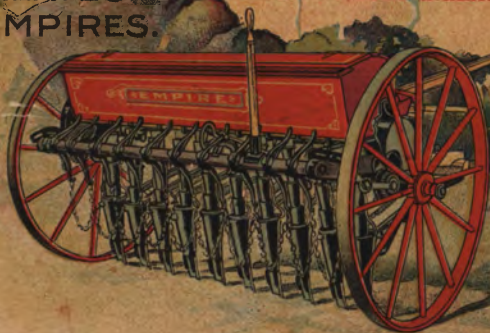


EMPIRE DRILL CO.,

52
YEARS

THE
THREE
GREATEST
EMPIRES.



SHORTSVILLE, N.Y., U.S.A.

G4-20.00

1901

PAST



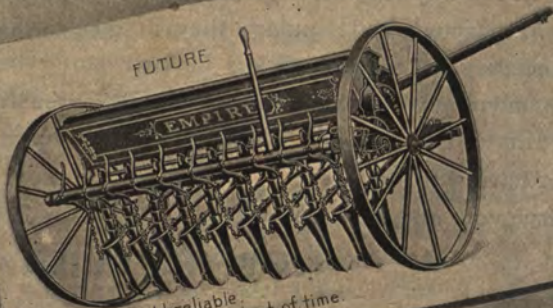
An old 49er
Worn but not worn out.

PRESENT



The latest out.
Our up-to-date Disc Drill.

FUTURE



The old reliable.
Has stood the test of time.

1849



1901

There is more difference in Grain Drills than the average man comprehends. The only way to know how much better the

EMPIRE DRILL

is than others is to use one with intelligent knowledge of its capacity. It's the way they work and wear, not our say so, that makes them satisfactory and popular; they do good work while they last, and they last a good while.

Our assortment of sizes, kinds and styles is extensive, and there is nothing in the shape of a Grain Drill we cannot make, if we do not have it in stock.

Let us serve you, and we'll do it well.

EMPIRE DRILL CO.

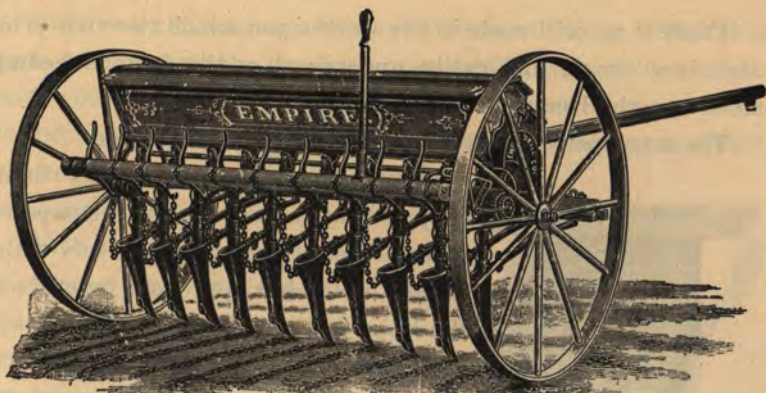


Fig. 1.

FACTS, NOT FANCIES.

A perfect feeding device for seeding machinery does not discriminate between different grains, but only requires a change for different quantities. Its motion is continuous and positive ; its feeding channel unalterable ; its capacity covering the range of all requirements on the farm ; its construction simple ; its accuracy of distribution unerring, and its reliability lasting and permanent.

This idea has been our hobby for more than fifty years and the satisfactory work of the Empire Drill proves that our efforts have been successful in producing a complete realization of the thought. To appreciate the sense and meaning of this statement, and its value as applied to a mechanical device for the sowing of grain, it must be understood and comprehended that the weight per bushel of different kinds of grain does not enter into the question in the least. A bushel of wheat and a bushel of oats differ greatly in weight, but so far as measurement goes are identical, and it is the matchless quality in the Empire which enables it to handle them in like quantities without change of adjustment, as accurately as a farmer can with a half bushel measure.

There is no drill made in the world upon which the vital principle is so simple and easily understood as this famous feeding device on the Empire.

The accompanying illustrations show its construction.

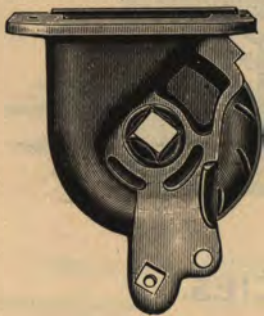


Fig. 2.

Figure 2 is the completed feed run as it appears upon the drill. It is composed of but three pieces, screwed firmly to the bottom of the box and held together at the lower end by a bolt.

Figure 3 is the casing made with a gradually converging and constantly narrowing throat which is a continuation of the hopper shaped bottom in the box.

Figure 4 is the binding guard which holds the feed run Figure 5 against the casing preventing leakage of grain. By removing one bolt the whole is easily separated and removed for repairs when necessary.

There is no gate, adjustable nor double feed but takes twice as many parts to accomplish the same results.

The Flange of 236 A, Fig. 5, is the bottom upon which the grain rests, and as it is steadily moving, a solid, compact mass of grain must be carried—not pushed nor rolled, but carried into the conductors and planted in the ground.

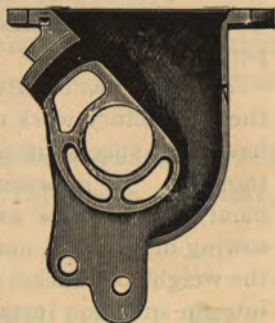


Fig. 3.

Quantities. At each rotation 236 A empties as much grain as it holds when detached, .28 of a quart (about half a pint).

With two revolutions twice as much, and so on. With this basis and knowing the number of square feet covered by the drill with one revolution of the ground wheels, it is a simple problem in mechanics to determine what gear to put on to give the square shaft a certain rotating velocity and sow with absolute certainty a given quantity per acre.

With each drill gear wheels are given with directions for using which will sow from 24 quarts to 128 quarts per acre, with 18 intermediate variations or 20 different quantities in all, covering the ordinary range desired by farmers generally. We can at small additional expense supply gear wheels to sow more or less than those quantities.



Fig. 4.

It is reliable because there is no guess work about it. Of all work on the farm, the planting of seed should be most carefully watched and accurately done.

It is as positive and accurate as the sealed half bushel, as it controls and measures the grain.

Position does not affect it. It sows the same quantity going up hill or down.

Its motion is slow, wear slight, repair cost small, and it will do as good work after long service as when new.

It sows wheat, rye, barley, oats, peas, beans, corn, pumpkin seed and beets, or any seed ever sown with a grain drill.

Is it wise to buy a complicated drill when one that is simple can be had, and do the work better?



Fig. 5.

WHEELS.

Wheels are attached to grain drills in various ways, some correctly, and others incorrectly. Opposite wheels, hung properly, are always nearer each other at bottom and front than at top and back. This gives them the right pitch and gather so that they always run freely on the spindle, snug up to the shoulder, and never outwardly on the nut.

No farmer would think of buying a wagon unless the wheels had pitch and gather sufficient to make it "chuckle" when loaded.

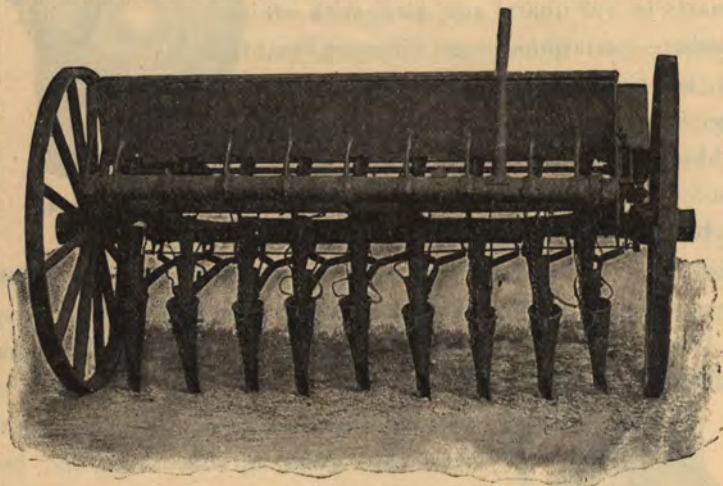


Fig. 6.

AFTER 35 YEARS' USE.

This illustration shows the idea. It is made from a photograph of one of our old drills, sold more than 35 years ago, and in use ever since. The wheels stand as straight as when new, showing perfection of wear on the axles.

THE WHEELS ON THE EMPIRE ARE HUNG CORRECTLY. TIRES THREE INCHES WIDE.

The principle applies to a grain drill with as much force as to a wagon, and should not be overlooked in making a decision as to the purchase of a drill.

CONDUCTORS.

An item of prime importance in the selection of a grain drill is the Conductors for conveying the grain from the box to the ground. Unless this part of the work is well done, the results will not be satisfactory, no matter how well the drill works otherwise.

We make our Conductors from Galvanized sheet steel (which never rusts) in four sections, riveted upon strips of leather, so that they telescope into each other, and conduct the grain properly under all conditions and circumstances. They never jam when the hoe is thrown back by an obstruction, nor does the lower end project through the hoe when it is raised by sowing lengthwise of a high back furrow. They are flexible, and always in position for work, and do it right every time. They are practically indestructible, and will last for years. Should the leathers break they are easily repaired at home. "Time is money" and they save time.

We can furnish Rubber Conductors if wanted, but do **not** recommend their use. They are not economical nor reliable.



Fig. 7.

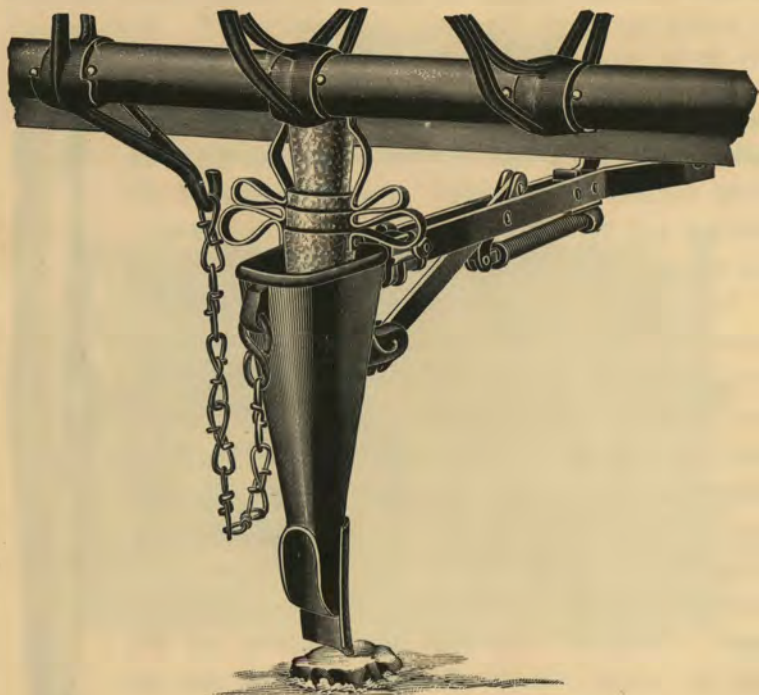


Fig. 8.

Metal Conductor in spring hoe, showing its position when the hoe is raised, as in sowing lengthwise of a back furrow or ridge. It conducts the grain as well as when in its natural position.



Fig. 9.

Metal Conductor in spring hoe, showing its position when passing an obstruction. There is no kinking, nor jamming, and upon release of the hoe, the original natural working position is assumed.



Fig. 10.

Rubber Conductor, showing position it is made to assume when the hoe is raised, by sowing lengthwise of a ridge or back furrow. The lower end projects through the hoe and is doubled back, retaining the seed.



Fig. II.

This cut shows the action of a Rubber Conductor when the spring hoe is operated in passing an obstruction.

Note the kinking. A few such operations and the rubber will crack and become worthless.

EASY RUNNING.

A close observation of Nature's methods, and patient, long continued experiments in planting, demonstrate that the proper depth to which any seed should be planted, should not exceed five times its own diameter. With these indications for our guide, we have endeavored to construct the Empire in this particular so as to approach as near nature as possible.



Fig. 12.

Our regular points, figure 12, open a broad shallow furrow with a wide bottom, and the angle which they present to the surface is easily adjusted to enter the ground sharply, or trail, skimming the surface enough to cover the seed lightly. They scour in all soils, and cover seed where others fail.

This principle taken in connection with our short draw bars, the perfect balance of the machine, and the manner of hanging our wheels, have won for the Empire the deserved reputation of being the **lightest draft drill on the market.**

We can furnish sharp points, figure 13, but do not recommend their use. They violate the plain teachings of nature, and crowd the seed together in a narrow space to its serious detriment.

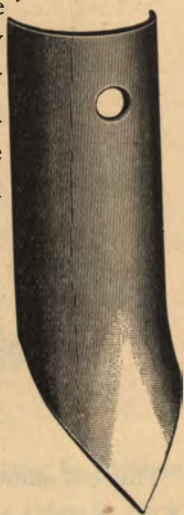


Fig. 13.

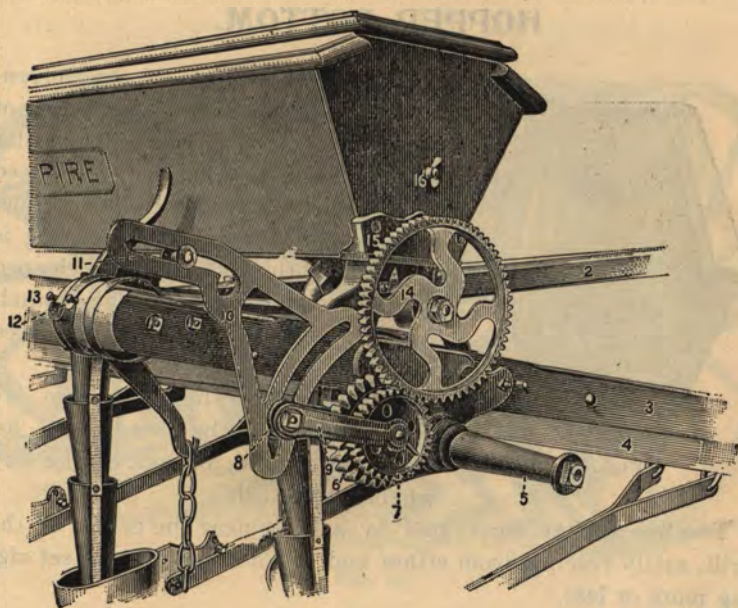


Fig. 14.

We show here all of the gearing necessary, and the manner of regulating it for the quantity of grain sown.

The smallest gear (7) has 32 cogs, and gives the right speed to the feeding shaft to sow two bushels per acre. This means it will plant two bushels of wheat, oats or barley, and if that quantity of each seed is sown per acre, no change need ever be made. No other wheel is needed. The drill is always ready. If any other quantity is desired, loosen the nut (8) so that the clamp (9) will slip off the bearing upon which the wheels run, remove (7) and replace by a wheel which will give the desired quantity according to the table of directions. The change is quickly made. Anyone can do it in five minutes. We can do it in a minute or less.

HOPPER BOTTOM.



Fig- 15.

This cut shows one of the conveniences on the Empire. The bottom of the grain box is made of triangular blocks placed between each of the feed runs. It helps in sowing, but its benefit is more apparent when seeding is finished and the drill has to be cleaned out. Raise the wheel off the ground, and turn it until every kernel is forced out.

Cut-off valves for each run are placed inside of the box, ready for use when wanted, and out of the way when not needed.

The hoe shifter is operated by a lever near the center of the drill, easily reached from either end. The hoes may be set zig-zag more or less.

ROLL AND HANDLES.

This arrangement is different from all others, and is peculiar to the Empire. It is operated by a lever near the center of the drill, giving a back rolling action, taking up the slack of the chains and lifting the hoes. Each hoe may be raised independently if desired.

The space between the outside hoes and the center of the wheel is the same as between hoes. This is done to avoid skips in drilling; let the wheel follow the last drill mark, and the outside hoe will be in the wheel track.

Hitch the team on as carefully as to a wagon, drive straight and the result will be satisfactory.



Fig. 16.

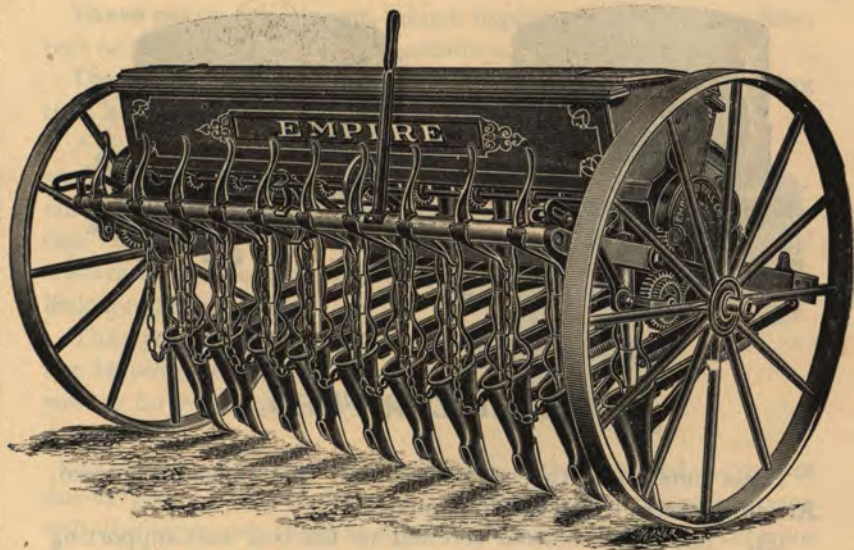


Fig. 17.

EMPIRE FERTILIZER DRILL.

There may be as good drills made as this one, but we do not know of them. The thing we do know is, that there are none better. It is not new and untried, but has been on the market for years and thousands of farmers the world over are pleased with its work.

THE MARK'S FORCE FEED

For distributing fertilizers has been made famous on this drill and is known by everybody to be the most satisfactory drill for doing that work there is made. It does away with all of the annoyances usually pertaining to this work and enables the farmer to know what he is doing without taking any chances of its being wrong or different from what he expects or desires.

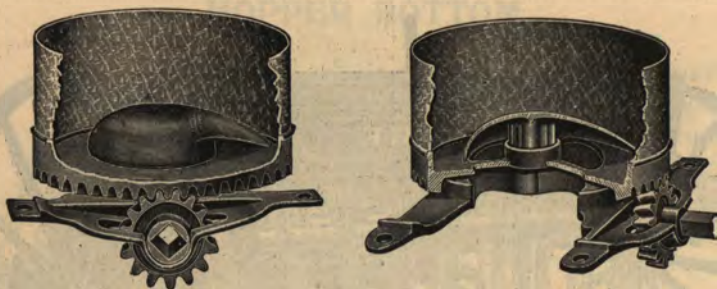


Fig. 18.

FERTILIZER FEED.

These cuts show the construction of this remarkable feed. As will be seen, it has but four pieces.

1st. The spider bottom screwed to the box and supporting the whole mechanism.

2d. The revolving bottom with cogs on its underside.

3d. The oval topped feeding cap with eccentric scroll lip extending to the inner circumference of the galvanized cup, fitting closely down upon the upper surface of the revolving bottom,

having an opening under the scroll lip large enough to cover the space left outside of its circumference, which space is filled with fertilizer when at work.

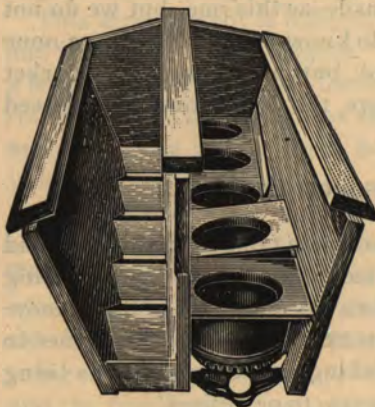


Fig. 19.

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

These parts are strong, bound together without a nut, key, bolt or spring, yet separated without a hammer or wrench.

The feed cap can be set in four different positions, adapting it to handle any fertilizer on the market.

A ring or thimble on the upper surface of the revolving bottom encircles the post of the feed cap, which, together with the washer on the post, prevents all leakage and waste.

The size of the discharge opening is never changed, whether sowing large quantities or small quantities.

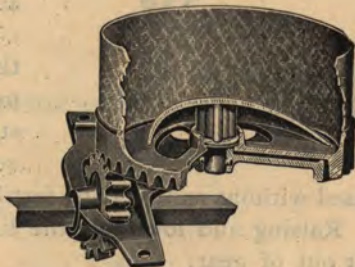


Fig. 20.

At each revolution of the revolving bottom .095 of a quart is discharged. Two revolutions will double it, and 100 revolutions will discharge 100 times as much, so that it is easy to determine the quantities sown. The same combination of gear will always give the same motion, and the same motion will always sow a like amount. It is not necessary to do any guessing.

The capacity of the drill as sold is from 46 quarts to 185 quarts (1 quart is about two pounds), with 18 intermediate quantities. It can be made to sow more or less, but anything different must be ordered specially and at extra cost.

The motion being steady and uniform, an even stream is always discharged, and

FIFTEEN PER CENT. OF PHOSPHATE IS SAVED

by the regular distribution of the amount used, so that the greatest results are obtained.

There is no clogging nor sticking up no matter what quantity is being sown, but such a movement of the material is forced that every particle is placed with the seed where it is of the most benefit.

Position does not affect its work as the material cannot escape control by the feed cap. There can be no sliding of fertilizer to the end of the box, as the cups hold enough to go across any field.



Fig. 21.

A small lever (see cut) enables the operator to put the attachment out of or into gear without stopping the team. Let this lever remain down, and the drill can be

used without running the fertilizer part.

Raising and lowering the hoes throws the attachments into or out of gear.

If there is fertilizer left in the box when seeding is finished raise the wheel off the ground, turn it, and it will be discharged.

WE RECOMMEND

when this is done that the light strip, inside the box, be taken off, top plates removed, and the whole mechanism taken out, thoroughly cleaned, and oiled with kerosene (coal oil).

GRASS SEEDER.

This feed is the same in principle as our grain feed. The quantity is regulated by different motions produced by different sizes of gear wheels.

It will distribute in front or rear of hoes, as desired.

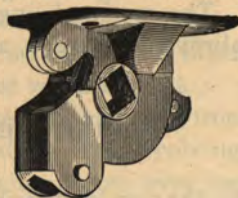
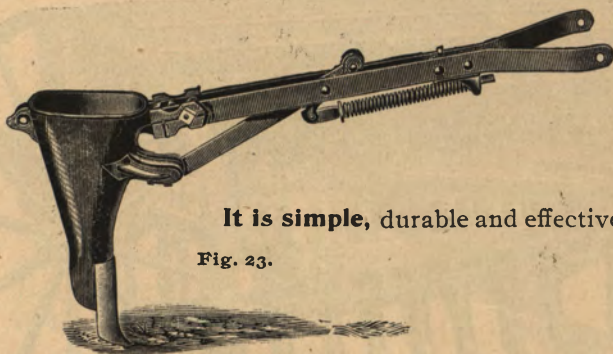


Fig. 22.

LAND MEASURE.

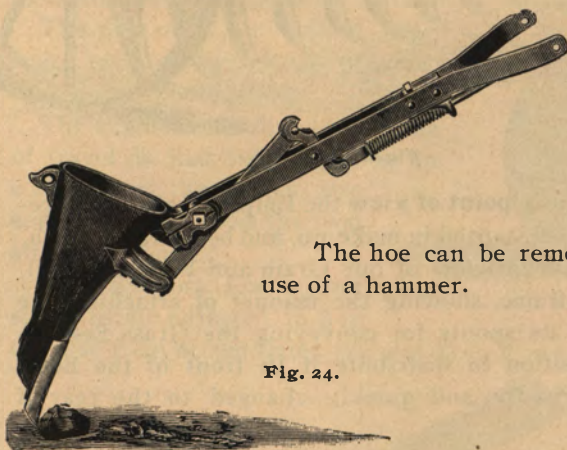
Simple and compact, marking the acres up to ten and parts of an acre by tenths

THE FINEST SPRING HOE MADE.



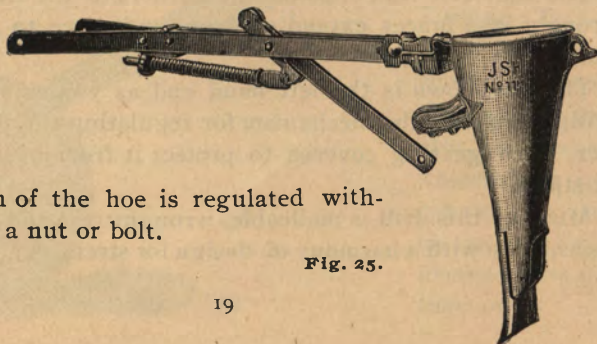
It is simple, durable and effective in its action.

Fig. 23.



The hoe can be removed without the use of a hammer.

Fig. 24.



The pitch of the hoe is regulated without loosening a nut or bolt.

Fig. 25.

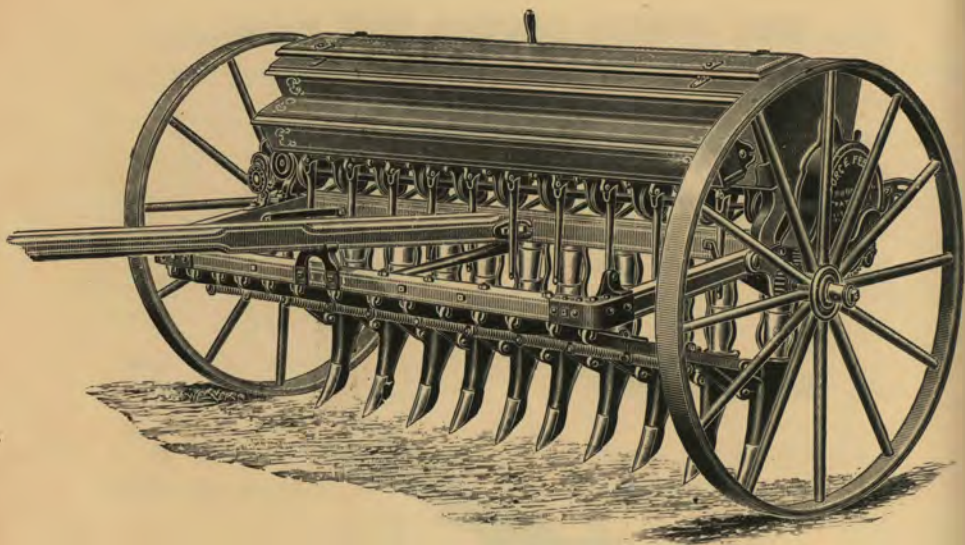


Fig. 26.

Looked at from any point of view the Empire is always graceful in appearance, substantial in make-up, and beautiful in finish.

This picture is a front view of our Grain and Fertilizer drill, put up with steel frame, showing the manner of attaching the Gras Seeder, with its spouts for conveying the Grass Seed to the ground in position to distribute it in front of the hoes. These spouts are easily and quickly changed to the rear if desired.

The malleable iron clips on the corners of the frame, and the wrought iron braces extending from end piece to axle are also shown clearly.

The end shown is the left hand end as you stand behind the drill, and shows the mechanism for regulating the flow of fertilizer, with gearing covered to protect it from accidental stones or sticks.

Much of this drill is malleable, wrought iron and steel, neat in appearance with a harmony of design for strength and durability.

DISC AND DRAW-BAR.

These detail cuts show clearly the construction of the EMPIRE Disc and connections, which for practical utility, beauty of design and satisfactory working, is not beaten by any. It is as light as the required strength will allow. The draw-bar is heavy, well braced to stand the side draught is from a rod underneath the frame, and nearly in line, from horse's breast to point of contact with the ground.

The disc runs on chilled bearings, each of which is provided with a dust-proof oil cup.

The angle of the disc to the line of travel is just right opening up a channel of the proper size and depth to deposit the seed all underground.

The scrapers are spring steel, nicely adjusted to free the disc from accumulated soil and keep it in proper condition to do the best work.

Fig. 28.



tory working, is not beaten light as the required. The draw-bar is heavy, stand the side draught is from a front piece of



Fig. 27.

The practical work of the EMPIRE DISC DRILL is a source of pleasure to the operator, and it is acknowledged by competitors to be the best drill made—except their own.

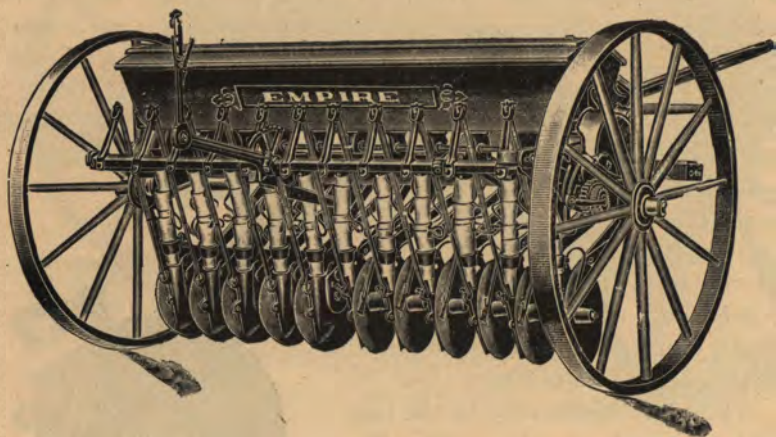


Fig. 29.

SIDE VIEW OF A PLAIN 11-HOE, STEEL FRAME DISC DRILL

showing position of jointed combination lever, adjusted for riding when the discs are raised out of the ground. It is out of the way, and does not extend back to strike a fence, or other obstacle when turning at the ends of the field. The driver need pay no attention to it.

Drag chains are furnished with all disc drills. They are small and light, yet sufficiently heavy to smooth off the surface and cover the seed satisfactorily.

Disc drills are preëminently adapted to work in hard ground, or in fields where there is litter or trash on the surface.

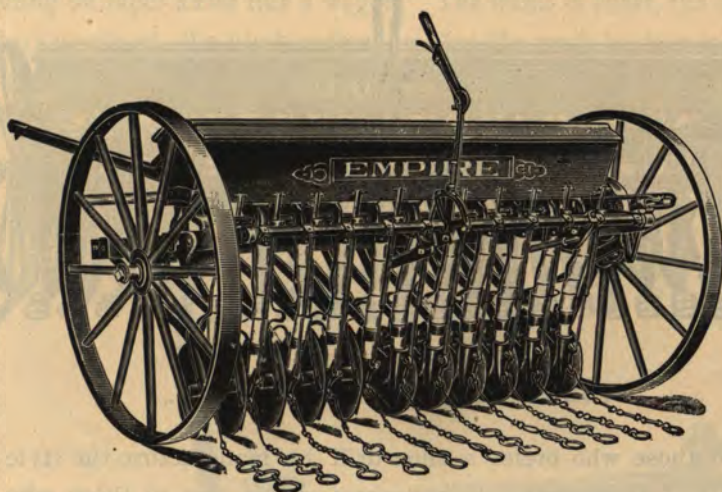


Fig. 30.

SIDE VIEW OF A PLAIN 11-HOE STEEL FRAME DISC DRILL,

shows more fully the jointed combination lever for raising and lowering the discs. At the angle shown (45 degrees) or straight it is convenient to use in operating the drill when walking behind it. On the preceding page we show it adjusted for riding at an angle of 90 degrees. It is by far the most convenient and complete lifting lever on any drill made.

The rock shaft, for raising and lowering the discs, is inch square iron, supported in the center by a truss which prevents any sagging out of line.

All disc drills are provided with scrapers, and are complete in every detail.

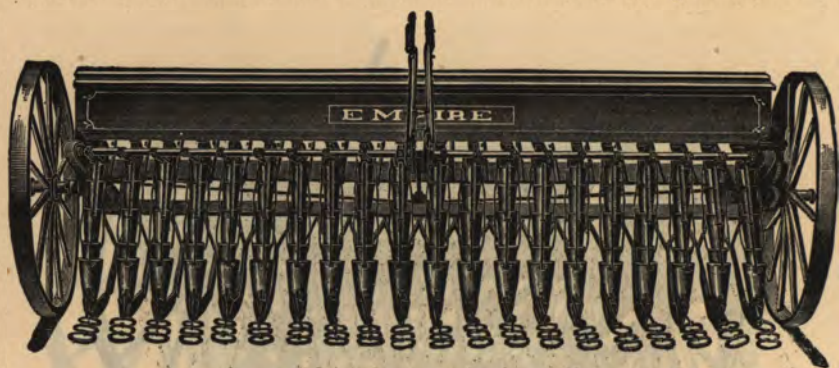


Fig. 31.

THE EMPIRE SHOE DRILL—20 ROW.

For those who prefer a shoe drill we manufacture the style shown in these cuts. It has given satisfaction to those who have used it, and we believe a better one is not made.

The shoe is fine steel, nicely proportioned, and scours every time.

The depth of sowing is regulated by a lever placed near the center of the drill.

This lever also raises and lowers the shoes, throwing the drill into or out of gear.

The swell of the shoe is gradual, and cleans as nicely as a plow.

Each is independent and so attached to the frame as to prevent side motion, but free to adapt itself to uneven surfaces or obstruction.

The pressure upon the horses' necks is reduced to the minimum, as the shoes engage the surface in advance of the tread of the wheels, and can be still further lessened by placing the double-trees under the pole.

It is the lightest draft shoe drill made, as its wheels are hung on taper axles like a wagon. The frame is short, the drag bars are short, the hitch is short, so that the work is close to the horses, and the shoe engages the ground only enough to cover the seed.

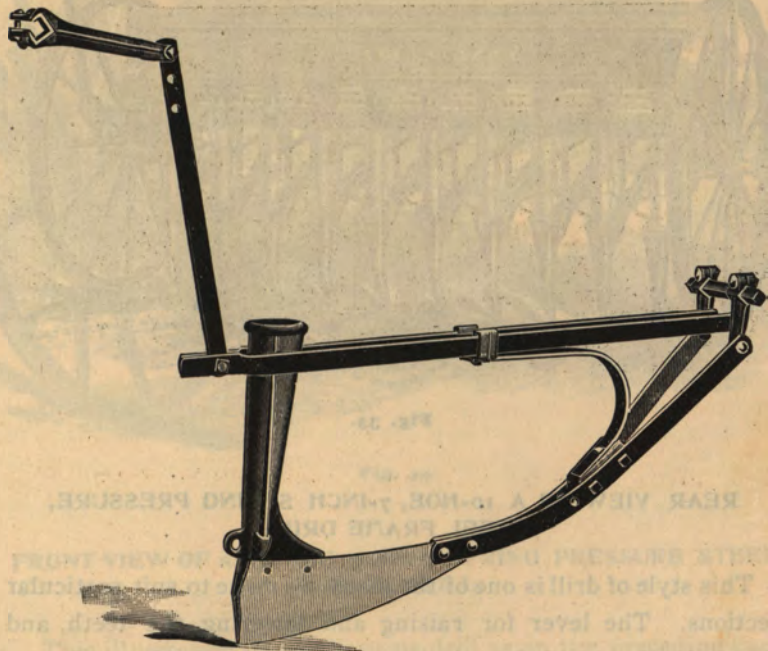


Fig. 32.

Chain coverers are attached to the rear, and cover the seed by smoothing the surface.

Press wheels can be put on in place of chains, making as fine a press drill as there is on the market. They cost extra, and are never sent out unless specially ordered.

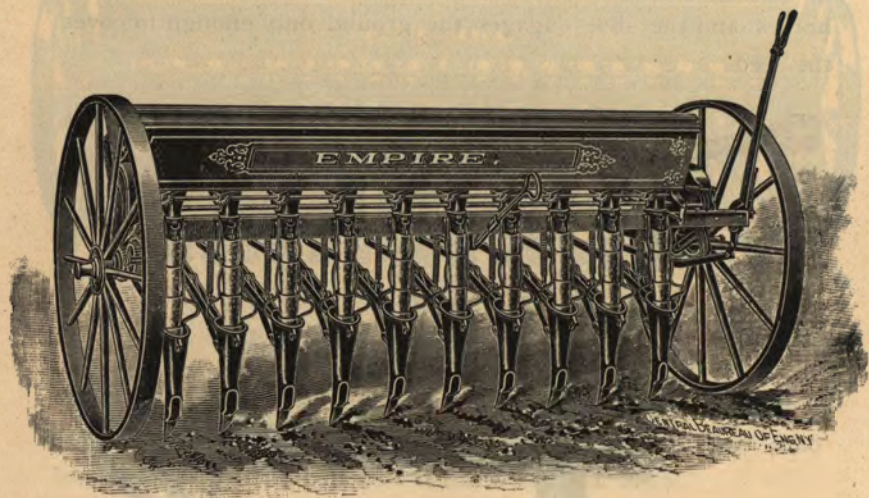


Fig. 33.

**REAR VIEW OF A 10-HOE, 7-INCH SPRING PRESSURE,
STEEL FRAME DRILL.**

This style of drill is one of the many we make to suit particular sections. The lever for raising and lowering the teeth, and which is also used for putting pressure on the hoes, is conveniently located at the right hand end of the box, so that if desired the operator can ride. It is long, giving plenty of power to raise and lower the hoes easily, from whatever position the drill is operated. This illustration shows its position when the hoes are on the ground or working.

There is nothing finer than this drill. We make them in all sizes, both plain and combined.

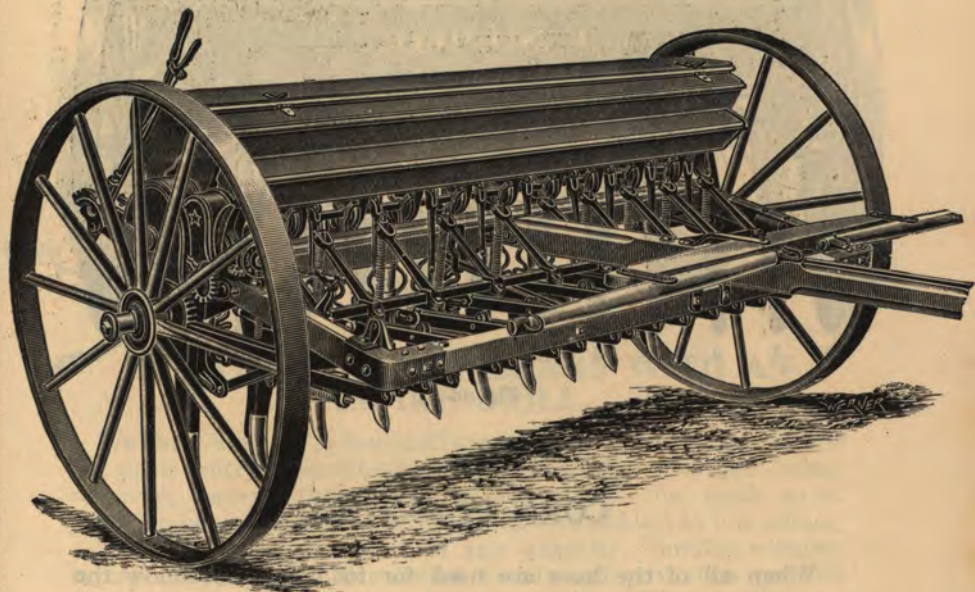


Fig. 34.

**FRONT VIEW OF A 10-HOE 7-INCH SPRING PRESSURE STEEL,
FRAME DRILL.**

This illustration shows the same drill as on the preceding page from a different point of view. In this the rock shaft with arms, pressure rods and springs are shown clearly.

The hoes are raised from the ground so that the operating lever is seen in the position it assumes under that condition.

We make this style in plain or combined, and in either they are compact, strong and durable.

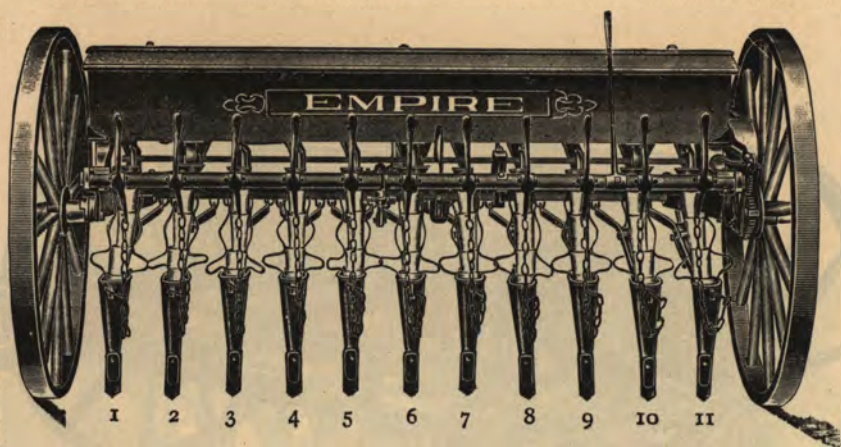


Fig. 35.

CORN PLANTING.

When all of the hoes are used for fodder corn, follow the directions on the box cover.

If more room is wanted between rows, shut off 2, 4, 6, 8 and 10, and you have six rows 14 inches apart.

If you want to plant beans or cultivate fodder corn, make the rows 28 inches apart, by shutting off 1, 3, 4, 5, 7, 8, 9, 11, and you have three rows.

In planting corn for crop, shut off all the feed runs but 3 and 9, and you will have two rows 3 feet 6 inches apart.

In sowing phosphate with corn, use three rows to one of corn, *i.e.*, use the hoes each side of the row, besides the one in the row.

A large quantity can be put on in this way without injury to the seed.

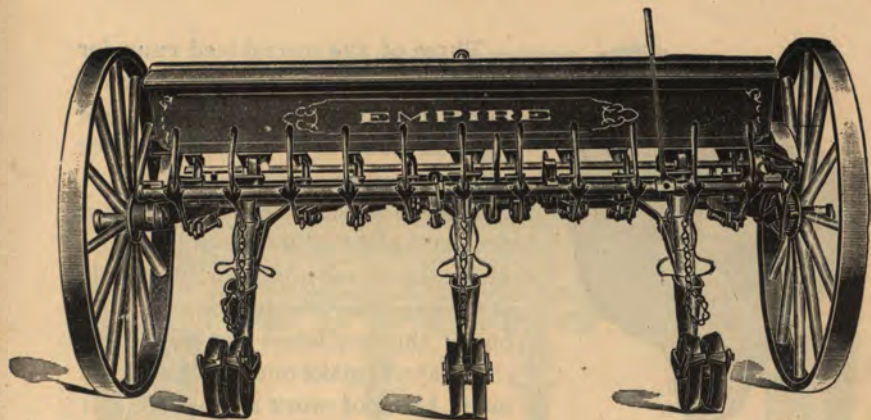


Fig. 36.

IT PAYS TO PLANT BEANS WITH AN EMPIRE DRILL.

We show here an 11-hoe drill arranged for planting beans with our open center press wheel coverer, all of the drill teeth being removed, except three. By leaving all of the teeth on a good job of cultivating is done and the ground left in fine shape.

Any kind, large or small, in any quantity, handled without injury. The seed is distributed evenly and put down into the damp soil where it sprouts and grows quickly. The wheel tracks are guides for driving and 12 to 15 acres a day is average work. The attachments cost extra but are well worth the extra cost.

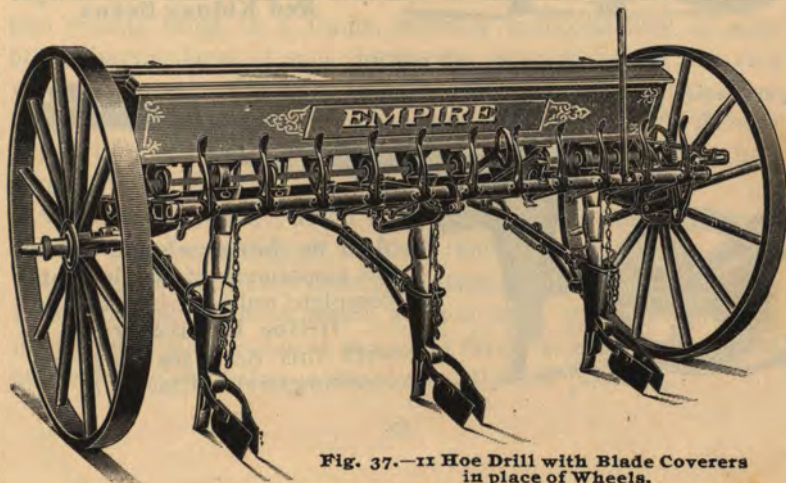


Fig. 37.—11 Hoe Drill with Blade Coverers
in place of Wheels.

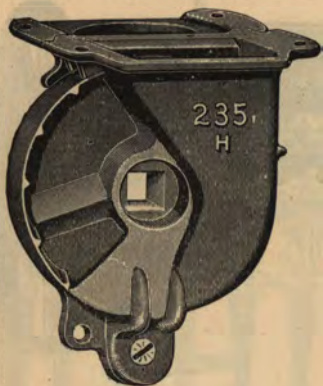


Fig. 38. Bean Run.

Three of the special feed runs for planting beans are put upon every 11-hoe 7-inch drill we make. They are used on runs 2, 6, 10 making three rows 28 inches apart.

It adds nothing to the weight of the drill, and the beauty of it is, you never have to hunt for it. It is always in place ready for work and out of the way when not wanted.

It pays to make one machine do as many kinds of work as possible. It saves investment of money, storage room and time when that is valuable.

Wheel Coverer Attached, Fig. 39.



All who have used the arrangement speak highly of its capacity and value especially in planting

Red Kidney Beans.

Wheel Coverer Detached, Fig. 40.



And no farmer should think his assortment of Implements complete unless it included an
11-Hoe Empire Drill
with this Bean planting and covering device attached.

SUGAR BEETS.

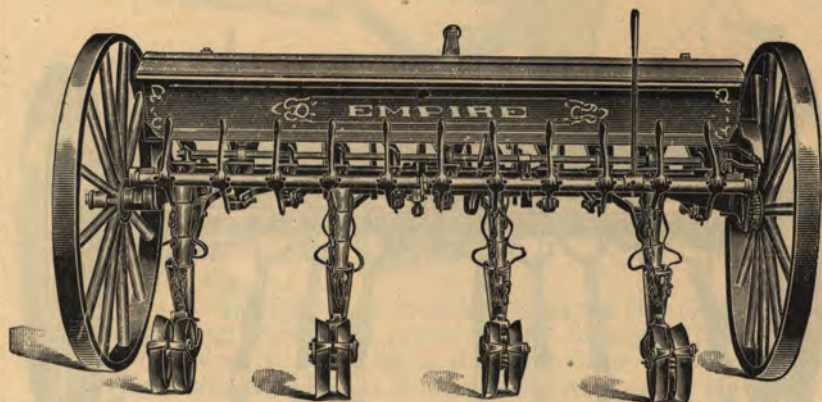


Fig. 41.

The Empire Drill is the finest planter made for putting in this crop. Its feed, handles Beet seed perfectly, distributing it accurately, and the devices we have added for this particular work adapts it completely for the purpose.

As shown in Figs. 39 and 40, a wheel coverer is put on to the regular hoe, and is easily attached or removed. It consists of two wheels hung in a frame, working independently of each other, having faces of such formation as to make the face as a whole, concave. They are an inch apart, leaving a soft mellow ridge for the seed to come up through, while the seed is pressed firmly into the soil from each side. Each face is kept clean by a scraper.

We show in Fig. 41, an 11-hoe 7-inch drill, as that is the most convenient size, arranged to plant four rows 21 inches apart, that being the ordinary distance between rows for Beets. We have removed the hoes which are not used, so as to show the device more plainly, but it is a good thing to leave them on and cultivate the soil between the rows at time of planting.

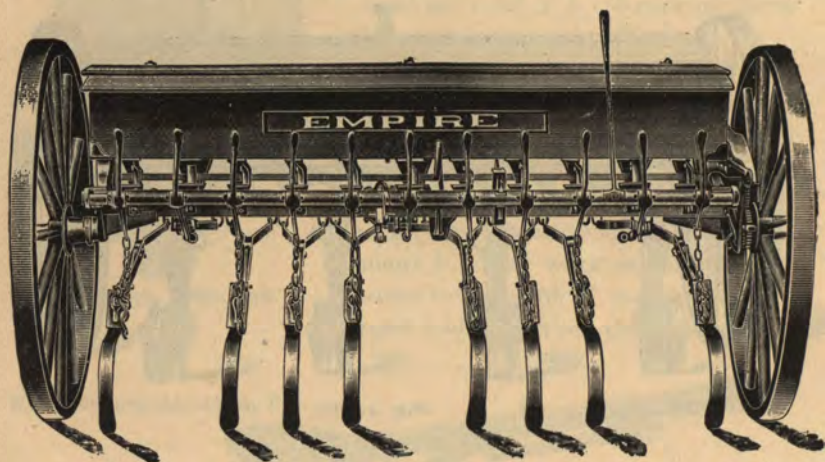


Fig. 42.

As a **Bean Planter** the Empire 11-hoe drill is taking front rank, even among machines built for that special purpose, and the demands of that crop has led us to add still more to its capacity and usefulness by arranging to cultivate the Beans after planting them. To do this we remove the hoes, and attach Spring Harrow teeth to all of the draw bars except the three which come over the rows to be cultivated. One, two, or three rows can be cultivated at a time, as desired. When one row at a time is cultivated the ground is gone over twice.

With the Harrow teeth on every draw bar it makes a serviceable Riding Spring Tooth Harrow.

The explanation on the preceding pages tells somewhat of the manner in which the Empire is arranged as a Bean Planter, but these detail cuts will make the idea of the Cultivator more clearly understood. Fig. 43 is

the ordinary Spring Hoe used upon every Empire Hoe Drill, and is shown as being handled to remove it, or change its pitch for deep or shallow work. Fig. 45 is the same draw bar with the Hoe removed and shown as it is handled for putting the Harrow tooth on.

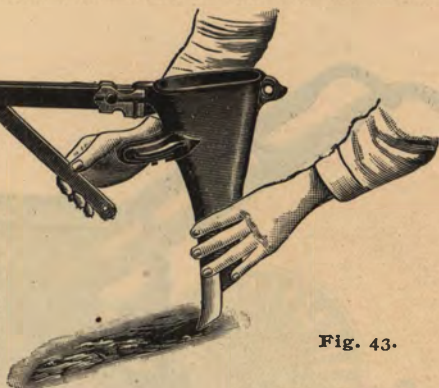


Fig. 43.

The change is made easily, without a hammer or wrench. Push downward on the iron connecting strap until the pin is out of the notches on the hoe, raise the point of the hoe until it is on a line with the draw bar, then pull it out.

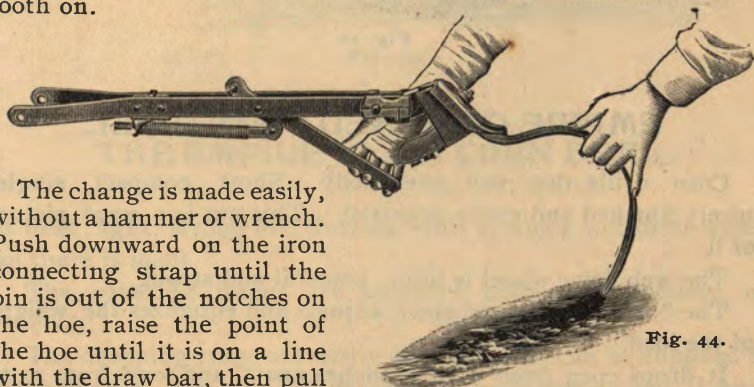
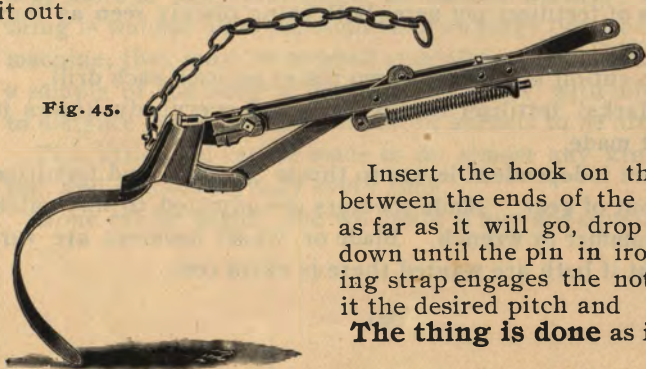


Fig. 44.

Fig. 45.



Insert the hook on the casting, between the ends of the draw bars as far as it will go, drop the point down until the pin in iron connecting strap engages the notch to give it the desired pitch and

The thing is done as in Fig. 45.

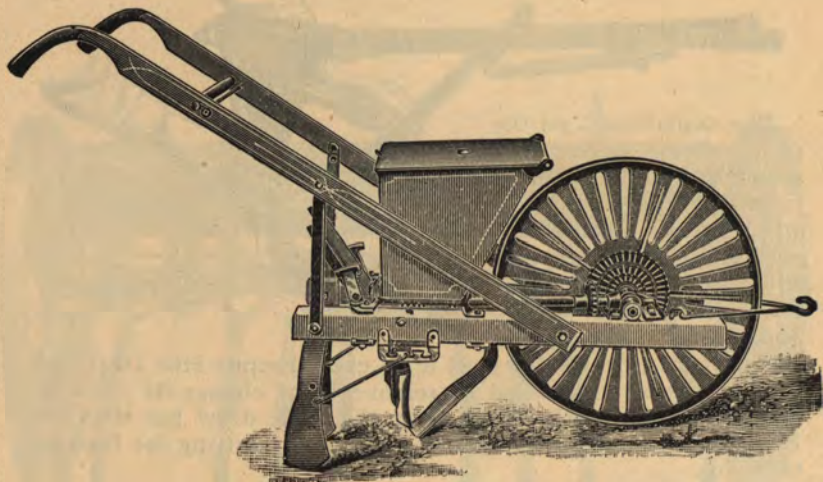


Fig. 46.

EMPIRE COMBINED CORN DRILL.

Corn drills that suit everybody. Short, compact, single, nicely finished and easily operated. This cut is a good picture of it.

The web drive wheel is light, graceful and strong.

The box of galvanized steel, adjusts and equalizes the weight of the load.

It drops corn from 8 to 30 inches apart, and sows from 23 to 120 quarts of fertilizer per acre, both being plainly seen as they are discharged.

A brush cut-off is used, and two plates go with each drill.

The "Marks" fertilizer feed is used, and everybody knows it is the best made.

There are independent levers to throw the corn and fertilizer into and out of gear. Blade coverers are adjusted to any pitch without hammer or wrench. Blade or wheel coverers are furnished, but if both are wanted there is extra cost.

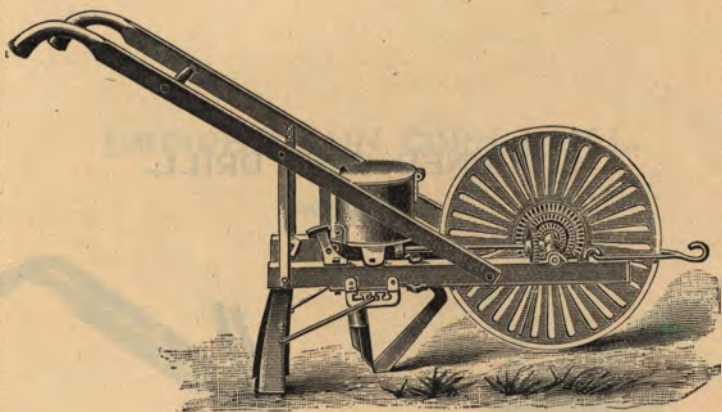


Fig. 47.

THE EMPIRE PLAIN CORN DRILL

is neat, light, strong and durable, with as fine a web drive wheel as there is made.

The covering blades are adjusted without a hammer or wrench.

The dropping rings are easily changed, and can be supplied to drop more or less seed, larger or smaller kernels ; but if anything is wanted different from the two rings furnished with each machine, they must be ordered specially, at additional cost, and a sample of the seed to be planted sent us, with information as to distance apart and the number of kernels to be dropped.

This little drill can be made to do almost any kind of planting, and suits everybody every time.

None can be better, and we doubt if any are equal.

**COMBINED CORN DRILL.
SHOE.**

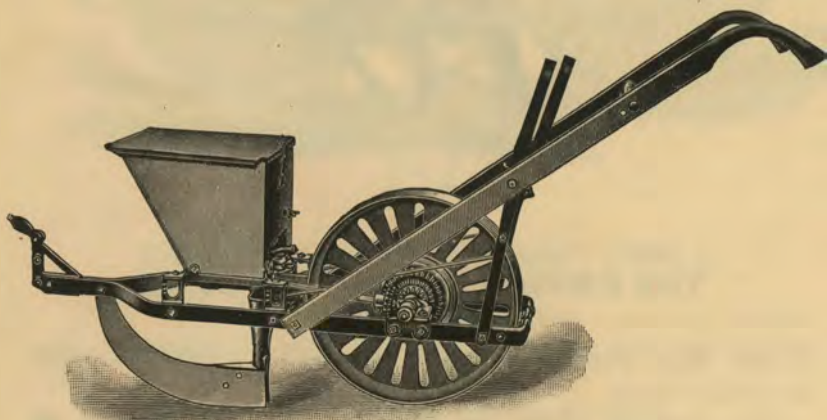


Fig. 48.

**The best thing made. Marks Force Feed Fertilizer Distributor
Light, strong, durable and satisfactory.**

**EMPIRE PLAIN CORN DRILL,
WITH SHOE.**

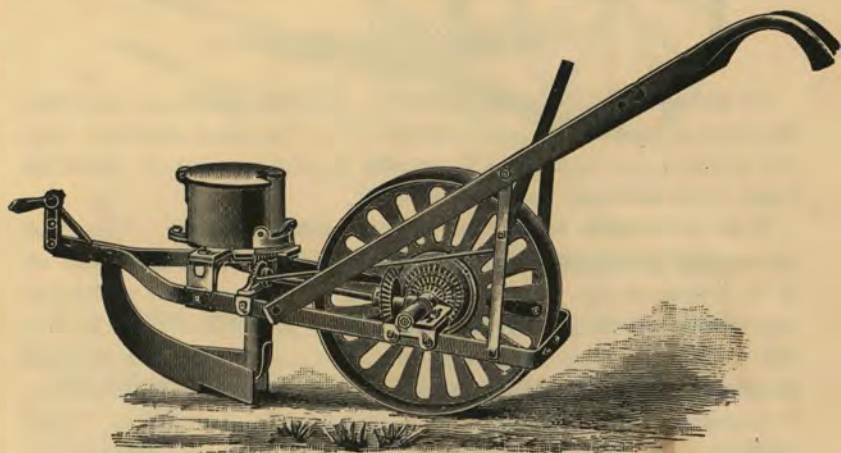


Fig. 49.

**Frame is well braced, rigid and strong. All metal except the handles.
Built for business and satisfies every time.**

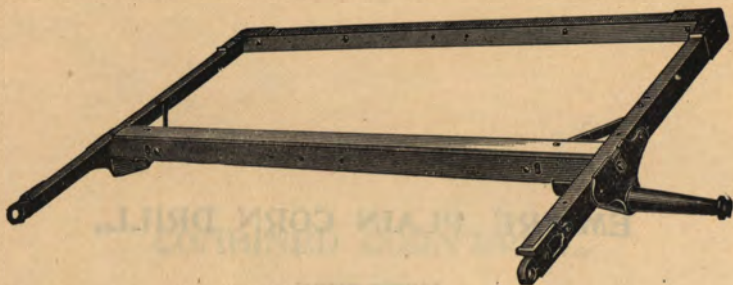


Fig. 50.

STEEL FRAME.

In designing this frame, we have kept in sight the fact that we must secure the greatest strength with the least material, and yet produce one upon which repairs, if ever necessary, could be made with ordinary mechanical skill.

It is not made of a solid piece, without joints. The end pieces and front piece are cut the proper length for each size of drill, joined at the front corners and held firmly by malleable iron clips; at the proper distance back they are tied together by the wood axle, from the ends of which, to each end piece, a brace is bolted, making a solid, substantial frame which can be repaired, if necessary, by any one. If a member is strained or bent, remove it and put in a duplicate. This could not be done if the frame was made solid, without joints.

The roll is pipe, hung in malleable iron brackets.

The roll handles are malleable iron, light and strong.

The lever for operating the roll is also malleable iron.

In fact, lightness and strength have been combined in a practical manner, and we believe that our steel frame has no equal among those on the market.

We use wood wheels on our drills, as we believe them better, but can furnish metal wheels if desired, at additional cost.



Fig. 51.

GARDEN FERTILIZER DISTRIBUTOR.

It is light, strong, nicely finished and its appearance is pleasing.

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 feed is the "Marks," with our valuable improvement for adjusting it to sow fine, dry phosphate, without leakage.

It is arranged to sow 75, 150 and 300 quarts per acre in rows 32 inches apart; 150, 300 and 600 quarts in rows 16 inches apart, from which figures variations can be easily determined; for instance in rows 40 inches apart, it will distribute one-quarter less than it will where there is 32 inches between the rows, as the 8 inches added to 32 is one-quarter of that number, there will be one-quarter less number of rows per acre.

GENERAL REMARKS.

The quality of material used in the construction of our goods is the best for the purpose we can buy.

It is manufactured and put together by workmen, most of whom have been in our employ for years and have become skilled in our particular work. We make everything from the raw material that is practicable, so that each piece receives close and careful inspection, and the machine as a whole goes from our hands bearing the stamp of honest endeavor, and is sold on the following broad and liberal

WARRANTY.

We warrant our machines to be made of good material, and well finished ; to do 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 is made, or ourselves, must be notified within 10 days therefrom, and if, upon a second trial, under the supervision of the agent, 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.

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



FOR
SALE
BY

KEE R. McKEE,
CADIZ, KY.