

1851.

ANNUAL CATALOGUE,

CONTAINING

Eng.avings, Descriptions, and Prices,
OF

**AGRICULTURAL MACHINERY,
FARMING IMPLEMENTS, &c.,**

MANUFACTURED AT THE

ALBANY AGRICULTURAL WORKS,

AND FOR SALE BY



EMERY & CO.,

AT THE

ALBANY AGRICULTURAL WAREHOUSE

AND

SEED STORE,

369 & 371 Broadway, Albany, N. Y.

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The Subscribers, having been long engaged in the manufacture and sale of Agricultural Machinery, and Implements of Husbandry, in New-England, in the largest establishment in Boston and Worcester, and, for some four years past, having enjoyed a liberal patronage as proprietors of the Albany Agricultural Works, Warehouse and Seedstore, are now, better than ever before, prepared to furnish the farming public with the best Machines, Implements, Tools, Seeds, &c. &c., of this or any other country.

The Warerooms are spacious, (being among the largest in the city,) and the collection of articles constantly on hand is large, and all new; (the former store and stock having been lately burned.)

The Manufactory, recently erected, is second to no other for the purpose in the United States,—being very large, located in the centre of the city, and supplied with a complete set of labor saving machinery. With these facilities, they are enabled to manufacture to any extent, and in a uniform and workmanlike style, such implements and machines as the wants of the public demand; and to furnish them on as liberal terms as any establishment in the country.

In presenting this catalogue, (their twentieth edition,) they have kept two objects in view:—

First. To give a brief description of all the leading and most important implements and machines, manufactured and sold by them, with their prices.

Second. To make it a directory, as well as a medium of advertising, where may be found a complete list of implements, seeds, &c.

They will, (as before,) say that it shall continue to be their aim to recommend and sell only such articles as are worthy of introduction and use, or seeds that are valuable to be grown; and they are willing to stake their reputation, as manufacturers and dealers, upon the merits of such articles,—all of which they feel no hesitation in warranting to the purchaser.

EMERY & CO.

EMERY & CO'S
NEW-YORK STATE AGRICULTURAL SOCIETY'S
FIRST PREMIUM
RAILROAD HORSE POWER AND THRESHER.

(With the latest and important improvements, for which patent is secured.)

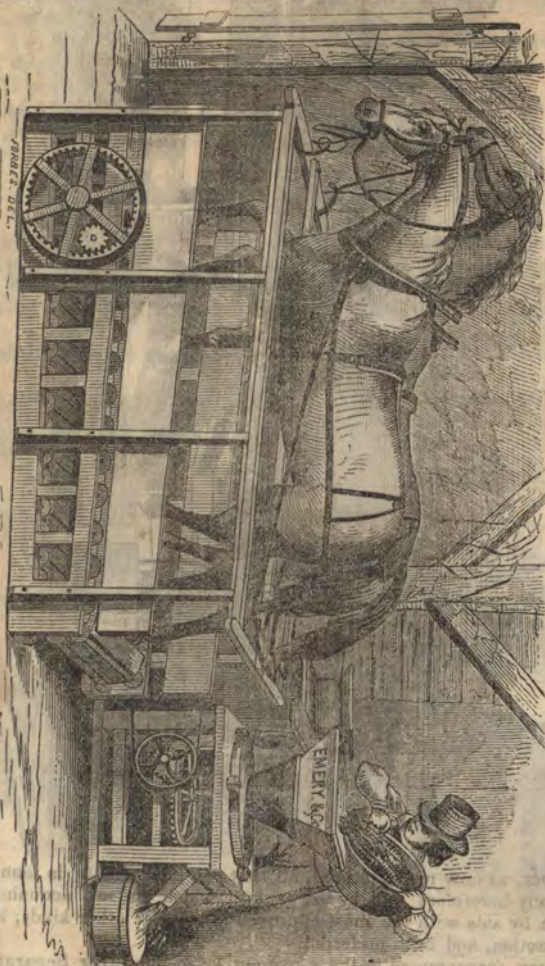
THESE HORSE POWERS were exhibited in operation at the September Fair of the N. Y. S. A. Society, at Albany, in Competition with Wheeler's, (still made and sold

by us,) and several others, including all of any note now before the public on the endless chain principle, where all were examined thoroughly, as the able report of the committee will testify, when they unanimously agreed to award E. & Co. the first premium for superior mechanical CONSTRUCTION, DURABILITY, STRENGTH and POWER.

This power, as will be readily seen in the cut, has the revolving plank platform, traversing upon its own friction wheels and iron railroad track. At the forward end, this platform is supported by its small shafts upon an iron reel, the shaft of which extending beyond the sides of the framework sufficiently to receive a strong CONVERGE or INTERNAL gear about 24 inches in diameter, as seen in the cut.

The shaft of the driving pulley, is hung in like manner, with the small gear upon one end, operating inside the converge gear before described, and consequently receives an increased motion in the same direction, and at the same time dispensing with the small pinions and cogs on the links of the endless platform in the ordinary powers. The converge wheel works on either side of the power, as desired.

This arrangement entirely removes all liability of breakage and wear of links and pinions (heretofore unavoidable,) as the direct stress upon the links and pinions is wholly avoided; they are acknowledged by those who run



THRESHING MACHINE.

with lighter friction, and enables the power to be operated at a less elevation than heretofore. Thereby combining GREATER STRENGTH and DURABILITY with LIGHTER FRICTION, without the liability of breakage of links, or the wearing of links and pinions; (no small item in the expense of repairs in most other kinds of powers in use.) The farmer or mechanic is enabled to perform a greater amount of work, or to operate with less power, or elevation, as best suits his wishes.

The arrangement for tightening the endless platform by means of a joint bolt connecting with the bearings of the reel shaft, is new, and is a very simple and effectual mode of effecting this object, as it may be instantly done by a common wrench without stopping the machine. The platform is considerably longer than usual,—avoiding the liability of large or unsteady horses stepping over or off at either end.

Having been long engaged in the manufacture, introduction, sale, &c., of the various kinds of horse powers, for different purposes, and at all times adopted such improvements as from observation and experiment have seemed necessary and desirable, we feel confident that in this power, as now manufactured, all that can be desirable, is found to a greater extent than any heretofore sold by us, or with which we are acquainted; and wherever used side by side with the most approved powers of other kinds, have given unqualified satisfaction, and been preferred.

The Overshot Thresher, (represented in the above cut,) and Vibrating Separators, with improvements, have been sold with like success as the powers. They admit of a leveling table, thus avoiding accidents (which often occur with the inclined platform,) by preventing hard substances, sticks and stones from getting into the machine, endangering those engaged with them. The grain by

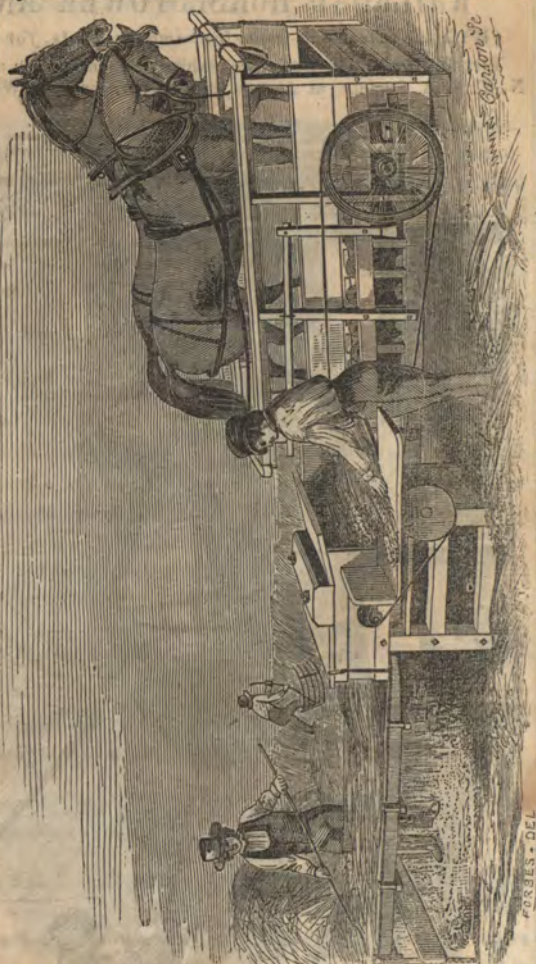


Fig. M. Overshot Threshing Machine and Vibrating Separator, in operation.

FORBES & DEL

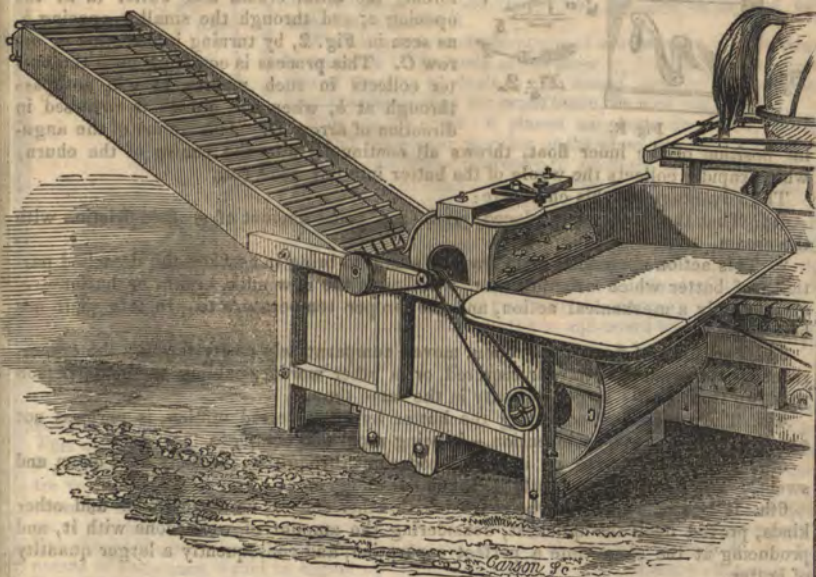
THRESHER AND CLEANER.

this motion is thrown on the floor within 3 ft. of the machine, and admits a separator to be attached sufficiently high to allow the grain and fine chaff to fall through it, while the straw is thrown off without being cut, and in fit condition for binding.

The cylinder shaft (of cast steel) runs in bronze boxes, which are so made of two parts as easily to be adjusted when worn loose, and can with little trouble always be kept tight. The cylinder is smaller in diameter, of greater length, and has only one-half the usual number of teeth. The concave has nearly double the usual number. The speed of the power is such that a larger pulley is used on the thresher than on most others,—driving stronger, with less liability of slipping of bands; which last are made of Vulcanized india rubber.

The Two Horse Power Thresher and Separator is capable, with three or four men, of threshing from 150 to 200 bushels of wheat or rye, and the single one from 60 to 100 bushels, or double that quantity of oats per day.

The prices for Emery & Co.'s one Horse Power,	\$85 00
do. do. Thresher and Separator, ...	35 00
do. Bands, wrench, oiler and extra pieces, ..	5 00—\$125 00
do. Two Horse Power,	110 00
do. do. Thresher and Separator, ..	35 00
do. Bands, oiler, wrench, &c.,	5 00—\$150 00
Also, "Wheeler's" one Horse Power, Thresher and Separator, complete, (improved this season,)	\$120 00
Wheeler's two Horse Power, Thresher and Separator, complete, ...	\$145 00
Price of Emery's THRESHER and CLEANER, with bands, wrenches, &c., ..	\$75 00
do. Saw Mill, complete for use,	\$35 00
Price of Grant's Fan Mills, adapted for hand or power, from...	\$22 00 to \$28 00



EMERY & CO.'S NEW THRESHER AND CLEANER.

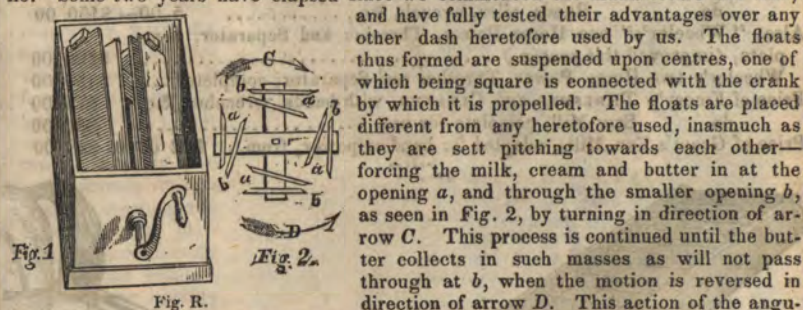
For nearly two years we have been experimenting to perfect a Cleaner, to be operated with our power for public and field threshing; and at the expense of much time and SEVERAL HUNDRED DOLLARS, we have succeeded to our entire satisfaction.

now are prepared to furnish a Cleaner, combined with all the advantages of our overshot cylinder, and at the same time requiring less force to operate its rotary motion than is required by the vibrating separator. We have tested it very thoroughly during last harvest, and some of them have been used the past season for public threshing in the best grain growing sections of the state, with the best success,—threshing months together an equal amount, and at less expense, than the common threshers with the vibrating separators.

The cleaner has all the advantages of a good fanning mill, cleaning the grain fit for market, and wasting none. The additional cost being not more than an ordinary fanning mill, or about **THIRTY DOLLARS**,—making the whole thresher and cleaner cost \$75 to the farmer. The cleaner can be detached, and the thresher used alone when desired.

EMERY'S IMPROVED COMPRESSING CHURN.

THE annexed cut represents the most approved churn dasher now offered to the public. Some two years have elapsed since we commenced the manufacture and sale,



and have fully tested their advantages over any other dash heretofore used by us. The floats thus formed are suspended upon centres, one of which being square is connected with the crank by which it is propelled. The floats are placed different from any heretofore used, inasmuch as they are sett pitching towards each other—forcing the milk, cream and butter in at the opening *a*, and through the smaller opening *b*, as seen in Fig. 2, by turning in direction of arrow *C*. This process is continued until the butter collects in such masses as will not pass through at *b*, when the motion is reversed in direction of arrow *D*. This action of the angular

position of the inner float, throws all continually into the centre of the churn, which rapidly collects the whole of the butter into one solid roll.

The advantages of this churn are:

1st. That the floats thus placed, produce a great amount of surface friction with the cream.

2. This action upon the cream has the effect to bring in contact the detached particles of butter which are the same, whether in the new milk, cream or butter—requiring only a mechanical action, and the proper temperature to promote their adhesion.

3d. This form of float being open, moves comparatively easily through the cream, reducing the amount of power required, or in other words, enabling the same person to churn from $\frac{1}{3}$ to $\frac{1}{2}$ larger quantity in the same time.

4th. The process of collecting the butter by the reversed motion, is perhaps not excelled by any previous invention,—it being rapid and complete.

5th. This churn having no iron or wood shaft through it, is easily kept clean and sweet. The floats can instantly be taken out or put in.

6th. It has in all cases where tried with other churns, as the cylinder and other kinds, proved itself the quickest, considering the amount of work done with it, and producing at the same time a perfect separation, and consequently a larger quantity of butter.

Several sizes are made, varying from 6 to 40 gallons. The common form is with the square box, and four pairs of blades, as shown in cut. In the smaller sizes, but two instead of the four pairs of blades are used. This dasher, when combined with the churn, forms a very perfect machine for the dairy house.

Principles Involved in the Construction and Operation of the Plow.

From the complex construction of plows, as also the manner in which circumstances oblige us to apply the motive power, many different theories and misconceptions have arisen as to the proper mode of application of the draft to effect the desired operation of the plow.

Too little attention has been paid to this subject, and too little is understood of the true principles involved in draft of the plow, by both manufacturers and plowmen, to enable them to construct, as well as properly to attach his team, and so arrange the clevis, as to cause the plow to do its work properly, and with the least force and power of both man and team.

To better illustrate the subject, a reference to the accompanying drawing, with the explanations, will be of service to all concerned.

1. All plows, when in operation, meet with resistance, caused by friction in the soil, and which is increased by the weight of the furrow-slice, as well as the tenacity of the soil or sward.

2. All plows, when in operation, have a right line of draft, (often mis-called centre of draft,) which may be defined by drawing a direct line from the fixed point of the motive power, (as for instance, the ring of hames in the harness of the horse, or the ring of the yoke, with oxen,) to the centre point, or place of the resistance of the work upon the mouldboard of the plow,—or, as may be seen in cut, from E to A or E B.

Were it not for considerations of convenience, a chain firmly attached to the body of the plow at A or B, in the direction of this line of draft to E., would answer all purposes better perhaps than the wood beam, as now constructed.

Now, as the chain, if placed as above described, would obstruct the proper working of the plow, we are compelled to apply the power indirectly to produce the desired effect,—the power of draft being the means by which the end is accomplished; it is by the use of the present framework of the beam (connected firmly and unyieldingly to the body of the plow,) that the desired end and object is attained. Now, therefore, when the beam is constructed properly, the effect produced by the application of the force of the point of the beam at C or D, is precisely the same as if attached to the chain, firmly fixed to the mould-board at A or B, as before described.

This much for the line of draft.

The point or centre of resistance upon the plow, is on the forward part of the mould board, and a little lower than the surface of the ground being plowed, and about midway of the width of the furrow-slice. This centre of resistance is varied by circumstances, as for instance, let the plow in Fig. J., be set into the furrow to the depth as represented by the two lines G and H, the centre would be near the point on the mould-board marked A. In this case, the draft is represented by the line A to E, and to secure the proper working of the plow, and preserve this line, it becomes important that the force be applied to the beam at the point C. But should the plow be set deeper in the ground, and as shown by the lines F, H, the centre of resistance would be higher up the mould-board, or at B, thereby changing the line of draft from A E to B E, and requiring the power to be applied to the beam at the point D. instead of C., as before.

From the foregoing, it will be readily seen, that the line of draft is changed as often as the centre of resistance is changed by deep or shoal, as also wide or narrow furrows;

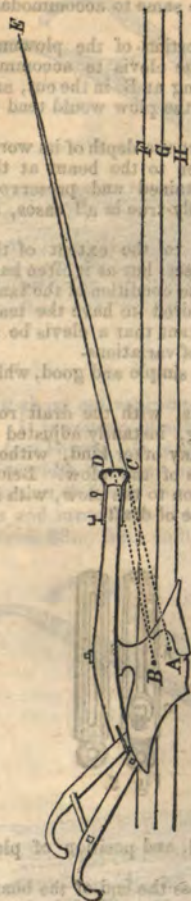


Fig. K.—Principles involved in the construction of the Plow.

or as often as the point of draft of the team is changed by tall or short horses or oxen, long or short traces, or long or short yokes.

In order, therefore, to preserve the line of draft, it is necessary to have an adjustable clevis at the end of the beam, that the plowman may regulate the same to accommodate the circumstances of the case.

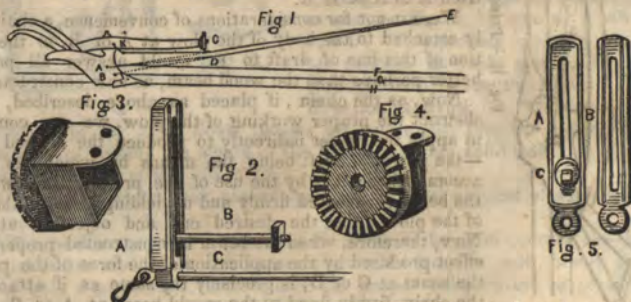
Should the plow incline to raise at the point, and require an exertion of the plowman to keep it down, it follows that the power is applied too low in the clevis to accommodate the line of draft; as for instance, the centre of resistance being at B. in the cut, and the attachment to the clevis being at C., the power being at E., the plow would tend to rise at the point C until it intersects the line B. E.

This would probably throw the plow out of the ground, or lessen the depth of its work. By the simple arrangement of the clevis, and attaching the power to the beam at the point D., the steady, easy, and uniform motion of the plow is obtained and preserved, and the same rule for regulating or applying the draft holds equally true in all cases, as width, depth, &c.

If a plow is properly stocked, the clevis giving the variations to the extent of the square of the end of the beam, is sufficient for all practical purposes, but as it often happens that from want of skill in the construction of the plow, or the condition of the land, or when two or three horses abreast are used, or when it is desired to have the team work upon the solid ground in plowing bogs, &c., it is all important that a clevis be so constructed that it may be susceptible of sufficiently wide range of variations.

Many different kinds of attachments have been invented—some simple and good, while others are heavy, cumbrous, and inconvenient.

The best now before the public is that called the Dial Clevis, with the draft rod, known as J. M. C. ARMSBY'S Patent of Dec., 1845, it is strong, instantly adjusted to any degree of nicety, and capable of a greater variation than any other kind, without the least endangering the strength of itself or the other parts of the plow. Below are cuts showing the parts of this detached, as also the application to the plow, with its use, as before explained, in the obtaining and preserving of the line of draft.



C and K, fig. 1, shows plow with dial clevis with rod attached, and position of plow in operation, line of draft, &c., &c.

A, fig. 2. The guide or movable plate which is confined across the end of the beam.

B, fig. 2. The joint bolt and nut which confines the guide to the end of the beam.

C, fig. 2. A section of the draft-rod passing through the guide, and to which the power is applied.

Figs. 3 and 4. The cast iron cap fitting the end of the beam, and through which the joint bolt passes, and to which the guide is confined by means of the bolt, and cogs or teeth on it fitting into ribs upon the guide.

A, fig. 5. Shows the front view of guide, and head of bolt confining it.

B, fig. 5. The back view of guide with splints or ribs which fit the cogs on the cap, as seen in fig. 4.

The clevis is light as any ordinary clevis,—costs but 50 cents more than a common wrought iron one.

The rod is made of the best of wrought iron, and extends back underneath the beam any distance, at the pleasure of the maker. As shown in fig. 1 it is attached at K, or near th



Fig. R.
NEW SWARD P.O.W.

THE above cut represents our new sward plow, recently completed and introduced by us. It is especially adapted to turning stiff sward and heavy clay soil, and intended for two horses. It is high under the beam, and will cut a deeper furrow in proportion to its width than any pattern we have before used. The form of the mould board is such that the wear is very equal over its whole surface. It is quite sharp forward—cuts and turns the soil with exceedingly light draft, and in a superior manner.

Price \$8. With Roller and Cutter, \$10.50.

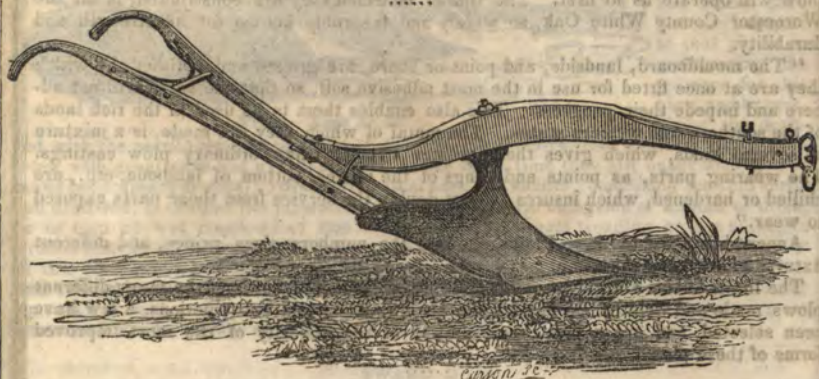


Fig. S.
NEW BROOM-CORN AND STUBBLE FLOW.

THE above cut represents our new Broom Corn and Old Land Plow, No. 38, but just completed. It is constructed with direct reference to this kind of work, is very high under the beam, high in the mould board, and has so much of the wedge or lifting form as to raise the earth gradually, and when sufficiently elevated, to completely bury the surface,—covering the whole deeply with the finely pulverised earth, which is raised by the plow.

Price \$8.50. Roller and cutter, \$11.

CATALOGUE

AND

DESCRIPTION OF PLOWS.

Our assortment of Plows consists of a great variety, calculated for all sections of country, soils, and modes of culture.

We have many from the most approved patterns of eastern manufactures, and of which we have had engraved several cuts and descriptions.

During the past season, we have added several new patterns to our assortment, expressly calculated for heavy sward soils, for deep and narrow furrows, and, at the same time, of very light draft, combined with superior form for doing good work. Also, several others of a different form, and better calculated for old or stubble land; and are especially well calculated for turning under stubble, stalks, &c., and expressly calculated for our broom-corn lands, and for covering deeply and thoroughly the long stalks and loose vegetable matter which accumulates; also, for turning under loose and long manure, when strewn on the surface of the ground.

In the construction of our plows, patented machinery is used, which forms all the plows of the same size and number,—one precisely like another,—thereby ensuring a uniform operation; and when any part is needed for repairing, they can furnish quickly and cheaply the part required, which is sure to fit, and the farmer is at once accommodated, as he can attach the several parts himself, and be assured that his plow will operate as at first. The timber of which they are constructed, is all the Worcester County White Oak, so widely and favorably known for its strength and durability.

"The mouldboard, landside, and point or share, are ground and polished, by which they are at once fitted for use in the most adhesive soil, so that the earth will not adhere and impede their progress. This also enables them to be used in the rich lands of the southern and western states. The metal of which they are made, is a mixture of several kinds, which gives them greater strength than ordinary plow castings. The wearing parts, as points and wings of the shares, bottom of landside, etc., are chilled or hardened, which insures at least double the service from those parts exposed to wear."

Annexed is a list of these Plows, showing the numbers, sizes, prices, and different fixtures and uses of the same.

The limits of this Catalogue will not admit a great many cuts of the many different plows made and sold by us, but for the several forms and constructions, a few have been selected, and are a fair representation of the majority of the most improved forms of these plows.

EAGLE NO. 1, WITH WHEEL AND CUTTER.



Fig. 1. Eagle No. 1.

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 would generally require three mules to turn a furrow 6 inches deep and ele-

ven 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.

EAGLE No. 2, WITH LOCK COULTER, WHEEL AND DRAFT-ROD.



Fig. 2. *Eagle Plow No. 2.*

any required width or depth of furrow, gauging it to a quarter of an inch, if necessary to be so exact, and also to allow of being conveniently used with two or three horses abreast. The form is precisely like the Eagle No. 1, with the exception of being one size larger.

EAGLE NO. 25, WITH WHEEL, CUTTER AND DRAFT-ROD.



Fig. 3. *Eagle No. 25.*

rod with the peculiarly adapted form of the "Eagle" plows, they perform extra deep work with great ease and excellence, and at the same time they are easily arranged to make but ordinary or shoal furrows, with equal ease and facility ; combining the Dial clevis and draft-rod, it enables the plowman to run his plow close alongside of a fence or ditch, or to turn up wet meadows or rice lands with both animals treading on the unbroken ground instead of the open miry furrow. The above cut represents a four-cattle plow of this description, and is calculated to turn any furrow not exceeding twelve inches deep, and twenty inches wide in grass land or meadow. It is also well adapted for breaking up rough ground, and trench plowing. It is also a great assistant in covering up a great growth of weeds, stubble or grass.

This cut represents improvements of a draft-rod, regulated by a simple dial, and recently patented by RUGGLES, NOURSE & MASON, and attached at 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

As deep plowing is now advocated and fast gains favor among the best practical and scientific farmers Ruggles, Nourse and Mason have had much regard to that object in constructing the patterns for this plow, and by combining the draft-

SWARD C.

Is a strong three-cattle plow, particularly calculated for breaking up deep, rough or stony sward soils. It is one size larger than Eagle No. 2.

SWARD B.

A strong four-cattle plow, same construction nearly as Sward C, but one size larger.

SWARD D.

Is a strong four-cattle plow, of the same size as Sward B, with the addition of a wrought lock coultter. To this plow is affixed, when required, a steel-edged share or point, cutting very wide, and a reverse or drag cutter forward, for the purpose of cutting and com-



Fig. 4. Sward D, rigged for reclaiming meadows.

practicable, thus making it comparatively easy work for the team, and obviating the great objection to breaking up wet meadows or swampy ground. The patent dial elev is nearly as convenient for this operation as the crane elev. When this steel-edged share is removed, and a strong cast iron one replaced, and the forward or drag cutter removed, the plow is adapted to rugged upland and hills, it being the strongest cast iron plow ever made for such purposes, thus rendering it fit both for upland and meadow plowing.

It may be well to explain the terms used here, as *Lock Coulter and Cutter*, which are too often used as synonymous. The *Cutter*, as in Fig. 1, is of wrought iron-edged with steel. It passes through the beam, and is confined by a key or wedge, or is sometimes clasped on the side of the beam by a strong band of iron passing round the whole beam and cutter, and reaches down nearly to the point of the share. It can be raised or lowered at pleasure, or taken out entirely.

The *Lock Coulter*, as in Fig. 4, is also made of wrought iron and edged with steel. It passes up through the beam, and is fastened by a screw nut or key, and also connects with the share, by locking quite through the share and mouldboard, where it joins them. This mode of fastening gives a plow much greater strength, and makes a plow more suitable to be used among rocks and newly cleared land, and among roots, etc., as the coulter cannot be turned one side, or forced out of its place.

The cutter, draft-rod and wheel are applicable, and are attached, when desired, to all sizes of plows, excepting the very small. One or all may be used on the same plow.

DESCRIPTION OF SMALL PLOWS,



Fig. 5.—Small Plow.

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 or southern culture. The mould-board is shorter and more curved than other kinds of plows, and pulverizes and works the soil admirably.

No. 15.— Same form and construction as No. 14—but one size larger.

No. A 1.—A one horse or mule plow, light, and well calculated for a leamy or clay soil. It is much used among cotton and corn, as for furrowing out or drilling.

No. A 2.—A single one horse or mule plow—one size larger than A 1, and same form and construction.

No. A 3.—A two horse plow; is much used at the north for general plowing, and highly approved for breaking up the rice lands at the south.

No. 1 B.—A large one horse plow—is frequently used with two horses for same purposes as No. A 3.

No. 2 B.—A small two horse plow—same form as No. 1 B, but considerably larger—is much used at the north and south.

Eagle No. 0.—Is one of the latest patterns, suitable for two horses at the south or one at the north, but sometimes used by two—of very easy draft, and possesses all our latest improve form.

RIDGING OR DOUBLE MOULDBOARD PLOWS,

Or several sizes. They are used for opening drills to plant potatoes and corn, &c., &c. In plowing between narrow rows, it throws the dirt both ways to the plants, and thus does the work of two plows. They are 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.

PARING PLOW.



Fig. 6.—Paring Plow.

This 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 coulters on the outward edges of each wing of the share—cutting the turf as it moves along into two strips about one foot wide, and deep as required. After the turf is pared off in 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, which, after being dried, are burned, and the ashes spread broadcast on the land.

SIDE HILL PLOW.



Fig. 7.—Side Hill Plow.

Of these plows, Ruggles, Nourse & Mason make five different sizes. They are so constructed that the mouldboard is easily and instantly changed from one side of the beam and wood work of the plow to the other, which is done simply by unhooking the hind end of the mouldboard and letting it fall over on the ground, and bringing it under and up on the opposite side, which is all done by the plowman at the handles. It is as easy as any other plow to manage and change. By this plow the operator is enabled to do the work horizontally upon side hills—going each way and turning all the furrows equally well down the hill. This mode of plowing prevents all washing of the land or soil by heavy rains, to which all side hills are subject when plowed as level land. This same plow is extensively used for horizontal plowing. The mouldboards have been so improved and lengthened during the last two years, that level land is plowed equally as well as with the common plow; this leaves no dead or finishing furrow, nor does it make banks or ridges by turning furrows towards and on each other. They are also very useful in turning furrows from walls and fences, and particularly in road-making. They save much time of the team by turning short about, instead of crossing wide ends of lands in the fields, as is done with common plows.

SUBSOIL PLOW.



Fig. 8.—Subsoil Plow.

THESE plows are used by following after the team which turns up the surface soil, and in the bottom of the same furrow. This is of great advantage to crops, both in wet and dry land. In the dry, the subsoil being deeply broken up and pulverized, the moisture

DESCRIPTION OF PLOWS.



Fig. 9.—Method of Using Subsoil Plow.

surface.

By modifying and simplifying the construction of them, they are now offered to the farmers at as favorable prices as ordinary plows, containing all the good qualities for effecting the object for which they are designed of the most approved Scotch and English wrought iron subsoil plows. They are light, strong, and durable, and on the whole, better adapted to our soils and modes of culture than those used in England and Scotland.

The draft rod is recommended for all sizes of subsoil plows, and in fact, is almost indispensable for guiding and gauging the plow.

EAGLE SELF-SHARPENING ADJUSTABLE STEEL POINTED PLOWS.



Fig. 10. Eagle Self-Sharpening Plow.

THESE are a new pattern, and are similar in form and general construction to the Eagle plows, except the points and wings of the shares are made of iron, edged and pointed with steel, and in two parts or pieces. The point is simply a straight bar of iron, pointed at each end with steel, and has several holes along the middle of the bar, by

which it is confined in its place. The object of the several holes is to move the bar forward as it wears away, and thereby always secure a point of suitable length, and when one end of this bar is worn up too short for further use, the other end is turned forward, and used the same way; and when both ends are gone, any ordinary blacksmith can in a few minutes relay the ends with steel. The wing of the share is also made of iron, steel edged when desired. This also is reversible, as it is so formed as to fit equally well either side up or either end forward, as the case may require as it wears away. It is simply a flat plate of iron, of suitable thickness to insure strength, and edged with steel by any blacksmith, the edge only wearing away by use.

Self-sharpening plows have been exceptionable, inasmuch as they have been too complicated to be of sufficient strength for ordinary hard and stony soils; but by substituting wrought iron and steel in place of cast metal, they combine greater strength and durability, and at a less expense, which does away such objections.

LEFT HAND PLOWS.

THESE plows are same as the Eagle in construction, but turn the furrow toward the left hand. They are mostly used at the west by the Dutch farmers, and are designed for heavy teams in rugged soils, and possess extra strength of timber and metal.

RETAIL PRICES OF PLOWS

INCLUDING ONE EXTRA SHARE TO EACH PLOW.

Plows.	Name.	With common clevis.	Wheel or cutter.	Wheel and cutter.	Draft-rod, Wheel and cutter.
Light Horse,....	No. 14,.....	\$3 50	.....	.....	.....
Medium Horse,....	" 15,.....	4 50	.....	.....	.....
Small do.,....	" A 1,.....	3 50	.....	.....	.....
Medium, do.,....	" A 2,.....	4 50	.....	.....	.....
Seed or Stubble,....	" A 3,.....	7 00	8 00	9 00	.....
Horse,.....	" 1 B,.....	6 00	7 00	8 00	.....
Two Horse,.....	" 2 B,.....	7 50	8 75	10 00	.....
" ".....	Stubble H,.....	8 00	9 25	10 50	\$11 00
One Horse,....	Imp. Eagle, No. 0,.....	6 00	7 00	8 00	.....
Light Sod,.....	" " " 1,.....	8 00	9 25	10 50	11 00
" ".....	" " " 1, Coult.,.....	9 00	10 25	11 50	12 00
" ".....	" " " 36,.....	8 00	9 25	10 50	11 00
Medium Sod,....	" " " 9,.....	8 50	9 75	11 00	11 50
" ".....	" " " 2,.....	8 50	9 75	11 00	11 50
" " wide,.....	" " " 44,.....	9 50	11 00	12 50	13 00
" ".....	" " " 2, Coult.,.....	10 50	11 25	12 50	13 00
Large Sod,.....	" " " 20,.....	10 00	11 50	13 00	14 00
" ".....	" " " 20, Coult.,.....	12 00	13 50	15 00	16 00
" ".....	" " " 25,.....	10 00	11 50	13 00	14 00
Medium,.....	" " " C,.....	9 00	10 50	12 00	13 00
Large ".....	" " " B,.....	10 00	11 50	13 00	14 00
" ".....	" " " H, Coult.,.....	12 00	13 50	15 00	16 00
Light Horse,....	Eagle S. Sharpener, No. 1.....	5 00	.....	.....	.....
One Horse,.....	" " " 2,.....	6 50	7 50	8 50	.....
Medium Sod,....	" " " 3,.....	8 50	9 75	11 00	11 50
Large ".....	" " " 4,.....	9 50	10 75	12 00	12 50
Heavy ".....	" " " 5,.....	10 50	12 00	13 50	14 50
Medium Sod,....	Left Hand S. S.,.....	40 10 00	11 50	13 00	14 00
3 or 4 Horse,....	" " " 41,.....	12 50	14 00	16 50	16 50
One Horse,.....	No. 0 Side Hill,.....	5 00	.....	.....	.....
" ".....	No. 00 " ".....	7 00	.....	.....	.....
Two ".....	No. A 1, " ".....	9 00	10 25	11 50	12 00
Sod,.....	No. A 1, " ".....	9 50	11 00	12 50	13 50
".....	No. A 2, " ".....	10 00	11 50	13 00	14 00
Large Sod,....	No. A 3, " ".....	12 00	13 50	15 00	16 00
Heavy Road,....	No. A 4, " ".....	14 00	D. Rod 15 00	.....	.....
One Horse,.....	No. 0 Sub Soil,.....	5 50	D. Rod 6 50	W. & D. Rod 8 00	.....
Two ".....	No. 1 " ".....	7 00	8 50	10 00	.....
Heavy,.....	No. 2 " ".....	.....	D. Rod 12 00	13 50	.....
Double wing & pt.	No. 3, Fluke pattern,.....	.....	D. Rod 15 00	16 50	.....
Cotton,.....	Davis 6 inch,.....	3 25	.....	.....	.....
".....	" 7 inch,.....	3 50	.....	.....	.....
Rice,.....	Trenching,.....	6 00	.....	.....	.....
Ridging,.....	No. 1 Double Mould,.....	4 00	.....	.....	.....
".....	No. 2 " ".....	6 50	.....	.....	.....
Sugar Cane,....	No. 3 " ".....	8 00	.....	.....	.....
Sugar Plow,....	No. 2 S. L.,.....	7 50	8 75	10 00	.....
".....	No. 5 S. L.,.....	8 75	10 00	11 50	.....
2 Horse Medium,	Imp. No. 21,.....	8 00	9 25	10 00	.....

HARROWS AND CULTIVATORS.

THE GEDDES HARROW.



Fig. 13. Geddes Harrow.

THE Geddes Harrow, so called from the inventor, GEORGE GEDDES of Tyler, Onondaga county, in this State, is considered by those who have used both, to be superior to the square harrow, inasmuch as it draws from a centre, without an uneasy and struggling motion, and is of course easier for the team. The accompanying cut is so simple and distinct, it needs no description in this place. Being hung by hinges, it is easily lifted when in motion, to let off collections of weeds, roots or other obstructions. It can be doubled back, and is of very convenient form to be carried in a wagon about the farm. Some have teeth put in as in common harrows, simply by being driven in from the upper side; others have the teeth so made as to be let through the timber from the under side, with a washer below, and a nut and screw on the top; this avoids the losing of teeth, by preventing them from dropping out, as in the common harrows.

There are several sizes containing more or less teeth as required. The following table shows the number of teeth in the several sizes, and their prices:

14 teeth, for one horse,	\$8 00
18 teeth, for one or two horses,	9 50
22 teeth, for two light horses,	11 00
26 teeth, for two heavy horses,	13 00
30 teeth, for two or three horses,	15 00

The work performed by this Harrow is better, with one operation, than can be done with the common or A Harrow by going twice over the ground.

TRIANGULAR FOLDING HARROWS.

THIS is also a folding harrow, and in form similar to the Geddes Harrow, but much heavier timber and teeth, and more suitable for new land and rough soils.

SCOTCH OR SQUARE HARROW.



Fig. 14. A Pair of Scotch Harrows.

THIS is one of the most effectual harrows in use for smooth land; they are formed by connecting two small harrows by hinges, as shown in the cut; have generally forty teeth, though we have seen them with sixty; the wood work, teeth and wrought iron, are lighter than in the Geddes harrow. The two can be detached, and used separately, with a single horse. Prices vary, according to size and weight of teeth, from \$10 to \$18.

Sufficient attention is not generally paid to harrowing, it being the next most important operation after plowing. The land should be harrowed from four to six inches deep, so as to leave the ground in a fine pulverized condition, and, if practicable, should also be rolled afterwards, when sown with grain or grass.

IMPROVED CULTIVATOR.



Fig. 14. Improved Cultivator.

planted crops, as corn, etc.

There are several kinds of teeth, some of steel, and others of wrought iron. The cut above represents the most common form when made of cast iron; but others have a kind of foot or share, which has two points, and are reversible, so that when one point is worn off, the other may be turned to the work; these shares are confined to a cast iron standard, with one bolt as a plowshare; these standards are made to fit into the same wood frame as above, and when so rigged, is called *Bement's Cultivator*. There are various other forms of cast iron teeth too numerous to mention.

The best steel tooth in use of any note, is Rogers' Patent, which are stamped or struck up from plates of spring steel, by machinery which gives a uniform appearance and effect to them; they are very strong and durable, and wear sharp until all worn up. The prices are as follows:

Improved Cultivator with wheel, cast iron teeth, . . .	\$5 50
Bement's Cultivator with wheel, " . . .	6 00
Common Cultivator without wheel, " . . .	5 00

With Rogers' steel teeth these Cultivators cost \$1 50 more on each.

All the above kinds of Cultivator can be extended from one to three and a half feet in width.

There are also in use cultivators with teeth like a small mouldboard, and which turn only one way. These are sometimes used with good effect, as they may be reversed or exchanged from side to side, and thereby throw the earth either to or from the planted crops, as corn, potatoes, &c.

HAND CULTIVATOR.

This is used in gardens, among root crops with good effect. It is constructed wholly of iron, has a wood handle by which it is drawn by hand. It is an expeditious way of cutting up weeds, and stirring the ground, and can be more frequently used than the hoe, as the weeds thus cut up are exposed to the sun, and are easily destroyed. It can be extended from ten to eighteen inches in width to suit the rows.

FIELD ROLLER.

This implement is becoming extensively used, and with very great advantage too, as it forms a smooth and even surface, by crushing the lumps of baked earth, and sinking small stones even with the ground, and is highly advantageous after the sowing of grain or grass seeds, as it compresses the soil about the seed, and secures a more quick and

sure germination. Its greatest advantages, however, are when used on light sandy or porous soils—such as are not compact enough to hold firmly the roots of plants, and retain a suitable and uniform moisture—as when compressed it is found that such soils yield a greater product, as it not only holds the roots better, but aids in retaining those gases from manure, so essential to vegetation, and so easily extracted and carried away by the action of the sun and winds. Other advantages are said to be



Fig. 15. Field Roller.

Other advantages are said to be

derived by using the roller early in the spring on those lands, which by "heaving" pull to pieces by the action of the frost, and displace the roots of grain as well as grasses sown the previous autumn, as it presses the roots and earth together, and back to their proper places, and vegetation goes on again, thus preventing what is termed "winter-killing."

There are various kinds, and as many different constructions. Wood is generally used, sometimes by taking a large sized tree, and cutting from its trunk a roller of suitable length, and suspending it at each end in a frame to which is attached a tongue or thills, by which it is drawn; this, although cheap and simple, is objectionable, as it is generally found too heavy for its diameter, and too hard for the team. Others are made in cylinders on two or more wheels on the same shaft or axle, and these wheels covered with boards or plank. This is, perhaps, the most convenient and at the same time effectual implement. They are sometimes made in two parts or separate rollers on the same shaft; this is much easier for the team, and does not leave the ground uneven in turning round, as the separate rollers move either way on the axle. From twenty to thirty inches is the best size for the diameter of rollers, and the length may be adjusted for the team by which it is used. All rollers should have a box or body to hold extra weight when desired, as stones, etc.

There are also cast iron rollers, formed as above with sections or separate rollers of one foot each in length, and more or less can be put upon one shaft, making it any length and of different diameters, each section weighing from 75 to 150 pounds, according to the diameter.

Wood rollers for one horse, constructed as above, are worth from fifteen to twenty-five dollars, and for two horses, twenty-five to thirty-five dollars; cast-iron rollers, same construction, for one horse, \$30; for two horses, \$50 to \$60.

Garden rollers, same construction, to be used by hand in gardens and walks, \$10 to \$15. A very desirable article for the purpose.

CAST IRON DIRT SCRAPERS.



Fig. 16.—Cast Iron Dirt Scraper.

Of these there are several kinds in use. The cheapest and best are now made of cast iron for bottom sides and edge, with wood back and handles, and wrought iron bail. They are extensively used for excavating and filling up for buildings and for making and repairing roads. The prices vary according to size and weight, from \$4.50 to 10.

FIELD HOES.

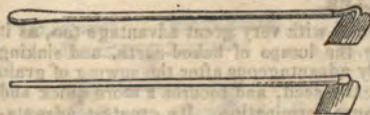


Fig. 17. Field Hoes.

Among the assortment is a great variety of hoes of all kinds, as field, garden, carrot, &c., &c., with and without handles. The best are cast steel, with shank and hoe forged solid, or from one piece. They possess great strength, and are light and durable.

DUTCH SCUFFLE HOE.

This is a first rate tool for weeding carrots, turneps, &c. They have two edges and a long handle. The operator stands between the rows and works the hoe back and forth, cutting each way, and walks backward in the row; thus, by not trampling on the weeds after they are cut, but exposing them to the sun, they are soon killed. They are of different sizes, from 6 to 12 inches in width, the common size for use being from six to eight inches.

BACHELDER'S CORN PLANTER.

Fig. L.—Bachelder's Corn Planter.

\$15.00.

This is one of the best machines in use for horse-power, for corn in hills. The general form is similar to a plow without mouldboards, with a hopper placed upon the beam. The seeds are dropped by two wooden slides or arms, which are moved alternately by a crank motion, in and out at the bottom of the hopper, these arms having cups or cavities which fill with corn, and as they are drawn out and over the pipe or tube, are dropped into it, and fall to the ground beneath the share. Price,

Root and Bush Puller.

Fig. 18—Root and Bush Puller.

the bushes are torn out by the roots. One man, with a smart and well broken pair of oxen, will thus do the work of ten men. Price, from \$2 to \$5.

This implement is very effective in tearing out stools or clumps of small bushes, which grow in wet boggy land. It is made of inch by inch and a half bar iron, with two, three, or four prongs, weighing from twenty to forty pounds. The ground is first, (if the roots are large and thick, loosened around the bushes, when the claw or pull is fastened to one side, and a pair of oxen attached by means of a chain to the implement. At the word given,

Transplanting Trowels.

Fig. 19—Transplanting Trowel.

They are made of the best of cast steel, and may be ground as sharp as desired.

These are intended for preparing the ground to receive small plants, and for taking them up and removing them to the desired place, and transplanting them without disturbing their roots or checking their growth. Sizes from five to ten inches in length.

Ladies' Weeders.

Fig. 20—Ladies' Weeder.

s long

These are simply another form of the trowel, except that they are a plain piece of steel, instead of being bent up at the edges. They are made light and delicate, and are used for weeding gardens, and working in and about flowers, both in the garden and in pots—a durable article, from four to six inches

Garden Rakes.

Fig. 21—Garden Rake.

A very great variety, with iron, wood, and steel heads and iron and steel teeth, from six to twenty inches wide, and any desired number of teeth. Also, some with teeth upon one side, and a scuffle or hoe upon the other, answering a double purpose of hoe and rake.

EMERY'S

ALBANY CORN PLANTER AND SEED DRILL.

The annexed cut represents this planter. In using it the operator takes the handles as with a wheel-barrow, and walks off erect. The machine, making its own furrow, counting and measuring its own quantity of seed, deposits it in hills or drills at pleasure, and at any distance apart, covering the seed after it is dropped, and compressing it after it is covered, by means of the roller, and doing the whole at one and the same time.



At the same time, it is one of the most simple machines for the purposes designed that has ever been introduced. With this, all small seeds are dropped by means of a revolving circular brush inside, which operates quite on the bottom of the hopper. The quantity, as well as the different kinds of small seed, are regulated by means of movable tin plates, with different sized holes in them, which are placed in the bottom of the hopper, the seed is forced through one of the plates with the proper sized holes, by the brush. By this process, all seeds, as carrot, parsnip, onion, turnip, &c., without regard to form or weight, are dropped with equal precision.

For planting corn the brush is removed, and a wooden cylinder is substituted, just filling the hopper mouth; the tin plate is removed, leaving the bottom of the hopper open. This cylinder is perforated with cavities sufficiently large to receive any required number of kernels of corn, beans, peas, &c., and a set-screw, with a head just filling the cavity, is inserted. The quantity is regulated by turning the screw down or up at pleasure; and when only a part of the cavities are needed, the screws may be turned out until they are even with the surface of the cylinder. All the cavities or any part of them may be used at the same time according to the distance asunder it is desired to drop the seeds. The brush and cylinder both receive their rotary motion by small gear wheels, (and connecting shaft,) operating into series of rows of cogs upon the plane face of the main large wheel, thereby avoiding the difficulties heretofore found in using bands, which would slip, wear, and get loose.

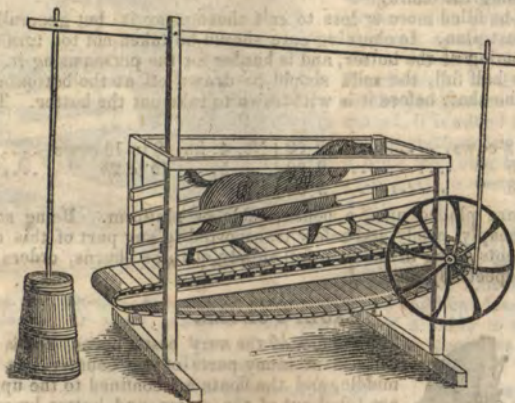
The speed of the cylinder and brush may be varied by placing the movable pinion (which is on the connecting shaft) in any of the different rows of cogs on the main wheel, and there confining it by means of an iron pin. By referring to the accompanying cut, the planter will be readily understood.

It is equally adapted for being used by hand, or by a horse, as a plow. Several hundred have been sold, and have given universal satisfaction. One acre per hour is readily lanted, and may be called a fair estimate of their capabilities, with the rows three feet

apart. With rows wider or narrower, more or less ground may be planted in the same time.

So accurately have they worked, that it may be proper to name an instance this season, which was on a good piece of ground of 20 acres. The machine was set to drop the desired quantity at the requisite distance, and a calculation made, and the quantity of seed for the whole field was measured; and when it was planted, a little over a quart of seed remained in the hopper. After the corn had come up, none had been missed; but any ten hills in one part would not vary in number with another part of the whole field. This statement is made by Judge Cheever, of Stillwater, N. Y., and is but one of very many similar reports of their successful operation.

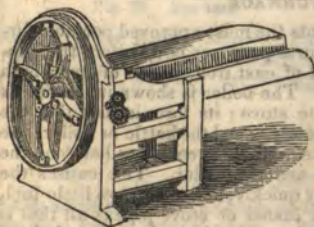
DOG POWER, For Churning, Driving Grindstone, &c.



The above cut illustrates our most approved Dog Power. It is a simple endless platform, formed upon two India rubber straps, with strips of light wood firmly riveted to it. This endless platform is supported by a drum about 12 inches in diameter at each end, and the whole so arranged that it can be elevated to any angle required by the weight of the dog, or work to be done by it.

Having sold a great number of them with entire success, we do not hesitate to recommend them to the dairymen as being the most simple, durable, and portable machine for the purpose in use. It is equally adapted for a sheep, and many prefer them to dogs. Price, \$12.50.

Cornstalk Cutter and Crusher.



This is for power, and is probably the most efficient for the purpose now offered. By means of large seed rollers, the stalks are compressed until they are completely crushed, and as the knives cut them off they become fine and soft like chaff.

By thus preparing the well cured stalks, (which otherwise are worthless,) they are made palatable and more valuable even than the same weight of the corn leaf, which last is the only portion eaten by the animals when thrown before them together. Several hundreds have been sold and in use for several years. They can be driven by one or more horse power.

Price, \$27.

KENDALL'S CYLINDER CHURN.



Fig. 35. *Kendall's Churn*, by means of the crank, the floats being confined to it, are turned at the same time, breaking the cream four times at each revolution of the shaft or crank. These floats are removed or taken out of the churn in a moment, by unscrewing and drawing out the crank first—thus making it very convenient to remove the butter after churning and cleaning the churn.

The churn may be filled more or less to suit those using it, but generally about two-thirds full is the best plan. In churning care should be taken not to turn too fast, as it only delays the coming of the butter, and is harder for the person using it. In case this is filled more than half full, the milk should be drawn off at the bottom so as to bring the whole below the shaft before it is withdrawn to take out the butter. The prices are as follows:

No. 1, for 1 to 2 cows,	\$2 00	No. 4, for 8 to 15 cows,	3 75
2, 3 to 5 "	2 50	5, 15 to 25 "	4 50
3, 5 to 8 "	3 00		

In using they are placed upon a bench, table or platform. Being so compact in shape, they are cheaply, easily and safely transported to any part of this or other countries. Arrangements being made for a full supply of these churns, orders from farmers and dealers are respectfully solicited.

GAULT'S CHURN.



Fig. 36. *Gault's Churn*.

This is one of the very best churns, and is in very general use in many parts of the country. It opens in the middle, and the floats are confined to the upper part, and are lifted out of the cream and butter by opening it, the top being confined on one side by hinges. In operation, this churn is not inferior to Kendall's, but in convenience, safety in transportation, and first cost, it has not all the advantages of the latter. It can never be filled quite half full, consequently a churn considerably larger than Kendall's, is required for the same dairy. Prices are as follows:

No. 1, for 4 to 5 cows,	\$3 00
2, for 6 to 10 cows,	4 50
3, for 10 to 20 cows, with 2 cranks,	6 00

MOTT'S AGRICULTURAL FURNACE.



Fig. 37. *Mott's Furnace*.

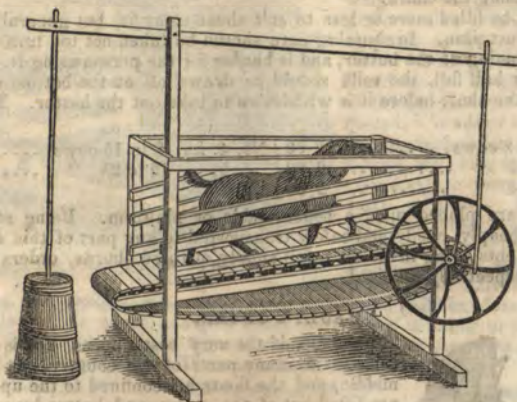
The cut represents the most approved portable furnace for agricultural purposes now before the public. It is formed of cast iron, and is of itself both stove and boiler. The boiler is shown in the cut as detached from the stove; its form is such that the fire passes completely round the kettle or boiler, the space being some two to three inches between the outside or stove and the boiler. This causes the water to boil very quickly, and with very little fuel, saves all the expense of masonry and brickwork, as a funnel or stove pipe is all that is necessary to give it a draft for all purposes. They are admirably adapted to boiling and steaming vegetables and food for stock, and are convenient for many other purposes.

apart. With rows wider or narrower, more or less ground may be planted in the same time.

So accurately have they worked, that it may be proper to name an instance this season, which was on a good piece of ground of 20 acres. The machine was set to drop the desired quantity at the requisite distance, and a calculation made, and the quantity of seed for the whole field was measured; and when it was planted, a little over a quart of seed remained in the hopper. After the corn had come up, none had been missed; but any ten hills in one part would not vary in number with another part of the whole field. This statement is made by Judge Cheever, of Stillwater, N. Y., and is but one of very many similar reports of their successful operation.

DOG POWER,

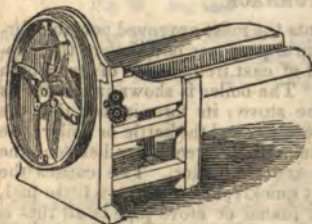
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Price, \$27.

KENDALL'S CYLINDER CHURN.



Fig. 35. *Kendall's Churn*—by means of the crank, the floats being confined to it, are turned at the same time, breaking the cream four times at each revolution of the shaft or crank. These floats are removed or taken out of the churn in a moment, by unscrewing and drawing out the crank first—thus making it very convenient to remove the butter after churning and cleaning the churn.

The churn may be filled more or less to suit those using it, but generally about two-thirds full is the best plan. In churning care should be taken not to turn too fast, as it only delays the coming of the butter, and is harder for the person using it. In case this is filled more than half full, the milk should be drawn off at the bottom so as to bring the whole below the shaft before it is withdrawn to take out the butter. The prices are as follows:

No. 1, for 1 to 2 cows,	\$2 00	No. 4, for 8 to 15 cows,	3 75
2, 3 to 5 "	2 50	5, 15 to 25 "	4 50
3, 5 to 8 "	3 00		

In using they are placed upon a bench, table or platform. Being so compact in shape, they are cheaply, easily and safely transported to any part of this or other countries. Arrangements being made for a full supply of these churns, orders from farmers and dealers are respectfully solicited.

GAULT'S CHURN.



Fig. 36. *Gault's Churn*.

This is one of the very best churns, and is in very general use in many parts of the country. It opens in the middle, and the floats are confined to the upper part, and are lifted out of the cream and butter by opening it, the top being confined on one side by hinges. In operation, this churn is not inferior to Kendall's, but in convenience, safety in transportation, and first cost, it has not all the advantages of the latter. It can never be filled quite half full, consequently a churn considerably larger than Kendall's, is required for the same dairy. Prices are as follows:

No. 1, for 4 to 5 cows,	\$3 00
2, for 6 to 10 cows,	4 50
3, for 10 to 20 cows, with 2 cranks,	6 00

MOTT'S AGRICULTURAL FURNACE.



Fig. 37. *Mott's Furnace*.

THE cut represents the most approved portable furnace for agricultural purposes now before the public. It is formed of cast iron, and is of itself both stove and boiler. The boiler is shown in the cut as detached from the stove; its form is such that the fire passes completely round the kettle or boiler, the space being some two to three inches between the outside or stove and the boiler. This causes the water to boil very quickly, and with very little fuel, saves all the expense of masonry and brickwork, as a funnel or stove pipe is all that is necessary to give it a draft for all purposes. They are admirably adapted to boiling and steaming vegetables and food for stock, and are convenient for many other purposes.

CHEESE PRESSES.

where large quantities of water are required to be heated. The following are the manufacturer's retail prices: they can be furnished both wholesale and retail.

15 gallons, complete,.....	\$9 00	60 gallons, complete,.....	\$23 00
22 " " " " " " " " " " " "	12 00	80 " " " " " " " " " " " "	30 00
30 " " " " " " " " " " " "	15 00	90 " " " " " " " " " " " "	35 00
40 " " " " " " " " " " " "	18 00	120 " " " " " " " " " " " "	50 00
45 " " " " " " " " " " " "	20 00		

COLLINS' AND STONE'S PATENT CHEESE PRESS.

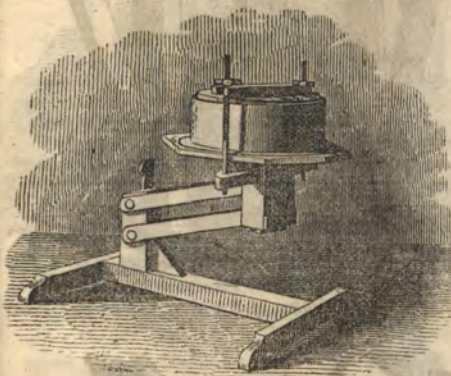


Fig. 38. Self-acting Cheese Press.

ing down the lever, the press answers every purpose of a table to turn and trim the cheese upon. The whole weighs from thirty to fifty pounds complete, and occupies a space of about two feet square. There are three sizes now made:

No. 1, smallest, \$5 00

No. 2, second, \$5 50

No. 3, largest, \$6 00

No one who has ever used this press, has returned them, or substituted any other kind in its stead, although before the public for the last five years, and many hundreds have been sold.

BOG HOES, POST SPOONS, &c.



Fig. 39. Bog hoes.

post holes for setting fences. They are usually made of iron—sometimes of steel. They, with the bog hoes, have a long handle, and are very strong.

Bog Hoes, several kinds, light and heavy, with and without pick attached to them.

Post Spoons both round and sharp-pointed used principally for digging



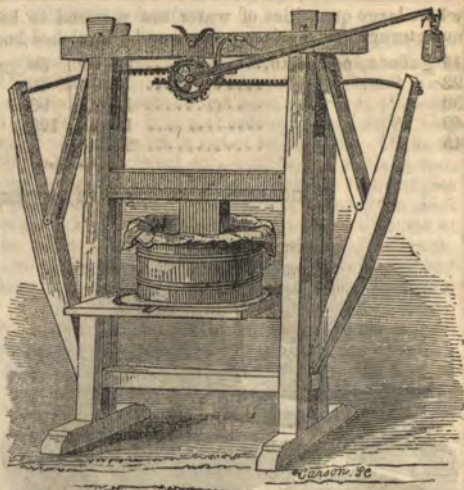
Fig. 40. Post Spoons.

GARDEN AND RAILROAD WHEELBARROWS.

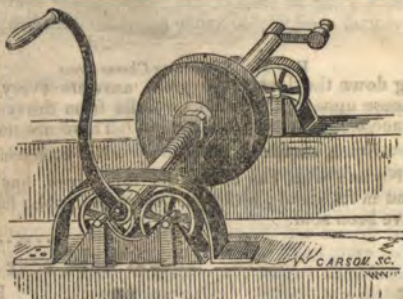
ALWAYS on hand various kinds of barrows for the different kinds of work for which they are used and at several prices. Boy's barrows, for light work, \$3.50; Garden barrows, a first-rate article, well finished and ironed, \$4.50; Canal and Railroad barrows of va-

KENDALL'S CHEESE-PRESS.*Patented July 15, 1843.*

The annexed cut represents an approved cheese-press, for which the New-York State Agricultural Society awarded the first premium in 1848, and is generally used in the counties of Herkimer, Oneida, &c., in this state. Its construction is a combination of levers working together, and so arranged as to give any desired amount of pressure. A suspended weight of twenty pounds, on the end of a lever four feet long, being sufficient to give a pressure of ten tons. Price \$15.

**GRINDSTONE HANGINGS.**

The annexed cut represents our latest improvement in hanging grindstones. It consists of a strong round iron shaft, with bearings turned, a small foot crank at one end, and a crank handle at the other. Near one of the bearings is a plate or wide flange, made solid with the shaft; another plate, corresponding to the first in size and form, with a hole through its centre, is slipped on the handle end of the shaft, and followed by a nut which works in the screw, cut in the shaft. All that is necessary to hang the stone, is to fill the hole of the stone with some soft wood, and with dividers find the true centre by measuring from the circumference, and bore a round hole just the size of the shaft; then insert the shaft, put on the loose plate, and follow up with the nut until it is firmly held. The crank may then be put on, and the whole suspended on the anti-friction rollers fit for use,—forming at once the best hangings ever invented.



Prices, with rollers, and all complete for a stone of 150 pounds, \$2; and more or less for larger and smaller stones.

EDGING OR BORDER KNIFE.

This is a semi-circular steel knife, about eight or ten inches wide, with socket to receive a straight handle. This, when ground thin, is used for trimming walks and edges of turf—is useful in forming grass plats, &c. &c.



CHURN, RAKE, SAUSAGE STUFFER.

COMPRESSING AND THERMOMETER CHURN COMBINED.



Fig. O.

drops into the groove when the crank is in its place. To wash and take out the butter, all that is necessary is to raise the pin and withdraw the crank far enough to relieve the dasher, when it is readily taken out.

GRAIN BINDERS' WHEEL RAKE.



Fig. P.

bound and thrown aside, the foot is removed from the foot-piece, (a,) the teeth drop down, and the handles rise ready for the next operation. Price 3 to 4 dollars.

SAUSAGE STUFFER.



Fig. Q.

This arrangement forms the best hand churn now before the public.

It has the Double Zinc Cylinders for facilitating the process of obtaining the proper temperature by means of hot or cold water, without mingling it with the milk and cream. A thermometer is neatly set in one end to enable the operator to know the proper degree of temperature at which to commence churning. The bevel floats which have been before described, are used without any shaft through the churn, by having a dowel at one end, and a square socket at the other, which receives the end of the short crank when it is suspended and propelled. The crank has a groove turned in its round part to receive a pin, which pin

THE annexed cut represents a labor and time saving implement, used extensively in several states where it has been introduced. It is light, weighing about fifteen pounds. As represented in the engraving, the binder takes the handles and pushes it before him, with the points of the teeth or fingers close upon the ground, and when he has gathered on the fingers a sufficient quantity for binding into a sheaf, he places his foot upon the foot piece, (a,) and by a slight pressure, and by letting go the handles, the fingers and grain are raised above the stubble, when it is readily bound, the binder being required to stoop much less than in the old way of reaching to the ground. When the sheaf is

With this machine sausages are stuffed with extraordinary despatch and ease. Sausage-making establishments cannot, and farmers should not, do without them.

Grass, Grain and other Scythes



Will be furnished on as liberal terms as at any other establishment in the country.

Having been long in the deal of Scythes, as well as Agricultural Implements generally, we do not hesitate to say, that in our opinion, few, if any other establishments turn off as uniform and good quality of Scythe, as the establishment of Dunn & Co., and recently, by an

Act of Legislature, incorporated under the name of the NORTH WAYNE SCYTHE CO., with a Capital of \$150,000, with a privilege of increasing it to \$200,000.

"The buildings have been enlarged and increased, and are now the model shops of the world, embracing some forty trip hammers, and a corresponding amount of machinery, sufficient for the manufacture of over 15,000 doz. Scythes annually, giving constant employment to over one hundred hands. All the different kinds and patterns of Scythes in use in the United States are manufactured here, including Grain, Grass, Bush, Bramble, Lawn and Rice Scythes. In workmanship and finish they are without a parallel, and their temper is equal to the best ever known.

"They have been awarded diplomas by the New-York State Agricultural Society, and a Silver Medal by the American Institute."

Scythe Stones.

The assortment of stones includes the Quinnebang, both dressed and rough. This is a celebrated stone, of fine sharp grit. The Norwich stone, one of the best known. The Cummington stone, well known and much used, but inferior to either of the others. Prices from 6 cts. to 25 cts. each.

Scythe Rifles.

Anson's celebrated and unsurpassed rifles, warranted water proof—single and double. Also, Austin's Rykerts, &c. From 6 cts. to 12½ cts. each.

Scythe Snaths.

Of the most approved form and merit, among which are Lamson, Goodnow & Co's, Clapp's, Barrett's, and others.

Grain Cradles.

Among the assortment are Grant's, Bryan's, Miller's, &c. They are too well known to need comment. They are made to be easily taken apart and packed, and as easily to be put together again, by any one. An improved manner of fastening the braces by thumb-screws avoids the liability of splitting the snath. Prices from \$3.50 to \$5.00.



Grain Cradle.

Partridge's Hay Forks.

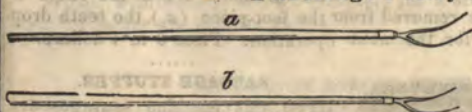


Fig. 34—Partridge's Hay Forks.

Among the assortment are to be found the celebrated and unequalled forks manufactured by Henry Partridge. These forks are not equalled in strength and elasticity by any other manufactured in this country, probably not in the world.

There are six sizes, and numbered accordingly, and are all of the same general form, and are warranted to the trade. Also various other kinds of much merit, among which are spring steel, cast steel, shear steel, and German steel.

GRANT'S PATENT FANNING MILL.

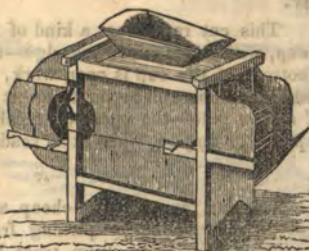


Fig. 23. Fanning Mill.

This mill is probably equal, if not superior to any other in use, for cleaning every kind of grain and grass seeds. Full directions for its use are attached permanently to each mill, for any and all kinds of grass and other seeds. The inventor and manufacturer speaks thus of it: "Our mill has taken the first premium at five fairs of the State Agricultural Society, and at the state fairs of Pennsylvania and Maryland in 1845. We were also awarded the first premium at the fair of the Mechanic's Institute, held in the city of New-York, in 1846, and also at a large number of county fairs." "Our mill received the highest consideration at the great national fair held at Washington in 1846, and has uniformly and in all cases taken the first premium whenever it has been presented for competition. Each mill has seven sieves, and there are four sizes, as follows:

No. 1,.... \$21. No. 2,.... \$23. No. 3,.... \$25. No. 4,.... \$27.

H. L. EMERY'S CYLINDER DYNAMOMETER.



Fig. 24. Cylinder Dynamometer.

This instrument is intended to be used as a comparative test of the power required to overcome the resistance of bodies under draught; more particularly that of plows.

It consists of a strong iron cylinder about eight inches long, and two and a half diameter, into which a piston is ground steam tight; the piston rod passing through a stuffing box in the cylinder head, and receiving in its end the draft ring. A strap hook, at the other end, serves as the attaching or connecting link.

This cylinder being filled with a non-elastic fluid, and the piston having a small orifice through it, the piston can be drawn from end to end as the fluid changes position, similar to the sand of an hour-glass. The instrument being attached to the plow and team, the comparative amount of power is self-registered on the piston rod on the completion of the furrow; as it is drawn out more or less by the different plows, without regard to time or speed of team,—an important acquisition, not before attained by any other instrument. It was awarded a silver medal at the Syracuse State Fair, American Institute Fair, and the Worcester County Fair, in 1849.

VEGETABLE CUTTER

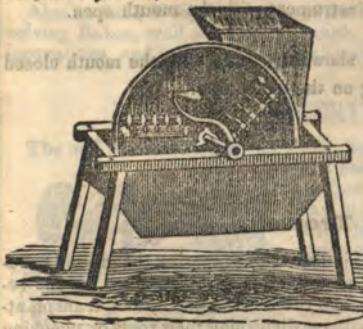


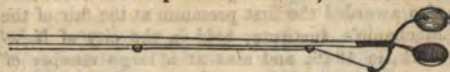
Fig. 25. Vegetable Cutter.

FIG. 25 is a front view of the best machine for this purpose manufactured in the country. It is constructed with a heavy iron face plate wheel, with three large apertures through it, this wheel revolves on a shaft, by means of the crank or other power, and in front of a hopper into which the vegetables are thrown. There is one long wide knife at each aperture, which serves to cut the roots into large slices; there are also on the front side of the wheel five smaller knives placed at right angles with each large knife; these serve to cut the slices into strips at the same operation. One bushel can be cut per minute with this machine, and every strip not to exceed an inch and a quarter in width, and any desired thickness, according to the set given the three large knives. Price \$12.

Fruit Picker.

This cut represents a kind of tin cup, with fingers upon one edge—the bottom of the cup is open work, to enable the operator better to use it by a light pole—the operator reaches it to the fruit so as to bring the stem between the points or fingers, when it is readily secured by a slight twisting of the instrument.

Price of the cup without handle, 50 cents.



This cut represents a cheap and useful contrivance for picking fruit without injuring it, from trees beyond the reach of ladders. It is formed by two spoons, with the bowls towards each other, and the handles crossing each other on a pivot, like a pair of scissors—one handle terminating in a shank or socket, and is fitted upon the end of a light pole of suitable length—the other handle being placed by this means in an angular position, it is attached to a strong string, which is confined by staples or loops, to the hole. The process of using it, is to place the instrument upon the fruit, and seize hold of the string sufficiently hard to pull off the fruit, when it is lowered by the operator safely.

This cut represents the latest, and probably best kind of fruit pickers in use.

It is formed of a strong wire frame, so constructed that when a kind of hoop is drawn down from the top, the sides of the frame close, the bottom being open, and the whole firmly attached to a handle. A cloth tube of sufficient length and size to convey the fruit to the ground, is inserted through the bottom of this frame and up to the hoop, which is made fast, thus forming a kind of bag with the mouth open. The operator simply reaches the mouth to the fruit, so that it is well into it, when, by pulling slightly upon the cloth tube, the hoop is drawn down the wire frame, closing it over the fruit, when it is detached and comes safely down the tube into the hand or basket, as is desired. The fig. represents the instrument with the mouth open.

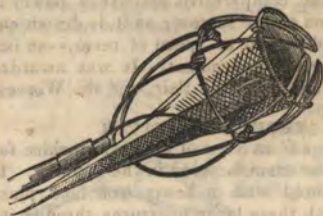


Fig. shows the same with the mouth closed by pulling on the cloth tube.

Transplanting Trowels.

These are intended for preparing the ground to receive small plants, and for taking them up and removing them to the desired place, and transplanting them without disturbing their roots or checking their growth. Sizes from 5 to 10 inches in length.



They are made from the best of cast steel, and may be ground as sharp as desired.

HORSE RAKE.

This implement, so well known in many parts of the country, and in use for so many



Fig. G.

three acres will be raked up in that time, or at the rate of twenty-four acres per day.

The only labor in unloading each rake full of hay, is a slight lifting of the handles, which causes the teeth and handles to make a semi-revolution, and drop the hay without the least stopping or delay. The rapidity with which a large field of hay may be secured from a threatening storm is one of its greatest advantages. When in operation the teeth lie flat on the ground, and not as represented in many agricultural papers, running on their points. The above cut represents Wilcox's Premium Revolving Horse Rake. It is one of the best finished pieces of work of the kind ever made in the country, being made by machinery, every joint and every tooth, head and all, are true to each other. As they are made of the best of second growth Massachusetts white oak and white ash, they have no equal in strength, finish, or durability.

Also Downer's Premium Revolving Horse Rake, a very good rake, and well known over this state. It is much heavier than Wilcox's, and by some preferred.

Price of square tooth rakes, 8 feet long, 18 teeth,	\$7 50
" " " " 8 " 20 "	8 00
" " " " 9 $\frac{1}{2}$ " 18 "	8 00
" " " " 9 $\frac{1}{2}$ " 20 "	8 50
" round, " " 9 $\frac{1}{2}$ " 18 "	8 00
" " " " 9 $\frac{1}{2}$ " 20 "	8 50

The square parallel teeth are most preferred, and are found to work easiest and most readily replaced when broken, and are at least one-third lighter than the ordinary wood rake in use.

Also on hand a superior make of flat steel spring, with round elastic steel teeth Revolving Rakes, well adapted for rough, new, or uneven land, as it yields readily to the inequalities, and will not be broken by obstructions which it meets. Price, \$10.00.

EMERY'S SAW MILL.

The mill is made strong, with joint bolts, patent metallic boxes, large and long shaft and heavy fly wheel, and may be used with the Single or Double Horse Power. For Single Power, a 22 inch saw is used; for a Double Power, a 24 inch saw; and with the One Horse Power and two men, from 10 to 15 cords of hard cord wood may be cut twice in two per day, or as much soft wood as they can handle.

The same mill by changing saws, can be used for
slitting boards and planks for fencing, &c.

Price, with 22 inch saw, in complete running order,
\$35.

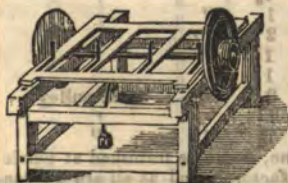


Fig. 31

HAY, STRAW AND CORNSTALK CUTTERS.

THERE are great advantages found in cutting food for animals in various ways: first they waste none of it by drawing down and trampling it under foot from mangers; secondly, the animals are enabled to save time and labor in masticating it, which gives them more time to lie down for rest and digestion. Fermentation also develops the nutritive matter, and leaves much less for the stomach to perform, and this by saving muscular exertion, leaves more strength with the working animal to be expended in his ordinary work. The same holds true with regard to milk cows, sheep, etc. The more carefully the food is adapted to assimilation in the animal system, the greater the product of milk, wool, flesh, etc., is yielded from the same quantity of food when thus prepared.

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.

Again, by adopting a mixed food, much of the coarser and otherwise refuse products of the farm can be worked up; 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. In feeding cut hay and straw, it is well to wet it slightly, and season it with a little salt and meal.

SPIRAL HAY AND STRAW CUTTER.

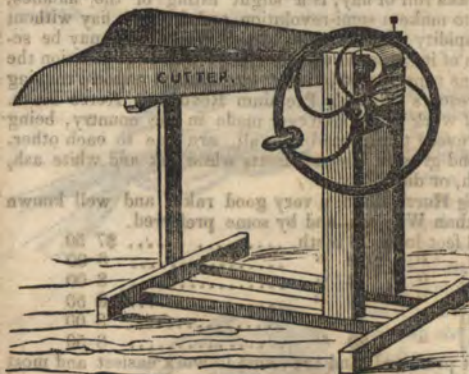


Fig. 29. Stevens' Spiral Hay Cutter.

slots independent of each other. The manufacturer has classed them as follows:

No. 0, price \$6 00, with 6 blades, cuts $1\frac{1}{2}$ inches long.

1, "	8 00, "	6 "	$1\frac{1}{2}$ "
2, "	10 00, "	6 "	$1\frac{1}{2}$ "
3, "	11 00, "	8 "	$1\frac{1}{2}$ "
4, "	12 00, "	10 "	1 "
5, "	13 00, "	8 "	$1\frac{1}{2}$ "
6, "	14 00, "	6 "	$1\frac{1}{2}$ "
7, "	15 00, "	10 "	1 "
8, "	17 00, "	6 "	2 "
9, "	18 00, "	8 "	$1\frac{1}{2}$ "
10, "	19 00, "	10 "	1 "
11, "	23 00, "	6 "	2 "
12, "	25 00, "	8 "	$1\frac{1}{2}$ "
13, "	27 00, "	10 "	$1\frac{1}{2}$ "

with pulley.

Having made arrangements for the sale of this machine, it can be furnished at whole sale and retail prices on the same terms as at the manufactory; and as all are warranted satisfactory, the attention of dealers, farmers, and persons feeding stock, is solicited to this machine.

PREMIUM STRAIGHT KNIFE HAY CUTTER.

This is constructed with a cylinder of knives cutting against a hide cylinder, with this difference, the knives are straight, but are placed diagonally upon the cylinder, and are confined by moveable cast-iron heads, which receive the ends of the knives, and when these heads are confined, all are held firm. This is a late invention, and promises to do well. The manufacturers hold that this form of knife is best, inasmuch as being straight, it is more easily ground by farmers in general.

The New-York State Agricultural Society, at Buffalo, and the American Institute, at New-York City, at their respective Fairs, held in September and October, 1848, awarded their first premiums to these machines.

chines, and the Worcester Co., (Mass.) Mechanic's Association, at their Fair, awarded to them its highest commendation.

The improvements consist:

1. The adopting straight knives, and placing them on the arbor, (diagonally,) that they work in the same manner as the spiral knives, and being straight, can be ground by the person using them, with the same facility as other farm implements.

2. They can be replaced by the common blacksmith when worn out, or new blades can be obtained of the makers or dealers, at trifling cost.

3. All the knives are confined to the arbor, with simply two caps, and two pins, by which simplicity the great liability to get out of repair, or the knives to twist, cripple, and break, is obviated.

4. The roller when used with straight knives, properly set, are said to endure much longer than when used with spiral knives.

RETAIL PRICES FOR 1849 AND 1850.

No. of cutter.	No. of Knives.	Length of Knife.	Length of cut.	Retail Price.
0	6	5 $\frac{3}{4}$ inches.	1 $\frac{3}{4}$ inches.	\$7 00
1	7	5 $\frac{3}{4}$ "	1 $\frac{3}{4}$ "	8 00
2	8	" "	1 $\frac{3}{4}$ "	9 00
3	6	6 $\frac{3}{4}$ "	1 $\frac{3}{4}$ "	10 00
4	8	" "	1 $\frac{3}{4}$ "	11 00
5	10	" "	1 "	12 00
6	6	7 $\frac{1}{2}$ "	1 $\frac{3}{4}$ "	14 00
7	8	" "	1 $\frac{3}{4}$ "	15 00
8	10	" "	1 "	16 00
9	6	8 $\frac{1}{4}$ "	1 $\frac{3}{4}$ "	17 00
10	8	" "	1 $\frac{3}{4}$ "	18 00
11	10	" "	1 "	19 00
12	6	9 $\frac{1}{4}$ "	1 $\frac{3}{4}$ "	22 00
13	8	" "	1 $\frac{3}{4}$ "	24 00
14	10	" "	1 $\frac{3}{4}$ "	26 00

Nos. 12, 13, 14 are fitted for Horse Power.

CLINTON CORNSHELLER.



Fig. 00. Clinton Cornsheller.
hopper, \$13. Warranted satisfactory.

THE accompanying cut is a good view of the single hopper and single balance wheel machine. This is believed to be one of the most efficient and durable shellers ever used as a hand sheller, having been in use for the last ten years or more, and having had some slight improvement it still stands at the head of the list of shellers for ease of operation, amount of work and durability. With two men, two hundred bushels of ears are easily shelled per day, or with two hoppers and large balance wheels, double that amount can be done with three men. It is equally well adapted for the large ears at the south and west as for the small ears at the north. Some have a balance wheel on each side; this balances the machine a little better, and the wear of the shafts is more equal and durable. It is about one and a half by two and a half feet on the floor, and three and a half feet high; with the single hopper it weighs about 100 pounds, with double hopper and balance wheel, it weighs about 150 pounds. Price with a single hopper, \$10; with a double

LAOTOMETER.



Fig. 27. Laotometer.

THIS is the only proper instrument or guage for testing the qualities of milk drawn from different cows correctly. It consists of several glass tubes placed in a frame or stand perpendicularly. The upper parts of these tubes are divided and subdivided by marks cut in the glass, and all are thus graduated exactly like the others. They are filled with milk from different cows, and to the same height, then after remaining a proper time the quantity of cream in each is distinctly seen at a glance through the glass, and the exact difference determined by the described marks. The milk can also be tested by its color and consistency, after the cream has arisen, by holding the whole up towards a strong light. No dairyman should be without this valuable instrument in selecting, purchasing and selling his dairy cows. Price with four to six tubes, \$2.50 to \$3.00.

GRINDSTONE.

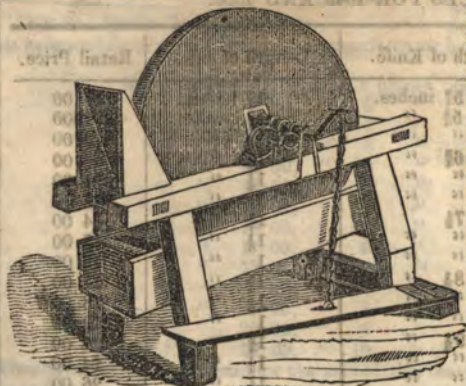


Fig. 23. Anti-friction Grindstone.

FIG. 23 represents a stone full hung for grinding. This has a crank for a foot treadle, and is on anti-friction rollers. This method lessens very much the friction, and is more durable than when the shaft is allowed to run on the wood of the frame, besides it is much more economical, one man being always able to sharpen any farm tool alone. A good assortment of cranks, shafts, rollers and sett plates constantly on hand; also a choice lot of the most approved stones for farming purposes at prices varying according to size and quality.



Fig. 41. Garden Wheelbarrow.



Fig. 42. Canal or Railroad Barrow.

rious sizes, from \$2 to \$3.00 each. Coal barrows for coal yards furnaces, &c., from \$4 to \$6.00 each.

All the above are made by responsible manufacturers, and warranted equal to any others in the country.

STORE AND STEAMBOAT TRUCKS.

ALL sizes and kinds of these articles, from three to ten dollars each, constantly on hand

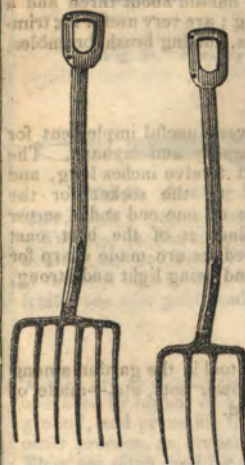
SPADES AND SHOVELS.

O. AMES', CARR'S, STONE'S, and STACKPOLE and Co.'s cast steel and iron spades and shovels; also Stackpole & Co.'s grain scoops, a very superior article. Their cast steel shovels, although a new article in the market, have, to all appearance and in use, all the merits of O. Ames' best, and at the same time are better finished. It certainly is an excellent shovel, and is afforded considerably less than Ames'. Ames', Carr's and Stone's, are all from the same manufacturer, and are too well known to need further notice here. A full supply on hand, for sale single or by the dozen, at the lowest prices.



Fig. 43. Spades and Shovels.

PARTRIDGE'S MANURE FORKS.



THESE, like the hay forks by the same maker, are as yet unequalled by any other make. They have from four to twelve tines, are light and warranted not to break. The four-tined is used for ordinary business; the six or eight-tined is intended to use in place of a shovel in fine manure, and is also used for spading up gardens, digging potatoes and other root crops. Also constantly on hand a variety of other manufacturer's forks, of good quality, and of cast, shear and German steel.

BULL RING.

THIS little article is very neatly made from round polished iron. It is fitted together in two parts, and opens on a pivot or hinge, and is fastened by a screw on the opposite side of the ring.



Every bull should be rung, for with a ring in his nose the most furious animal can be safely managed by any person, as one end of a small stick, three or four feet long, can be tied to the ring, and by this the animal can be led, handled and controlled

with perfect safety and at the will of the holder. The ring is inserted by punching a small hole in the cartilage between the nostrils, and then inserting the ring and screwing it together.

CATTLE TIE OR CHAIN.



THIS is the most convenient and secure mode of fastening cattle in use, and at the same time the most comfortable. The large ring being confined by a round post attached to the manger, and so loose as to slip up and down as the animals move their heads in feeding, or in getting up or lying down. The ends are thrown round the neck, and the T end put through one of the small rings at the other end of the chain, according to the size of the animal's neck, and thus the animal is safely confined. Such a chain will last an age, and at the same time costs

less than the ordinary stanchion, and very little more than the wooden bow which is extensively used in many places. They are worth from \$3 50 to \$5 per dozen, and at corresponding rates for single ones.

OX YOKES AND BOWS.



Fig. 47. Ox Yokes.

AMONG the assortment are to be found a good assortment of bows, finished and unfinished, ox-yokes of all sizes and lengths, with or without bows and irons.

Prices of yokes without irons or bows, \$1.00 to \$2.00; the same with irons and bows, \$3.00 to \$5.00.

BRIAR OR BUSH HOOK.



Fig. 48. Bill Hook.

THIS is of various forms—the cut, however, represents the most approved and in most extensive use; they are used with a handle about three and a half feet long; are very useful for trimming hedges, cutting brush, brambles, etc.

PRUNING SAW AND CHISEL.

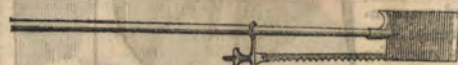


Fig. 49. Pruning Saw and Chisel.

THIS is a very useful implement for both the nursery and orchard. The saw is about twelve inches long, and is attached to the socket for the chisel blade at one end and a screw socket on the handle and at the other end. The chisel blade is of the best cast steel, and three inches wide and four inches long, and both edges are made sharp for cutting either way. It is usually made fast to a long handle, and being light and strong, it is well adapted for the purpose it is intended.

LADIES' GARDEN FORK.



Fig. 50. Ladies Garden Weeder.

A light, strong, and useful tool in the garden among plants and flowers and in flower pots, etc.—made of steel and very neatly finished.

LADIES' GARDEN SHEARS.

A small, light, neatly finished article with wood handles—is useful for trimming box bushes, grass lawns, and banks, etc.—very similar to the border shears but lighter and better finished.

PRUNING SCISSORS WITH BOWS.

WELL adapted to cutting flowers, pruning small twigs, and is a useful and cheap article for ladies' use.



Fig. 54. Pruning Scissors.

FIG. 55 represents a pair of shears with short wood handles, well adapted for trimming shrubbery, grass banks, etc., when made with what is called a pruning notch in them, they are frequently used as the pruning or lopping shears.

GARDEN OR HEDGE SHEARS.



Fig. 55. Hedge Shears.

EDGING OR BORDER SHEARS.

THESE are chiefly used for trimming the sides of box or grass edgings, and are so constructed that the operator may stand upright whilst using them. Sometimes they have a wheel attached for support whilst in operation, which is considered a considerable advantage to it.

LADIES' PRUNING SHEARS.

WITH short wood handles—light, and extra finished. For the same purpose as pruning or lopping shears.

PRUNING KNIFE.



Fig. 56. Pruning Knife.

A good form, very large and strong, and found almost indispensable in the cultivation of young fruit trees.

BUDDING KNIFE.



Fig. 57. Budding Knife.

THE cut represents the best and most approved form for budding—The edge of the blade is rounded at the point, and will shut up as a pocket knife. At the other end is fixed permanently a thin flat ivory

ifter, with which the bark is loosened and raised, after being cut to receive the bud. For best modes of grafting, budding, pruning and culture of fruit trees, and further descriptions and uses of many other useful implements, J. J. THOMAS'S Fruit Culturist is referred to, as one of the cheapest and most practical works on the cultivation of fruit trees ever published.

POLE PRUNING SHEARS.

THESE are so constructed as to be attached to the end of a long handle or pole, and operated by means of a cord and small pulley; this enables the operator to stand on the ground, and prune his trees at his pleasure, and often to better advantage than by any other process, as branches an inch and a half in diameter can easily be cut with them. They are often used for cutting off small branches to which insects have attached themselves. They may also be used for gathering fine fruits, which when cut fall into a basket attached to the handle for that purpose.

GARDEN TOOLS.

PRUNING SCISSORS.

WITH sliding centre and spring, also cut with ease, and leave the branches smooth and sound : and for pruning rose bushes are superior for ladies' use.

VINE SCISSORS.

THESE are useful for removing superfluous leaves, twigs, &c., thinning out grapes when they have grown too thick on the bunch, etc.

FLOWER SCISSORS.

COMBINING scissors and tweezers or pincers. They are useful in gathering flowers or fruits from thorny stems, as they hold whatever is cut off by the pincers.

HAND SLIDING PRUNING SHEARS.

THESE are iron-handled shears, very strong, and suitable to be grasped by one hand, and are the best for gentlemen's use. They have the sliding centre and spring, and make a smooth cut. They are useful to remove superfluous and injured roots in setting out young trees, and for this purpose are extensively used by nurserymen.

GARDEN SYRINGES,

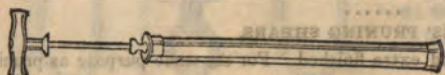


Fig. 58. Garden Syringe.

OF various sizes and of various materials, as brass, block tin, &c. For watering the leaves and branches of trees, shrubs, and greenhouse plants or for destroying noxious insects by using various liquids, are found very useful, and are extensively used in garden and nurseries.

BILL HOOK.



Fig. 59. Bill hook.

VERY useful for various purposes, as pruning trees, etc. It is made of cast steel, with two cutting edges—strong and easily used with one hand. This is also frequently used to trim thorn hedges with.

GRAFTING CHISEL.



Fig. 60. Grafting Chisel.

THIS is probably the best form for a grafting chisel. The wide edge is used for splitting the stock after being cut off with a fine pruning saw. The two pointed ends are used to open the same to receive the scions. This is the same as in the tool chest.

PRUNING SAW.

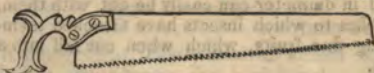


Fig. 61. Pruning Saw.

THIS form is most commonly used, and is of various sizes, with fine teeth, it is usually from fourteen to eighteen inches long.

Farnham's Patent Double Action Force Pump.



All sizes of the above pumps for elevating water from deep wells—for forcing water through the lofts or upper stories of buildings—for stationary Power Pumps, for extinguishing fires by being connected with water or steam power. For the last purpose, they have been found of the greatest importance in checking the progress of several recent threatening fires in this city—by being connected with the steam engines of the large manufactories and breweries in the vicinity, and the city hose being coupled to the same, have poured constantly; for the whole time of the fires, a volume of water greater than that of several fire engines, with full compliments of men.

No manufacturing establishment, with either Steam or Water power, should be without one of these Pumps, with a sufficient quantity of hose, couplings, &c. in readiness, at a moment's notice, to be set in operation.

They are equally well adapted for Stores, Dwellings, and Gardens—are quite simple and compact.

Prices vary from \$12 to \$200. Always on hand and furnished at manufacturer's prices, and warranted.

Grass Lawn Rake.



This is made of a plate of cast steel, with teeth cut similar to that of a saw, but much longer in proportion. The edges of the teeth are made sharp, and are used for raking grass plats in order to take off the heads of flowers,

daisies, dandelions, &c., &c. It is drawn as an ordinary rake, over the grass.

Garden Rakes.



A very great variety, with iron, wood and steel heads; and iron and steel teeth, from 6 to 20 inches wide, and any desired number of teeth. Also, some with teeth upon one side, and a scuffle or hoe upon the other, answering a double purpose of hoe and rake.

Ladies' Garden Rake & Hoe.

A light and very useful tool about flower gardens, &c.



Ladies' Weeders.

These are simply a form of the trowel, except that they are a plain piece of steel, instead of being bent up at the edges. They are made light and delicate, and are used for weeding gardens, and working in and about flowers, both in the garden and in pots—a durable article, from four to six inches long.



SMITH'S PATENT CORN SHELLER, FOR POWER.

This is probably the best power sheller in use—is a horizontal toothed cylinder, six feet long, and fourteen inches in diameter. The ears of corn are confined in the operation to a part of the upper or rising side of this cylinder, by means of a cast-iron concave or case extending the whole length of the machine; and the corn being shovelled in at one end, it is driven through, and the cobs discharged at the other, while the corn falls below, being admitted by the small space on either side of the cylinder. The operation is governed by elevating or depressing the discharging end, which causes the machine to discharge the cobs fast or slow, and of course operating more or less upon them, thus securing to the operator the means of finishing his work. It is capable of shelling two hundred bushels of ears per hour with our two horse power. Price, \$50.

FREEBORN'S MILL,

For grinding feed by power, is also a very good one. It is capable of grinding cobs and corn as well as other grains. It grinds by iron plates, which need renewing for every six hundred bushels of grain ground. Price, \$35, with 1 set extra plates.

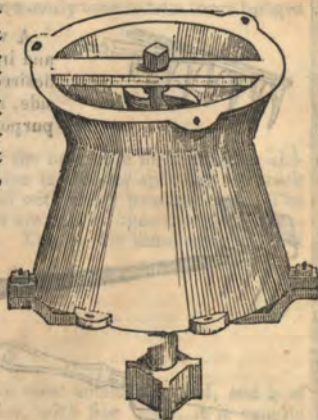
HAND, CORN, AND SPICE MILLS.

The only mill with chill-hardened plates with finished bearings, used for grinding coffee, spice, and grain;—almost indispensable to hotels, grocers, &c. Capable of grinding coffee at the rate of two bushels per hour. Warranted the best mill for the purpose. in use. Price, \$7.

Corn and Cob Crusher and Bark Mill.

Is used for cracking cobs & corn, preparatory to grinding between stones. Is also used for grinding bark for

tanning. They are made to run either way, (right or left,) according to arrangement of power. Price, \$13.00.

Pole-Pruning Shears.

See description in another part of this Catalogue.

IMPROVED HYDRAULIC RAM.

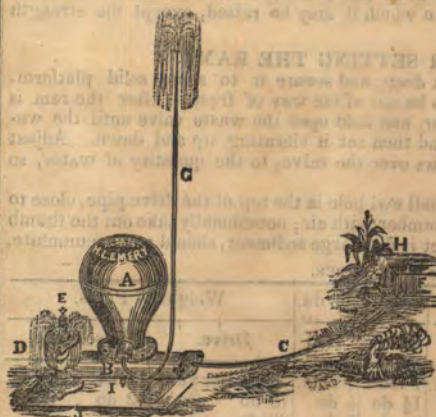


Fig. D.

H, spring or brook. C, drive or supply pipe, from spring to ram. G, pipe conveying water to house or other point required for use. B, D, A, E, I, the ram. J, the plank or other foundation to which the ram is secured.

Comparatively few of those for whose benefit this contrivance is designed, have as yet become aware of its great utility. Although the law upon which it works is one of the most common in nature, and although it has been known in some form or other for 2000 years, yet a kind of mystery has always hung about it. The seeming absurdity of the idea that water may be made to elevate itself above its level, and to supply a constant and abundant stream at any desired height, without the liability to accidents and stoppages, has prevented inquiry into the construction of the hydraulic ram, and until a few years, little used.

DESCRIPTION.

The annexed cut represents a vertical section of the ram. A, the air chamber—B, the waste valve—C, valve opening into the air chamber—D, the feed or driving pipe—E, pipe to convey the water where it is desired. The pipe D, should be 30 to 50 feet long, and from one to two inches calibre; the pipe E any length desired, and about $\frac{1}{4}$ inch calibre; lead pipe is commonly used. The circular figure on the left represents the form of the waste valve. The waste valve is made to vibrate up and down thus: the water passes down the driving D, and escapes at the waste valve B. Now, as any descending body increases in velocity and force every instant of its descent, the column of water descending in the driving pipe, quickly attains sufficient velocity and force to lift the waste valve, but the valve in rising instantly stops the passage, and the whole momentum of the water strikes against it and seeks relief, which is only found at the valve C, through which a quantity of water is forced into the air chamber, where it is confined by the closing of the valve. The momentum being thus expended, and the water at rest, the valve B. drops by its own gravity, and is ready to start again. After repeated vibrations, the air chamber becomes partly filled with water, compressing within a small space the air, which, by its elasticity reacts upon the water, and forces it up the pipe E to any desired elevation or distance.

Thus simple is the machine, and, when once properly set, it will act for years without a penny's worth of repairs, and be as constant and regular in its duty as is the law of nature upon which it acts.

Many a farmer has a good spring or stream of water in the vicinity of his buildings, which would be to him invaluable if it could be brought to the house and barn; but being at a distance, and below the level of his buildings, it cannot be done by the ordinary means of conveying water; to such the ram becomes one of the most useful contrivances that ingenuity and science has ever furnished. Faithfully performing its work, unattended and unnoticed, with constant and regular pulsations as of life, it presents one of the most beautiful and interesting achievements that the mind has ever obtained over matter.

A fall of not less than 18 inches at the spring, and a quantity of water not less than $\frac{1}{2}$ gallon per minute are necessary to operate the ram,—but the greater the fall and the quantity of water furnished, the greater will be the quantity of water elevated by the ram; and there is no limit to the height to which it may be raised, except the strength of the pipes used.

DIRECTIONS FOR SETTING THE RAM.

Place the ram in a pit two or three feet deep, and secure it to some solid platform. Lay the pipes the same depth, or so as to be out of the way of frost. After the ram is set, and ready to operate, let on the water, and hold open the waste valve until the water has acquired a strong, full current, and then set it vibrating up and down. Adjust the length of stroke by means of the screws over the valve, to the quantity of water, so as not to exhaust the head.

N. B. Be particular to make a very small awl hole in the top of the drive pipe, close to where it enters the ram, to supply the chamber with air; occasionally take out the thumb screw at the bottom of the chamber, to let it discharge sediment, should any accumulate.

DIMENSIONS OF PIPES.

Size of ram.	Length of Pipes.		Calibre of do.		Weight of Pipes.	
	Drive.	Discharge.	Drive.	Dis.	Drive.	Discharge.
No. 3.	30 to 50 feet.	to where wanted.	1 inch.	$\frac{1}{2}$ inch.	8 lbs. per yard.	12 lbs. per rod.
No. 4.	do do	do do	$1\frac{1}{4}$ do	$\frac{3}{4}$ do	10 do do	12 do do
No. 5.	do do	do do	2 do	$\frac{3}{4}$ do	20 do do	25 do do
No. 6.	do do	do do	$2\frac{1}{2}$ do	1 do	33 do do	7 do per yard.

The greater the elevation to overcome, compared with the head or fall, the longer the drive pipe should be, and vice versa. The drive pipe should invariably be made straight, or a very gentle curve if necessary.

Connect the pipe with the ram by passing it through the iron coupling, and forming a flange on the end of the pipe, and then screwing the coupling together, with the leather collar between. Put a coarse strainer over the upper end of the drive pipe, to keep out sticks, &c.

Ornamental Garden Vases,

Of various patterns and sizes, some new and very handsome.

Garden chairs of cast iron for one two and three persons. These are from patterns recently imported from England, and are very beautifully designed.

They are both ornamental as well as useful, and withal, very desirable for Porticos, Walks, Lawns, Gardens, &c. Some of them may be seen on the decks of our river steamers.

Fountains,

Of various patterns, for public and private uses, they are afforded at from \$12 to \$200.



These are becoming very common in gardens and about residences, as they can be so readily and simply operated by the agency of a Water Ram, at almost any direction or elevation from a running stream of water.

SAW MILL, PLANING MACHINE.

EMERY'S UPRIGHT SAW MILL.

For Sawing Curved Work in Wagon-making, Cabinet Work, &c. &c.

The annexed cut represents the most simple and effectual arrangement for a saw mill for the purposes designed.

As these are made, they are equally well adapted for our 1 or 2 horse power, or may be used by steam or water power as desired. Its construction is a simple frame, with two uprights from 8 to 12 feet long, with three cross beams of $3\frac{1}{2} \times 6\frac{1}{2}$ inch square. Near the upper end is hung a straight shaft with fly wheels D on each end, outside the frame.

E. Two driving pulleys, (one loose.)

C. Wrist pins in fly wheels, to drive connecting rods.

F. Connection of the driving rods, and lower part of saw gate.

G. Table.

B. Dog for holding down plank.

A. Wind Box and Pipe, for cleaning away saw-dust.

These mills can be afforded complete for \$40, ready to be driven by horse, steam, or water power. They are warranted to be superior to any thing of the kind heretofore offered—and with one of the R. Road Horse Powers, is an important acquisition to mechanics having heavy or curved sawing to do.

N. B. The whole can be taken to pieces and packed for shipment to any part of the country. Weight about 300 pounds.



DANIEL'S PATENT PLANING MACHINE.

The annexed machine is acknowledged to be superior for the purposes of dressing all kinds of wood, and squaring up stuff for machinery. It is capable of dressing boards, plank, &c., of any required thickness or length, as well as all kinds of Mill Work, Ship Timber, Tackle Blocks, Railroad Cars, planing iron, &c. The size suitable for one horse power, and capable of planing 18 inches wide and 9 feet long, is \$170; and more or less according to size. They are used by nearly all the Railroad Car and Coach manufactories and government workshops throughout the country. For further particulars, prices, directions for running, or any other information, address us, who have had them constantly in operation several years. Any size can be furnished on demand on 10 day's notice, if not in hand.



