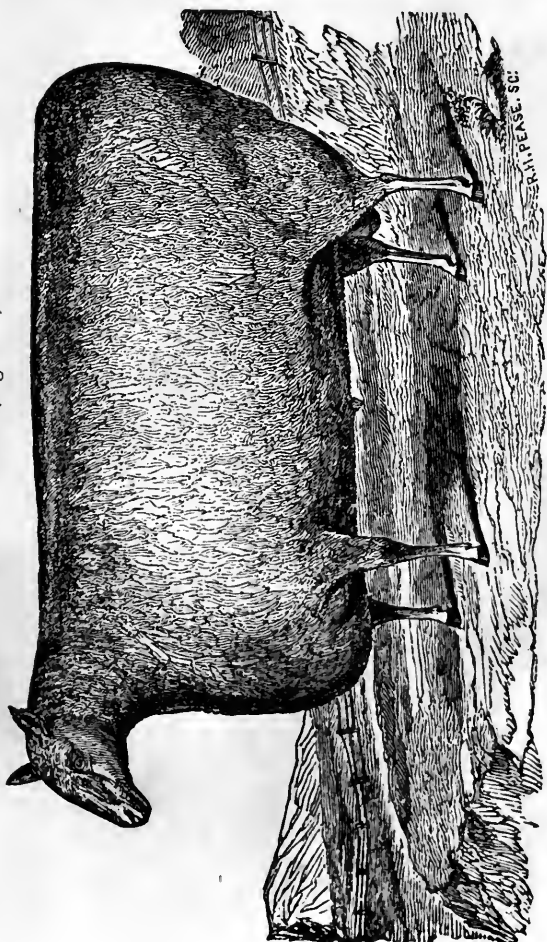
Freight of cattle South, from \$10 to \$15 each; feed, \$6 to \$10. Stalls are generally necessary for their accommodation, and cost from \$8 to \$12 each, according to the size of the animal.

**SHEEP.—Fine Woored**—The Saxons have the finest fleeces, but are smaller than the Merinos. Ewes yield from two to three lbs. per head, of clean washed wool; bucks from four to six lbs. Bucks are worth from \$15 to \$50; ewes, \$5 to \$15. When a number are purchased they come cheaper.

**Merinoes.**—In this class the Rambouillets stand the highest. They are the largest in size of any fine woored sheep, shear the heaviest fleeces, weighing from four to fourteen lbs. clean washed, according to the sex, &c., and of a quality only one grade inferior to the Saxony. No ewes of this breed will be for sale probably before the year 1850. Bucks can be had for \$50 to \$300 each, according to age, quality, &c.

**Native Merinoes** may be had from \$10 to \$100 each. They are valuable sheep, shear about one fifth less than the Rambouillets, and of a quality of wool one grade inferior.

LONG WOOLED BUCK.—(Fig. 118.)



**Long Wool Sheep.**—These are all essentially the same, though they pass under the different denominations of Bakewell, Leicestershire, Lincolnshire, Cotswold, Oxfordshire, &c. These are the largest class of sheep in this country. Their mutton is rather too fat for good eating. They shear from five to fourteen lbs. of clean washed wool, according to the sex, &c., suitable for worsted combing. Price from \$10 to \$50 each. They make an excellent cross on the common sheep of the country, both for wool and mutton for plantation use.

SAXON BUCK.—(Fig. 119.)



SOUTH DOWN BUCK.—(Fig. 120.)



SOUTH DOWN.—This is a very hardy breed of sheep, with the best of mutton, lean, tender, and juicy. Their hams, when properly cured, can scarcely be told from the finest venison. They shear from three to eight lbs. per head, of clean wool, according to the sex, &c., of a medium

quality, very open and easily worked, and especially suitable for plantation use. We wish the planters could get more into the habit of eating mutton; it is much healthier than pork, especially in a hot climate, and to our taste it is infinitely more palatable. Price, \$10 to \$20 each.

*Cost of Shipping Sheep South.*—Freight from \$2 to \$5 each, according to the number, size, &c.; feed, \$1 to \$3. Stalls are an extra charge. If thirty to fifty sheep were taken they could be shipped at a moderate expense per head.

BERKSHIRE BOAR.—(Fig. 121.)



SWINE.—The Berkshire breed has hitherto been most highly esteemed, though some pretend to say they do not stand the Southern climate as well as the Neapolitan, or White English breed. These, as well as the Woburn, Bedford, Mackay, Byfield, Grass, Leicestershire, and indeed all good improved varieties, are merely crosses of the Chinese—that is, they are *grade* China hogs. We wish our readers to bear this especially in mind. In giving orders it is only necessary to say what color and size is required, and leave all the rest to us, without signifying the name of the breed, as we profess to be good judges of all kinds of stock, and we can thus make better selections than if hampered with special instructions. The China breed are too small and fat to go to the South. They are also delicate and shy breeders. Their crosses are superior to themselves for the farmer. Pigs should be three to four months old at least before shipped.

Price, caged, \$15 to \$20 per pair. Older ones come much higher, say \$15 to 30 each. Freight \$4 to \$6 per pair. Feed \$2 to \$4, according to the length of the voyage South.

DORKING FOWLS.—(Fig. 122.)



**POULTRY**—The Dorking Fowls are among the largest kind, weighing from 6 to 12 lbs. each, according to sex. Their flesh is superior; they are hardy, good layers, and good nurses. The Polands are of medium size, very beautiful, with large topknot, and the greatest layers of any known. Prices of fancy poultry vary greatly according as they are in market, plenty or scarce. To cost of the fowls must be added from \$1 to \$1 50 per pair for feed on the voyage, and expenses of shipping.

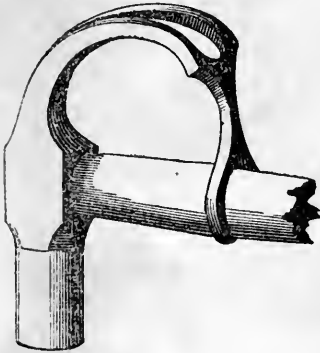
Dorking Fowls, large size,.....	per pair,.....	\$5 00 to 5 00
Java,.....	“.....	3 50 to 4 00
Malay,.....	“.....	2 50 to 3 50
Polands, medium size,.....	“.....	2 50 to 3 50
Bantams, small size,.....	“.....	1 00 to 2 00
Turkeys, pure white, and others,....	“.....	3 50 to 4 00
Small China geese,.....	“.....	4 00 to 5 00
Large do. do.....	“.....	5 00 to 8 00
Bremen do. do.....	“.....	3 00 to 4 00
Wild do. do.....	“.....	5 00 to 8 00
Guinea or African do., very large,....	“.....	10 00 to 15 00
Ducks of different kinds,.....	“.....	2 00 to 5 00
Pigeons, Fantails,.....	“.....	1 00 to 2 50
Tumblers,.....	“.....	1 00 to 2 50
Pouters,.....	“.....	4 00 to 7 00
Carriers,.....	“.....	5 00 to 20 00

**RABBITS**, according to variety, \$1 00 to \$10 00.

For further particulars we must refer to the **American Agriculturist**, and books published on these subjects.

*Observation.*—Something must always be allowed for the expense of detention of animals in the city, from the time of their arrival to the sailing of the ship, as it is impossible to calculate this matter exactly. We conclude by saying, that before any one orders stock they should take into consideration, the following three things: *First*, be completely prepared to keep and breed them. *Second*, select none but the best, and these with a reference to improve what you already have. *Third*, have some faithful person, if possible, to accompany and take care of them. This last, however, is not essentially important; for out of the hundreds of animals we have shipped West and South, we scarce recollect one that did not arrive safely at its place of destination, we took such good care in shipping and providing for them on the voyage.

#### ANDERSON'S PATENT HAMMER.—(Fig. 123.)



This is a recent invention; the claw, as will be seen by the cut, extending to the handle and clasping it with a strong ring, which makes it impossible, in drawing nails, for the handle to give way, draw out, or become loose. The face of the patent hammer will thus always remain true, it being kept at the same angle with the handle. We consider this a very great improvement, and we think it will supersede all others now in use. These hammers are made of cast steel of the best kind, and in a very superior manner. Further description seems unnecessary, as the cut shows all. Six different sizes are now

made, weighing from half a pound to one and a half pounds. The price varies according to size, from 75 cts. to \$1 00 each.

#### PRODUCE ON CONSIGNMENT.

We are prepared to receive all kinds of Agricultural Produce for sale on commission; grain, seeds, beef, pork, lard, cotton, sugar, rice, tobacco, hemp, wool, &c., &c.,

#### CONCLUSION.

All orders for goods, &c., must be addressed us, *post paid*, and accompanied with the money, or a draft at sight, or acceptance, on some responsible house in this city, Boston, Philadelphia, or Baltimore.

The direction for the goods must be written out in full, in a clear, legible hand, otherwise mistakes and delays are liable to occur.

Insurance will be effected at the lowest rates whenever desired.

Any other kind of goods wanted for the farm, plantation, house, or family use, will be purchased on the best terms, as we are conversant with most kinds of merchandise, and have facilities for executing orders not surpassed by any other house in this city.

## COMMERCIAL GARDEN AND NURSERY

OF

**PARSONS & CO.,***FLUSHING, NEAR N. Y.*

The Proprietors desire to call attention to this extensive establishment, which is now probably the largest in the Union, covering an area of over forty acres, and compactly planted with more than 600,000 trees, shrubs, plants, &c.

The very rapidly increasing taste for Horticultural pursuits, producing a demand for new and rare fruits, ornamental trees, and plants, has rendered necessary a systematized arrangement for the importation of all that is new and desirable.

For this purpose, the Proprietors have personally inspected all the principal public and private Horticultural Establishments in Britain, France, and Germany, and have perfected arrangements, by which they will receive immediately on its appearance, everything that is new and valuable.

THE FRUIT DEPARTMENT comprises the finest varieties of apples, pears, cherries, plums, peaches, nectarines, apricots, grapes, figs, quinces, mulberries, persimmons, papaws, medlars, walnuts, currants, raspberries, strawberries, gooseberries, berberries, cranberries, esculent roots, &c., all of which are of superior size and quality, and will be furnished by wholesale at reduced rates. They would particularly call attention to the British Queen, Prince Albert, Swainstone, and other new varieties of strawberry, which they have imported, and to the very superior new Fastolf raspberry.

THE ORNAMENTAL DEPARTMENT includes the different varieties of maples, ashes, horse-chestnuts, poplars, oaks, lindens, elms, beeches, magnolias, mountain ashes, pines, firs, and a large collection of all the known hardy deciduous and evergreen trees, among which are the Chinese aillants, silver-leaved abele, European larch, tulip-tree, white fringe, flowering ash, Judas-tree, Chinese Kōlreuteria, Venetian sumach, balsam fir, white spruce, arbor vitæ, &c., &c., and Norway spruces of different sizes at very reduced rates.

They would call attention to their beautiful specimens of Paulownia imperialis, Cedrus deodara, Juniperus excelsa, Abies morinda, Pinus excelsa, Pinus halepensis, Picea cephalonica, Cupressus Tournefortii, Cupressus torulosa, and other new and valuable kinds of evergreens.

There is not space to enumerate the different species in their collection of ornamental and flowering shrubs, vines, creepers, honeysuckles, azaleas, pæonies, hyacinths, crocuses, and other bulbs and herbaceous plants. Their collection comprises over 600 kinds of roses, of esteemed and distinct character. Among these are all the varieties of the hybrid perpetuals, a class of roses perfectly hardy, combining beauty with fragrance, and blooming from spring till autumn.

The trees cultivated at this establishment are straight and thrifty, and from their exposed situation they are sufficiently hardy for removal to much higher latitudes.

The attention of amateurs and others is particularly directed to the fruit grounds of this establishment, in which will be found bearing specimens of all the varieties of fruit which they cultivate. Visitors are also invited to inspect their vineries, in which are more than 100 varieties of Foreign grapes, which will be in bearing in 1846.

Having perfected an arrangement with an extensive exotic establishment in the neighborhood, the proprietors will be able to supply any variety of green-house or stove plants. Orders may be addressed to the Proprietors, at Flushing, N. Y., and catalogues can be obtained by application, post paid, to themselves, to Parsons & Lawrence, 10 Pine st., or A. B. Allen, 187 Water st., N. Y.



