

EMPIRE GRAIN & FERTILIZER DRILL



G. A. DUNSTON, UTM. BUFFALO, N.Y.

MANUFACTORY AT

SHORTSVILLE, N.Y.

ESTABLISHED 1854.

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Thirty-Fifth Annual.

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THIS Catalogue contains an honest, candid statement of the merits of our goods, and every claim can be demonstrated practically, and the fact that the "EMPIRE" performs as advertised sustained with abundant proof.

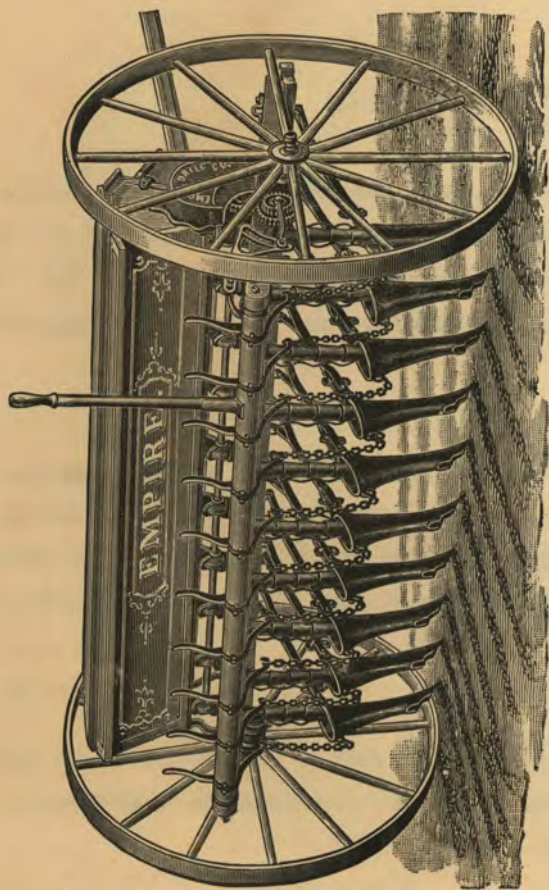
THE years of labor bestowed in the construction of our present reputation is a guarantee for its maintenance, and we shall not feel warranted in cheapening the quality of our goods to meet competition on the basis of low prices.

THANKING one and all for the generous patronage of the past, and soliciting its continuance in the future, we remain,

Yours truly,

EMPIRE DRILL CO.,

SHORTSVILLE, N. Y.



THE EMPIRE PLAIN DRILL.

THE EMPIRE PLAIN DRILL.

In the following pages will be found a complete list of the Seeding Machines made by us, with their points of merit stated honestly and candidly, without exaggeration, firmly believing that the interests of all concerned will be better served than by drawing on our imagination for arguments in our favor.

The essential principle of a Grain Drill lies in its feeding device, and from the fact that so few give it the proper amount of consideration, it is almost always overlooked or passed by with the remark that, "any drill will sow well enough," while the truth is just the reverse. There is, in the Empire feed run, a scientific principle, which the more it is understood, the greater the wonder is that all cannot see, and appreciate its advantages. It is a principle that fully and completely realizes the idea of a positive Force Feed, and is the only one on the market to-day that does so. It is dependent upon no argument to sustain its claims, as it proves by its own operation its right to this distinction.

Feeding out in an equal time, with the same combination of gear, the same quantity of wheat or oats.

We were the first to discover this principle, and, recognizing its utility, have developed it until, as embodied now in our machine, it has no equal in the world.

It fulfills, in every particular, the definition of a Force Feed, being so constructed as to take positive control of the grain immediately upon its leaving the box, and to carry it forward irresistibly to the point where it is discharged into the conductors.



This cut shows the feeding device, which is attached firmly to the bottom of the box (one for each hoe), the upper part of the casing being cut away, giving a clear understanding of its construction. The grain enters at the top, being immediately received upon the flange of the rotating disk, and carried forward to the point of discharge with uniform speed, and emptied into the conductors in an even continuous stream. The flange on the rotating disk forms the floor or bottom of the device, and as the whole column of grain must rest upon this bottom, it is plain that it must be carried forward in a solid compact mass, every particle moving at the same speed, not pushed nor rolled, nor a portion laying quietly in the bottom of the seed cup, while the balance grinds and works its way over it.

The quantity discharged is regulated by the speed with which the feeding shaft revolves, and being so controlled, it becomes an easy matter to determine the exact quantity of any kind of grain that will be discharged by any number of revolutions; as at each turn there is a definite, and known quantity put out, and when the amount desired to be sown per acre is known, a gear can be put on which will give that amount with certainty, and which can always be relied upon, as it will, for all time, cause the shaft to revolve at the proper speed for that quantity.

For different quantities, different sizes of gear wheels must be used, but as ordinarily arranged, the drill will distribute from twenty-four quarts to 128 quarts of any small grain per acre with eighteen intermediate quantities, varying four quarts up to two bushels, six quarts from two bushels to three bushels, and eight quarts from three bushels to four bushels.

It is the most reliable device ever invented, because, as shown, no item of chance or guess work is found in its whole mechanism.

It is as positive in its action as the half bushel measure is in the hands of the farmer.

Its motion is slow, and the wear so light that after years of service it will do as accurate work as when first taken from the shop.

It is simplicity itself, as there are but three pieces in each feed, bolted firmly together, and, unless in case of accident, need never be touched. If necessary, it is easily taken apart and the broken piece replaced at the most trifling expense.

**There is no gate, or adjustable feed, but what
has more pieces.**

Do not buy a complicated drill when a simple one does the work the better, and all liability to mistakes is avoided. The Empire sows Wheat, Rye, Barley, Oats, Beans, Peas, Corn, and Pumpkin seeds through a single channel, and does it in a manner excelled by no other drill.

The novel arrangement of a hopper shaped bottom to the grain box was first applied to a drill by us, and its value has been so much appreciated that no drill to-day is complete without it. This device, with our Force Feed enables the farmer to clean his drill, at the close of the season, free from all seed, by simply raising the wheel from the ground and turning it.

The use of a straight continuous axle violates every principle of hanging wagon wheels, and no farmer would even think for a moment of buying a wagon unless the wheels had pitch and gather sufficient to make it "chuckle" when loaded.

The wheels of the Empire are hung on taper axles, with the same pitch and gather as wagon wheels, and always run true and free without binding.

This important feature, taken in connection with the facts that our drag bars are short, our steel points of such peculiar shape as only to engage the surface sufficiently to cover the seed, and the whole machine so nicely balanced that there is only just weight enough in the neck yoke to steady the machine, has won for it the reputation of being

The lightest Draft Drill in the market.

The Hoe Shifter, for shifting the hoes from a straight line to a zigzag, or *vice versa*, is simple, durable, and, being located near the center of the drill, is easily and readily reached from either end. It is arranged so that the hoes may be set zigzag, more or less at the will of the operator.

The lifting device, for raising the hoes out of the ground, is upon an entirely different principle from any other made, and its superiority over every other one is instantly seen and appreciated when once used. It is easily operated, with one hand, by means of a lever near the center of the machine, by which a back rolling action is given, taking up the slack of the chains, and lifting the hoes. Each hoe is attached, by means of a chain, to a corresponding lever or handle, so that each may be operated independently, if necessary.

These chains are made of sufficient length, so that the back rolling action takes up the slack, and operates the mechanism for throw-

ing the machine out of gear before the hoes are out of the ground, and dropping the hoes into the ground before the machine is in gear, avoiding all scattering of seed on the surface.

We can also furnish, for those who desire, a unique arrangement for lifting the hoes in front of the box, thus dispensing with the roll and handles in the rear. This is so constructed that the operator can, in a moment, change it so as to ride on the drill, or walk behind it. The lever is placed in the center of the machine where it is most convenient.

Our method of changing gear is simple, durable, and substantial, enabling the operator to change from one quantity to another by simply loosening one nut; but with our perfect force feed a change is seldom necessary, as the same gear that sows two bushels of oats per acre, will sow two bushels of wheat, or any other small grain, upon the same area.

Our steel points are made from our own patterns, and are of such shape as long experience has shown to be best adapted to clear in all varieties of soil, and cover the grain under all conditions.

They make a broad bottomed furrow, and the seed is scattered, to a certain extent, while those drills using a long, hooked, sharp point deposit the seed at the bottom of a narrow, deep furrow. They are single pointed, and will give as much wear as any double pointed tooth in use.

Our conductors are made of sheet steel, in four sections, riveted upon strips of leather (made for our special use), so that when the hoes are raised, the sections telescope into each other, thus adjusting themselves to all inequalities of the surface, conducting the grain to the ground properly, under all circumstances. They are made of the best material, and, with ordinary care, will last for years. In case they should become broken or damaged, from any cause, the farmer can

easily repair them himself, avoiding the necessity of sending miles away, and paying more in express charges than the repairs are worth.

We furnish Rubber Conductors to those who desire them, but do not recommend their use, for the reason that they will, on an average, wear out in from one to three years, and, when once cracked, are useless, and new ones must be bought. They are liable, when the hoe falls into a low place and rises again, to double up and retain the seed; or when the hoe rises, in going over a knoll or ridge, to project through, the ground turning the lower end backward, discharging the seed on the surface.

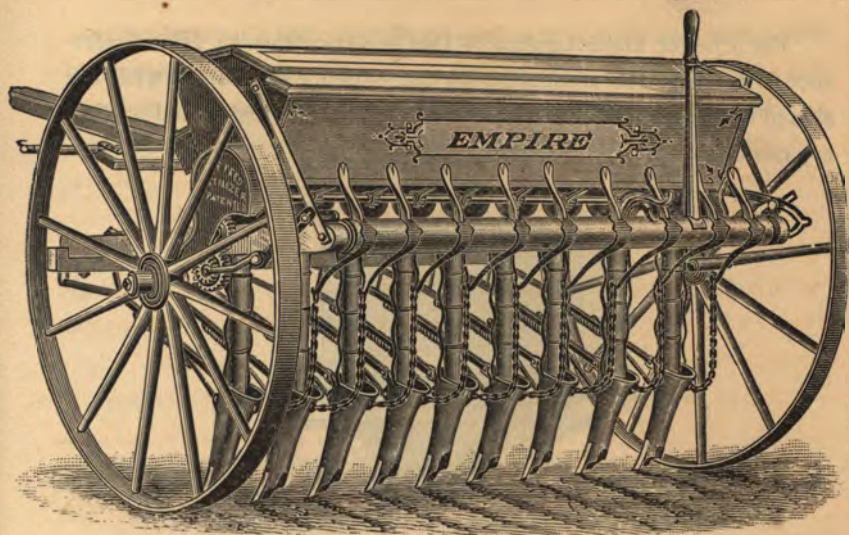
Cut off Slides are provided for each run so that the farmer can regulate the drill for planting corn handily, dispensing with loose sheet iron covers, with which some drills are provided, and which can never be found when wanted. These slides are attached to the bottom of the box in a neat, substantial manner, and when not wanted for use are completely out of the way.

The distance from the center of the outside hoes to the center of the wheel is the same as between the hoes, so that no skip or balk will be made, if, in driving, the wheels follow the last drill mark. This is a very important point and should not be overlooked by those intending to purchase drills.

It will be seen from the points stated, that in the matter of convenience for handling and operating the drill, we have the latest and best improvements to date,

All of which are Inventions of Our Own

growing out of our intimate knowledge, gained by long experience of the demands of the trade, never making a change until study and practical experiment had fully demonstrated that it would make the drill better.



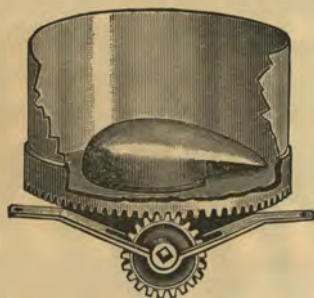
THE EMPIRE GRAIN AND FERTILIZER DRILL.

The use of commercial manures having passed the experimental stage, and the devices for distributing it economically and satisfactorily narrowed down by experience to the celebrated

“Marks Force Feed,”

it will not be necessary to go over ground already thoroughly worked to demonstrate the value of either, especially the latter, as compared with others, nor waste time in extolling its merits, but leaving Phosphates to those whose business it is to manufacture and sell them, we shall give a plain, candid statement of the points wherein, as made by us, the “Marks” leads every other device, or those made under the same patents by other manufacturers.

For a better understanding of this justly celebrated device, reference is made to the accompanying cut, which represents it with the side of the galvanized cup broken away, so that the inside and feeding cap can be seen.



It is composed of but four pieces:—

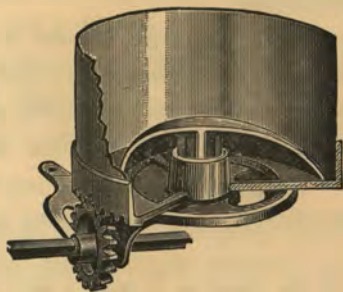
1st. The stationary spider or support, which is screwed fast to the bottom of the box, and upon which the whole mechanism rests.

2d. The revolving bottom, or carrying plate, with cogs on the under side.

3d. The feeding cap, with an eccentric scroll lip projecting to the inner circumference of the galvanized cup, setting closely down upon the upper surface of the revolving bottom, with an opening in one side sufficient to cover the space left outside of its circumference, which space, when the drill is at work, is full of the fertilizing substance.

4th. The galvanized iron top or cup, riveted securely to the revolving bottom over which is placed an iron plate forming the bottom of the large box, with a hole through it of such size as to completely fill the circumference of the galvanized cup.

The different parts are made of sufficient weight and strength to be durable and substantial, and are held together firmly without a nut, key, bolt or spring, yet are quickly and easily taken apart when occasion requires, without the use of a hammer or wrench.



By an ingenious arrangement the feeding cap can be set in four different positions, and adapted to sow any phosphate sold in the market economically and with perfect satisfaction.

A ring projecting upward from the upper surface of the revolving bottom, completely encircles the post which supports the feeding cap, and forms a dam against any fertilizing substance, effectually preventing any leakage or waste by its running out when the machine is not in operation.

This device we have secured by Letters Patent and it cannot be found upon any other machines than those manufactured by us without infringing upon our rights, and we hereby give notice that we shall use every possible means to protect our interests, as well against the users, as the manufacturers who trespass upon our invention.

For positive action there is no device on the market that can be compared with this as we have it improved.

There is no guess work about it.

Its movements are controlled by gear wheels, and it is absolutely certain that the same combination of wheels will at all times impart the same motion, and as the size of the discharge aperture is never changed, it follows that the same quantity will always be distributed with the same combination.

Each revolution of the revolving bottom or carrying plate, takes out a certain fixed quantity by measure (.095 part of a quart), and it is easy to see that two revolutions will double the quantity, and that 100 revolutions will discharge 100 times as much; so a scientific basis is formed, from which the quantity to be sown can be easily determined, and limited only by the different combinations possible with the gear wheels at hand.

The motion of the feeding device being always uniform and steady, an unvarying stream is discharged by the action of the scroll lip of the feed cap, scraping the material from the surface of the revolving bottom.

There are no cams or agitators to stir up the fertilizer, and make a sticky mess of it, but it rests quietly upon the bottom until removed by the feed cap, as each revolution brings it to that point.

There is no clogging when a small quantity is being sown, as in all other drills that depend upon the size of the discharge opening for quantity distributed.

Fifteen per cent of Phosphate is saved:

by distributing it evenly over the surface, and accurately as to quantity, thus obtaining the largest results from the amount used.

There can be no sliding of the Phosphate to the end of the box, when working on a side hill, as the cups will hold enough to go the full length of any field, thus ensuring an even distribution over the entire surface.

By automatic action, produced by raising and lowering the hoes it is thrown out of, or into gear instantaneously, thus avoiding any waste by scattering on the surface.

An ingenious device enables the operator to put the attachment out of, or into gear without stopping the team, or affecting the drill in any other way, thus allowing him to put fertilizer on part of field, and not on another, if it is desired.

For ease and quickness in cleaning it has no equal. When seeding is finished, and Phosphate is left in the box, raise the left hand wheel off the ground, and by turning it the substance will all be discharged; and

We recommend

that when this is done, the light triangular strip along the inside of the box be taken off, the top plates removed, beginning at the left hand, and the whole mechanism taken out, thoroughly cleaned and oiled with kerosene.

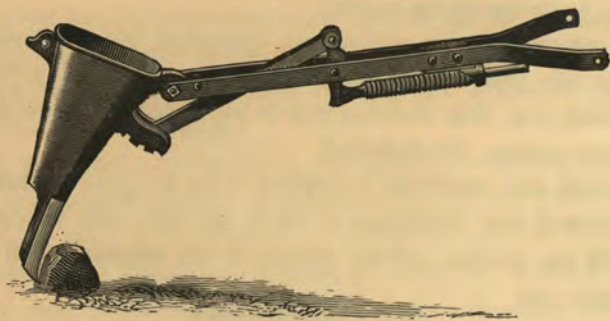
GRASS SEED ATTACHMENT.



The Grass Seeder is constructed upon the same principle as the grain feed, and is as positive in its action, thus presenting all the advantages for sowing grass seed that the grain feed does for sowing grain.

The quantity is regulated by change of gear. It is firmly attached to the front of the grain box, and is arranged to distribute the seed in front or rear of the hoes as desired.

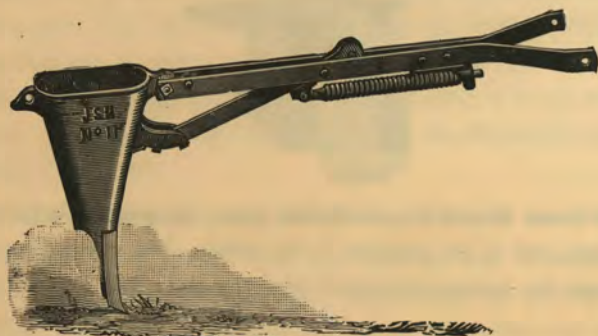
SPRING HOE.



It is, in fact, the best and most complete spring hoe ever invented, combining all the good qualities of the old style, with many that are new.

The convenient manner in which the pitch of the hoe is regulated, is well worth to every farmer the extra cost in saving time.

The spring hoe is never sent out with a drill, unless specially mentioned in the order.



It is simple, durable, and effective in its action.

It is operated by a steel coil spring which works as well after years of use as at first.

It is free from the objections which are strongly urged against rubber springs.

It is so constructed that the pitch of the hoe is regulated without removing, or even loosening, a nut or bolt.

There is no strain on the spring when the hoe is in a working position.

There is no strain on the spring when not in use, which is about eleven months in the year.

The strain is so brought to bear on the spring that it does not weaken by use.

The spring never fails to do its work instantly and thoroughly.

It never costs anything to replace broken springs, as none ever break.

It is impossible for the spring to get out of its proper place.

It can be adjusted to allow the hoe to fly back easily or not.

It adds but a trifle to the weight.

It is so arranged that the hoe can be removed from the drag bar without the use of a hammer or wrench.

LAND MEASURE.

This is simple, durable, and compact, measuring the land as accurately as can be done by the means employed, and only registers that portion of the surface upon which seed has been sown. It marks the acres up to ten, and the parts of an acre by tenths.

PLANTING CORN.

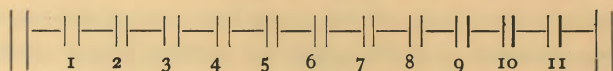
In many sections of the country the practice is prevailing largely of using the grain drill for planting corn for a crop, and the reasons are obvious. The work is done in a manner much superior to the old method of hand planting, much more rapidly, and saving to the farmer the time required to mark out the ground. Fewer tools are required, as one is made to do the work of two, thus effecting a saving in money invested and in storage room.

The Empire with its positive feed is second to none in doing this work, and with our Fertilizer Drill, Commercial manures can be applied directly to the seed at time of planting, thus obtaining greater results than can be hoped for, even when a much larger amount is placed on the surface.

Farmers will find it to their advantage in sowing phosphate with corn, if they will use three rows of phosphate to one of corn; i. e., use the hoes each side of the row, besides the one for the row. This will give the corn a good thrifty start, but avoid any liability to damage the seed by the acid in the phosphate, and the spreading roots will find that at the side when the plant is large enough to absorb it, giving more strength to the large brace roots that corn always throws out.

While corn may be planted with any of our drills (the feeding device being identical), yet our eleven hoe seven inch will be found best adapted for that purpose, as the wheel marks may be used as guides in driving.

The diagram will show our idea more clearly.



When all of the hoes are used for fodder corn, the directions upon the cover of the drill will be followed, the same as for other grain, using the wheels as guides, the distance from the center of the outside hoe to the center of the wheel being the same as between each hoe.

If more room is wanted between the rows, shut off feed runs 2, 4, 6, 8 and 10, and you will have six rows fourteen inches apart, using the wheels as guides in driving.

Some farmers desire to cultivate their fodder corn, and the rows can be made twenty-eight inches apart by shutting off feed runs 1, 3, 4, 5, 7, 8, 9 and 11, giving three rows, still using the wheels as guides.

To use drill for planting corn for a crop shut off all the feed runs except 3 and 9. This will give two rows three feet, six inches apart, also using the wheels as guides.

BEARDED OR RUST PROOF OATS.

We can furnish with any of our drills, large or small, when ordered, the finest device ever made for distributing this grain. It is no experiment, as it was invented by us and put upon the market six years ago, and during that period we have supplied hundreds of them to farmers who have used them with great satisfaction.

It is easily removable without a hammer or wrench, if desired, but as it in no wise interferes with the operation of the drill in sowing other grain, it is rarely taken out.

It is only sent out when specially ordered.

GENERAL POINTS.

For quality of material used and skilful labor employed, we yield the banner to no one. Every piece of lumber must pass the inspection of the President of the Company, who, from long experience, is able to detect at a glance what is suited to our needs, and the reputation for square and honest goods, the building of which has been the labor of his life, prevents him from buying anything, unless it completely meets his idea of what is required. Our employees, as a rule, are men who have been with us for years, and have grown with the business, gaining each day some new experience which enables them to apply their skill with practical knowledge to the benefit of our goods.

Everything that is possible we make under our own roofs. Our wheels are made by us from the rough lumber, carefully selected at first; and, in the process of manufacture, subject to several more inspections, so that, when finished, they are the best wheels for the purpose in the market.

Our frame is mortised and gained together, firmly bolted at the front corners, braced with substantial wrought iron braces into other corners, besides being bolted to the cast-iron axle; making the strongest and best frame in the market, and not liable to become "rickety," as some other manufacturers admit their frames do.

Our castings are all made in our own foundry. The wrought-iron is refined, and every stage of manufacture carefully watched by skilled eyes, so that no part can be slighted, and the machine be defective when finished.

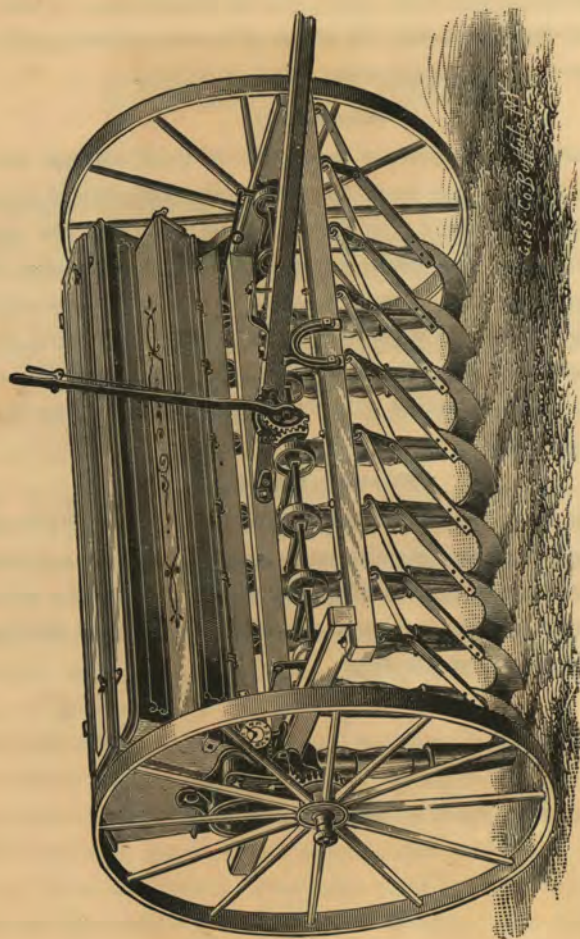
In fact, the utmost vigilance is used on our part, and the greatest possible care taken that every piece, and the machine as a whole, shall go out of our hands bearing the stamp of honest endeavor, and every machine is sold upon the following broad and liberal

Warranty.

We warrant our machines to be made of good material, and well finished; to perform the work for which they are intended in a good and workmanlike manner. If they fail thus to perform, the agent of whom the purchase was made, or ourselves, must be notified within ten days therefrom, and if, upon a second trial, under the supervision of the agent, if it fails thus to perform, it may be returned, and the purchase money, if any, will be refunded; but if notice of difficulty is not received, as above stated, it shall be conclusive evidence that the machine is accepted.

Please Read.

In order to prevent any misunderstanding in regard to the above warranty, and avoid any dispute as to the price and terms of sale, we request all purchasers to demand of, and give to, the agent a duplicate of the order in writing, properly signed by each, upon the back of which will be found our warranty.



THE EMPIRE SHOE DRILL.

THE EMPIRE SHOE DRILL.

In many sections where the merits of our Hoe Drill had, by its accurate and reliable work, won an enviable reputation, a demand was made on us for a Shoe Drill which would, without changing the general principles, embody the latest and best devices for seeding grain in that manner, and in response to that demand, we present the result of our practical work and experiment in a shape which we believe to be the best in the United States.

This Drill, which is shown in the cut opposite, contains every essential principle that has made our Hoe Drill so popular, and the devices that we have added to make it a Shoe Drill, are of our own invention, and have been thoroughly tested, practically, so that we know they are all we claim, and not excelled by any in the market.

It is light, tidy and symmetrical, and made upon entirely different principles from any other drill.

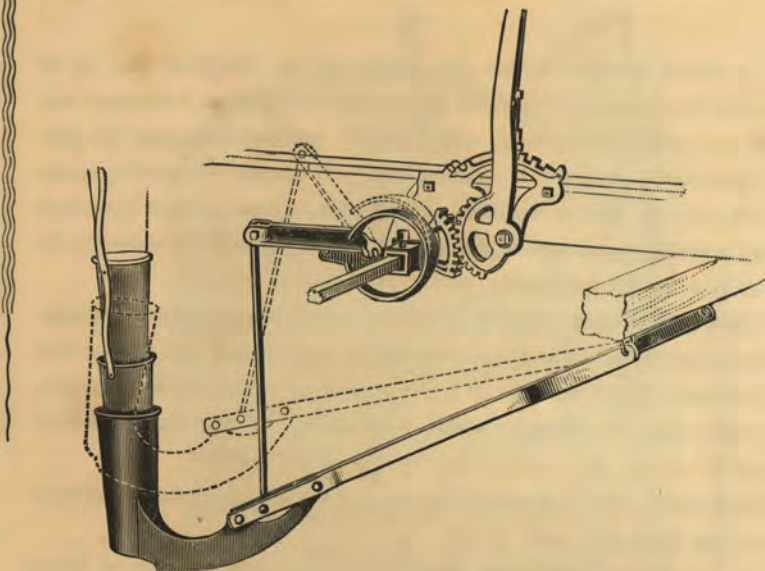
It has Shoes made from Cast-steel which are capable of being drawn and tempered by any blacksmith, yet of such quality as to entirely avoid any liability of breaking.

No Other Drill has Cast-steel Shoes.

Notwithstanding the largely increased cost of this material over common cast-iron chilled, or ordinary agricultural steel, as used for this purpose, we feel the greater satisfaction experienced by our customers in using them, will amply reward us, and we make no extra charge.

They are Front or Rear Lift, at the will of the operator; the lever being in the center of the Drill, it is more handy and convenient, whether riding or walking, than it would be if placed at the end.

HOE PRESSURE DEVICE.



This cut shows our new Hoe Pressure device which for power and strength is not equalled by any on the market.

It is unique in principle, simple in construction, and so arranged that it is well nigh impossible to break.

It has power enough to nearly lift and carry the whole machine, but as it is only policy to use this style of drill upon loose, friable soils, it will seldom be necessary to use the whole strength of the device. It is arranged so that more or less pressure can be put on the hoes as it is desired.

Each shoe is independent of the others in its action, and will follow the uneven surface of the ground.



THE JUNIOR.

This cut shows our Three Hoe Combined Drill, and is simply the Two-horse Empire arranged for one horse. We believe that it is the best in the market, and to possess advantages over any other made in the United States.

It is solidly and firmly bolted together, and has none of the loose joints common to other drills of this style.

The grain and phosphate are discharged, and fall perpendicularly, so that there is no possible chance of its clogging in the spouts.

The drive wheel is made of wrought iron on a cast hub, and is known as a suspended wheel, the strongest wheel ever made. The tire is two and one-half inches wide, making a wide tread which does not sink into the earth in fallow sowing.

It is furnished with castor wheels at the rear end of the frame, ten inches in diameter, with three-inch faces, so that it guides with marvelous ease.

These wheels are attached to standards, by means of which the depth of the sowing can be instantly regulated, and the teeth raised clear of the ground when desired, going to or from the field.

Combined with these special points it has all of the essential principles of the Empire Drill, that for years has stood so high in the estimation of the farming community.

Positive force feed for grain, sowing all kinds with unerring accuracy.

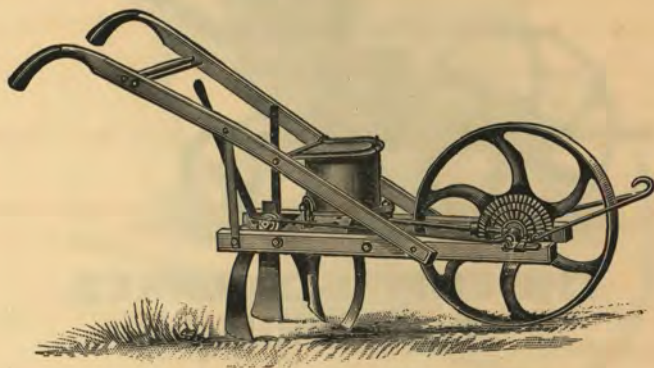
The Marks Fertilizer Attachment, with our latest improvements, which has no equal in the world for handling all kinds of phosphate without gumming or clogging.

Change of speed for regulating the quantity sown, avoiding all guess work and consequent liability to error.

It is thrown out of or into gear from the rear of the machine by an ingenious device which works instantly, and is positive when done.

It is built as low as possible so as to avoid being top heavy, which is so conspicuous in other drills of this class.

Guard irons are attached, running from the frame back to the box, so that standing corn is not dragged over when at work between the rows.



THE EMPIRE CORN DRILL.

This machine, as made by us, has no superior for planting corn in drills. It is simple, durable and reliable, dropping one kernel in a place, twelve, sixteen or twenty inches apart, as desired.

It has a brush cut-off, so there is no liability of breaking the seed. It is light, tidy and substantial, and will give the best of satisfaction to those who purchase it.

It is furnished with broad blades for coverers, as shown in the cut, or with a wheel which covers and presses the earth over the seed, and regulates the depth of planting as shown in the following cut of the Combined Planter.



THE EMPIRE COMBINED CORN DRILL.

This is identical with our Plain Corn Drill, except that we have added a fertilizer attachment, [made upon the "Marks" principle, making, as a whole, the most complete tool of the kind in the United States.

It distributes from 46 quarts to 186 quarts of Phosphate per acre, or as phosphates average to weigh two pounds to the quart, ninety-two pounds to 372 pounds with four intermediate quantities, thus giving a range which must satisfy the most exacting.

The levers for throwing into and out of gear are convenient to the operator, and operate instantly to stop the working of the Planter or Fertilizer distributor.

The Fertilizer Attachment can be thrown out of gear, and the drill operated without it, as a Plain Drill, when so desired.

We can furnish this Drill with blades as coverers, or with a wheel, as stated above, in connection with the Plain Drill.

With these four styles of Corn Drills, we present a full and complete line of these tools, enabling us to satisfy the preferences of any purchaser.



GARDEN FERTILIZER DISTRIBUTOR

This little machine is almost an absolute necessity where attention is given to the raising of garden stuff, celery or potatoes, as it distributes any brand of phosphate in a manner that is eminently satisfactory to the farmer, and productive of the best results when the crop is harvested.

It is light, finely proportioned and strong.

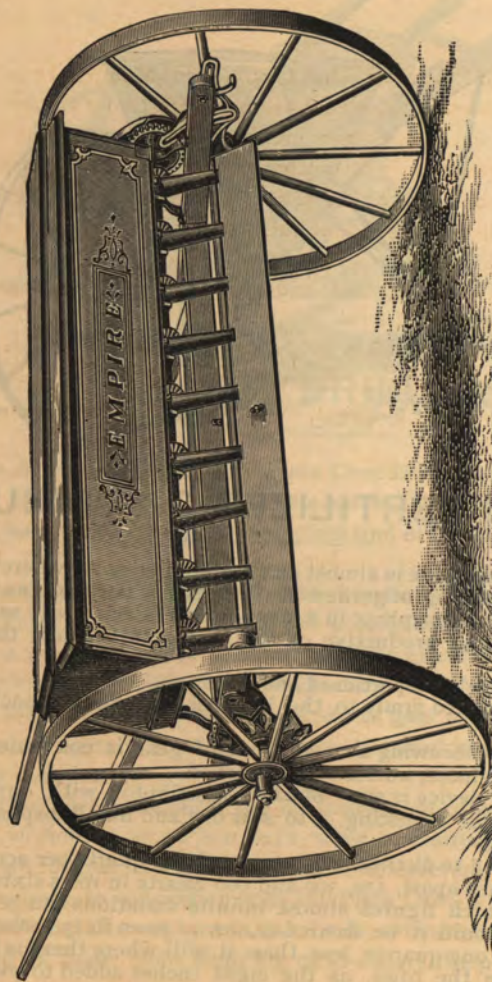
The box is bolted firmly to the handles, and has a capacity of half a bushel.

The lever for throwing into and out of gear is convenient to the operator's right-hand, and is easily worked.

The feeding device is our "Marks" distributor with our valuable improvements for adjusting it to sow dry and fine Phosphate, and to prevent leakage.

It is arranged to distribute 75, 150 and 300 quarts per acre, in rows thirty-two inches apart, 150, 300 and 600 quarts in rows sixteen inches apart, from which figures almost infinite variations can be obtained; for instance, should it be desired to sow in rows forty inches apart, it will distribute one-quarter less than it will where there is thirty-two inches between the rows, as the eight inches added to thirty-two is one-quarter of that number, there will be one quarter less number of rows per acre.

It is nicely painted, and its appearance is pleasing.



THE EMPIRE PLASTER SOWER.

THE EMPIRE PLASTER SOWER.

The sowing of Plaster or other Commercial Manures broadcast, by hand, is the worst and most unsatisfactory work that a farmer is called upon to do; the eyes, nose and mouth filled with the fine dust, the clothes and hair completely saturated, and the moist skin covered with a thick scale of cement; the back aches, the legs almost refuse to carry the load, and when the last handful is thrown, a deep sigh expresses the sense of relief that the job is finished.

All of this has been overcome and the work made the easiest and lightest of the year.

Our Empire Plaster Sower is so arranged that the operator can ride, above the dust, knowing that the substance is being scattered so evenly that every blade of grass, and every square inch of surface has its portion and no more.

A light horse will handle it all day with ease, getting over fifteen to eighteen acres, distributing from sixty quarts to 200 quarts per acre, with six intermediate quantities.

The feeding device is our well-known Force Feed which has been proven by years of use to be the only one that is positive and satisfactory, avoiding all pasting and clogging.

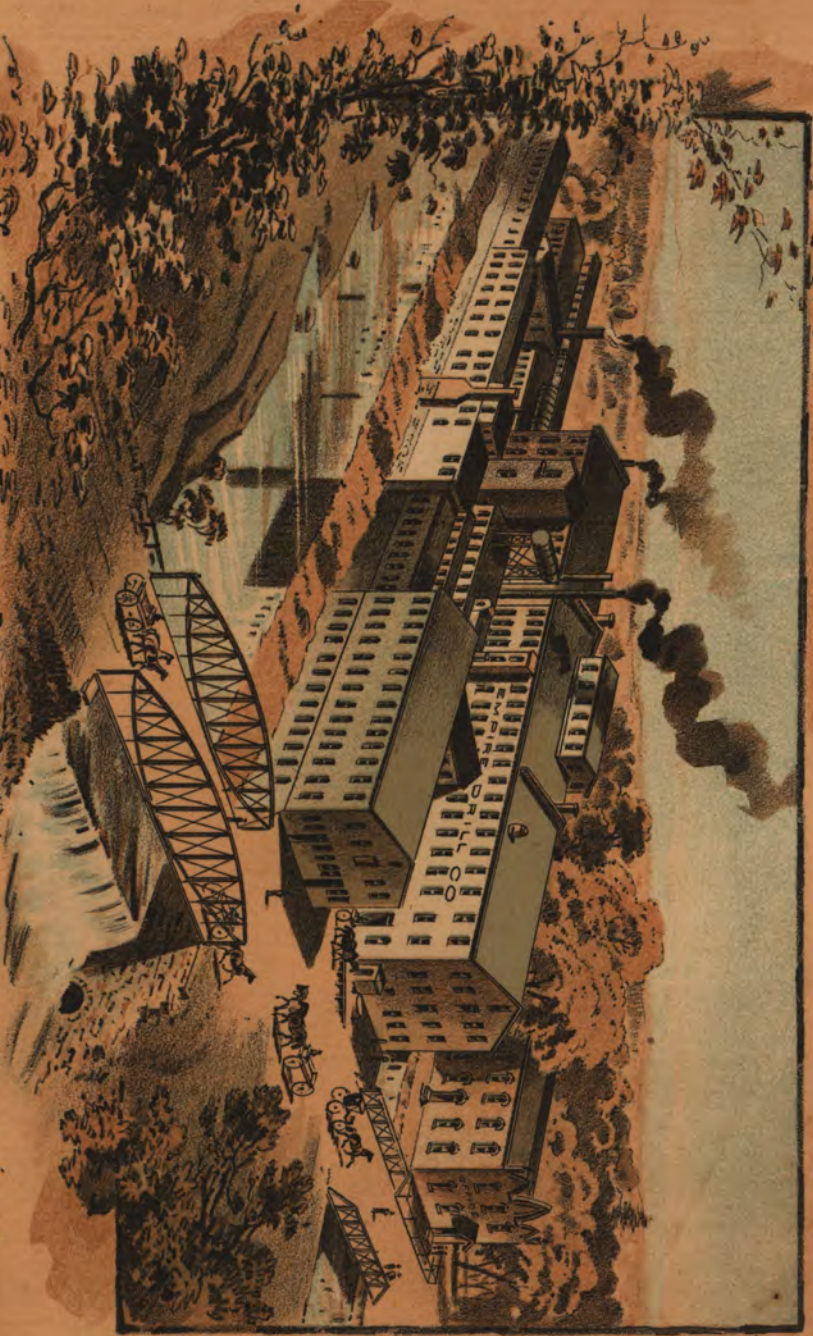
It is simple, easily taken apart for cleaning or repairs, without using a hammer or wrench.

It is durable. All bearings being iron to iron, and covered so that the substance sown cannot penetrate to cause friction.

It is reliable, depending upon speed for quantity sown, which is accomplished by different sizes of gear; the discharge aperture is never changed.

It is satisfactory, because there is no gumming, pasting or clogging, the quantity being discharged in an even continuous stream, and scattered in a thin sheet by the vibrating board upon which it falls.

It is well made of fine stock, and finished in a neat tasty manner, and is warranted the same as our Fertilizer attachment on the Empire Drill.



WORKS OF THE EMPIRE DRILL COMPANY. (INCORPORATED 1884)

SUPPLY HOUSES

JACKSON, MICH. BALTIMORE, MD. ALLEGHENY CITY PA. LOUISVILLE, KY. CHATTANOOGA, TENN.