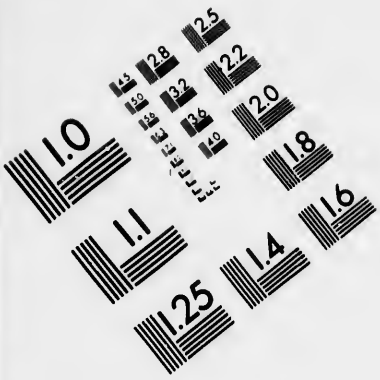

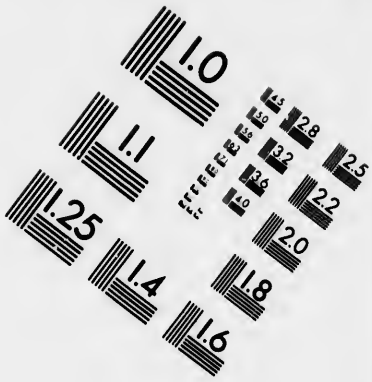

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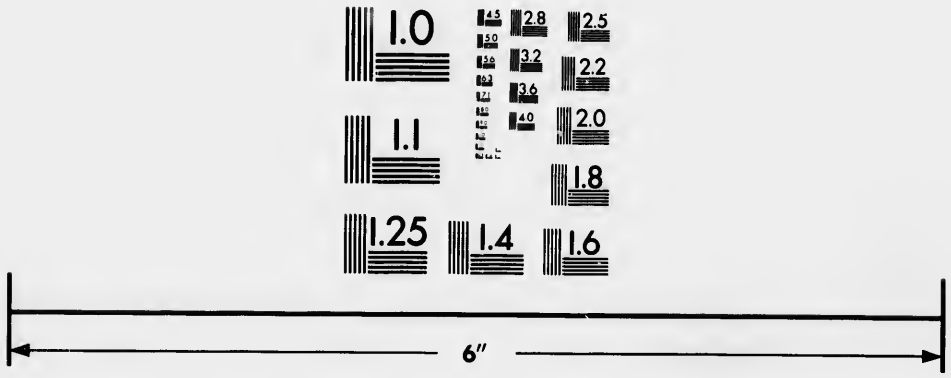

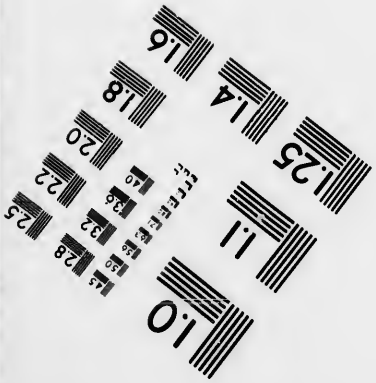

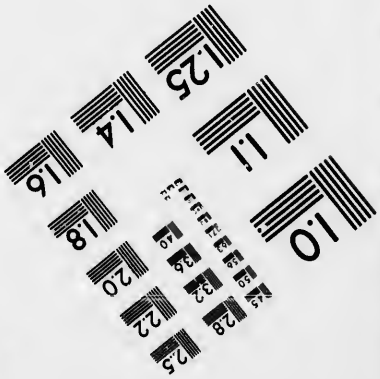

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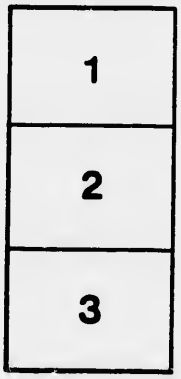

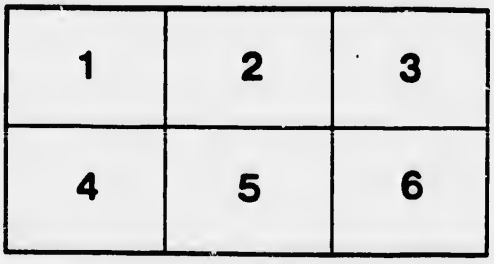

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TORONTO AGRICULTURAL WAREHOUSE.

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FIFTH EDITION.

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AGRICULTURAL MACHINES,

FARMING IMPLEMENTS AND TOOLS,

FIELD AND GARDEN SEEDS, FRUIT TREES,

FERTILIZERS, &c., &c.

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INTRODUCTION.

In submitting to the Agricultural Community this new edition of my Catalogue, I desire to have it understood that, although tolerably complete, yet it contains only a part of the articles I have for sale.

I can at all times supply any MACHINERY, IMPLEMENTS, or TOOLS that are required on a farm, and if the same are not in the WAREHOUSE on receipt of order, they will be procured and shipped at the usual Manufacturer's prices.

I have the Agency for some of the best Fertilizers made at the present time, and can supply all others that are of established merit.

My Seeds will be found of superior quality. The imported varieties are obtained direct from the most reliable houses in Europe and the United States. They can therefore be relied on as being Fresh and Genuine, and of the same good quality as those which have given so much satisfaction to my customers in former seasons.

My list of Fruit and Ornamental Trees and Shrubs contains all that are suitable to our climate. Great care will be taken to send out none but what are sound and healthy.

Farms rented and sold on commission.

Intending purchasers of Farms and Lots are invited to look at my List, which includes some very desirable places, and others at lower rates.

Orders for all kinds of Improved Live Stock will be carefully attended to.

Persons at a distance, communicating by Post, may depend upon their orders being as faithfully executed as if they were personally present.

After shipping, *in good order*, my responsibility ceases, and any claims for damages, &c., must be made to the carriers.

Terms, *Nett Cash*, unless by special agreement.

In regard to prices, it must be understood that I do not agree, unless a special contract is made, to deliver Goods at a future date, at the prices of the list which accompanies this Catalogue.

Revised Price Lists will be issued from time to time. Also, Descriptive Catalogues of Seeds and Fruit Trees, which will be mailed to all intending purchasers.

All weights, measurements, &c., used, are those of this section, and orders will be filled in accordance therewith.

In ordering from this Catalogue or accompanying Price List, the page and figure should be specified, also the number of edition.

When sending orders, remember to mention the station to which you wish your goods sent, by what route, and whether by Express or Freight; also by what time you require them. If such directions are not given, I shall use my best judgment.

If you conclude to order, please do so in good time; you will thereby not run any risk of not having them in season.

Every farmer who is about to purchase a machine desires to secure the best the market affords; but among the multiplicity of machines offered, it is often difficult for him to satisfy himself which is best.

My aim is to offer such Implements, &c., as have really proved their superiority, and, with this aim in view, I submit the following pages, believing that all the articles therein described and illustrated are what can be used to advantage by those for whom they are intended.

Any person who has ever purchased a Machine at my establishment can at all times be supplied by me, or my agents, with any extra parts he may require at reasonable prices; also, Repairs for all kinds of Machines kept in stock.

Remittances may be made by cheque, bankers' draft, post-office order, or by registered letter.

My Warehouse, No. 132 Adelaide Street East, is filled with the largest assortment of Improved Machinery to be found in this Dominion, and a cordial invitation is extended to farmers and all others interested. My stock will be cheerfully shown, whether my visitors desire to purchase or not.

I would call special attention to the Improved Champion Double-Furrow Plough, which is one of the greatest labour-saving implements of the present century.

Business communications and enquiries will receive prompt attention.

Applications for Agencies, from active dealers and farmers residing in territories where I have no established agencies, are respectfully solicited.

I also solicit the addresses of intelligent, influential and enterprising farmers, and others to whom it would be desirable to send my Circulars, which I will do with pleasure.

My Machines have received the highest awards at our Provincial Exhibitions and Trials.

All orders promptly attended to, and goods shipped free on board cars or steamboats on receipt of cash or satisfactory order and references.

Special rates have been obtained from the principal Railroad Companies, &c., for carrying freight on their lines, which will also benefit my customers.

In conclusion, I shall be pleased to hear from parties using my Machines, and again request the careful perusal of the Catalogue, Price List, &c.

Address (with care to avoid delays),

WILLIAM RENNIE,
No. 132 Adelaide Street East,
Toronto, Ont., Canada.

N. B.—In ordering from this Catalogue, please specify the number of edition, as well as the page and figure.

☞ Business letters should always contain the writer's Post Office address in full.

MY SEED DEPARTMENT.

Fig. 2.—RENNIE'S "CHAMPION" PURPLE TOP SWEDE TURNIP.

Fig. 2.—RENNIE'S "CHAMPION" PURPLE TOP SWEDE TURNIP.

Fig. 2. C-106204

In connection with my business in Agricultural Implements, I have always sent abroad, (as well as a large domestic trade,) every variety of field and garden Seeds, and to this department, which has lately been largely increased, I again call the attention of my customers.

My stock of seeds of foreign growth is selected from the most reliable sources in Europe and the United States, while those of domestic growth are generally raised expressly for me and are under my personal supervision until harvested, by which means I can secure for my customers absolute certainty of the kinds and quality of my stock.

My stock of agricultural and farm seeds and grain is very complete, and is the largest in this department.

My *Extra Early Pea* is one of the earliest, and believed to be the best grown, yielding well, and being very suitable for both farms and gardens, and is highly recommended by all market gardeners who have tried them.

The list of garden seeds comprises all the latest and most improved as well as the old standard varieties, and contains everything that should be found in a kitchen garden.

All the choice varieties of Potatoes.

Any orders from gardeners or farmers for small lots can be safely executed by mail; our new postage law enables the sending of parcels, not over three pounds in weight, to any post office throughout the Dominion, at the rate of one cent per ounce.

The postage must be prepaid.

Parcels sent to the United States can only be prepaid to the frontier, the postage for the rest of the way being paid on delivery at their destination.

Special inducements to Dealers, Agricultural Societies, Farmers Clubs, and others requiring large quantities.

TREES AND SHRUBS.

The stock offered for sale is of the first quality in every respect, and consists of Apple, Pear, Plum and Cherry Trees, Hardy and Foreign Grape Vines, Currants, English and American Gooseberries.

Ornamental, Deciduous and Evergreen Trees, and Flowering Shrubs.

All stock packed to carry safely to any part of the world.

Extra Large Trees for Street planting.

Parties who choose to leave the selection of varieties to me, merely stating the number of the different fruits and proportion for each season, may rely upon my endeavours to select such varieties as will be for their interest and most likely to give satisfaction.

Orders should be sent in early in the season, so that, especially when trees are to be sent a great distance, I may have the opportunity of shipping at an early date after the transplanting season opens.

FERTILIZERS.

Ground Bone.

This has been fully proved one of the best top dressings for grass lands that can be used.

All crops are benefited by it.

From ten to twenty bushels per acre is the usual dressing, though more for a first-class dressing is better, as it requires several seasons to fully decompose it, and the effect of a large application will be felt for many years.

It should be sown broadcast on grass land. On ploughed land, harrow it in with the seed, or apply it directly to the crop, in hills or drills, just previous to planting.

It is shipped in Barrels, containing about one hundred and seventy-five pounds each.

Two Grades of this Fertilizer are made. The Half-inch Ground Bone, which is very coarse, and the Fine Bone Dust, the latter being the most saleable and beneficial.

Superphosphate of Lime.

As a Fertilizer, the Superphosphate of Lime is highly commended, since it seems almost universally applicable, and, unlike some others, it may be applied in varying proportions, without any risk of injury.

Full directions for applying it to best advantage will be furnished to all purchasers.

It is shipped in boxes of 40 pounds each; in barrels of about 200 pounds each; also loose in any quantity.

Ammoniated Bone Fertilizer.

For producing early crops and large yields, this Fertilizer will be found very beneficial. It will add very much to the fertility of the land for three or four years after it has been freely used, besides giving abundant crops the first season.

It is shipped in barrels of 200 lbs. each, and in bags of 50 lbs. each.

☞ No charge for bags or barrels with this Fertilizer.

Peruvian Guano.

This is the most concentrated and valuable manure, being derived principally from the excrements of birds subsisting entirely on fish, which yield even richer deposits than those of our gallinaceous fowls, which are the strongest of all our animal manures.

The other original constituents of Peruvian Guano are the unconsumed remains of fish and birds that have perished, and whose remains and excrements have, by slow decay in an intensely warm climate, where no rain ever falls, thrown off most of their moisture and carbonaceous matters and left only the highly concentrated salts, all of which are very essential to vegetable growth.

For grass lands sow broadcast just before a rain.

One to three hundred pounds per acre is usually sown in drills or broadcast, covering lightly with a harrow, and planting the seed directly over it.

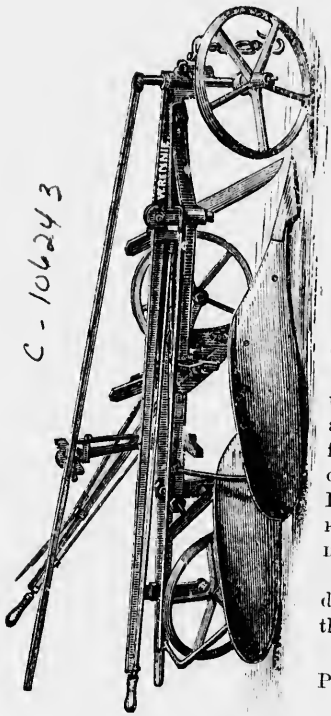
Phospho Guano.

This valuable manure is imported in its raw state from Islands in the Pacific Ocean.

It contains about 40 per cent. Soluble Guano Phosphates, and other valuable elements.

PLOUGHS.

FIG. 3.—IMPROVED CHAMPION DOUBLE-FURROW PLOUGH (COMBINING GRAY'S AND PIRIE'S PATENTS).



These Ploughs have become deservedly popular, owing to the saving effected in draught, manual labour, wear and tear.

The demand for them is rapidly and steadily increasing.

They are wholly carried on large angular rimmed wheels, which not only carry their weight, but also resist the pressure exerted in lifting and turning the furrow. They have neither side nor sole plates, and hence are free from all friction, caused by the rubbing action of the same; the cutting part of the Coulters and Shares are so constructed and arranged that they make room for the rest of Plough, and no part of it touches the soil or mould-board. By this arrangement THE POWER REQUIRED to work the Plough IS REDUCED FULLY A THIRD.

The Double-Furrow Plough can be drawn on heavy soil with ease by three horses, and on light soil by two;

Among the advantages these Ploughs possess are the following:—

1st.—ECONOMY IN DRAUGHT. The work can be accomplished by fewer horses. On moderately heavy land the DOUBLE-FURROW PLOUGH drawn by three horses WILL PLOUGH THREE ACRES PER DAY of nine hours, thus securing to the farmer A SAVING OF NOT LESS THAN 30 PER CENT., or affording him the opportunity of having his ploughing done quicker when a suitable season occurs.

2nd.—ECONOMY IN MANUAL LABOUR. With one of these Double-Furrow Ploughs ONE MAN CAN DO THE WORK OF TWO, if using the ordinary Plough, and with far more ease, as THEY GUIDE THEMSELVES, and only require attention in case of anything unusual in the soil.

3rd.—Economy in Wear and Tear. The shares are made of steel, and are so cheaply constructed, and keep sharp so long, that the whole cost of keeping them up does not exceed the cost of sharpening the old iron share.

4th.—These Ploughs raise and loosen the land more thoroughly; from their construction they turn a deeper and broader furrow, and press it more closely than the ordinary ploughs. There being no sole plate, the subsoil is not glazed and hardened as by the common plough, the advantage thus gained being great in all cases, but especially in damp soils.

It is the opinion of those best qualified to judge, who have seen Gray's Improved Champion Double-Furrow Plough worked alongside others, and under every variety of circumstances, that the quality of the work done, the strength and durability of the implement, the lightness of draught, the simplicity and quickness of adjustment, and the general arrangement for ease and simplicity of working combined under his Patent, render it the best implement of the class before the public.

It is a strong, efficient and durable implement, suitable for all kinds of ploughing, and will also rib up to 18 inches in width.

The two lifting levers afford additional facilities for throwing the plough over fast stones or other obstructions in the soil, and the adjusting screws on both right and left hand levers make it easily adjustable to any inequalities of the surface.

On light land, or for ribbing, it can be worked by two horses, and on heavy and rocky land three horses can be used with safety.

The framing is made of the best wrought iron, and is easily adjusted to plough any required width of furrow.

The skifes or heads also are strong, and of the best wrought iron.

The most crooked furrows can be easily straightened while the implement is at work.

In ploughing hilly land, the Patent Governor greatly facilitates the operation, when it is desirable to plough one furrow up the hill and two furrows down. The new Governor can be adjusted to instantaneously alter from two to one furrow (which is sometimes required in finishing).

This Plough, when once adjusted, is self-acting, following the horses without any attention from the ploughman, and works well in any kind of land.

Triple-Trees,

Of a new and superior style, suitable for working three horses abreast, can be furnished with the double furrow ploughs, or separately.

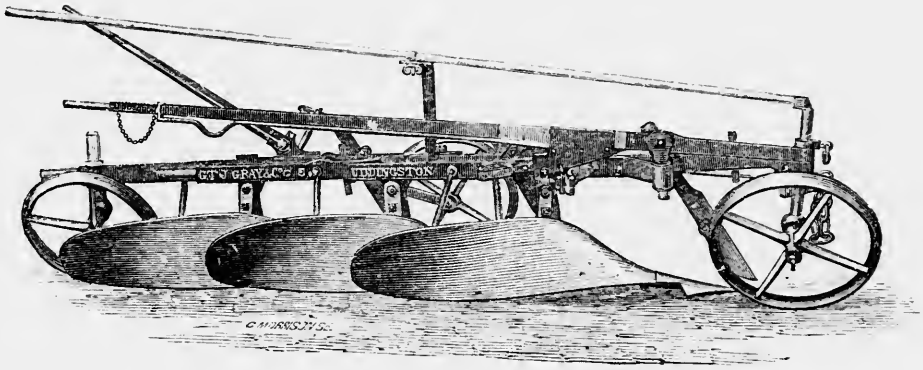


FIG. 4.—GRAY'S TRIPLE-FURROW PLOUGH.

This extraordinary economizer of labour is similar in construction to the Double-Furrow Plough, having the new governing steerage, and every recent improvement, and is made so that in heavy work it can be readily changed in a few minutes to a Double-Furrow Plough of the most perfect description.

At a time when facility for getting through work is of such urgent necessity, farmers will readily observe and appreciate the importance of this Triple-Furrow Plough.

In ploughing loose land for wheat, and in cross ploughing for root crops, it is invaluable, doing the work of three common ploughs in superior style, and saving two men and three horses.

It has also been successfully used in making two drills at a time for root crops, by merely withdrawing the centre plough.

The lightness of draught is, in the case of this Triple-Furrow Plough, exhibited in a most marked manner; the dynamometrical tests having shown an average draught of one horse power *per furrow*, at the usual depths, so that, except in stiff heavy lands, this plough can be worked by three horses.

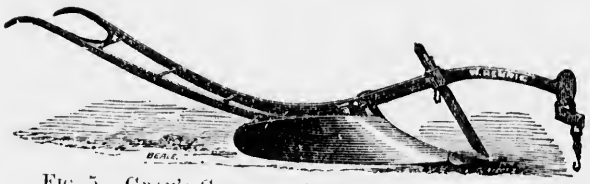


FIG. 5.—GRAY'S CHAMPION SINGLE-FURROW PLOUGH.

C-106242

This plough is made of the best wrought iron, and is characterized by great strength, lightness of draught, and the perfect manner in which it does the work in every description of land.

They can be made to cut at any required angle of furrow, in a way not to be surpassed, making them the greatest (and for *Match Work* the most popular) favourites of the day.

It is fitted with steel or cast mould boards of improved patterns, and with single or double holed bridle.

This plough has received the highest awards at our Provincial trials and ploughing matches.

An extra coulter and share for stubble work recommended with each plough.

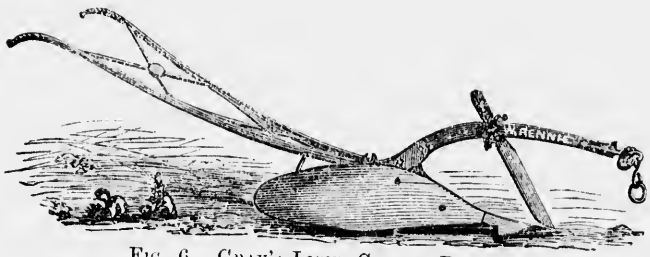


FIG. 6.—GRAY'S LIGHT CANADA PLOUGH.

C-106241

This plough supplies a want long felt in Canada, viz., that of a good and cheap general purpose Iron Plough.

Being made of wrought iron, it is durable, and cannot get out of order by warping or rotting.

It has a cast iron head, steel mould board and steel shares (an extra one given with each plough).

The shares are so easily constructed and keep sharp so long that the whole cost of keeping them up does not exceed the cost of sharpening the old iron share.

The coulter fastener used on this plough is a simple and ingenious contrivance. With it the coulter can be set to cut any required shape of furrow. It can be moved backward or forward, and enables the Plough to do good work in both sod and stubble.

The coulter can be moved to either side of the beam and is held firmly by two set screws.

No farmer should be without this plough.

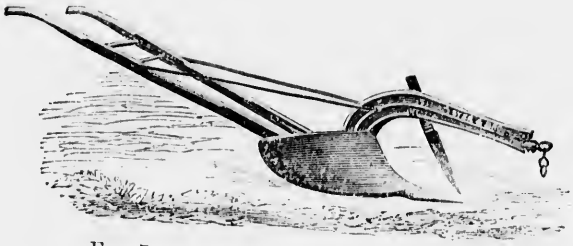


FIG. 7.—COMBINED CAST BEAM PLOUGH. C-106240

This plough is adapted to all styles of ploughing, both common and premium work. For premium work set the coulter on the right hand side of the beam, and put on the sod share. The stubble share works well in sod.

For fallow ground use the wide share.

COMBINED WROUGHT BEAM PLOUGH.

This is the same pattern of plough as the preceding, but with a wrought iron beam, and is rapidly superseding those with a cast beam, as they are more durable, of lighter draught, and easily repaired.

The mould board is steel, and is fitted with cast or steel shares.

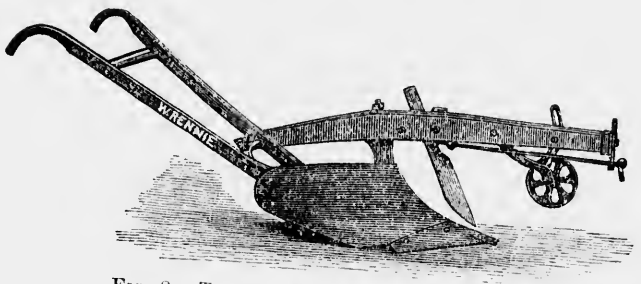


FIG. 8.—TWO-HORSE WOOD BEAM PLOUGH. C-106245

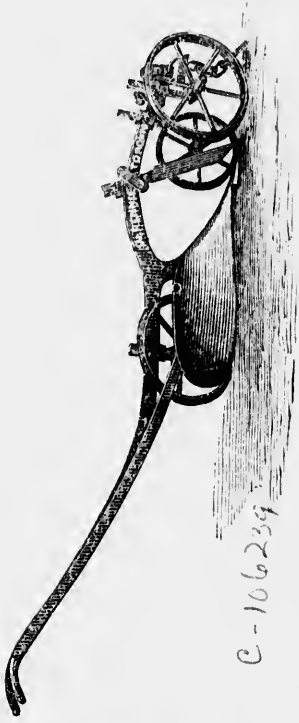
The above is a correct representation of this plough, of which large numbers are now in use.

It is admirably adapted for cross-ploughing.

The wheel can be changed to plough any required depth.

It is fitted with steel mould board and cast iron share.

Fig. 9.—Anti-Friction Wheel Plough.



The superiority of a rolling to a sliding motion in the construction of ploughs is easily understood, as securing lightness of draught and ease of management.

The Anti-friction Wheel Plough is fully a third less draught than the ordinary single-furrow plough.

It can be worked in any soil with two horses the same depth as can be done with three horses, besides making more regular work.

This plough is easily adjusted to any required size of furrow or style of ploughing, and when so adjusted is self-acting, following the horses without the guidance of the ploughman.

When the ridges are struck out by a competent ploughman, the work can be carried on by a boy, the stilts or handles being used merely for turning at the ends and for passing obstructions in the soil.

They are fitted with mould boards of the most approved pattern.

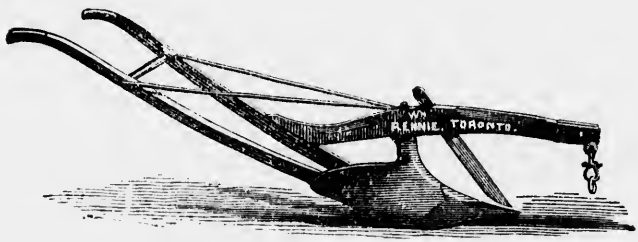


Fig. 10.—One or Two-Horse Wood Beam Plough.

This is an improved pattern of American plough, and is especially adapted for market gardeners, being light draught for one horse, is easily held, and cuts a wide furrow.

Wherever introduced, this plough meets a ready sale.

The mould board and share are made of cast iron.

Fig. 11.—One or Two-Horse Wrought Iron Plough.

This plough can be worked by one horse.

The sole and landside being dispensed with and an anti-friction wheel inserted in the body of the plough reducing the weight to less than one hundred pounds, and the draught nearly a third less than any other plough of the same size.

Although light, it is sufficiently strong for two horses.

The Skife or Head is made of wrought iron, and very strong, fitted with steel mould board and steel share.

Ribbing Plough.

This is a very light and strong one-horse Plough, fitted with wood beam and handles, adapted for ribbing purposes.

It will also answer the purpose of a one-horse plough.

The mould board and share are made of cast iron.

Light One-Horse Plough.

This pattern of Plough is the lightest on the list, and has no coulter.

It is intended for working amongst growing drilled crops, and for gardening purposes.

The beam, mould board and share are made of cast iron.

FIG. 12.—SWIVEL OR SIDE-HILL PLOUGH.

A series of several sizes, from a light one-horse to a heavy four-horse Plough.

They are so constructed that the mould-board can be instantly changed from one side to the other, enabling the operator to perform the work horizontally upon side-hills, going back and forth on the same side, and turning all the furrows downward.

The mould-board, being of convex shape throughout, will not clog, and cracks and pulverizes the soil thoroughly.

They are employed by many for level ploughing, as this leaves the field without any centre, dead or finishing furrows: thereby allowing the mowing machine, horse rake and hay tedder to work to best advantage.

They are very convenient in gardens, nurseries, &c., as they turn the furrows either way.

The ploughed land lying together, the work of manuring, harrowing, &c., can go up to the plough.

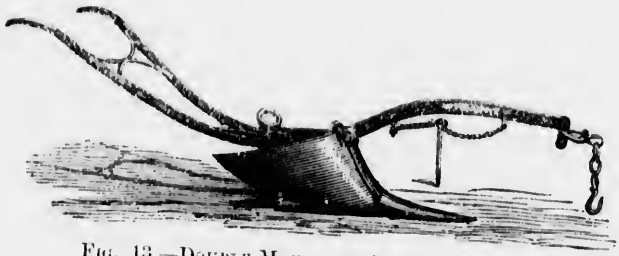


FIG. 13.—DOUBLE-MOULD OR RIDGING PLOUGH.

This plough is intended for moulding up potatoes, or other roots sown on the ridge, and for opening drills and water-furrows, for all of which it is admirably adapted.

The operation is sometimes performed by a single mould-board plough, which has to go up and down the field to accomplish the same work as this plough effects in one journey.

When used for setting out lands, and for drawing furrows for planting potatoes and other roots, a marker is attached to the plough, to be used for setting out the land, which saves the trouble of measuring or dividing the land, as the plough, whilst making one furrow, is marking a course for the next.

By removing the boards and marker, it may be used for subsoiling.

This plough is made entirely of iron and steel.

The moulds can be expanded or contracted, as may be desired, to any required width of drill.

Several sizes are made, with various patterns of mould-boards; straight are recommended, also with wood beam and handles.

I furnish a very superior style which is made with wrought-iron beam and wood handles.

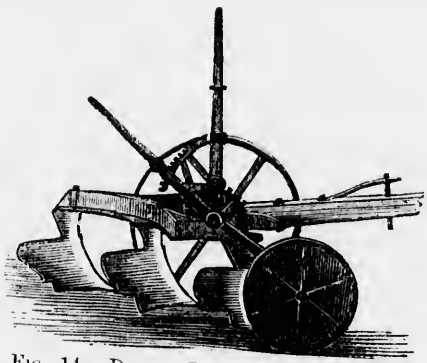


FIG. 14.—DOUBLE-LEVER GANG PLOUGH.

This is an excellent implement for eradicating Canada thistles, and for all light ploughing.

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It is used with advantage in the spring on ground that has been fall ploughed, for summer fallows, covering peas, &c.

The driver, by lifting or lowering the left hand lever, raises or lowers the plough without acting on the right hand lever at all, while with the right hand lever the plough is raised or lowered to suit uneven ground.

The levers are hung on the axle and long doubletrees or neckyokes are dispensed with.

It is capable of turning over from four to six acres per day with one team.

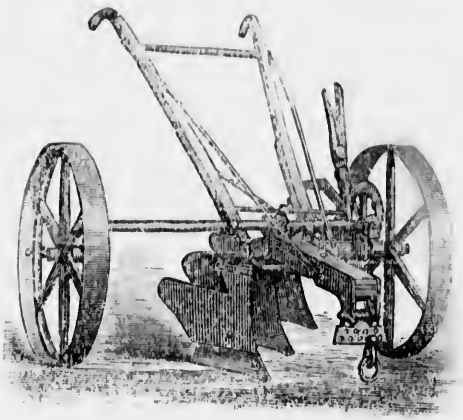


Fig. 15.—Improved Gang Plough.

Fig. 15 represents an improved Gang Plough, with wood handles and short beam.

It is extensively used, and is well adapted for spring or fall ploughing to put in seed, and to cultivate the land. It cuts the whole of the land, the shares lapping past each other.

A tongue will be put in (when so ordered) instead of short beam and handles.

Steel mould-boards are used, and the shares are chilled.

MOULD-BOARDS, SHARES, &c.

FIG. 16.—No. 40 MOULD-BOARD.

The above represents one of the favourite styles of mould-boards; it is the longest of all my patterns, measuring forty-three inches in length.

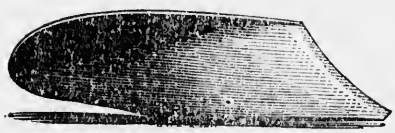


FIG. 17.—No. 53 MOULD-BOARD.

This is similar to the No. 40 Mould, but shorter and deeper.

It measures forty inches in length.

No. 54, or, BARROWMAN IMPROVED MOULD-BOARD, is most generally used, at the present time, for general purpose work.

RENNIE MOULD-BOARD.—For match work this mould-board now excels all others.

SHARES.—To fit nearly all ploughs now in use, and are made of wrought or cast iron.

I also supply steel shares which are so cheaply constructed, and keep sharp so long that the whole cost of keeping them up does not exceed the cost of sharpening the iron share.

Also Landsides, Sole Shoes, Beams, Handles, &c., &c.

FIG. 18.—EYER'S PATENT COMBINED SMOOTHING AND GRUBBING IRON HARROW;

A perfect smoothing harrow when drawn with convex face of teeth cutting; a thorough Grubber and Cultivator when reversed.

EYER'S PATENT COMBINED SCOOTHING AND [illegible] IRON HARROW.
(See Fig. 18.)

The frame of this harrow is made similar to [illegible] heavy zig-zag harrows.

In the following particulars it will be found far superior to any other.

FIG. 19.

1st.—*Ease of Draught.* The teeth are flat, sharpened at both edges; highly tempered, and convex in shape, (See Fig. 19); and *never clogging* cause the harrow to run with one-half the usual draught upon the team. All the useless friction is dispensed with.

2nd.—As a *Pulverizer.* As the teeth are flat, convex shape, and sharpened, they never clog, and therefore run *clean and bright* through the soil in every possible condition. From their position they cut *downwards* through lumps, running on to a lump like a sled they hold it fast, and cut and slice and pulverize it thoroughly. All ordinary teeth push lumps to one side instead of pulverizing them.

3rd.—It *Cultivates*, in the most perfect manner, young growing crops, such as Wheat, Oats, Barley, and particularly Corn and Potatoes. As the teeth are convex, they do not tear up, but like a sled press downwards and run with perfect safety over the deeply rooted corn, wheat, and other plants, while the young and tender weeds, just springing into existence, are pulverized with the soil and destroyed.

ZIG-ZAG IRON HARROWS.

These Harrows are made in two sizes, light and heavy, and the teeth are so placed that they each cut a separate track at equal distances apart.

It is made in two-row sections, four sections making up a harrow of forty teeth, and has a very lively motion when at work; being in small sections, it readily adjusts itself to uneven surfaces in the ground, is light to handle or move, and of easy draught. There is not a nut or key to remove when taking it apart, consequently no small parts to lose.

By taking out one of the inside sections, it makes a light 30-tooth harrow, suitable for one horse or a pair of colts; and it can at any time be enlarged by adding one or more sections, thereby making a 50 or 60-tooth harrow.

The hinges or connections are so arranged that there is a joint exactly behind each horse and one between them, so that when either horse is walking in the furrow—or if the furrow is between them—the harrow will with ease adapt itself to the shape of the furrow, thus nicely dressing the edges of both lands at the same time.

As soon as one side of the teeth becomes blunt, you can hitch on to the other side of the harrow.

The sockets which admit of the teeth are oval shaped, giving the teeth the greatest possible strength.

Improved English Harrow.

This style of Harrow is composed of a special class of iron rolled for the purpose, or what is known as grooved or harrow iron.

They are specially recommended for rough and stony farms, as they will be found to stand better than any other.

The teeth run at equal distances apart, cannot track, and work uniformly over the whole surface.

The teeth are oval-shaped, and composed of solid steel.

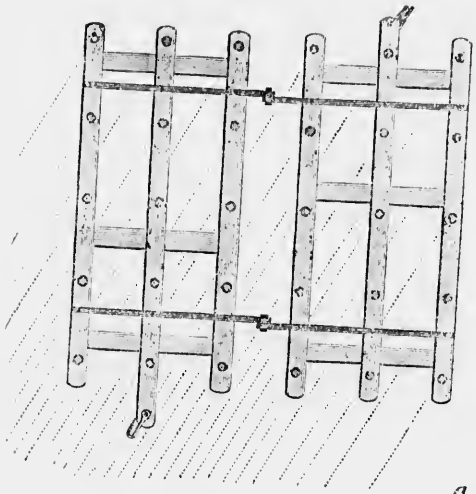


Fig. 20.—Wood Harrow.

The above cut represents a Reversible Wood Harrow made in two or more sections, as ordered, which, for some kinds of work, is considered preferable to the iron harrows, viz.—harrowing new and stumpy land, also for covering grass seed, &c.

Chain Harrows.

The chief peculiarity of this implement is, that being made entirely of diagonal iron links, working loosely in each other, they have the property of clearing themselves from all accumulation of soil.

As there is no rigid frame-work, they follow closely the surface of the soil, however uneven it may be.

They are very efficient for cleaning land, gathering weeds, and top-dressing on sod.

They are made so that the last half can be taken off and the first half used with one horse for harrowing in grass seeds, or following a grain drill.

They are fitted with drag weights.

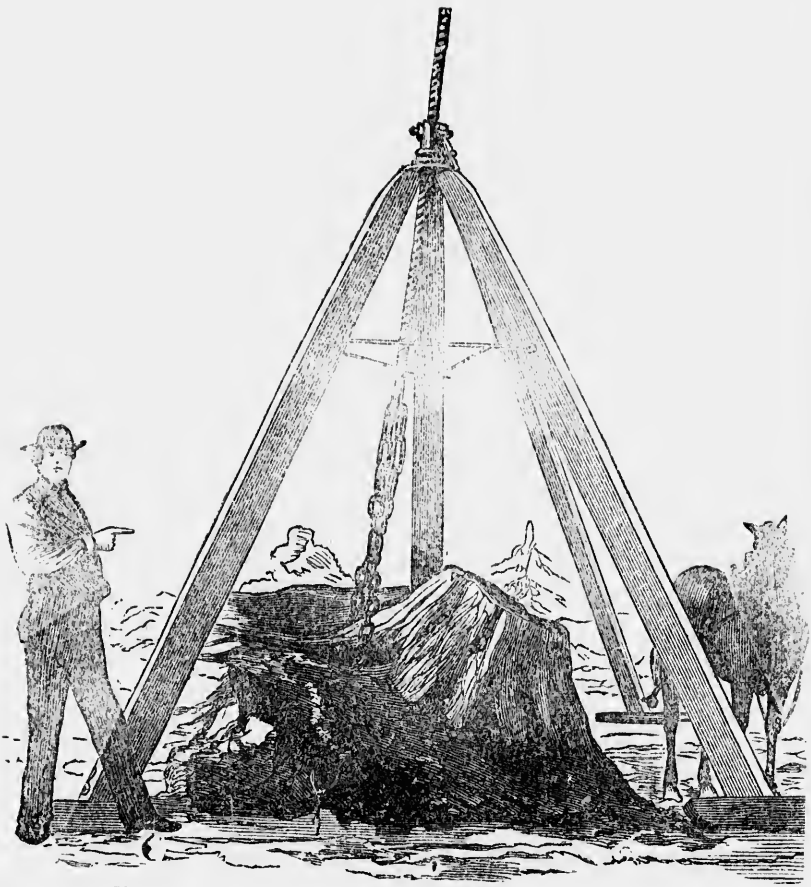


FIG. 21.—SCREW STUMP MACHINE.

This style of Stump Machine has now superseded all others.

It is simple, and very easily managed by one man and a horse.

It will raise any ordinary stump.

One of the many advantages is that it raises the stump perpendicular and allows the hole to be filled by the earth loosened from the stump while being drawn.

It is only the work of a few minutes to move from one stump to another.

Woodwork is not shipped unless specially ordered, as it can be made by the purchaser with the aid of the plans I furnish, thereby saving freight.

MACHINES FOR DRAINING AND GRADING.

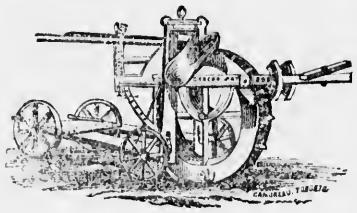


FIG. 22.—CARTER'S IMPROVED DITCHING MACHINE.

This Ditching Machine was first introduced to the public in the summer of 1869. It has been awarded the highest premiums wherever exhibited, both in Canada and the United States. Indeed it has in every instance, when brought into competition with others, proved itself to be far superior to any other machine of the kind yet invented.

Its principal parts are an iron wheel four feet in diameter and eight inches wide, with two flanges of five inches projecting from its edges. Between the flanges, on the circumference of the wheel, are cogs five inches long, arranged in rows of two at points twelve inches apart around the wheel. Immediately in the rear and in close proximity to the bottom of the wheel, is a steel plough-shaped cutter, arranged in such a manner that the earth continues its upward progress to the top of the wheel, where the cogs pass through a comb, and the earth is discharged into a polished steel spout, and falls at a convenient distance from the trench. The whole is connected with a car upon which the operator stands, who has the power of regulating the cutter for the purpose of levelling the bottom of the ditch (quite a *desideratum*).

The machine is drawn to and fro in the same track, cutting from two to five inches each time (at the will of the operator) until the ditch is the depth required.

Many certificates might be mentioned here, but I invite all interested parties to test the machine for themselves, feeling quite certain that they will be pleased with the result.

This machine is simple in construction, very strong, and not liable to get out of order.

It will work satisfactorily in the hardest as well as the toughest and most adhesive clay soils; will also work admirably in sandy or light soils.

Two men and from two to four horses are required to work it, cutting from 100 to 200 rods (according to soil) of ditch, 3 feet deep, 11 inches wide at the top and 8 inches at the bottom, per day.

Official authorities certify that it does the work of from twenty-five to thirty men per day, and saves fifty per cent. of the former cost of draining.

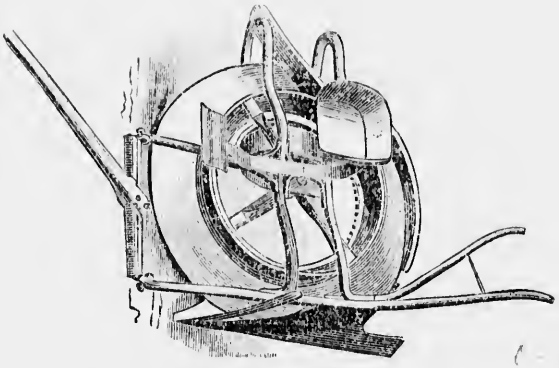


FIG. 23.—CARTER'S OPEN DITCHER, ROAD GRADER, AND SUBSOILER.

The machine is of simple construction. The main fixture is that of a plough, driven and used in the ordinary manner. Attached to this is a large wheel, which lies on its side, and revolving as the plough passes along cutting a furrow, takes the earth from the plough and carrying it round the flange of the wheel, drops it in the middle of the road, a distance of 7 feet from where it originally lay.

Thus the machine cuts a ditch on each side of the road to any required depth, and throws the earth into the middle, not in large quantities, but equally distributed across and along the road. In this operation the two machines, which are usually employed on such work, are combined in one, and the work done in the same time as any ordinary plough would take to cut the ditch.

By this machine work can be accomplished which would take fully 100 men to get through in the same time. This machine will not only be of great advantage for road work, but can be turned to extra benefit on farms, etc., for making open ditches, subsoiling, etc.

The earth as it passes through the machine is completely pulverized and dropped so steadily and gradually, that it goes through its work far more completely than a spade. This will be highly beneficial for farmers.

It will effectually grade from three-quarters to one mile of road per day, and the same amount at least of open ditch.

Every township should own half a dozen for road-making.

FIG. 24.—ROAD-SCRAPER.

This pattern of scraper is very extensively used. They are substantially made, with strong cast-iron mouth piece.

Townships supplied

ROLLERS.

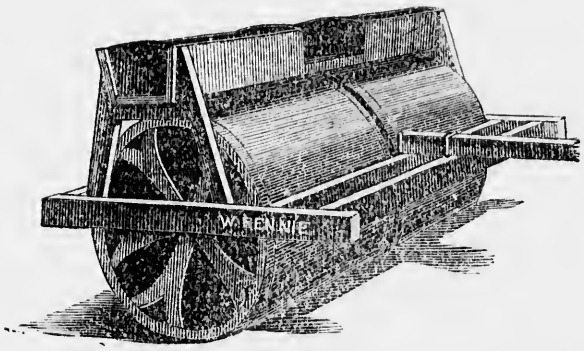


FIG. 25.—FIELD ROLLER.

This is an important implement, and is now in general use.

They crush all soils and lumps that remain on the top of the ground after it has been harrowed, and force down small stones level with the surface.

They render the field smooth for the reaper, mower, hay-tedder, and horse-rake, and press the earth close about the seed, thereby securing a more sure and quick germination.

On light and sandy soils they are invaluable, and in all cases their use has greatly increased the product, clay lands by heaving, pull to pieces and displace the roots of grain and grasses sown the previous fall, and the roller presses the roots and earth together to their proper position, and prevents what is termed winter killing.

The box is attached to receive stones, etc., picked up on the field, and for giving weight to the roller, according to the work required.

They are made with cast-iron heads strongly braced, fitted with wood, and the sections revolve separately on a wrought-iron spindle, which facilitates the turning.

I can furnish these of any desired length; the usual sizes cover six and seven feet.

Iron Field Roller.

These rollers are made of various diameters, from thirty to forty-eight inches, in separate sections of from two to four parts, placed on a wrought-iron shaft independently of each other, with or without boxes to receive stones. It is a very strong, durable roller, being constructed wholly of iron, except the tongue and box, which are wood.

Large Road Roller.

This style of Roller is intended for levelling roads, streets, &c., weighing from four to seven tons each, and is usually drawn by a road engine.

It is all cast solid with the axles, and is very efficient in its operation.

Garden Roller.

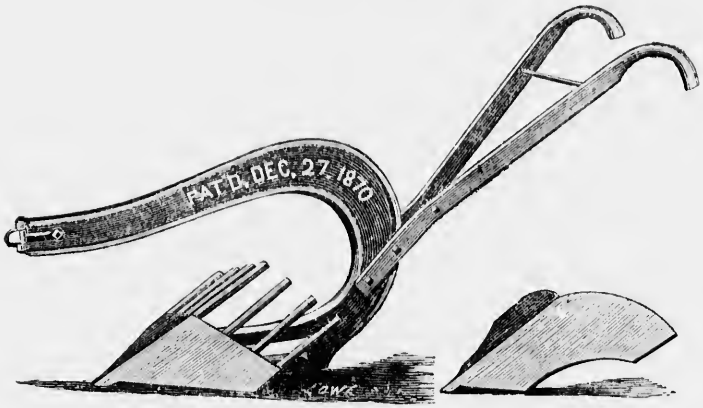
Since the Hand Roller was first introduced it has been greatly improved.

It is now made with two sections of cast iron, revolving independently on a wrought iron axle, and with a box to receive stones, &c. or giving greater weight when required.

The sections are each one foot long and twenty inches diameter.

It can be easily worked by one man.

POTATO DIGGERS.



Figs. 26–27.—Dick's Patent Potato Digger.

A pair of horses, with a boy to drive, will easily dig as fast with this implement as twenty men can pick up.

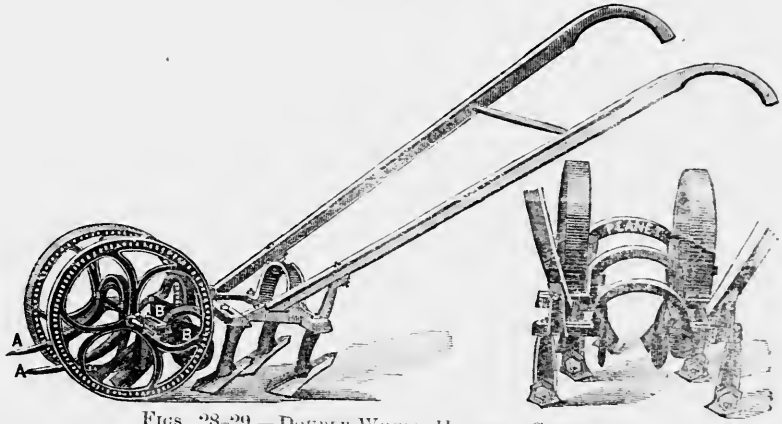
The standard is high, so as to allow of its working freely, without clogging from weeds and potato vines.

It is readily changeable from a potato digger to a double-mould plough, and again to a scarifier of growing crops.

It works well *in all kinds of soil.*

Its simplicity and cheapness specially recommend it.

Fig. 27 shows the attachment for moulding.



FIGS. 28–29.—DOUBLE-WHEEL HOE AND CULTIVATOR.

Perhaps no implement is so much needed by root growers and gardeners as one which will relieve them of the *slow, tiresome and expensive task of hand-hoeing*, enabling them to largely increase their sowings, and tend them with slight expense.

This implement is a complete hand machine for rapid and efficient hoeing and cultivation of all drilled vegetable and root crops, doing the work with unexampled ease and rapidity, *finishing both sides of a row at one passage*.

It has six highly-tempered cast-steel blades, broad at one end, narrow at the other, reversible, readily ground, and equally efficient after long wear. The wheels six inches apart, with the horns A A for raising leaves which would be otherwise torn off, and the high arches allow the machine to cultivate both sides of the row at once.

The knives are readily ground and should be kept sharp.

Fig. 29 is a rear view of the same implement.

Fig. 30.—Hand Cultivator.

Fig. 30 represents an improved implement for field and garden use, to destroy and prevent the growth of weeds between the rows of beets, carrots, onions, turnips or other rowed crops, and for flat cultivation generally.

It expands from 8 to 14 inches, is light, strong, durable, and easy to operate.

It will do the work of six men with hoes.

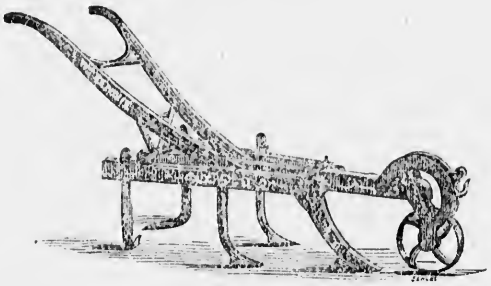


Fig. 31.—Improved Expanding Horse Hoe.

This is a useful implement for working and cleaning root crops between the drills.

It is constructed so that it can be expanded or contracted to suit any required width of drills, and will be found a useful and efficient implement.

It is made with five teeth—the front one is pointed with steel, the others are made of wrought iron.

Combined Horse Hoe and Weeder.

This is a very useful article in the turnip, potato and corn fields, and is provided with two complete set of feet.

The horse hoe is used for throwing earth up to the potatoes, or, by reversing the feet, to take from them, also for opening drills.

The weeder does its duty thoroughly.

It can be expanded or contracted in the same manner as the preceding style.

CORN CULTIVATOR.

This is made of the same form and size as the ordinary one-horse cultivator, with five reversible feet which are made of heavy steel, bolted to a cast standard, and of such shape that, when worn by long use, they can be reversed, and are then as serviceable as when new.

This cultivator can be expanded to work between rows four feet apart.

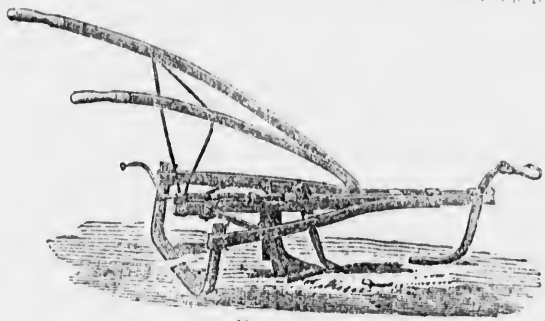


FIG. 32.

COMBINED ADJUSTABLE HORSE HOE.

(See FIGS. 32, 33 & 34.)

The above cut shows one section of this combined horse hoe, scarifier and double mould plough, and as shown above, is what is termed the "horse hoe," and is set for the first operation through a "root field," soon after the crop has shown itself.

The "wings" are made to display or contract by means of the crank shown in the centre, to suit the width of the rows.

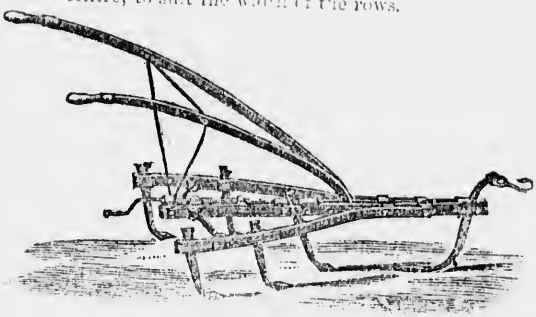


FIG. 33.

Fig. 33, shows a section of the horse hoe combined, called the "scarifier," set for use.

After having gone over a field with the "horse hoe proper" Fig. 32, let it lay for four or five days, until the weeds become wilted by the sun, then shift your implement into a scarifier, and go through your root crop again.

In this way you keep the weeds down, the ground well stirred, loose and fresh, and your crop always in a healthy state and at a very small expense.

After which operation take out the scarifiers and put in the reversible mould-board, so as to draw the earth gently from the plant, extending the wings according to the width of the rows.

When the crop has rested a few days, reverse the mould-board; go over again and throw the earth back to the plant.

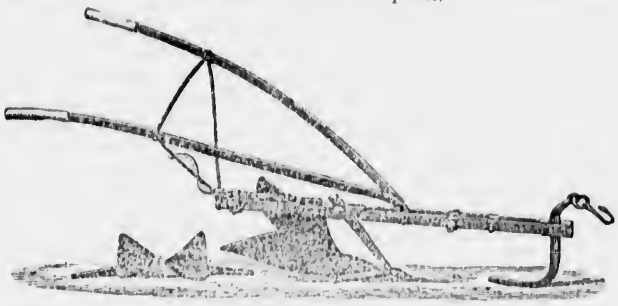


Fig. 34.

The above cut shows the horse hoe combined as double mould-board plough, with the reversible mould-boards lying along side of it, which are used for hilling up corn and potatoes, and throwing up a larger body of earth than could be otherwise done.

As shown in Fig. 34, it is a light one-horse double-mould plough —useful for ditching purposes—and makes a simple potato digger.

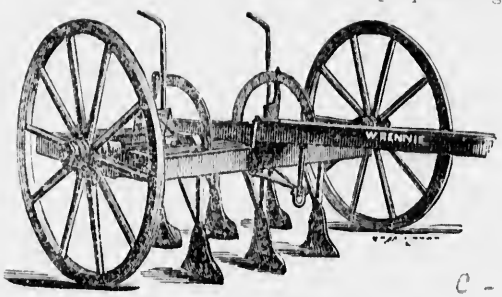


Fig. 35.—Morgan's Two-Horse Cultivator.

This implement is used for pulverizing the ground, for making a good seed bed, and is very generally used.

It has seven teeth made of steel, rivetted to wrought iron standards, which are supported by strong wrought iron braces attached to the frame.

The levers are very convenient, and easily operated.

It is very strongly built, and gives general satisfaction.

Weight, three hundred and thirty pounds.

Patent Two-Horse Cultivator or Grubber.

This style of Cultivator excels in hard and twitchy land, is strongly braced, and not liable to choke with weeds.

It has seven feet, or teeth, made of heavy wrought iron, each secured to a wood frame by two bolts.

The centre lever extends furthest back, and is used for throwing the implement in or out of work.

The other two levers are situated one at each side, and are used for gauging depth.

It has large wooden wheels and tongue.

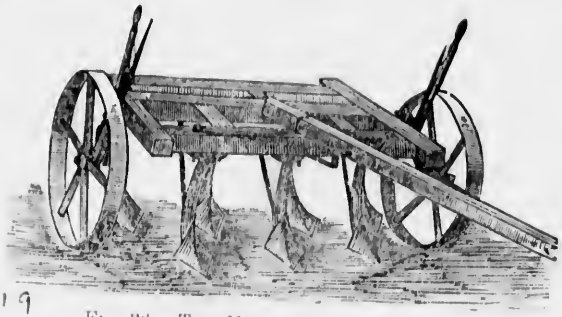


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Fig. 36.—Two-Horse Cultivator No. 1.

Fig. 36 represents a Two-horse Cultivator with iron wheels, of which large numbers have been sold.

The feet are braced from near the bottom with strong wrought iron braces.

The steel blades or cutters are bolted on the cast iron standards, consequently can be easily removed to be sharpened, and replaced without taking the standard off the frame.

It is raised from both sides by the levers, and cuts 4 feet 8 inches wide.

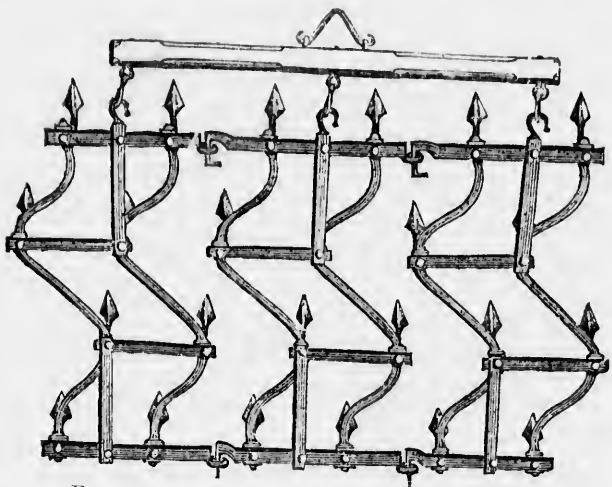

Fig. 37.—Patent Flexible Iron Cultivator.

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PATENT FLEXIBLE IRON CULTIVATOR.

Fig. 37 is a view of a Two-Horse Cultivator, without wheels.

It is made entirely of iron, in sections like the zig-zag harrow.

The teeth are formed of the best bar iron, ⅞ square, worked into shape by means of powerful rollers and presses, something like a miniature double-mould plough, the bottom, or shear, is laid with steel, and the shank, or shin-piece, above the foot, brought in so as to present a small surface in front and very little resistance in passing through the ground.

The omission of wheels allows it to run close to trees and boundaries.

HAND SEED DRILLS.

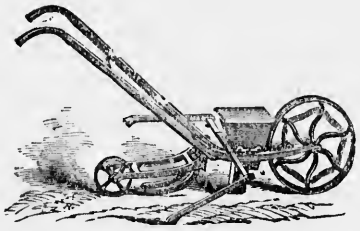


Fig. 38.—Patent Regulator Seed Drill.

The Regulator Hand Seed Drill sows all the varieties of Beet, Carrot, Onion, Turnip, Parsnip, Sage, Spinach, Sorghum, Broom Corn, Peas, Beans, &c., with great regularity, saving much time, labour and seed, giving the highest satisfaction for garden and field use throughout the country.

It is light, durable and easy to operate, makes its own drill, drops the seed, covers and rolls it.

The inner surface of the seed conductor being enamelled white, the operator can, at a glance, see how the seed is being dropped and thereby prevent any mistake or failure in sowing, a matter of great importance.

The new Hinged Markers mark the row straight at any distance apart, so that they are much easier tended with a cultivator.

All springs, slides, reeds, and brushes being dispensed with, the machine is not liable to get out of order.

Full directions for using attached to each machine.

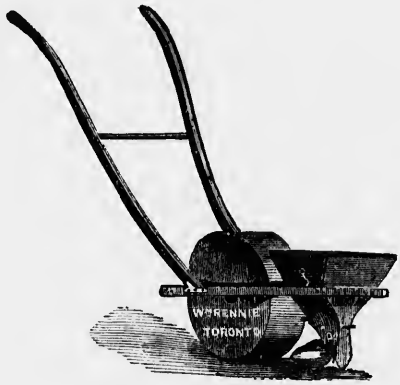


FIG. 39.—WETHERSFIELD SEED DRILL. C-106 2[illegible]

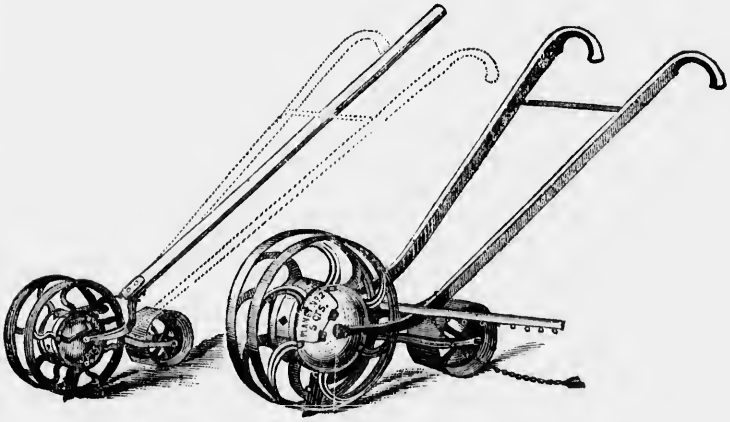
This is a simple and cheap style of hand drill; easy to operate; marks its own row; opens the drill; drops, covers, and lightly rolls the earth upon the seed, and sows with regularity any kind of seed.

It is provided with a marker, which marks the next row to be drilled.

The coverer can be adjusted to cover the seed more or less.

The roller ridges the earth upon the seed.

It is worked by cast-iron reeds of various sizes, which are easily changed for different kinds of seed.



FIGS. 40, 41 AND 42 (NOS. 1, 1½ AND 2) PLANET SEED DRILLS.

3

C-106 215

Planet Seed Drills.

(See Figs. 40, 41, & 42.

Nos. 1, 1½ and 2 Planet Drills are complete for sowing Peas, Beans, Turnips, Carrot, Parsnip, Spinach, Beet, Onion, Salsify, Cabbage, Lettuce, Osage Orange, nursery seeds in sand, Broom Corn, Sorghum, corn for fodder, &c.

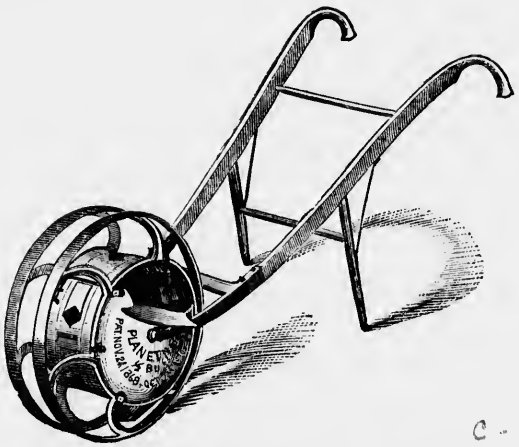
Nos. 1 and 1½, ample in size for ordinary use, holding three pints, yet working perfectly with ¼ oz., the very thing for all who need a cheap, handy, efficient drill.

Weight 18 pounds.

No. 2, twice the ordinary capacity, holding four quarts, yet operating perfectly with ½ oz. of seed, particularly desirable for market gardeners, nurserymen and farmers sowing seeds on a large scale.

Light running and durable, with convenient marker.

Weight, 35 lbs.



C - 106 214

Fig. 43.—Planet No. 3, or Fertilizer Drill.

In using guano and other fertilizers it is important to sow them with regularity, and in the proper quantity and place.

In their application for row crops, from a bucket or bag, it is impossible to obtain the most desirable results, and it is a most disagreeable, slow and uncertain process.

The No. 3 Planet Drill is especially devised to meet all these objections.

It holds half a bushel, and the arrangement of buckets and holes, being similar to Nos. 1 and 2, already described, has the same beneficial effect, sowing fertilizers with great regularity and in any quantity, also spreading them over the breadth of the furrow in the most desirable manner.

Put in any quantity, from one pound to half a bushel at a time.

FIG. 44.—CAHOON'S BROAD CAST SOWER. C-106 213

This Seed Sower consists of a light sheet iron frame work, with a canvas bag or hopper surmounting it, which will hold about half a bushel of seed.

It is suspended by a strap from the operator's neck, and held in position by a strap around his waist.

When in operation the grain falls through an opening that can be graduated as to the quantity sown per acre, and is discharged through a flanged mouth or spout, which is rapidly rotated by turning the crank.

The motion is greatly increased by the gearing connecting it with the spout.

The seed is thrown in front and from eight to twenty feet on each side of the operator.

FIG. 45.—GRASS SEED SOWER. C-106 212

This consists of a long box divisioned off into sections of two feet, and is operated by a small lever handle, which is easily regulated to sow any desired quantity with ease.

It is suspended by a strap or rope placed over the shoulder, and is carried against the breast.

Farmers having grass seed to sow will make a considerable saving by using this sower.

I make three sizes, to sow respectively twelve, fourteen and fifteen feet.

TURNIP & GRAIN DRILLS.

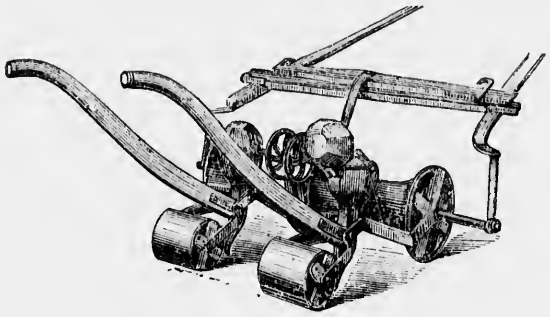


FIG. 46.—IMPROVED TURNIP SEED DRILL.

The above figure represents the improved Turnip drill, which is giving perfect satisfaction.

The rollers are made of cast iron and are hollowed to fit on the rows. They slide along the axle and will adjust themselves to any inequalities in the width of rows.

The depth of sowing is regulated by the hind rollers.

The seed boxes are concealed from the weather, and are operated by two friction wheels running on the front rollers.

By bearing on the handles sufficient to raise the front rollers the sowing ceases, which is useful at the end of rows.

The quantity to be sown is gauged by a band with holes of various sizes perforated in it which fits securely around each of the seed boxes.

WOOD ROLLER TURNIP DRILL.

This style is intended more especially for sowing on the level, the rollers not being grooved.

The seed boxes are operated by means of a chain attached to back roller.

In turning at the ends of rows, lift on the handles sufficient to stop the sowing operation.

It does not adjust itself to the rows, but can be changed by means of thumb screws which are also used to change the depth of sowing.

The sowing boxes are the same as the preceding style.

Fig. 47.—Improved Grain Drill.

IMPROVED GRAIN DRILL—(See Fig. 47).

Every seed distributed by a drill adapted to its distribution reaches the exact point of depth where it will soonest germinate and grow.

It is evenly and perfectly distributed and evenly covered, not a seed is left scattered on top of the ground to attract the attention of birds or fowls.

None of them are deposited so near the surface of the earth as to grow weakly, sickly plants unable to ripen and mature the grain.

None of them are so deeply buried as to be unable to force their way to the surface.

Thus every seed, if perfect in itself, is deposited in the earth at the exact point where it will receive the best possible advantages for growth and maturity, is far less liable to be effected by drouth; and being deposited at the same even depth comes to the surface evenly.

Its entire growth is uniform, ripens at or near the same time, therefore earlier; and by the admission of air and light alike to every plant, not only produces a better quality of grain, but a larger product.

Their advantages are summed up in a very few words.

They save the heavy lugging labour of broadcasting, no desirable or pleasant task.

They perfect the work as they go, leaving nothing to be ruined or lost by the impending storm.

They protect the seed from the drouth of mid-summer, the frosts of winter, the bleak, cold drying winds of spring.

They save 25 per cent. of seed necessary to use by putting every seed exactly where it should be.

They surely multiply and add bushels to the produce of the field.

Grain is not so liable to rust as when sown broadcast.

It secures the same advantages for spring as winter grains.

In order to obtain good crops be sure and get a good drill.

Directions for sowing all kinds of grain sent with each machine.

BROADCAST SOWING MACHINE—(See Figs. 48, 49).

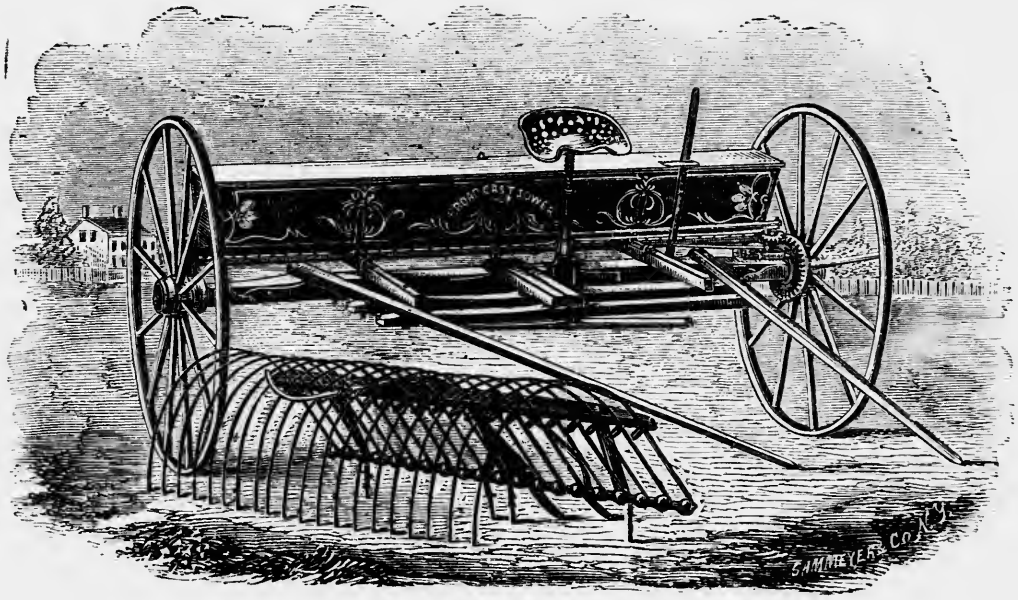
This machine sows plaster and all fertilizers of a dusty nature.

It has a double crank motion, driven by strong head gears with two sets of agitators, which keeps the plaster, &c. always loose in the hopper and the distributor open.

This machine is a continuous and even distributor.

It is also furnished in connection with the Ithaca Wheel Rake.

Fig. 49 shows the rake frame attachment.



FIGS. 48, 49.—BROADCAST SOWING MACHINE.

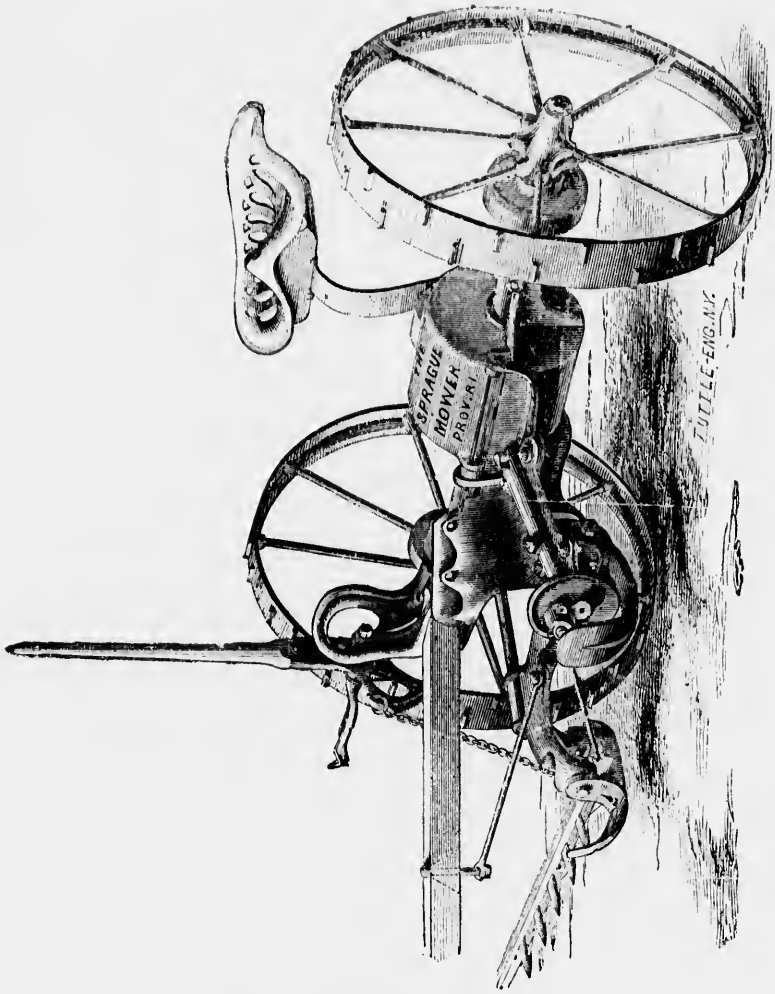


FIG. 50.—THE SPRAGUE MOWER.

This is comparatively a new style of mower From the satisfaction given to purchasers as well as the victories achieved by it at trials, I do not hesitate to offer it again, as the best in the market, all points considered.

The following are the peculiarities of this machine.

The frame is an iron case, in which all the gears are placed and entirely covered.

The shafting is all held by the frame, and, as it is a single piece, there can be no warping and springing, as where the frame is of wood or pieces of iron.

The shafting once in line must always be in line, thus securing easy draught throughout the whole life of the machine.

Only four bolts are used to hold cover, caps, seat, shafting, gears and frame.

No dust, dirt, or grass can reach the gears, and the driver cannot possibly be injured by them.

Almost the entire weight of the machine is carried upon the wheels, giving large driving power in proportion to the whole weight.

The machine is one of the strongest, and also one of the lightest, in use, weighing only 600 lbs.

The Sprague has the central lifting draught, lessening the work of the team, and the liability to strain when striking obstructions.

The lifting apparatus is the most complete in use; with the lever only the bar is brought to a perpendicular position and fastened, and with the lever it is unfastened and lowered, and the driver, not leaving his seat, can do all this in ten seconds.

The cutting apparatus is regarded as the most perfect in the world; no pains or expense having been spared in its construction.

The tool-box and seat are combined, the box forming the base, and the seat the cover, combining the symmetrical and useful.

The gear-lifting lever is worked by the right foot, the left foot being used for throwing it out and in gear leaving the hands at liberty for driving.

Fig. 31.—The Cayuga Junior Mower at Work.

The Cayuga Junior Mower.

(See Figs. 51 & 52.)

Many valuable improvements have recently been added to this machine.

The back part of the frame carrying the pitman, and to which the cutter-bar is also attached, is hitched upon the axle of the driving wheels: this, with a hinged or flexible cutter-bar, allows it to follow the surface of the ground, however uneven, and keeping the connecting rod always square with the knives.

The cutter-bar is made of steel, light and strong; it is quickly raised by a lever in order to pass over obstructions.

Its leading and peculiar feature is a dipping motion given to the cutter-bar, which is regulated by the driver.

It cuts a swath 4 feet wide, and will cut from seven to ten acres per day.

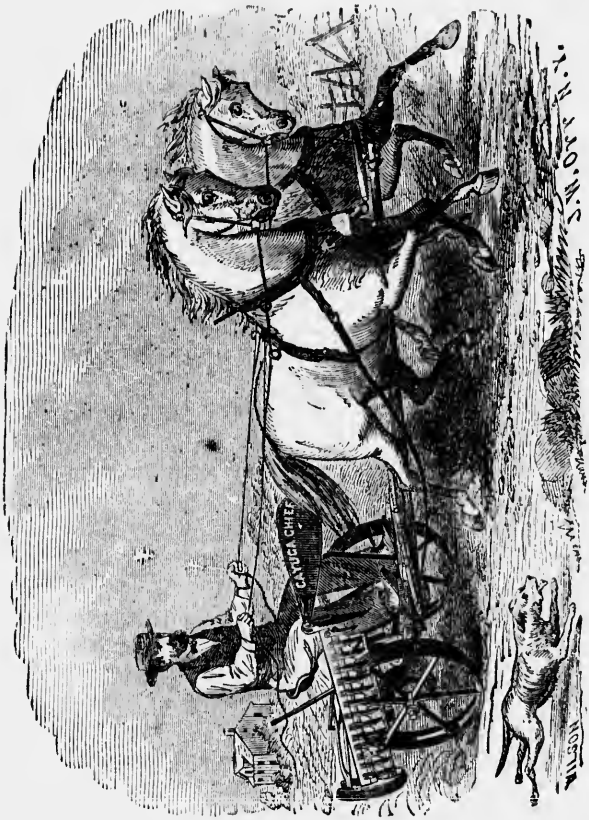


Fig. 52.—The Cayuga Junior Mower on the Road.

FIG. 52.—THE CAYUGA JUNIOR MOWER ON THE ROAD.

C-106207

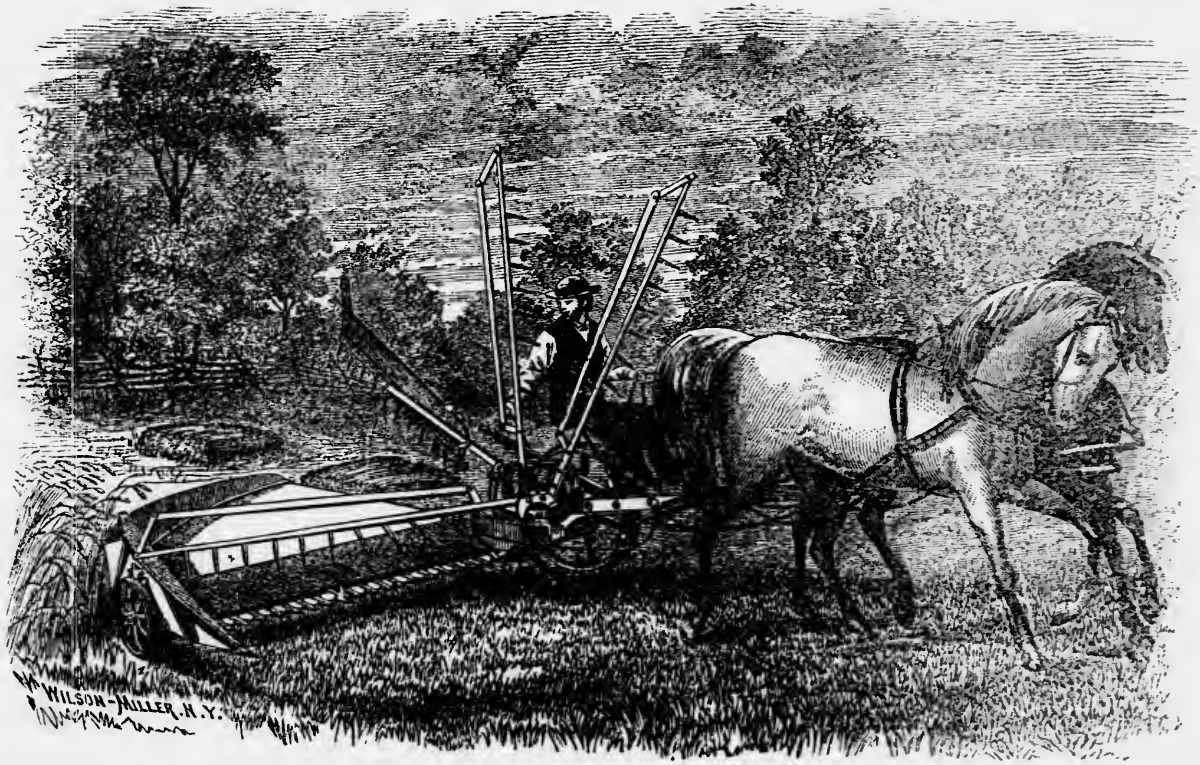


FIG. 53.—THE BURDICK SELF-RAKE REAPER.

C-106[illegible]

The Burdick Self-Rake Reaper.

(See Fig. 53).

I have two sizes of this machine for reaping only, which has been got up with a special view of meeting the wants of that class of farmers in large grain-growing districts who wish a separate self-raking reaper.

It has been thoroughly tested, and is recommended with perfect confidence.

By means of a lever convenient to the right hand of the driver, the cutting apparatus and platform can be easily and instantly tipped down or up while the machine is in motion, so as to gather up short or fallen grain.

It is easily raised or lowered perpendicularly, independent of the tilting arrangement, by means of a separate lever applied to the axle-plate and platform wheel, and can be set low enough to cut clover for seed or high enough for the tallest grain.

It will work on side-hills or over rough ground.

Being perfectly balanced, their is no weight on the horses' necks.

It is the lightest draft self-raker in the market, has no side draft, and is very durable.

These requiring two single machines will find their wants fully supplied with a Sprague Mower and a Burdick Reaper.

Johnston's Self-Rake Reaper.

(See Fig. 54.)

This Reaper is strongly and durably built.

The best materials are used in its construction.

Its machinery is compact.

The finger-bar is a combination of wood and iron.

The rake revolves round an axis close to the driving wheel, so placed as to be entirely under the control of the driver without stopping the team.

It cuts and delivers tangled or lodged grain rapidly, with little or no side draught.

This reaper has been in successful operation for six years.

Its many points of excellence have won for it during that time a multitude of friends, and a position never before attained by any harvester in so short a time. For the first two or three years it was comparatively little known; but during the past three seasons it was widely introduced throughout the principal wheat-growing sections of the land, and gained a popularity unprecedented in the history of reaping machines.

Gordon's Self-Binding Harvester.

In appearance this machine is not unlike the Marsh Harvester—the cutting and elevating is much the same.

Instead of two men binding the grain as it is cut, a very simple and ingenious contrivance is attached, which gives the driver perfect control of the whole machine.

The gavels are easily made of any required size.
It binds any part of gavel, and as tight as desired.
Binding is done with No. 20 wire.
Send for descriptive circular.

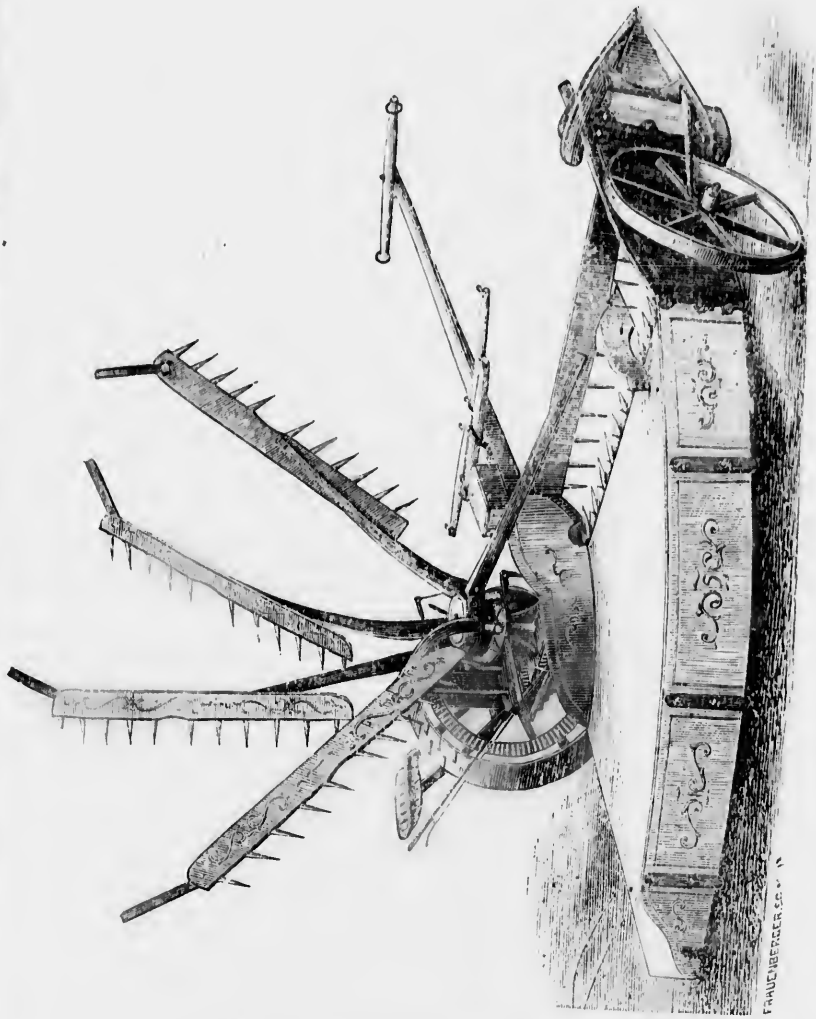


FIG. 54.—JOHNSTON'S SELF-RAKE REAPER.

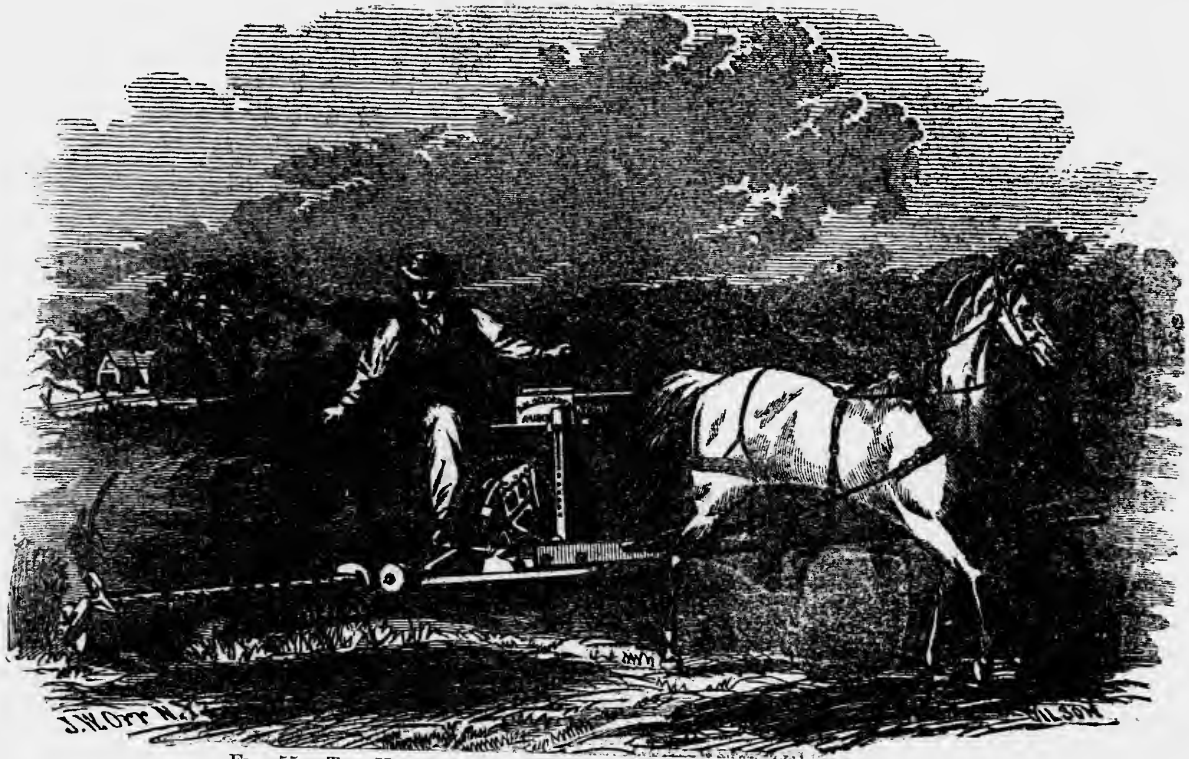


FIG. 55.—THE KIRBY COMBINED AS A MOWER, PASSING AN OBSTRUCTION.

Kirby Combined Mower and Self-Rake Reaper.

(See Figs. 55, 56 & 57.)

A Combined Mower and Reaper, to be successful, must work perfectly in wet or dry weather, whether on rough, smooth, hard or soft ground, hillside or level, in all kinds and conditions of grain and grass, cutting high or low.

The Kirby works successfully under any of the above conditions.

The Kirby Mower.

The main parts of the Kirby Mower are, a strong cast-iron frame, which cannot shrink or swell, on which the gearing is carried; a finger-bar of wrought-iron, such as to secure perfect stiffness and strength, and a knife or cutting-bar of steel.

The driver sits, with perfect safety, on a spring seat, at left side of driving wheel, having the team and cutting apparatus immediately under his eye.

The frame and inner end of the finger-bar are balanced and raised by the weight of the driver alone; a slight lifting by the right foot in the stirrup being all that is necessary to effect this.

By a lever at the right hand the outer end of the bar is easily raised.

In the Kirby Mower the finger-bar has no joint whatever, it is always straight, and, therefore, the knives and cutting gear are always in line, and work freely and smoothly.

But the independent action (joint) which every mower must have to allow it to pass flexibly and easily over elevations and obstructions is in the frame of the Kirby Mower, or rather in connection between the frame and the drive-wheel, and this joint answers the purpose effectually and economically.

A light, convenient reel is sent out with each machine, that is of the greatest advantage in mowing.

When properly managed it never fails to give satisfaction.

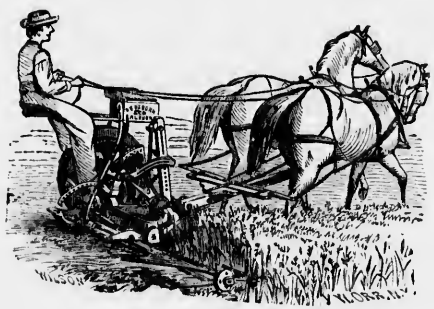


Fig. 56.—The Kirby Mower at Work (without the reel).

Fig. 55.—The Kirby Combined as a Mower, Passing an Obstruction.

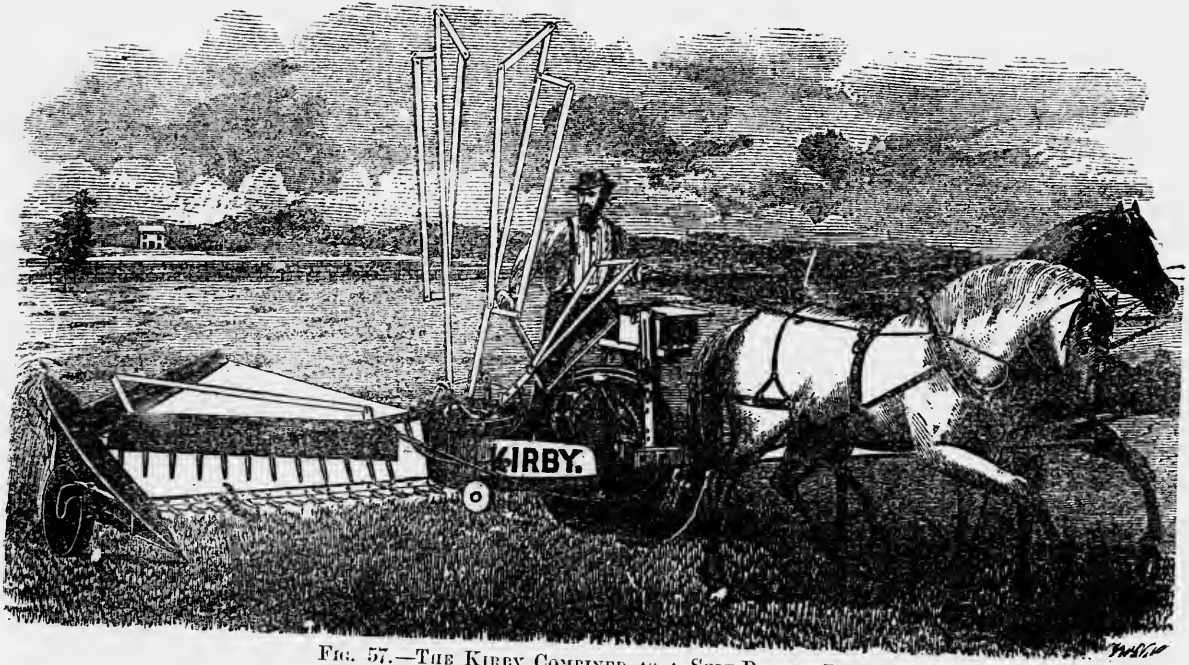


FIG. 57.—THE KIRBY COMBINED AS A SELF-RAKING REAPER.

THE KIRBY COMBINED AS A SELF-RAKING REAPER—(See Fig. 57).

The Kirby Combined can be changed from a reaper to a mower in a few minutes.

The reaper has one drive-wheel and a grain wheel, which are the only bearing points on the ground. Between these the frame, platform, reel and cutting apparatus are carried without sagging or binding in the least.

Examine the Kirby well, and you will find points of superiority over all other combined machines.

The knives never bind, but always work freely and with little noise.

It runs very light, there being no side draught.

It can be adjusted to cut at any height from 2 to 18 inches, either in mowing or reaping.

The reel (used in mower for timothy, and in hand rake reaper) can be adjusted for any height of grain without changing the length of the belt.

You cannot strain the machine any more than a cart or waggon.

You can work it on side-hills where an empty lumber waggon would turn over.

Any ordinary gateway will allow it to pass.

The driver can at the same time watch his team and cutting apparatus without looking back, in either reaping or mowing, and cannot be thrown in front of the cutter bar.

The Self-Rake is either "Positive" or "Controllable" at the will of the driver, without stop or change, enabling him to double or "carry" the bundle in thin spots, or around corners.

The gavels are left on the stubble in the position most convenient for the binder with the butts perfectly square.

Platform Castor Wheel, for turning good square corners easily.

Raised or lowered while in motion, either in reaping or mowing.

The best materials are used in its manufacture.

Repairs always on hand.

Illustrated price lists are placed in each machine, and should be preserved for reference in ordering repairs.

Sections, Rivets, Guards, and other parts of all the leading reapers and mowers.

FIG. 57.—THE KIRBY COMBINED AS A SELF-RAKING REAPER.

KNIFE GRINDER AND GRINDSTONES.

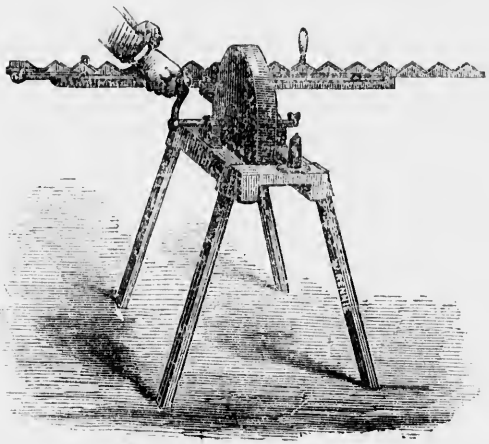


FIG. 58.—MOWING MACHINE KNIFE GRINDER. C-106201

This Machine can be attached to any grindstone, whether large or small.

It is easily adjusted, does excellent work, is easily operated, and very durable.

By it, the knife is held firmly to the stone, and the bevel sustained alike on every section, so that the knives on the entire cutter-bar are uniformly and readily ground.

When one side of knives are ground set it on the other end of frame.

One man can both grind and turn without requiring to use a foot treadle.

It is adjustable to fit any size of cutter bar or knife by means of set screws, which hold it firmly and are only required to be used when knife is finished, and for putting it in.

One man with it can grind much quicker and better than two can without it.

FARM GRINDSTONES.

The above cut (Fig. 58) represents the Farm grindstone most generally sold.

It is hung on rollers and ready for use.

An attachment for working by foot is easily attached.

I also supply the stones and fixtures separately.

FAMILY GRINDSTONE.

A very convenient and useful article in the kitchen.

The frame is made of cast-iron secured to a wooden bottom.

The stones are made of the best Berea grit and measure ten inches diameter.

LARGE MILL STONES.

These are supplied to order, and are made of all sizes and qualities.

HAY TEDDERS.

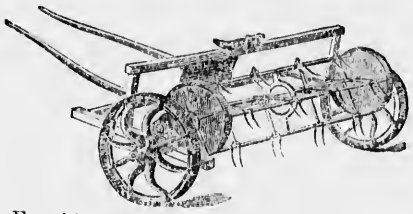


FIG. 59.—THE AMERICAN HAY TEDDER. C-106200

By the use of this machine the farmer is enabled (in ordinary haying weather) to properly cure the grass and get it into the barn on the same day, in good condition, thereby not only effecting a great saving of labor, but avoiding changes of weather.

The Tedder will pay for itself in tedding fifty tons of hay.

The action of the forks is such as to leave the grass lightly turned up, and in the best condition for the admission of the air and the sun's rays.

The draft of this Tedder is light and easy for one horse.

A boy who can drive a horse can operate it, and turn and spread an acre every twenty minutes.

By means of a lever, convenient to the driver, the forks can be raised or lowered to any desired height.

In this Hay Tedder, the separating and distributing of the grass is done by means of a fast backward motion, which throws the hay up behind the machine.

It has been thoroughly tested, and farmers who have seen these machines at work in the hay field will testify to their successful operation where the horse rake can be used.

HORSE HAY RAKES.

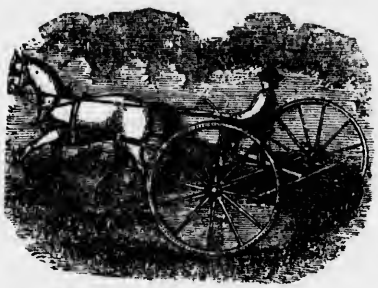


FIG. 60.—THE ITHACA WHEEL RAKE. C-106199

The Ithaca Wheel Rake is made strong and durable, and of the best materials. It has 20 teeth, which are spring-steel, oil-tempered.

The manner in which the teeth are fastened, and the application of the pressure and staple-bar, are not surpassed.

The loaded rake is easily discharged, and without labor, by a foot treadle and a hand lever, which is pulled towards the operator while sitting on the seat.

The teeth are held firmly to the surface, when necessary, by applying the foot to the same lever, leaving both hands for driving.

Each tooth is independent; and the rake, having a movable head, accommodates itself to any surface, either smooth, rough, or stony.

It is successfully used for spreading manure, bunching hay in the winrow, raking corn-stalks, pea-vines, weeds, swamp-grass, and it is effectual in straightening up lodged grass, so that the mowing machine will cut it closely.

This rake has paid for itself in one season, in raking stubble alone.

The tooth frame may be raised or lowered by a single bolt, any required distance from the ground.

It does not thresh the grain nor collect dirt.

In all respects it has proved to be a really first-class hay and stubble rake.

An attachment for sowing plaster, and all fertilizers of a dusty nature, is supplied with this rake (and is also very efficient), as represented by Fig. 48.

Taylor's Sulky Hay Rake.

This Rake is mounted on wheels, and in some respects resembles the Ithaca Wheel Rake.

The principal difference is in the shape of the teeth and a spring being placed over each tooth.

In those respects it is by some considered preferable to the Ithaca.

Fig. 61.—Sulky Wood Horse Rake.

The teeth are made of wood and have an entirely independent action.

In raking grain stubble it does not thresh the grain.

The operator is seated, and by means of a hand lever the load is easily discharged.

It rakes heavy equally as well as light hay or stubble.

The teeth are strong and durable.

FIG. 62.—REVOLVING HORSE HAY RAKE.

This Rake is made of the first quality timber in a very substantial manner, with square teeth sharpened at the points.

This is the best and simplest pattern of revolving rakes; but I would recommend the wheel rakes to those who can afford it, and who have sufficient raking to do to justify the expenditure.

The teeth of this rake differ in length, but not so much as shown in the above representation.

HAY FORKS.

FIG. 63.—PATENT HORSE HAY FORK.

Of the many kinds of Horse Forks before the public, none has been found to compare with this style in all kinds and conditions of hay and grain.

The following are a few of its advantages:—

It is made entirely of wrought iron, which makes it very durable.

It is very simple in construction, and not liable to get out of order; in fact, although I have sold large numbers, I have not heard of a single complaint.

It does not take up much space, and is very easily operated.

Having two prongs, one at each side, it is perfectly square in its ascent.

When seen for the first time very few persons can be found who can tell what it is intended for; but, as seeing is believing, when they behold it at work all their objections are instantly overcome.

It will take more hay in a single forkful than any horse can elevate over single tackle blocks, and two horses have taken a ton at one draught.

Pulleys and Rope supplied.

THRESHING MACHINES.

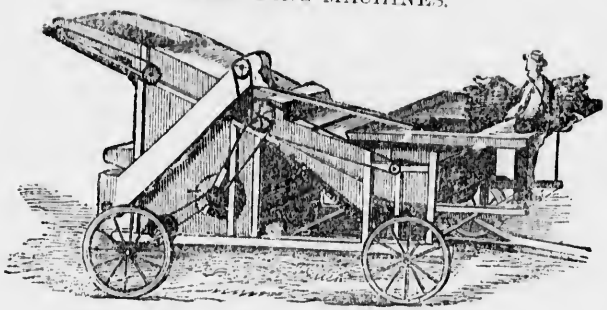


FIG. 64.—IMPROVED THRESHER AND SEPARATOR.

In the construction of this machine no pains or expense have been spared to meet the wants of the farmers.

Those acquainted with the machine will observe some changes on those to be sent out in future that will add considerably to the convenience of threshers.

The following are some of the points claimed for this machine :—

The frame is made heavier and more thoroughly braced ; steel shafting is used in many parts.

It will thresh as clean, fit for market, as much grain, in as quick time, and do it as well as any other.

There is no other machine known that will do the same amount of work with less power when kept in proper condition.

No better finished machine can be found in the market.

The best American curved spikes are used in its manufacture, which have a tendency to throw the straw off, instead of wrapping around the cylinder.

Centre heads are used in all cylinders, rendering them stronger, heavier, and less liable to strain from sudden jars.

A new improvement has recently been added, by means of which the thresher can change the direction of the blast of wind upon the sieves at pleasure, so as to adapt it to the different kinds of grain and seed.

The elevators give better satisfaction than any others yet produced.

Iron pulleys are used, the one on cylinder being bound with leather to prevent the belt slipping ; should any, however, prefer wooden pulleys, they will be put on.

I furnish it with Eyer's Patent Sieve in it, without extra charge.

VIBRATOR THRESHING MACHINE.

The construction and principle of this Thresher differs from all others in the following :—

No grain belt or canvas apron is used.

The separator is made in the form of a long box, open at the back end, and sufficiently roomy to permit the straw to pass through without obstruction or packing.

The lower part of the separator is made in two sections, each about six inches deep.

The lower section has a tight bottom to hold the grain after it has been separated from the straw. It projects under the concave and receives what grain goes through the concave without its going into the straw at all. It also projects over the sieve, and is perforated so that the grain falls through on the sieve.

The upper section has a bottom formed of substantial wooden slats, with sufficient space between them to permit the grain to fall through; and immediately above this slat work is placed six sets of finger-bars, with long projecting fingers in each, reaching from one bar to the other, nearly the entire length of the separator.

Both sections are suspended on swing rods, and are made to vibrate or swing backward and forward by means of a crank shaft and pitmans.

The cranks are so set that they move in opposite directions, one going forward as the other goes backward, thus perfectly counterbalancing each other, and the machine stands perfectly still without bracing or blocking.

The finger-bars are connected to the out-side framework, so that, as the section swings back and forth, it causes the fingers to throw up and down with a quick sudden motion.

Both sections are lower at the back end than in front, and this inclination, together with the peculiar vibration and "up lift" works the straw off to the stacker, and the grain to the sieves, without the slightest stopping or clogging.

The deck back of the cylinder is made circular, so that the straw is at once deflected to the fingers, and prevented from shooting by a light sheet-iron apron hung on hinges, which rises and falls according to the quantity of straw fed in.

The Little Giant Thresher and Separator.

(See Fig. 65).

The Little Giant is capable of threshing from 200 to 300 bushels of Wheat, or 400 to 500 bushels of Oats, per day. It will also thresh Peas and Barley.

It threshes clean, and is not liable to throw grain over, having peculiarly constructed shoe and shakers.

Canvas elevators and sieves are dispensed with.

The straw and chaff are taken from the cylinders by rakers; the straw is then carried out of the machine by an ingenious contrivance worked by cranks, which serves to give the straw an additional shake, so that no grain is carried out. The chaff and wheat are shaken down on the grooved and slatted shoe by a Rock Roller, which also riddles through a comb when the blast from the fan strikes the same, as in other machines.

The cylinder measures 28 inches long, by 13½ inches diameter, ordinary open cylinder, with 8 bars, teeth in every bar, and two centre heads.

The length of the machine over all is nearly 12 feet, without tongue, which can be taken off if desired.

It is intended to be driven by six horses, although only four are sometimes used.

The new style of power, specially adapted for this machine, works with tumbling rods outside of the barn, connected with a jack on barn floor, and driving with a short belt inside of barn, which will cover any objection to the old style of having driving belts exposed to the weather.

A 6½-ft. or 8-ft. single-pinioned horse-power has sufficient power to drive it.

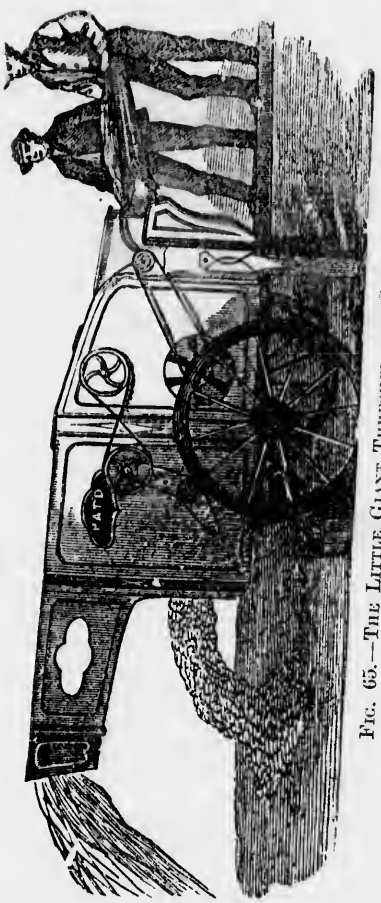


FIG. 65.—THE LITTLE GIANT THRESHER AND SEPARATOR.

(Continued.)

It can be worked by Pitt's power by placing a bevel jack between power and cylinder pulley.

Jacks can be supplied with this machine to give the required amount of speed for any style of power, the number of revolutions of the tumbling rod to one of the horses being stated with the order.

The thresher takes up but little room on the barn floor, and is easily moved about, being placed on wheels.

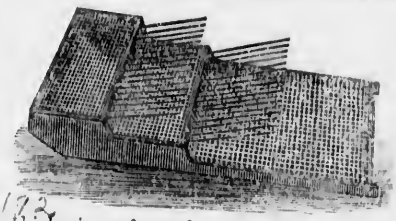
The Little Giant is the best threshing machine for a farmer's own use, while the price places it within the reach of almost every one.

STEAM THRESHING MACHINE.

Both engines and threshers are mounted on wheels—no loading or unloading is necessary, being always ready for work.

Greater steadiness of motion is secured than on the horse-power threshers. Full particulars on application.

FIG. 66.—EVER'S PATENT SIEVE FOR THRESHING MACHINES.



This Sieve has gained the approbation of the farmers and threshers wherever it has been introduced.

It consists of a wooden frame of whatever size desired to fit any machine, covered with wire or zinc in the usual manner, with three falls of two inches each. A thick piece of wood across the sieve at the two lower falls is inserted with strong wire spikes, over which the straw is carried.

This arrangement allows the wind free access whilst the separation is taking place.

This sieve cleans as fast as it can be put through any threshing machine.

It does not choke up or clog, and is very durable.

I will furnish it on any threshing machine without extra charge.

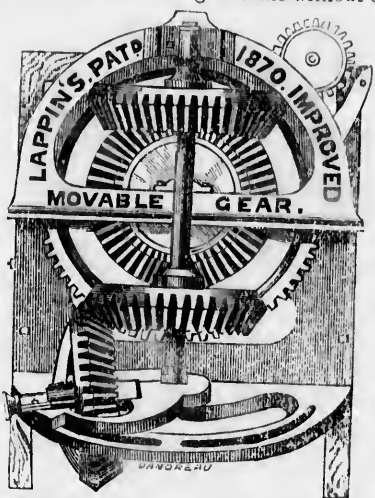


FIG. 67.—LAPPIN'S PATENT MOVABLE GEAR FOR THRESHING MACHINES.

This gear enables the horse-power or threshing machine to be placed in any position from the side of the machine on which the gear is attached.

Descriptive circulars furnished on application.

MACHINE JACKS.

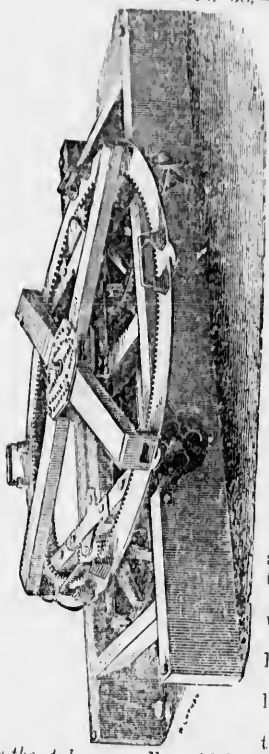
Suitable for driving all kinds of machines.

The best kind for driving straw cutters, &c.; has a strong cast-iron frame, in one piece, bolted to a wooden frame to stand on—a knuckle at one end and a large wooden band wheel at the other, with increased speed.

It takes up little room, and will be found very convenient and useful.

HORSE POWERS.

FIG. 68.—PITT'S 10 HORSE POWER.



This celebrated power has been lately very much improved in its construction and gearing.

The bevel wheel shafts are made of steel, the wheels closely fitted, and, by means of keys, held firmly in position.

The boxing is lined with Babbitt metal, and covered with dust shields.

A heavy cast bridge-bar is placed across the frame at each end of the bridge, which prevents any part of the frame from being twisted out of position.

The transverse and friction rollers are faced and their axles turned. The small rollers have been displaced by much larger ones placed upon heavy iron pedestals between the sills or beams.

Being about four times larger than the old style of rollers, they revolve more slowly and wear much less.

For lightness of draught, durability and power, the Pitts has no superior.

TWO-HORSE POWER.

A small compact power, adapted for all kinds of farm use where the work is not too heavy.

It is made to run with two horses, and with a jack if required to drive by belt.

It has been frequently worked by one-horse.

For driving Grain Crushers, &c., larger powers are preferable.

I supply a four-horse power with attachment, so as not to require a jack, which *is the style* generally sold for a farmer's own use.

Farmers wanting a power for any use can be suited to their satisfaction.

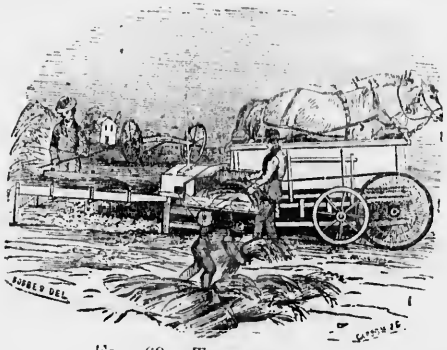


FIG. 69.—TREAD POWER.

© 106190

The engraving on page 58 represents a two-horse tread power driving a small threshing machine.

It can be set and worked in a building to drive straw-cutters, grain crushers, &c., &c.

Two sizes are made to be driven by one and two horses respectively.

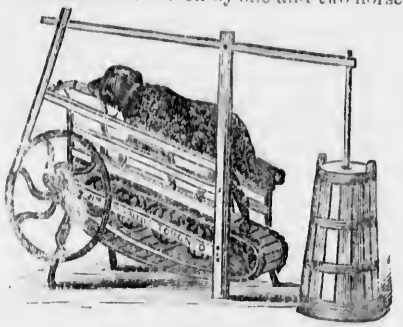


FIG. 70—DOG POWER.

An efficient and durable dog or sheep power, which can be used to drive churns, fanning mills, corn-shellers, grindstones, &c., is a valuable labour-saving implement.

The machine above illustrated is constructed upon two endless vulcanized rubber bands or straps, with thin wood slats screwed to them crosswise, upon which the animal travels.

These slats in turn are made to support each other in a true plane by means of wood buttons across their ends, overlapping the joints and upon the slats each way.

The power is provided with a heavy balance wheel, also an adjustable crank pin in a slotted arm for adjusting the length of stroke to the churn or the size of the animal.

It has a compensating attachment upon the side of the frame, through which the lever moves up and down, producing an absolutely vertical movement of the lever, thereby avoiding all friction, see-saw or rocking motion of the churn-dasher.

A dog of thirty pounds will do the work of an able-bodied man, and a larger dog more work in proportion.

They are fitted with pulleys to drive the Blanchard Churn.

Large numbers of this power have been sold, and are giving entire satisfaction. I also furnish several styles with circular platforms.

TOTMAN DRAG CROSS-CUT SAWING MACHINE—(See Figs. 71, 72).

This machine has been very much improved the past season; the objectionable platform for the horses to walk over has been dispensed with, a tumbling rod being substituted.

The speed of the machine has been increased, thereby allowing the horses to walk slower and at their usual gait.

One team, with the usual help to be found on a farm, is all that is required to work it.

The whole machine is easily managed, and gives good satisfaction.

By removing the saw and pitman and attaching a shaft and pulley, this power can be applied, by means of a belt, to a circular sawing machine, small thresher, grain crusher or other light machinery.

Fig. 71 represents this power applied to a straw cutter.

I furnish another pattern, on the same principle, to be worked by four horses.

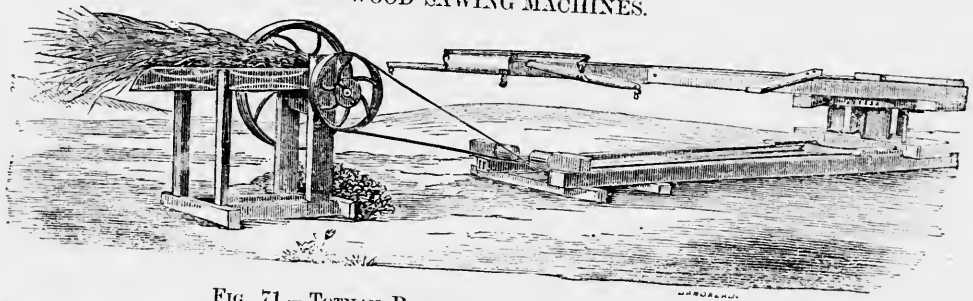
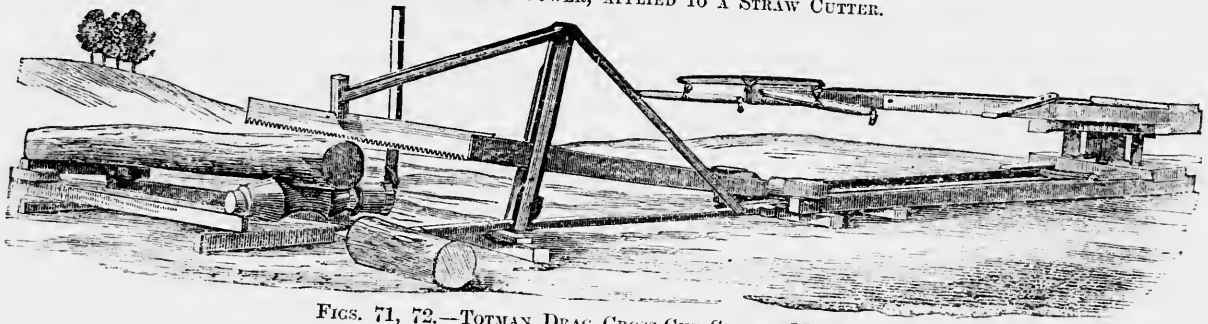


FIG. 71.—TOTMAN POWER, APPLIED TO A STRAW CUTTER.



FIGS. 71, 72.—TOTMAN DRAG CROSS-CUT SAWING MACHINE.

FANNING MILLS.

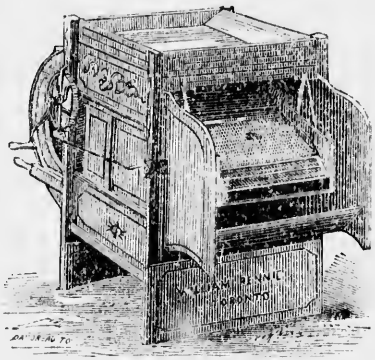


FIG. 73.—CANADIAN SIFTER FANNING MILL.

This Mill is intended to separate oats and barley, peas, oats and spring wheat, chess and cockle from fall wheat, &c., &c.

As now made, the mill is fed by drawing up a sliding board at back part of hopper.

The screen is worked up and down.

The sieves are hung on four iron springs, crossed and secured by bolts at both ends.

The shake can be easily changed.

IMPROVED DOUBLE-ACTION FANNING MILL.

This Mill was awarded first prize at the Provincial Exhibition, and wherever exhibited.

Its peculiar and leading feature is a double action, which enables the sieves and screen to shake independent of each other. It can be regulated so that either will have a heavy or light shake—so that both sieves and screen will work clean in any grain.

When necessary the back part of sieves can be raised or lowered.

This mill cleans and separates grain perfectly at a single operation, is light, easy running and durable, giving entire satisfaction in every instance.

It is furnished with the latest improvements.

PATENT G. S. FANNING MILL.

The plan of construction of this mill differs very materially from the preceding patterns, which is briefly stated as follows.

A small sieve placed between the hopper and sieves separates all small foul and grass seeds which are delivered at a spout on side of machine. Often this saving of grass seeds alone compensates for the price of the mill at a single operation.

The improved quadrant motion will give any required shake from one and one-eighth to two and one-half inches, and is easily changed.

The shoe is hung on wrought iron rods working in castings fastened to the sides of mill.

The double screens and valve in the lower end of the shoe, by which the screenings are cleaned, or the grain divided in two samples, at the same operation.

This mill has one-third more screening area.

☞ A complete change of sieves given with all mills.

FIGS. 71, 72.—TOTMAN DRAG CROSS-CUT SAWING MACHINE.

CLOVER THRESHERS & HULLERS.

Birdsell's Combined Clover Thresher Huller & Cleaner.

This machine operates in clover threshing similar to grain separators in wheat threshing, doing all the work at one operation.

It has received a number of alterations and additions for this season which have been thoroughly tested.

In the hands of good operators, it is claimed for this machine that it will thresh, hull, and clean from twenty to fifty bushels per day, without waste of seed.

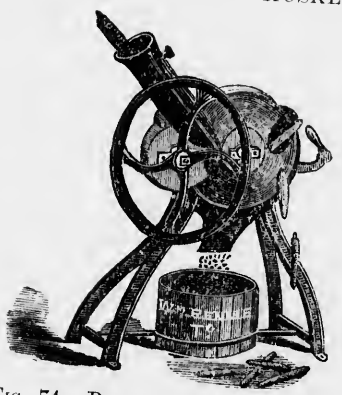
Clover Huller.

This is a compact, neat and durable machine for taking the hull from clover seed after it has been threshed by an ordinary machine.

It is comparatively low in price, and capable of Hulling, when the more expensive machines have failed.

It works well without injury to the seed, and hulling from five to fifteen bushels per day with the power of one-horse.

CORN SHELLERS AND HUSKERS.



C-106/08

Fig. 74.—Burrall's Corn Sheller.

This style of Sheller is made entirely of iron.

The ears and corn are perfectly separated by the action of the machine.

It will shell one hundred bushels per day, and, being made of iron, will not decay or shrink when left exposed to the weather.

It is an American pattern.

Canadian Chief Corn Sheller.

This is a new and patented Sheller of Canadian invention.

It is capable of shelling one bushel of corn in two minutes, and is adapted for either hand or horse-power.

It stands on a strong wood frame.

The main parts are a large revolving roller, with a rough indented surface and a stationary plate, which do the work of shelling. The corn and cobs then fall on an inclined wire sieve, which separates it.

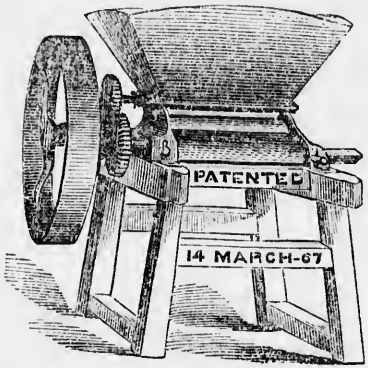
This machine was awarded first prize at Buffalo International Exhibition, in competition with American machines.

"Victor" Corn Husker.

The cob is, with the left hand, laid on the plate, and separated from the husk by a light pressure on a lever with the right hand.

It takes up very little space, and is cheaply constructed, although strong and serviceable.

GRAIN CRUSHERS.

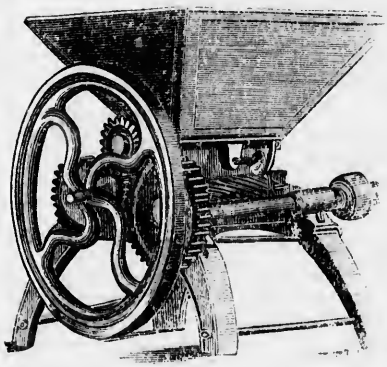


C-106161

Fig. 75.—Patent Wood Frame Grain Crusher.

It is mounted on a wooden frame braced in a superior manner, and capable of chopping sixty bushels of grain per hour.

Fig. 76.—Iron Frame Grain Crusher.



This figure represents a new pattern of grain crusher having been recently improved in all its parts.

The advantages of bruising oats, &c., before giving them to horses and cattle are too well known to need any notice here. Suffice it to say, that with horses in their prime their is a saving of 25 per cent. by feeding them with oats crushed by these mills; with horses too young or too old to masticate properly, the saving is considerably more.

These mills are used for crushing corn, oats, peas, and other grain, for cattle.

They have two finely grooved rollers, one running faster than the other, which do the crushing, which can be set to grind coarse or fine, by means of adjusting screws.

The brackets which hold the roller boxes in place are let into the main frame, thereby securing additional strength, without a possibility of its jarring loose.

A rubber spring in a recess made for the purpose, gives the rollers an opportunity of springing back enough to let a nail through without materially injuring the rollers.

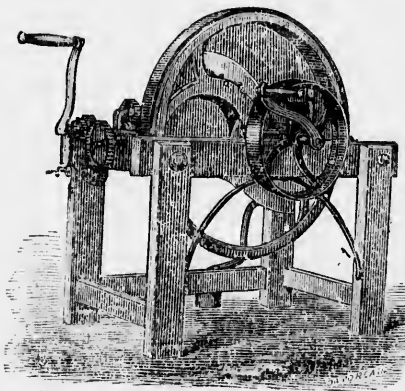
This mill is capable of grinding from 30 to 60 bushels of grain per hour, and will do it better than it can be done in any other way. As it does not heat in grinding, it will not heat or sour in the bin.

It will also break up the small seeds.

They require from three to six horses to drive them, according to the kind of grain, amount fed in, &c.

STRAW CUTTERS.

FIG. 77.—MANCHESTER STRAW CUTTER. (See Figs. 77 & 78.)



The best straw cutter in every respect.

It is designed for horse or hand power, being provided with a pulley or knuckle for horse power and two handles for hand use.

The knives are provided with several set screws each, which enable the knives to be set with accuracy. They feed themselves in the most perfect manner.

It is very substantially made, and capable of cutting one ton per hour with ease.

It is so arranged that by a change of gear it will cut three different lengths, viz., ⅜, ½, or ¾, of an inch, as may be desired, and can be instantaneously thrown out of gear.

The knives are circular in shape, and fastened to the arms of the fly wheel.

It has an adjustable throat to suit heavy or light feeding, raising from both sides.

This machine is extensively used for threshing peas, by attaching with carriers (which I furnish) to any fanning mill, an operation which it performs admirably, leaving the pea-straw chopped up in the best possible manner for feed.

Four sizes are made—Nos. 1, 2, 3, & 4, with mouthpieces varying from 9 to 12 inches in width. The No. 4 stands on three legs, cuts two different lengths, and is intended for hand use only.

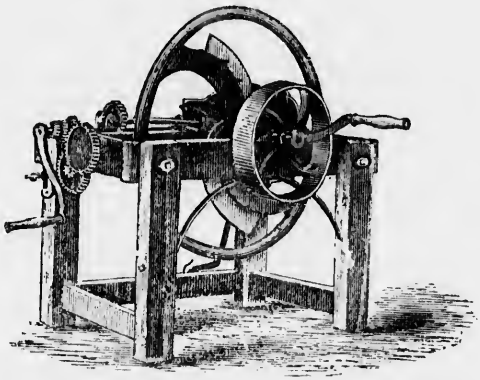


FIG. 78. C-106185

Fig. 78 shows the Manchester Straw Cutter without the shield.

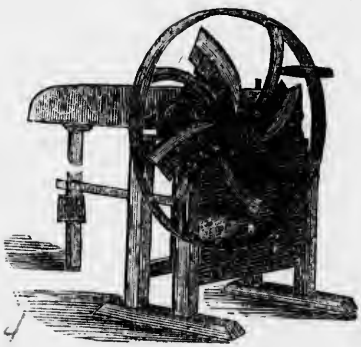
A good straw cutter should be an indispensable machine on every farm. No one who has investigated the advantages of its use will question the value and importance of cutting hay and straw before it is fed to cattle and horses.

Repeated tests have shown that in the saving of fodder alone the gain is from 30 to 40 per cent.

Hay and straw cut together and mixed will be found to make very good feed.

This is beyond doubt the best straw cutter in use.

FIG. 79.—"D KNIFE" STRAW CUTTER.



C-106184

This cut represents a Straw Cutter which has given good satisfaction.

It can be worked by horse-power, and is very light work for one man to turn it.

The shape of the knives enables the straw to be cut off cleanly.

A lifting feed compresser, worked by a spring, is situated between the feed roller and knives, which keeps the action of the knives from drawing it through, and is now made with a protector to prevent the operator's hands getting into the knives by accident or through carelessness.

Three sizes are made.

No. 1 has 12-in. mouthpiece, four knives, is quickly adjusted to cut the straw into any one of five different lengths, and is specially adapted for horse-power.

No. 2 has 12-in. mouthpiece, two knives, and cuts three lengths.

No. 3 has 10-inch mouthpiece, two knives, cuts three lengths, and is chiefly used for hand-power.

This machine will be found very efficient and satisfactory for hand use.

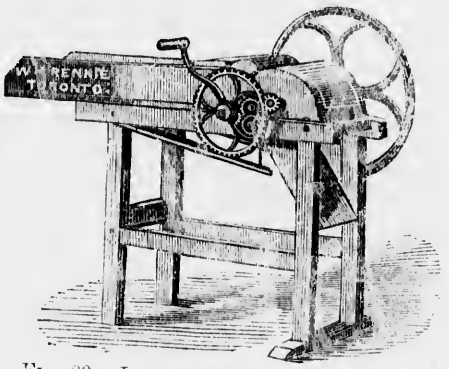


FIG. 80.—LITTLE GIANT STRAW CUTTER. C-106183

This style is intended for those who desire a cheaper machine to cut for two or three horses or cattle, and to be used by one man.

The working parts, which comprise the knives and the feeders, with their necessary shafts, are confined in iron side-plates, securely attached to the frame.

The knives are spiral-shaped blades made of steel, secured to the knife-heads by two bolts each.

The feed rollers are driven by gearing, and adjust themselves to the amount passing through.

The length of cut is changed by taking out one of the knives.

For hand use only.

CUMMING'S FEED CUTTER.

The form of construction and arrangement is more like the Little Giant, but larger and stronger, of greater capacity, and can be driven by a horse-power, as well as being a good hand machine.

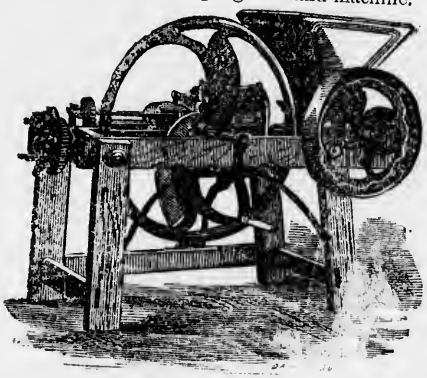


FIG. 81.—PATENT COMBINED FEED MILL. C-106182

This is a Manchester Straw Cutter and Grain Crusher on one frame, which makes it more compact, while the cost is a great deal less than two single machines.

The frame is made sufficiently heavy, and is durable.

It gives good satisfaction.

Combined Grinder and Straw Cutter.

This Feed Mill consists of a Straw Cutter and a Grinder of new design, which grinds the grain as fine as can be done by mill stones.

It is worked by a two or four-horse power, which is quite sufficient to drive and grind twenty bushels per hour.

The grinder can be placed on any of the Manchester straw cutter frames.

Recommended for farmers and stock raisers.

Champion Giant Straw Cutter.

This is the largest and fastest cutting straw cutter.

The frame is made heavy, very strongly braced ; nearly square, and stands on four short legs.

The Feed Box is similar to that of a Threshing Machine; the straw is put into the feeders in the same manner.

The knives are long, spiral shaped, secured to the two heads at both ends, and braced at the centre to the shaft.

It is provided with gear, or a pulley to be driven by a Jack.

Carriers can be attached to carry the cut feed into a mow, while cutting.

It cuts from $1\frac{1}{2}$ to 2 tons per hour.

Root Cutters.

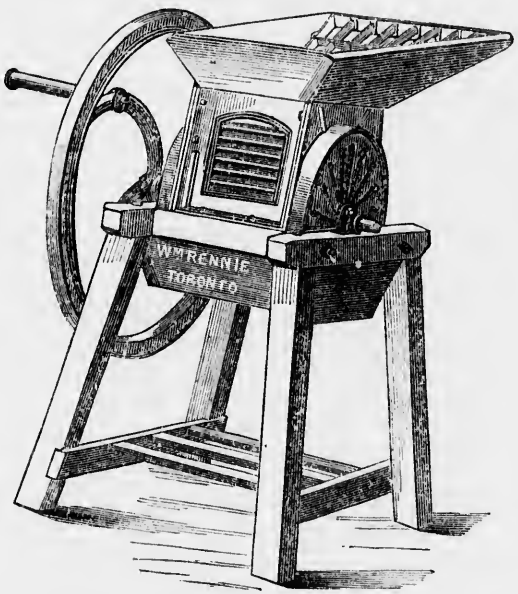


Fig. 82.—Gardner's Patent Root Cutter. C-106181

This style of Root Cutter is the best in use.

It is made very strong, with reversible knives so arranged that by turning the cylinder in one direction the roots are sliced of a size proper

for cattle, while by reversing the motion they are made sufficiently fine for sheep and calves.

The grate bottom of the hopper allows the dirt and small stones to fall through, and a further escape for the dirt adhering to the roots is provided in a lattice opening on the side where the knives are operating.

It is very rapid in its operation, cutting from two to five bushels per minute.

Cant's Reversible Root Cutter.

The knives of this machine revolve under the roots; by turning the crank one way it cuts for cattle, and by reversing it, for sheep.

Very easily operated, but not as durable as the Gardner's.

Scotch Lever Root Cutter.

This style of Root Cutter is extensively used in Great Britain.

It stands on four wrought-iron legs strongly braced, and is very simple and durable.

The operation is performed by a closely-fitting block bolted to the lever, a single pressure on the lever cutting the entire hopper full of roots without scattering them.

Two sizes are made, with iron or wood lever.

Fig. 83.

Empire Root Cutter (Patented).

(See Fig. 83.)

The roots slide down against a front board, which has a projecting knife the entire length.

The operation is performed by working a lever up and down, cutting between one and two bushels per minute suitable for cattle.

When required for sheep, put the roots twice through.

It takes up little room; can be carried in one hand.

Face Plate Root Cutter.

The cutting wheel of this root cutter is made of cast-iron, through which are inserted three steel knives. These cut the roots in thin slices and by cross-knives into small pieces for sheep.

COMMON CYLINDER ROOT CUTTER.

The cutting apparatus is a hollow cast-iron cylinder with knives projecting on the circumference, thereby slicing the roots as it revolves, leaving the pieces in slices for cattle. The size of slices cannot be changed.

ROOT PULPERS.

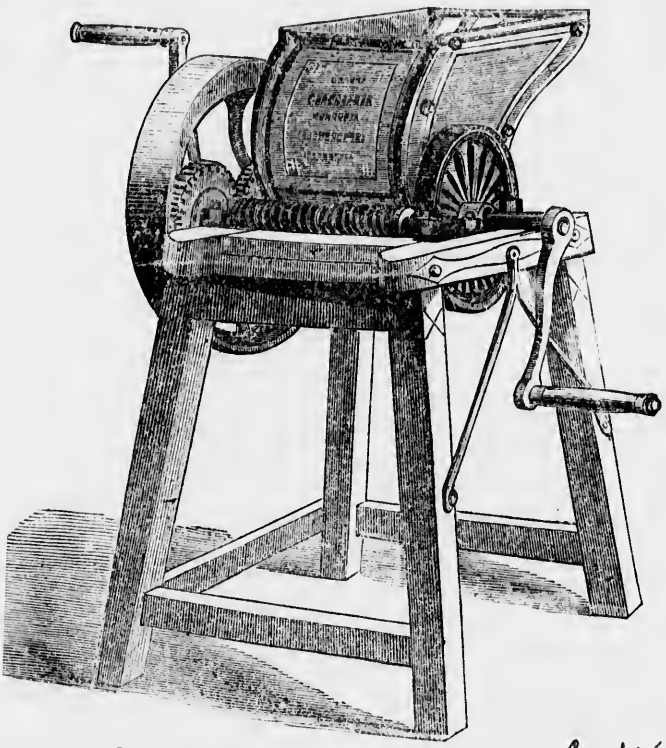


FIG. 84.—BENTALL'S PATENT ROOT PULPER.

This machine is adapted for reducing the roots used for feeding cattle, to a pulp, in order that they may rapidly ferment, and when the pulp has reached the stage of fermentation, it may be mixed with cut straw, when it forms a good nutritious food.

By a peculiar arrangement of the knives, the roots are prevented from jumping up or sliding endways.

It has two handles for hand power, and a pulley for horse-power.

Extensively used in the manufacture of sugar-beet.

FEED STEAMERS

FIG. 85.—AGRICULTURAL STEAMER & BOILER. C-106193

This is useful for cooking food, heating water, &c., by steam, though useful on the farm, and elsewhere, for many other purposes.

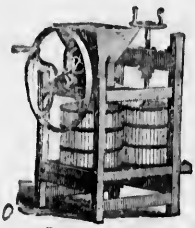
It is made in two sections,—the lower one being the cauldron, and the upper one the steam attachment, which has a pipe that leads into a large barrel that stands near it. Both sections are designed to be used separately from or conjoined with the stove, or common arch, as may be preferred. For indoor work the steamer will be found very valuable, as it is perfectly secured against danger of communicating fire, and, by an improved combined vacuum and pressure safety valve, from danger of explosion. The furnace is made of wrought and cast-iron. The stove is of heavy boiler iron, and the base, flues, &c., of cast-iron. The cauldrons stand from three and a half to four and a half feet high, with a diameter somewhat less than the height.

Every farmer must *know the superiority* of cooked over uncooked food, &c., &c.

Three sizes are made to steam from 20 to 100 bushels of cut feed per day, and to hold from one to two and a half barrels of water.

CIDER MILLS & PRESSES.

FIG. 86.—PATENT CIDER MILL.



C-106180

This mill first cuts and then crushes the Apples perfectly fine in one operation, making a considerable saving.

It never clogs, and is very substantial in its arrangement.

Its curbs are new and patented.

In grinding hard Apples by hand, do not fill the hopper, but throw them in as the mill takes them through.

It is adapted for grinding and pressing Sugar Beets.

It can be furnished for horse-power, when so ordered. Gross weight of mill 300 lbs.

PATENT IMPROVED CIDER MILL.

This is an improvement on the preceding.

It has a counter shaft, with fly wheel high'y-geared, making it a very speedy hand mill.

For hand or horse-power.

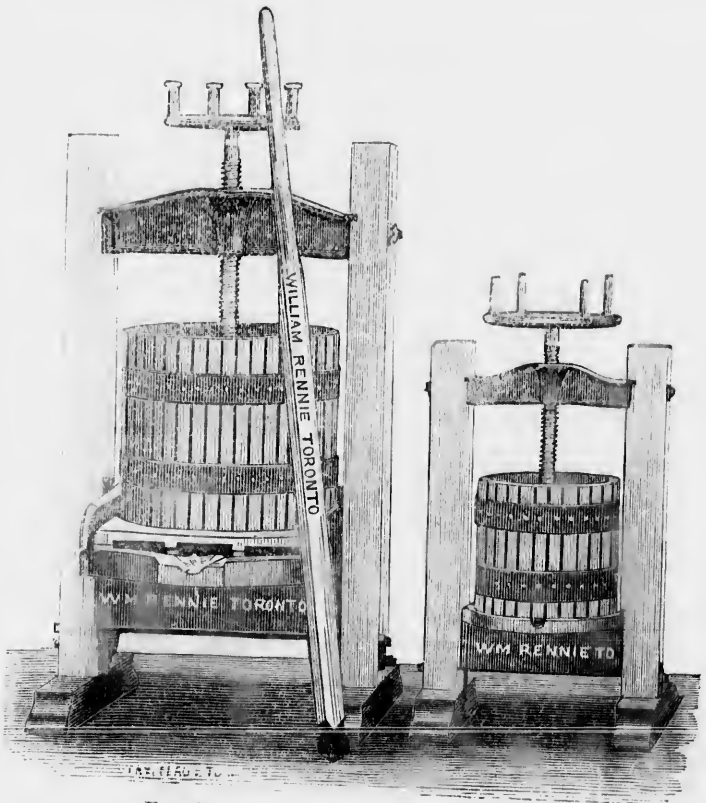


FIG. 87.

C-106179

FIG. 88.

C-106177

FIG. 87.—LARD, CIDER OR WINE PRESS.

This Press is intended more especially for pressing Lard, having an iron bottom, but can be used to press Currants, Cherries, Berries, &c., which it does to perfection.

It presses Cheese by putting the cheese vat into it.

It has an iron beam and large wrought iron screw (not cast) with a heavy thread cut on it.

A boy can work it with ease by using the lever.

Another style is made with wood bottom.

Weight 200 lbs.

FIG. 88.—TINCTURE PRESS.

As shown by the engraving, this Press is smaller than the lard press.

It is extensively used for Berries, Wines and Drugs.

It is very powerful, quickly handled and works perfectly.

Weight 80 lbs.

HAY, &c., PRESSES.

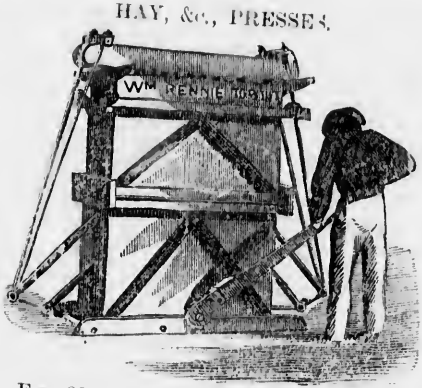


FIG. 89.—PATENT LEVER HAND PRESS.

Fig. 89 represents a very convenient, substantial, and easily operated Hand Hay Press.

The levers have their fulcrums on swinging rods, suspended from the head, over which they yoke so as to be removed for filling the box. The levers are attached to the Follower through small perpendicular slats in the box. The starting levers or braces are connected to the main levers at their outer ends, and attached to the Follower at separate points nearer the centre. They are geared together by strong knuckle-shaped teeth so that they must move together, thus holding the Follower perfectly level at all times, and allowing the chains to be attached to the Windlass, so as to adjust themselves. Parties who are familiar with these Presses will recognise this as an improvement. The chains pass from the lower angle, formed by the levers to the Windlass under the centre of the Press, which is operated by a hand lever on a ratchet wheel, as shown in the engraving. There is also a ratchet and a pawl on the Windlass inside to hold the power, and a friction brake to let the power back gradually, both operated by a small hand lever, at the end of the Press.

The Follower is provided with friction rollers, thus obviating all friction in the box, and comes down on the Windlass so as to leave the entire box for filling.

The power is applied direct against the levers endways, thereby securing the greatest amount of strength of the material employed, and requiring but small and light parts for great strength.

The rods are attached to the head timbers, and the press is self-supporting, requiring neither rods nor posts to hold the frame together endways.

Size of Bale, length 3 feet 10 inches.
do. width 2 feet 1 inch.
do. depth 2 feet 1 inch.
Weight of Bale, 150 to 200 lbs.
Number of Tons per day, from 4 to 5.
Weight of Press, 800 lbs.
Pressure exerted by Hand Power, 15 Tons.
Depth of Box to be filled, 5 feet.

This is the style usually sold; however, various other sizes and styles are made, to suit purchasers.

Any of them may be operated by one man, and requiring only a boy to assist in filling the box.

I also furnish them with Windlass and Wheel attached for Horse Power, which is worked by a horse, drawing out on a line, so as to operate the press either by horse or hand without delay or alterations.

With the printed directions I furnish, they can be set up and operated by an inexperienced person.

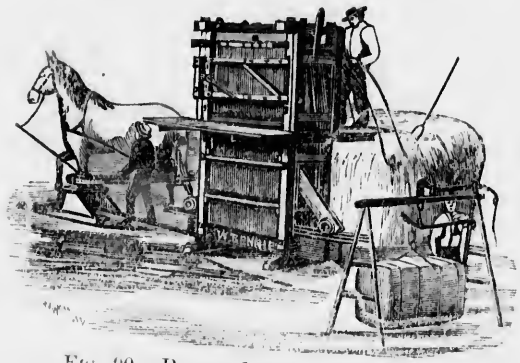


FIG. 90.—PATENT LEVER HORSE PRESS. C-106176

The same progressive leverage is employed in the horse press as in the hand presses.

The lower ends of the levers move on wheels, resting on iron "T" rails, which in turn are supported by timbers.

The upper ends of the levers are connected together by the improved knuckle gear, as previously described, thus holding the Follower level without guides or legs.

The Follower comes down entirely on the track, thus making a very small and low press in proportion to its capacity. As the levers move

nearer and nearer the perpendicular, the power increases in like ratio, until it multiplies at least 150 times.

Size of Bale, length 3 feet 8 inches.
do. depth 2 feet 9 inches.
do. width 2 feet 9 inches.
Weight of Bale, 300 to 350 lbs.
Number of Tons per day, 8 to 10.
Weight of Press, 2800 lbs.
Pressure exerted by one horse, 112 Tons.
Depth of Box to be filled, 8 feet.

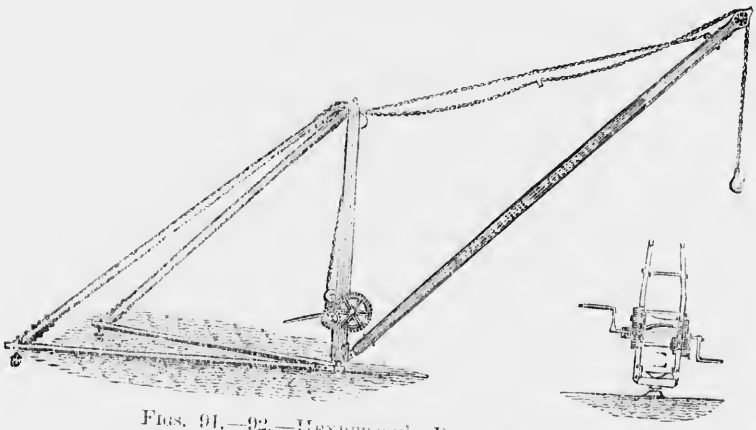
For Horse this is the style more generally sold, being adapted for Hay, Straw, Broom Corn, Hemp, and for rebaling. I furnish all sizes and styles for different uses.

The above dimensions and weights must be considered as approximately.

All the horse-presses are operated by a patent capstan which is included in the price of same. Printed directions for setting up and operating furnished with every press, which will be easily understood.

I supply Hay and Bale Elevators, Weighing Horse (as shown in cut of Horse Hay Press), Hoop Stretchers, which will be found very useful accessories to the hay press.

CRANES.



Figs. 91.—92.—Henderson's Derrick Crane.

This style of Crane supplies a want long felt by builders, contractors, and others.

It is simple, and not liable to get out of order.

An *improved safety catch* prevents the Jib from running down.

Various sizes are made, capacity from 1700 lbs. upwards.

Fig. 92 shows a section of the winding apparatus.

Combined Hand and Steam Derrick Crane.

The radius of Jib is altered by steam power, with or without the load suspended, thus combining all the advantages of Henderson's Derrick Crane, performing a large amount of work at the expense of one man's wages, and about 50 cents per day for coal.

When steam is not up the crane can be worked by hand-power.

It takes up very little room, and is made with the Improved Safety Catch.

FAN FORGES.

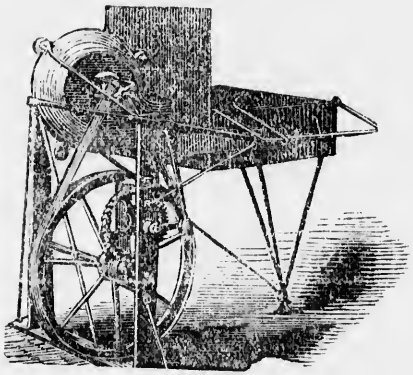


Fig. 93.—Patent Hecla Fan Forge.

This forge is portable, and possesses many advantages over those in general use.

It is made almost entirely of iron, takes up very little room, requires no expensive brick-work, and may be worked with equal facility in the open air or shop.

It is extremely durable and not liable to get out of order, while the fan blower is generally acknowledged superior to the leather bellows both in the regularity of the blast and the ease with which it is worked.

The wind comes through continually without any breathing action like the bellows, thereby securing a steady and stronger heat.

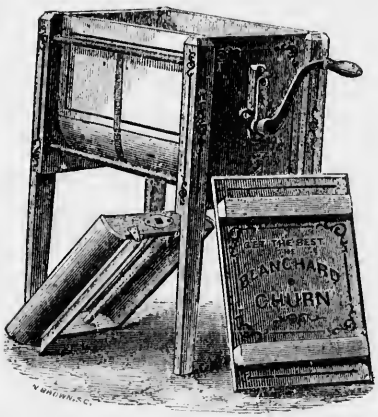
The Fan is attached to the back of the Forge, and the *tuyre* or wind pipe is directly connected with it.

For railways or other public works it is peculiarly adapted, and without exception has received the praise of mechanical smiths.

Farmers will find this Forge very convenient for pointing ploughshares, and for repairing.

It is easily worked and will be found one of the best paying implements any farmer can have on his farm.

Five sizes are made with Forge and Fan complete as above, and two sizes of the Fan blower, which is adapted for attachment to any Forge.



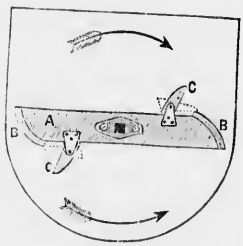


Fig. 95.

C-10672 Fig. 94.—The Blanchard Churn.

This Churn is intended for churning, gathering, working and salting butter.

In churning, the cream is prepared in the same manner as for any other churn.

Gathering the butter is done by turning the crank half way round and back again, and by repeating this motion a few times, the butter is gathered at the bottom of the churn.

The butter is worked by merely reversing the motion of the crank.

When the butter is gathered together, and washed, scatter the requisite quantity of salt evenly over it, and by breaking and gathering the butter as above mentioned a few times, the salt will be thoroughly and evenly worked in.

By moving a simple slide that rests on the crank, the dasher comes out entire, giving the greatest possible convenience for removing the butter. Replacing the dasher, a quantity of water may be poured in, and a few rotations complete the washing of the churn.

No churn in the country was ever made of better material and workmanship.

It has no cog wheels or gearing of any kind.

It has no zinc about it.

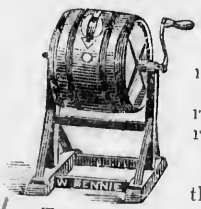
The irons are tinned to prevent rusting.

The self-adjusting arrangement of the floats to the dasher gives two motions to the cream, with only one revolution of the crank, so that it does not require to be turned quickly. Fig. 94 represents the exterior of the churn. Fig. 95 gives a section of the dasher and the form of the interior of the churn. The upper arrow indicates the direction in which the crank should be turned in churning. The lower arrow gives the direction of the crank in working and salting the butter. A is a view of the end of the dasher. B B is the permanent covering of the dasher. C C are the movable Floats, which are self-adjusting, opening in churning to admit the cream, and to give it another motion, and closing in working the butter so as to present a large convex surface, by which the butter is pressed against the bottom of the churn, and passed out in a thin sheet through the small space shown at the end of the dasher.

I have a Pulley for power, which can be applied in the same place and manner as the crank; also, an accurate churn Thermometer made expressly for the Blanchard Churn.

Printed directions for using accompany each churn.

Five sizes are made, to churn respectively, two, four, eight, twelve, and eighteen gallons of cream.



C-106171

Fig. 96.—Barrel Churn.

This is an established style of churn in use for many years.

The dasher is secured to the inside of the barrel; both, therefore, revolve together when in operation.

No zinc or iron comes in contact with the cream.

It is necessary to take out the plug once during the operation of churning, for the purpose of airing it.

Two sizes are usually made; any other size will be furnished to order.

Dash Churn.

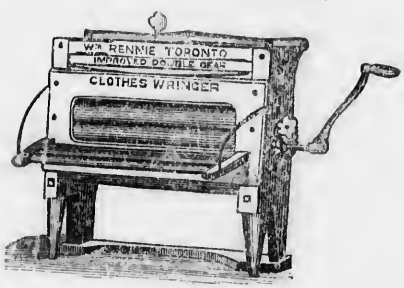
The old fashioned style of churn, and by some even preferred to the newer and more elaborate patterns.

They are made of any size, of either Oak or Pine Wood, and with the round or cross dasher.

The lid is placed about six inches below the top, the churn being made in two sections.

Dog-power can be applied to any of the usual sizes, as shown by Fig. 70.

LAUNDRY MACHINES.



C-106170

Fig. 97.—Improved Double Gear Clothes Wringer.

A good Clothes Wringer is universally acknowledged to be an indispensable article in the Laundry.

Fig. 97 shows one of the best patterns; the elasticity of the rubber is such as not to break buttons and at the same time to dry the clothes properly.

The fastening is the handiest and firmest used on any wringer, being easily adjustable to fit any size of tub or washing machine.

It is made of the best materials, nicely finished, and requires only to be seen and tried to satisfy the most scrupulous. Packed in cases of six each, for shipment.

Colby's Clothes Wringer.

This is a cheaper style of wringer than the preceding, having no gearing of any kind.

C-10619

Fig. 97.—Novelty Washing Machine.

The above cut is a representation of the Novelty Washing Machine.

It is quite simple in construction, consisting of a long shaped box, with a movable bed of friction rollers, which prevents any wear or tear to the fabric.

The rocker or rubber being hung in a swing gives great power and ease to the operator.

Patent Oscillating Washing Machine.

A recent invention for assisting in this department of work.

It is simple in construction and easily worked.

The body of the machine is hung on two pivots inserted in the uprights, the dasher being stationary.

A washboard is inserted in a convenient place.

It is claimed for this machine, that it will wash thirty-six large bed quilts in three hours, clean, and without injury.

Suspending Clothes Dryer.

This Clothes Dryer is constructed upon an entirely new principle, being suspended from the ceiling upon pulleys.

It can be raised or lowered to any convenient height; when the clothes are hung on, it is raised in a moment to the ceiling, where the clothes are exposed to the hot air of the room and are out of the way.

It is also used for drying apples.

English Clothes Mangle.

This is a very strong and superior upright style of Mangle.

The Rollers are made of wood placed horizontally one above the other.

The best for durability and capacity.

Spiral Spring Mangle.

To fasten on the Kitchen Table.

It is self-regulating and portable, weighing only about twenty-eight pounds.

The Rollers are twenty-three inches long.

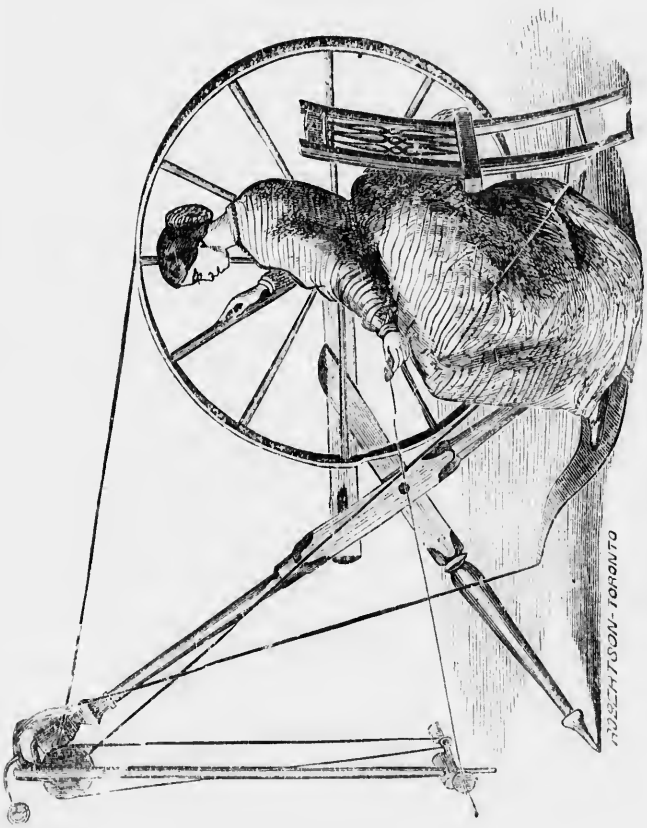


Fig. 98.—Victoria Spinning Wheel.

Victoria Spinning Wheel.

As shown in the engraving, the operator sits comfortably in a chair. It is easily worked and very much superior to the older styles, Also, Reels, Swifts, &c.

FLORENCE SEWING MACHINE.

(See Figs. 99, 100, 101, & 102).

The Florence is the only Sewing Machine that makes four kinds of stitch (Fig. 99), three of which are made on no other machine, and are stronger and more elastic than any other.

It is the only machine that can sew in more than one direction, having a reversible feed.

It has an improved hemmer, making any width of hem, and easily managed. Owned exclusively by the Florence Company. It will hem anything, and make perfect corners.

It hems, fells, cords, braids, tucks, quilts, binds, gathers, etc., without basting.

It makes a gather and sews it to a band at one operation perfectly.

It is the only machine having a self-adjusting shuttle tension, *a great improvement over all others*, rendering it easy to do good work on any fabric.

It fastens the end of a seam better and quicker than a seamstress can.

The Florence is guaranteed to sew everything needed in a family, from the heaviest to the lightest fabric.

It is easily managed. Beginners are troubled less in accomplishing a given amount of work than on any other machine yet offered to the public.

The plate of the shuttle turns on pivots, and is pressed by a spring upon the surface of the thread on the bobbin, and rests there until the thread on the bobbin is used up, producing a perfectly even draught.

The thread is drawn from every part of the bobbin with equal tension.

The precision and accuracy with which the Florence draws the thread into the cloth, is unapproached in any sewing machine hitherto offered to the public.

Its motions are all positive.

There are no springs to get out of order, and its simplicity enables the most inexperienced to operate it with ease.

The needle is easily adjusted.

It runs exceedingly light and quietly.

The reversible feed will be found very useful, instead of turning the fabric or breaking the thread and commencing again.

The general satisfaction given to purchasers is a sufficient guarantee for recommending it over all others now in use.

No. 1.—This machine makes the Lock and Knot Stitches.
Plain Black Walnut Table and Cover. Reversible feed.
No. 1.—Half Case.—Silver Mounted. Table Half Case.

FIG. 100.

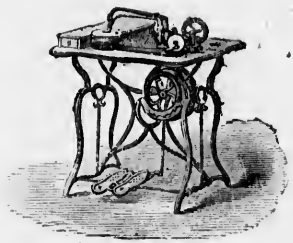


FIG. 101.

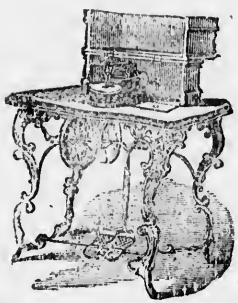


FIG. 102.

Fig. 100, No. 2.—Makes all the four stitches. Plain, Gold ornamented Machine. Black Walnut Table and Cover.

No. 3.—Silver Mounted Machine, Ornamented. Oil finished. A very desirable style.

Fig 101.—No. 13.—Back Feed. The fabric moves backward and forward, instead of from side to side. Reversible feed. Makes the Lock and Knot Stitches.

Fig. 102.—No. 5.—Silver Mounted. Makes all the stitches. A favourite family selection.

No. 8.—Full Cabinet Case. Silver mounted. Finished in Black Walnut, and highly ornamented. Makes all the stitches.

Also, Sewing Machines for Manufacturing purposes.

PIANOS, MELODEONS, &c.

FIG. 103.—THE MATHUSHEK PIANO.

The great aim of manufacturers of the Pianoforte, in times past, has been to increase the quality, purity and brilliancy of tone, or, in other words, to gain power without harshness, purity and roundness of tone without metallic effect, and brilliancy in the upper notes, with a continuous, or, as it is sometimes called, a singing tone.

The Mathushek Piano is believed to have excelled all others, and overcome many obstacles never before attempted.

The size has been reduced to meet the wants of all classes, without impairing the volume of tone, and securing in the construction of the Pianos an equal distribution of the strain of the strings upon all parts of the frame.

Send for special circular of Pianos, Organs and Melodeons.

BELLS.

FIG. 104. AMALGAM BELLS. FIG. 105.

These Bells are suitable for Churches, Schools, Factories and Farms.

They are fine in tone, and durable, though sold at a very moderate price.

Being an alloy of cast steel, they combine valuable qualities, such as tone, strength, sonorousness and durability of vibration.

Bells of sufficient size to be heard all over a farm should take the place of the old fashioned and disagreeable tin horns.

They cost less than any other in the market.

Fig. 104 represents the three smaller sizes placed on a yoke and crank; they vary in diameter from fifteen to eighteen and a half inches.

Fig. 105 represents the four larger sizes fitted with wheels, varying in diameter from nineteen to thirty-six inches.

LAWN MOWERS.

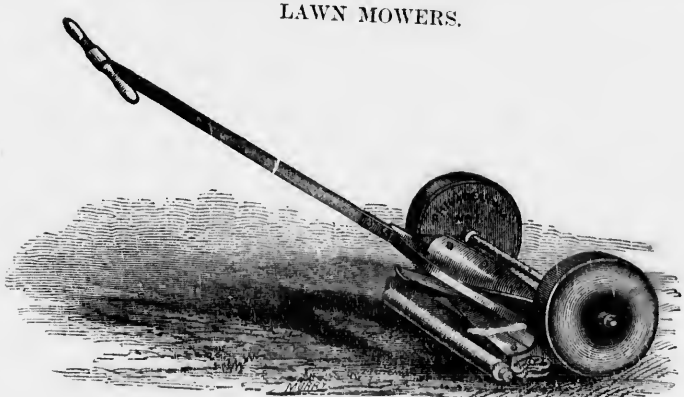


FIG. 106.—THE PHILADELPHIA LAWN MOWER, No. 1. C-106164

The Philadelphia Lawn Mowers have become so much the favourite with owners of lawns and grass plots, and have given in the past such

universal satisfaction with all who have used them, that I have no hesitation in recommending them as the best Lawn Mowers in the market.

They perform the operation of grass-cutting on any ground that can be well mown with a scythe, cut it evenly, and leave the sward in a much improved condition.

The plan of construction has the following advantages: the machine will cut as well when turning a short corner as when pushed straight forward. The tendency of the gearing is to lift the lower knife, (thus causing it to pass lightly over uneven ground,) instead of pressing it down. The machine being single geared, the friction and number of parts is reduced one-half. The cut grass is thrown *behind the cutters*, instead of forward to be cut over and over again. The machine is as portable as a hand truck. So few parts being used, they are each very strong, and are thus not liable to break or get out of order, and render the machine very durable.

FIG. 107.—THE PHILADELPHIA LAWN MOWER No. 1. JR.

This machine is equal in every respect to the No. 1. Machine, and requires about one-half the labour to use it. It is of the same general construction, except that the driving wheels are $6\frac{1}{2}$ instead of $10\frac{1}{2}$ inches in diameter.

The gearing is effectually concealed, the knives are made of the best cast steel. The machine is very compact and strong, and easily worked by a boy.

In all public trials with different Lawn Mowers, this machine has succeeded in gaining the highest awards, and may be seen in operation during the season, in all the principal Public Gardens, Avenues, and Parks of this city.

No Lawn owner should be without them.

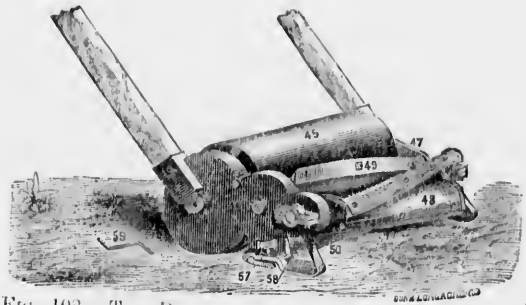


FIG. 103.—THE PHILADELPHIA LAWN MOWER, No. 00.

This little machine weighs about 28 lbs., cuts a swath 10 inches wide, and runs very easily.

It is intended for cutting the grass on narrow borders and other places in the Flower Garden, where it would be difficult to use a large Mower; and being sold at a low price, will meet the wants of those whose grass plots are too small to warrant the purchase of a more expensive one. It will do good work on smooth ground, in grass not over three inches high, and will also work on *rougher* ground equally well with other Lawn Mowers, but must not be expected to equal my Machines [illegible] driving wheels.

THE PHILADELPHIA LAWN MOWER.

No.	POWER REQUIRED.	WIDTH OF CUT.	WEIGHT.
00	A Lady,	10 inches.	28 lbs.
1 jr.	A Youth,	14 do.	37 do.
1	One Man,	15 do.	63 do.
2 jr.	One Man,	16 do.	42 do.
2	One or two Men,	20 do.	75 do.
2½ A.	A light Horse (Draft Pole),	30 do.	275 do.
2½ B.	do. (Driver's Seat & Shafts),	30 do.	315 do.
3	A Strong Horse,	36 do.	500 do.

Full directions for working, &c., are sent with each machine.

GARDEN ENGINES & PUMPS.

GREENHOUSE ENGINE.—See FIG. 109, p. 85.

The working apparatus is placed in a large sized Galvanized Iron Pail, with a step projecting, on which the operator places his foot to hold the engine steady while working.

The variety of uses for which it may be used are numerous.

For wetting roofs near fires it is very efficient, being so portable that it can be used where no other article can be brought to bear.

The diffuser will throw liquid compositions for destroying insects on trees and shrubs.

It is also furnished with a Rose Sprinkler, so that either can be used, or by taking both off, it throws a steady stream without spreading.

Weight twenty pounds.

IRON CISTERN PUMP.—See FIG. 110, p. 85.

This cut represents one of a series of standards which is furnished separately to dealers who wish to use their own pipe.

C-106118

Fig. 109.

C-106119

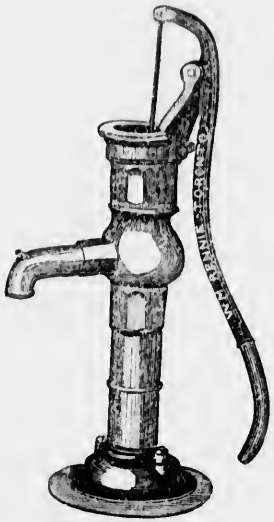
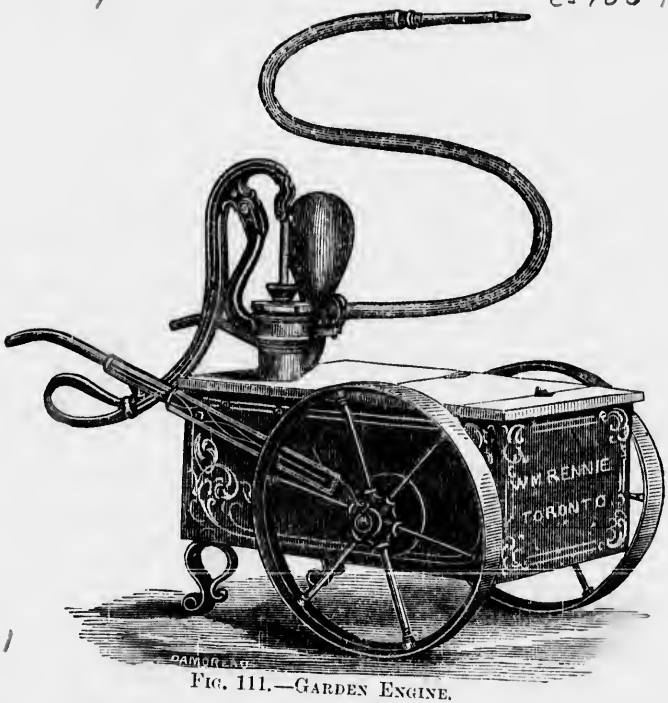


Fig. 110.

C-106120



C-106121

Fig. 111.—Garden Engine.

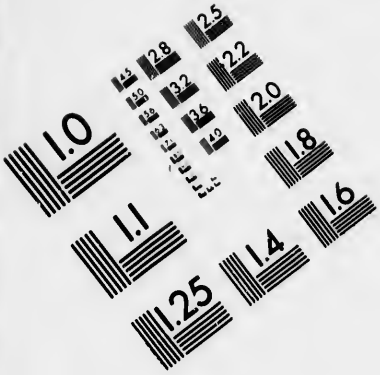
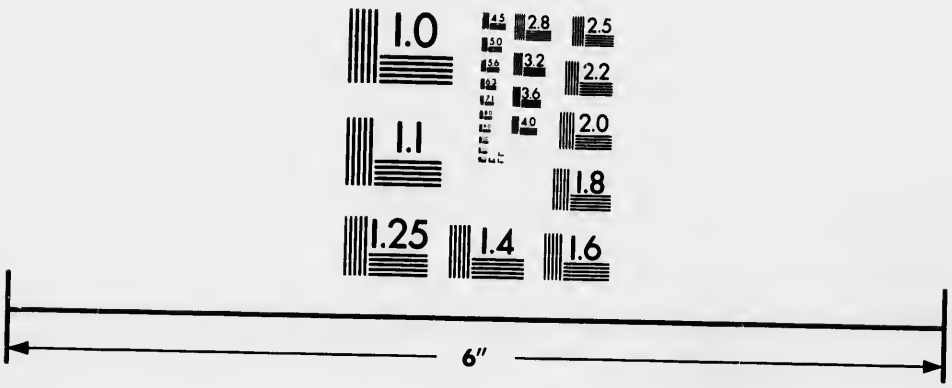
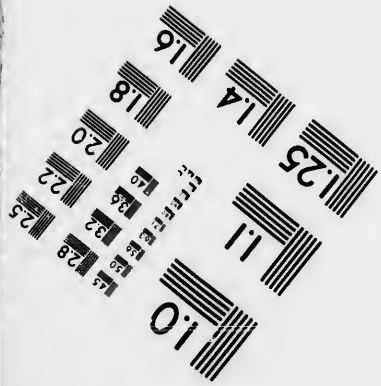
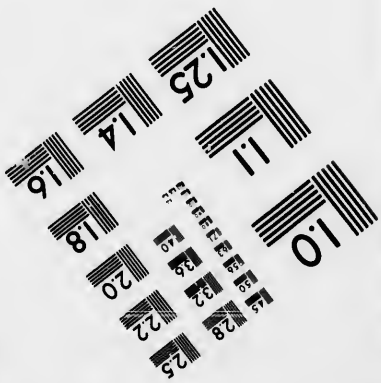


IMAGE EVALUATION TEST TARGET (MT-3)







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(716) 872-4503

GARDEN ENGINE.—See FIG. 111, p. 85.

This engraving is a representation of a superior Garden Engine.

It is as portable as a Barrow, and draws the water from the box, which must be filled when it is required for use.

It throws a stream of water 50 feet perpendicularly.

The Diffuser is a simple and efficient article; it spreads the water evenly, and cannot by any possibility become choked up with dirt, &c. It will also throw four times as much water a greater distance than the Rose Sprinkler formerly used.

Made for attaching Suction Hose when so ordered.

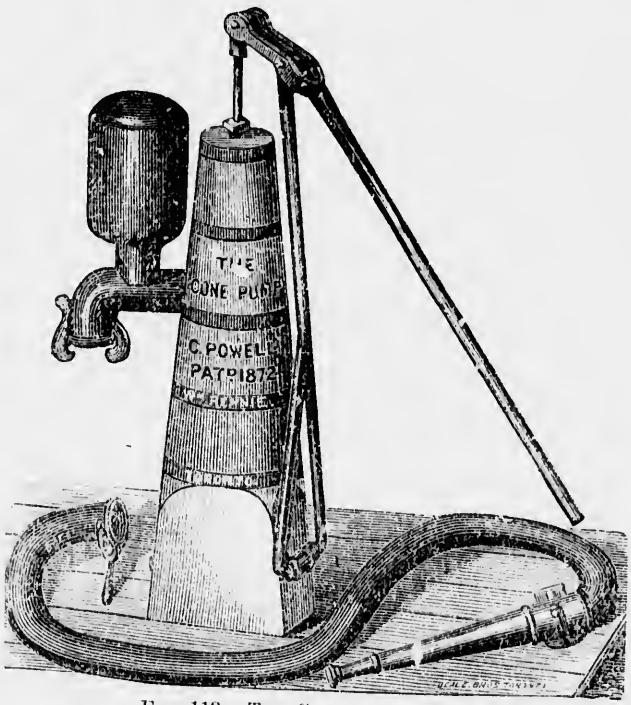
PUMPS.

FIG. 112.—THE CONE LIFT PUMP.

The above figure represents the Cone Pump.

It is a new thing, for which Letters Patent have been granted.

It is not only neat and easily worked, but also very durable; being tightly fitted at the top with a cast iron cap, children cannot put nails or small stones into it, which in nine cases out of ten is the cause of pumps getting out of order. This style is adapted to all the uses of the ordinary pump: when so ordered, customers can have this pump carbonized at a small additional cost, so that it will not taste the water (quite a *desideratum*) and make it last much longer.

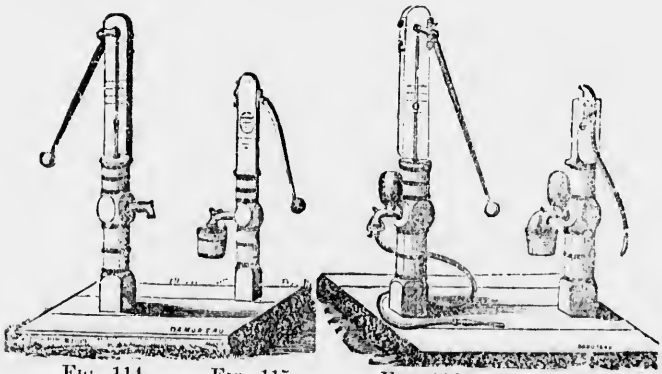


C-106123

FIG. 113.—THE CONE FORCE PUMP.

This cut represents the Cone Force Pump, being always ready to throw a stream of water on or over buildings in case of fire; it is also used for watering gardens, washing buggies, windows, &c.

It is adapted for all ordinary uses.



C 106124

FIG. 114. FIG. 115. FIG. 116. FIG. 117.

PATENT LIFT AND FORCE PUMPS.

Fig. 114. The Patent Swing Pump, is an established favorite for any depth, and especially for deep wells. Solid steel bearings.

Fig. 115. The Junior Swing Pump, is adapted for cisterns and shallow wells, constructed of the same materials and on the same principle as the preceding, but lighter.

Fig. 116. The Dominion Force Pump, is adapted to all the uses of the ordinary Pump, besides being always ready to throw a stream of water on or over buildings in case of fire; used also for washing buggies, windows, &c., &c.

Fig. 117. The Lever Force Pump, is intended for the same uses as the Dominion Force Pump.

All the above Pumps can be carbonized, and satisfaction guaranteed, also water pipes, &c.

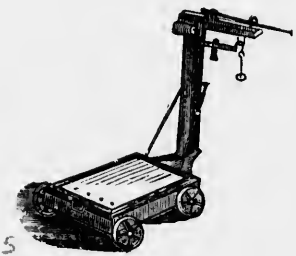
The Process of Carbonizing is secured by *letters patent*.

It has proved to be an effectual preventative of the usual woody taste and disagreeable smell attendant on the use of Wooden Pumps that are not carbonized.

It also prevents decay.

SCALES.

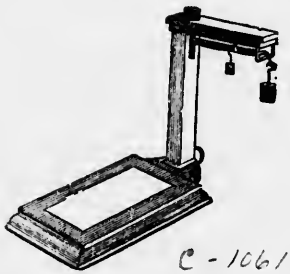
The following Scales are made of the best materials, and finished in a superior manner:—



C-106125

Fig. 118.

Portable Scales.



C-106126

Fig. 119.

No. 7.—This Scale is provided with drop lever, with or without wheels (Fig. 118). Capacity, 2000 lbs.

No. 10.—A very neat and convenient Scale for Farmers, Country Stores, &c. With or without Wheels (Fig. 119). Capacity, 1200 lbs.

No. 10½.—With or without Wheels. Capacity, 1000 lbs.

No. 11.—With or without Wheels. Capacity, 600 lbs.

No. 11½.—With or without Wheels. Capacity, 400 lbs.

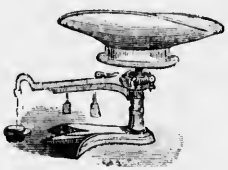


Fig. 120.

C-106127

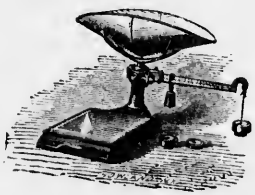


Fig. 121.

C-106128

FIG. 120.—GROCER'S SCALE, NO. 1.

Weighs from one half ounce to sixty-two pounds.

Made either with a platform and scoop as represented in cut, or with a fork and scoop as shown in engraving of Union Scale.

GROCER'S SCALE, NO. 2.

Weighs from one half ounce to thirty-six pounds, and is made with a fork and scoop.

EXCELSIOR SCALE.

This is made from new patterns, with a Brass Beam same as Grocer's Scale, and used for same purpose.

Weighs from one half ounce to thirty-two pounds.

FIG. 121.—UNION SCALES.

They weigh with the utmost accuracy from one half ounce to two hundred and forty pounds.

A No. 1 is made with a platform and scoop, and No. 1 with a fork and scoop as shown, besides the large platform which is on both styles.

FIG. 122.—EVEN BALANCE SCALES.

Three patterns are made as follows:—

A No. 1, with side Brass Beam, weighs from one half ounce to eight pounds.

No. 1, weighs the same, without side beam.

No. 2. Capacity, six pounds. do.

FIG. 122.

C-106129

FIG. 123.

FIG. 123.—DORMANT SCALE.

Weighs from one half pound to thirty-five hundred pounds. It is usually set in the floor, or it can be used as a hopper scale for mills. Extensively used by wheat buyers, grocers, etc.

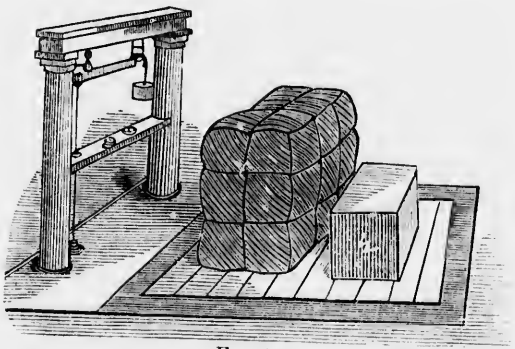


FIG. 124.

C-106121

RAILROAD DEPÔT SCALE.—See FIG. 124, p. 89.

This Scale is placed in the floor of the Depôt building, and is constructed wholly of iron, with cast Steel bearings not liable to wear or lose their adjustment by use. The beam is supported upon iron pillars, with a neat architectural finish.

I have several sizes, the smallest weighing from one half pound to eight thousand pounds.

They are in general use by Railroad Companies.

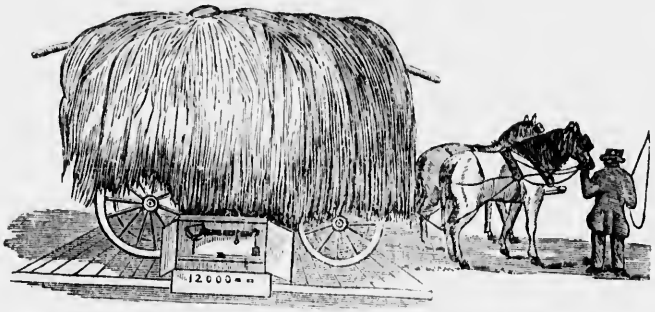


FIG. 125.—HAY SCALES.

Four sizes are made, weighing three, four, five, and six tons, respectively.

They are made with iron lever and brass beam, with all the latest improvements.

Special arrangement made with parties who get the Scales put up themselves.

Cattle Scales, and any other form, can be made on short notice.

WAGGONS AND CARTS.

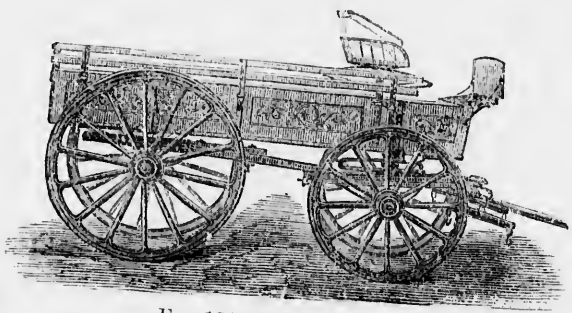


FIG. 126.—FARM WAGGON.

This is the usual pattern of Waggon for Farm use.

It is supplied either complete or in part.

Any other size or form can be made on short notice, and all will be of the best materials throughout, and tastefully finished.

Dumping Cart.

For Farm purposes: a cart of this style is very useful and convenient.

It is preferable to a Waggon for hauling in Potatoes and other Root crops, also for hauling out Manure, gathering Stones, &c.

Fig. 127.

Carriages, Democrats, &c.

Manufactured and finished in the most tasteful manner, with all the modern improvements.

Every part (wood or iron) is constructed of the best materials.

C-106134

PATENT STEP LADDER.

A light Step Ladder, strongly braced, suitable for use in the orchard or house.

Various sizes are made, the usual lengths being from six to ten feet.

WHEEL-BARROWS.

Fig. 128.

Farm Barrow.

This style is made of good materials, and strongly braced. The wheel is made of heavy cast-iron. Its sides are stationary.

C-106135

Garden Barrow.

Similar to the preceding in every respect, but without the back board, and sides to lift out when desirable.

Canal Barrow.

This is a cheap and light barrow for rough work, largely used in excavating Canals, Railroads, &c. The wheels are made of wood, the tray of bent timber, braced by strap iron bands.

Vanbrocklin's Combined Bag-Holder and Sack Barrow.

This is used for holding the bag while it is being filled, and then run across the floor on its wheels before or after the bag has been tied; being light, it can be easily lifted on any platform Scale with the bag held open by a wire bale and lever. It is very convenient for holding bags while shovelling Grain off the floor or changing from one bag to another.

Farm Truck.

This is intended for farmers and flour dealers principally; it differs from the Store Trucks in having the slats or cross pieces hollowed out to prevent the filled bag from rolling off.

It prevents the usual wear and tear of bags caused by dragging them on the floor.

C-106136

FIG. 129.

FIG. 129.—STORE TRUCK.

One of the small sizes of the wooden slat truck used for moving boxes, bales, &c., in warehouses and stores.

They are made of good material, strongly put together, and of various sizes and styles.

BEE HIVES.

All the latest and most approved patterns, including the ordinary Single and Double-Boarded Hives.

For all purposes the latter is the best hive; being double-boarded, a hollow wall is formed all around the bees, making the interior warmer in winter and cooler in summer.

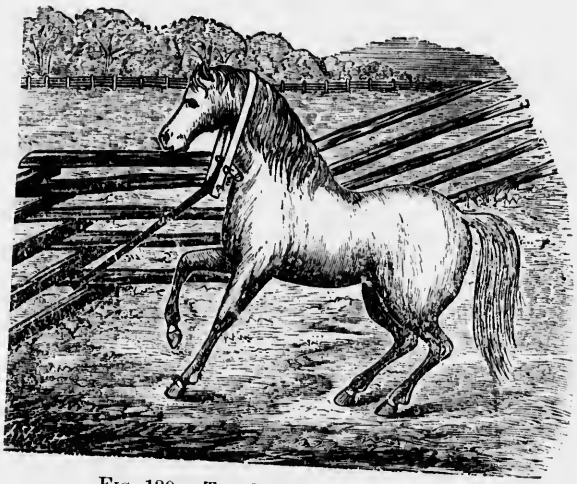


FIG. 130.—THE PIONEER ANIMAL POKE. C-106137

The above is a representation of this well-known article, for preventing animals from jumping fences.

They are harmless to the animal wearing them.

WIRE FENCING.

Various styles of plain and ornamental Wire Fencing furnished to order.

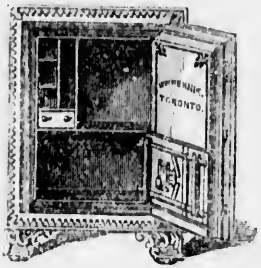
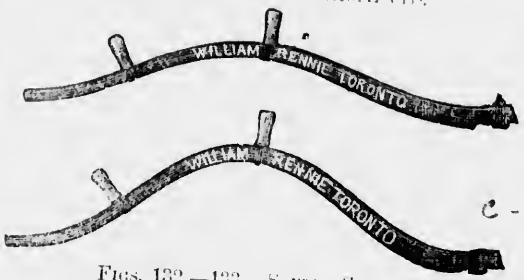


FIG. 131.—FILE PROOF SAFE.

A good Safe for protecting Money, valuable papers, &c., from all danger of fire, &c., is very valuable.

Various sizes and styles are furnished, sufficient to meet all requirements.

HARVESTING IMPLEMENTS.



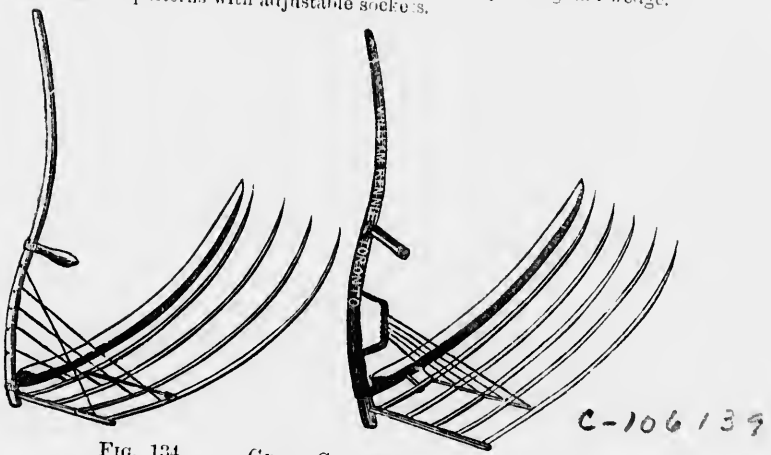
C-106135

FIGS. 132.—133.—SCYTHE SNATHS.

I have various styles; Nos. 1 & 2, with the Patent Loop Heel fastening and adjusting Screw.

No. 1 Extra with slide sockets, and secured by a ring and wedge.

Other patterns with adjustable sockets.



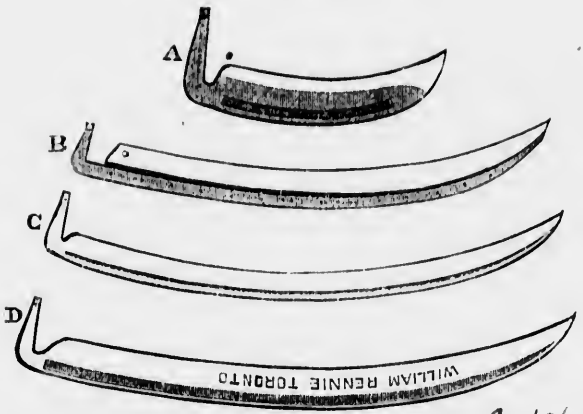
C-106139

FIG. 134. GRAIN CRADLES. FIG. 135.

All the best kinds with or without the Scythe.

The Grape Vine Cradle (Fig. 134), is generally preferred. Also, the Morgan, half Mulley, full Mulley, &c.

Cradle Fingers kept in Stock.



C-106140

FIGS. 136, 137, 138, 139.—SCYTHES.

The above styles of Scythes comprise those in ordinary use, and all are finished in a superior manner.

C (Fig. 138) represents the usual pattern of Grass Scythe made of various qualities of German, Cast and Silver Steel, measuring from thirty-two to forty-six inches in length; the shortest are generally preferred for pulling Peas.

D (Fig. 139) represents a Cradle Scythe made of the same qualities as the Grass Scythes; the heel is made of various shapes to fit any style of Cradle.

They are made of various breadths, and of any length from forty-two to fifty-two inches.

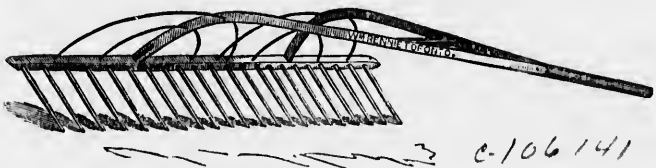
The length of a Scythe is its measure in a straight line from the point to outside of heel.

FIG. 140.—HAND RAKES.

These are of various styles, qualities, and finish.

The cut represents a rake for use on lawns.

They are made with Wood or Iron Bows, curved or straight handles, oiled or plain, and from eight to ten or more teeth.



C-106141

FIG. 141.—SWATH RAKE.

This is used for raking after the Waggon, or for going over the entire field.

The teeth are strong, and the best timber is used in its construction.

FORKS.

Wood Barley Forks.

These have either wood or malleable heads and from four to six wood teeth of various lengths, with or without a wire bow to prevent the Barley, &c., from sliding down the handle, when loading waggons from the swath, and the grain not bound.

Steel Barley Forks.

These are made with three and four tines of various shapes and lengths, strapped and plain ferrules, and bent or straight handles, all of superior materials and workmanship. They are superseding the wood forks, being much more durable, and can be used for pitching straw, &c., in the barn.

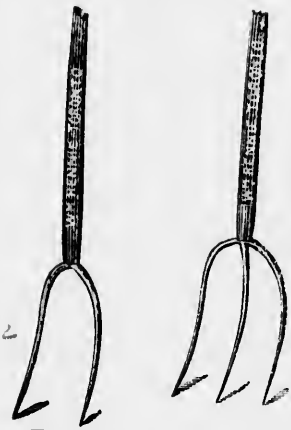


Fig. 142.

Fig. 143.

Hay Forks.

A large assortment of two and three tined forks, of the best tempered steel, and round, oval or balloon shaped; with plain or strapped and capped ferrules.

The balloon tine has the oval feature on the under side of the prong, which gives it the superior lifting strength of the oval shape, while, being rounded on the upper or bearing side of the prong, it has the easy delivery of the round tine.

The good qualities of both, the round and oval, are therefore combined in the balloon tine, while their separate faults or deficiencies are completely overcome.

The Patent Capped Ferrule holds the tool at the shoulder with the whole strength of the handle, fits closely round the shank, covering the end of the wood and placing the greatest strength where the most strain will be in using it.

Manure Forks.—p. 96.

Fig. 144.—The Manure Forks are made of four or six cast steel prongs, round, oval, or balloon shaped, with plain or strapped and capped ferrules, and with the short D handles or with long straight handles.

Spading Forks.—p. 96.

Fig. 145.—The Spading Forks are usually made with four or six prongs, having plain or strapped ferrules, and D or L handles. All have the same style of prong, viz: flat on the face, and the back of a diamond shape.

C-106143

Fig. 144.—Manure Fork.

C-106144

Fig. 145.—Spading Fork.

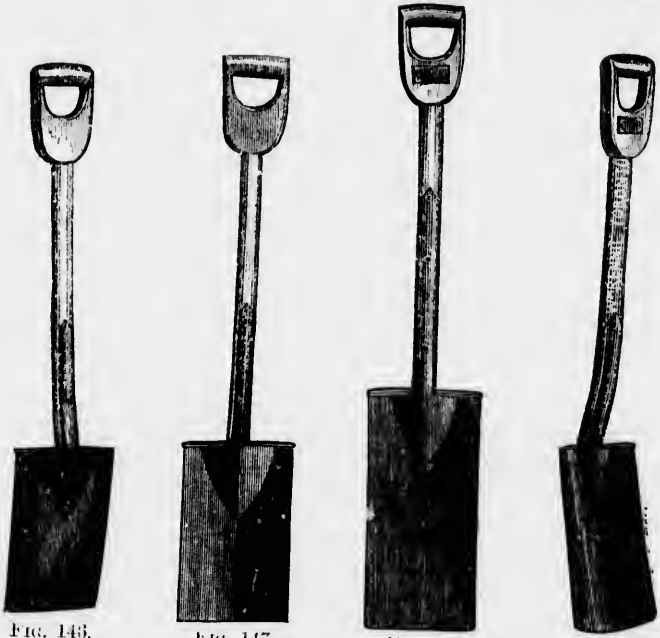


Fig. 146. Fig. 147. Fig. 148. Fig. 149.

SPADES.

C-106145

C-106144

FORK.

g. 149.

SPADES AND SHOVELS.

Spades.

A general assortment for all purposes.

They are all made with the short D handle, or with a long straight handle, and can be furnished either polished or unpolished.

Fig. 150. Fig. 151. Fig. 152. Fig. 153.

Shovels.

Figs. 150, 151, 152 & 153 represent some of the favorite styles of round point Shovels.

They are of various widths, shapes and thickness, with D or L handle, polished or unpolished, and square or round point.

Fig. 154.—Scoop Shovel.

Light or heavy.

Polished, half polished or black.

DRAINING SPADES, CRUMMERS, &c.

C-106147

FIG. 155.—ENGLISH DRAINING SPADE.

This is made very strong, heavily strapped on the handle. The blades are concaved, and vary in length and width.

SQUARE AND CONCAVED DITCHING SPADES.

CRUMMERS.

Used for cleaning out the bottom ready for the tile. Furnished without a handle.

C-106148

FIG. 156.—POST-HOLE SCOOP.

For lifting earth from a post-hole, or similar excavation, after the ground has been loosened by a crow-bar.

It is made of Steel in the form of a spoon curved out at the bottom edge, and supported by a wrought iron strap, making it very strong and durable.

Extensively used for making the holes for Telegraph poles, the Auger being entirely discarded in this section for that purpose.

C-106149

FIG. 157.—POTATO HOOK.

Useful for raising potatoes, and for unloading barn yard manure. It is made with four and six teeth, or prongs.

POTATO AND VEGETABLE SCOOP.

This is constructed in the form of a Scoop Shovel, but longer and deeper.

The bottom is formed entirely of wrought iron bars of sufficient strength, placed at equal distances apart.

These bars are rivetted at one end to a strong wrought-iron frame which forms the outside of the scoop, and at the other to a mouth-piece.

This arrangement enables the roots to be picked up the same as with the ordinary shovel, and the openings between the bars allow the dirt to escape.

APPLE BARREL HEADING PRESS.

Extensively used by Apple Shippers, Packers and Dealers. They hook to each side of the barrel at the bottom, come up the barrel and have a screw at the top which is easily worked, pressing the head of the barrel to its place and holding it in position while it is being nailed up.

HOES.

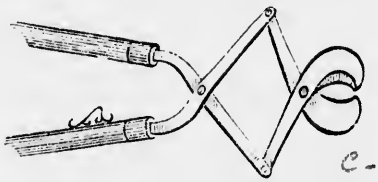
C-106150

Fig. 158.—Field Hoe.

A complete Assortment of Field, Garden and Turnip Hoes, made with rivetted or solid steel shanks, and with the patent solid Steel socket.

Also, an assortment of the following always in stock, viz:—
Hand Seed Boxes or Hoppers, Measures, Hay Knives, Axes, Picks, Scythe Stones, Harvest Gloves, &c., &c.

HORTICULTURAL IMPLEMENTS, &c.



C-106151

Fig. 159.—Improved Trimmer & Pruner.

This pattern is operated by a person standing on the ground for the purpose of trimming trees and shrubs, an operation which it performs admirably without jarring or pulling in the least.

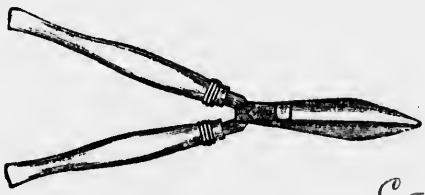
The handles, represented in the engraving as broken off, are of sufficient length to reach ordinary branches of trees.

It is also very much used by Telegraph Surveyors, &c.

Excelsior Pruner.

The operation of pruning with this pattern is performed by pulling on a single handle.

Branches of one inch or more in diameter can be easily cut off.



C-106152

Fig. 160.—Garden Shears.

These are used for trimming hedges, shrubbery, &c.

I have various patterns with long and short handles, and all are very substantial and durable.

Fig. 161.

Fig. 161.—Grass Edging Shears.

These are made of various sizes, with and without the Wheel.

They are principally used for trimming the borders of box and grass edgings.

The operator stands nearly upright while using it.

Fig. 162.—Garden Hoe Rake.

This is now made with a long handle only, having the Hoe and Rake in one piece, adding materially to its strength.

They have four or six teeth.

Garden Rake.

The teeth are made of Cast Steel, and malleable Iron, varying in length and number.

English Lawn Rake.

The teeth of this Rake are made of Steel, sharpened on both edges, and are shaped broad at back edge, gradually coming to a point.

It is used for raking the grass, tearing off the flower heads or buds of dandelions, and other weeds in Grass Lawns.

Fig. 163.—Dutch Hoe.

I have several sizes with different widths of blade, which is made of steel, and finished in a superior manner.

It is pushed before the operator.

Ladies' Hoe.

This is made of same shape as the Field Hoes, narrower and lighter, and with either long or short handle.

Grass-Edger.

For paring the edges of grass borders, &c.

It is fitted with a D handle.

HORTICULTURAL HARDWARE.

Branch Pruning Slide Sh[illegible]rs.
Heavy Branch Pruning Sl[illegible]rs.
Slide Topping Shears.
Garden Trowels.
Bill Hooks.
Garden Reels.
Pointed Scissors.
Garden Saws.
Pruning Knives.
Budding Knives.
Syringes.
&c. &c.

HEARS.
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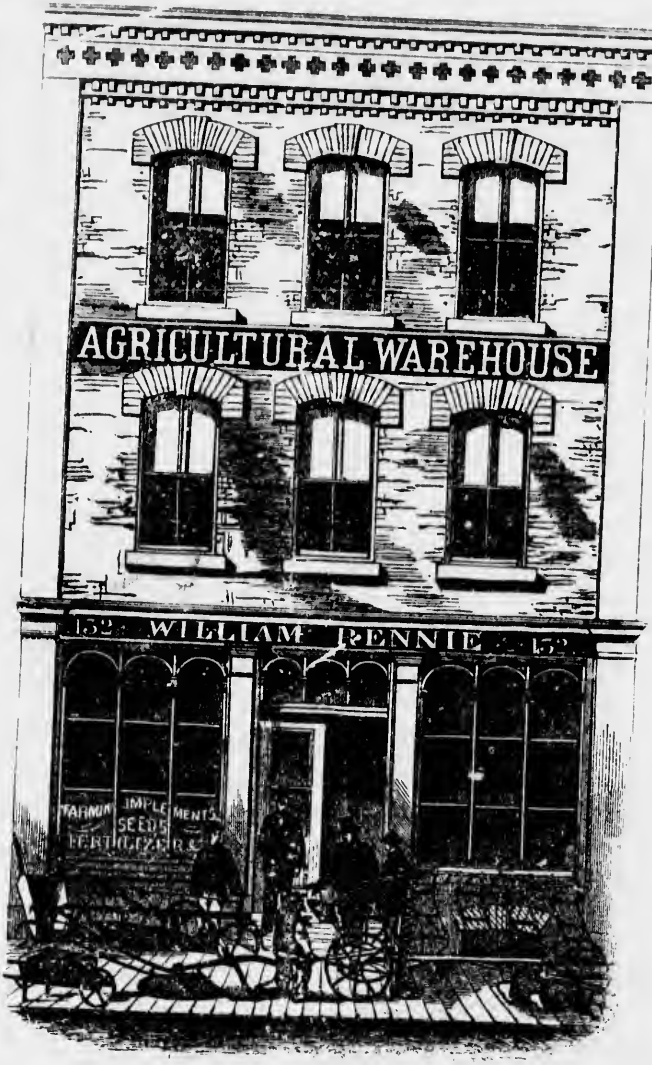

TORONTO.