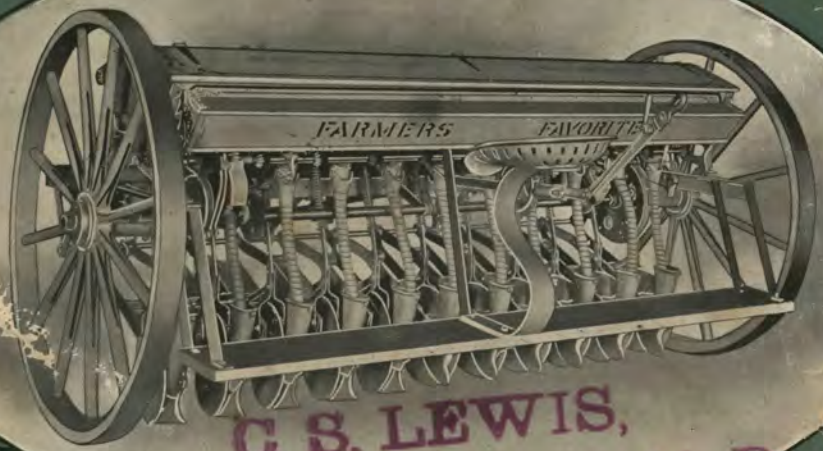
FARMERS' FAVORITE GRAIN DRILLS



Manufactured by

BICKFORD & HUFFMAN CO.

FACTORY-MACEDON, N.Y.

BRANCH HOUSE - BALTIMORE, MD.

Farmers' Favorite
Grain and Fertilizer Drills

1842
Originators
of the
Modern Grain
Drill.

Fig. 2

1903
The
Standard
of
Excellence.

All Standard and Convenient Sizes

Pin-Hoe, Spring-Hoe and Single-Disc

DRILLS

With and Without Fertilizer Attachment

Bickford & Huffman Co.

Head Office, Macedon, N. Y.; Branch, Baltimore, Md.

Convenient transfer points, with repair stocks, in the following States: New York, Vermont, Pennsylvania, New Jersey, Ohio, Michigan, Maryland, Delaware, Virginia, North and South Carolina, Tennessee and Georgia.

GIES & CO., PRINTERS AND ENGRAVERS, BUFFALO, N. Y.

Imitation is the Sincerest Form of Flattery.

Introduction

Bickford & Huffman Company was established in the year 1842 and soon thereafter manufactured, in their factory at Macedon, N. Y., the first grain drill built in the United States. Imitators quickly sprung up and multiplied in numbers as years rolled on, until to-day 46 different concerns are manufacturing grain drills in this country.

This company, however, has always led the march of improvement and its imitators have slowly but surely followed as soon as the expiration of patents allowed. The first successful double distributer was patented by Lyman Bickford in 1867 and to-day 90 per cent. of the grain drills manufactured in America pay homage to this basic device. The several Wizard Fertilizer patents were acquired by us in the eighties, when we abandoned the Marks Feed, and on the expiration of our patents the Wizard is being widely copied.

And so it will be with the spiral steel funnel, the chilled extension hub, the "Plowfur" single disc, the Wizard adjustment improvements and all our latest patented devices—as our patents expire our competitors will adopt our devices.

The Strong Lead and Garner the Grain, The Weak Follow and Sift the Chaff.

Nevertheless, as we led in the manufacture of the first seed drilling device in 1842, so do we still lead in improvements, and it is with great satisfaction that in the year 1903 we are able to offer the trade so many substantial improvements and new devices, amongst which we mention:

The New Balanced Angle-Steel Frame.
Adjustable Wizard Fertilizer Positive Force Feed.
"Plowfur" Single Disc.
Extension Chilled Hub.
Improved Box and Roller Bearings.
"Perfection" Grass Seeder.

Furthermore, regardless of the fact acknowledged in the trade that the Farmers' Favorite Drill has always been a light-running drill, we have reduced draft a further 150 pounds, placing our machine in a class entirely alone in this particular.

We have never catered to the low-price dealer or the cheap farmer. We sell a substantial article, we lead a staple industry with a standard tool, and our machine is only found in the hands of substantial people. Our prices will compare more than favorably with all other makes of drills, durability, workmanship, finish and reliability considered.

BICKFORD & HUFFMAN CO.

The Keynote of Creation!
Change and Improvement.

About Our Fertilizer Drill

In 1894 the Bickford & Huffman Company acquired from a native of Macedon—Samuel Everett, a practical farmer and mechanical genius, the patentee of the famous Wizard Fertilizer Feed—a patented improvement on his original device whereby the quantity of fertilizer sowed to the acre could be regulated more simply than by changing the speed of the driving mechanism for each different quantity required. With this patent as a basis, this company has during the past seven years spent thousands of dollars experimenting in factory and field, and as a result is now able to embody in the Farmers' Favorite Drill a device, the introduction of which is destined to mark an epoch in the history of grain drill construction. Extensive and practical tests of this device in the hands of farmers have demonstrated the reliability of our claims. The range of fertilizer is from 40 to 820 pounds to the acre with only one change of speed. The fertilizer is distributed by a positive force feeder, and the adjustment is so simple that a child can operate it under all conditions.

The Same Old Company for 63 Years. Beware of Imitators and Imposters.

Your favor of the 28th inst., enclosing copy of contract for 1903, received. This is my forty-first contract with you. I made my first contract with Lyman Bickford in April, 1861. My first sale was made to Wm. Barrett, Wayne, Steuben County, and this drill is still in actual use.

You led them all in the sixties and 1903 will find your drill still in the van.

Yours respectfully,

ERASTUS RAPALEE.

Dundee, N. Y., Oct. 31, 1902.

The 1903 Wizard Combines More New Features than have Appeared on All Other Grain Drills During the Past 10 Years

Combined Grain and Fertilizer Hoe Drill

Fig. 3

By actual dynamometric tests we have demonstrated that this machine runs 150 pounds lighter under working conditions than any drill of the same size and class ever manufactured.

Sows Fertilizer, Wheat, Oats, Barley, Rye, Flax, Millet, Beets, Buckwheat, Peas, Beans, Corn and Grass Seed.

For durability, finish and general excellence it stands unequalled.

We Have No Competitors.

The Farmers' Favorite Stands in a Class by Itself.

About Our Plain Grain Drill

Quality not cheapness has ever been the keynote in the manufacture of the Farmers' Favorite. A casual glance at our Plain Drill will substantiate this statement. Built to wear, to sow accurately, to satisfy the user, and to bring credit to the manufacturer and the dealer, our Plain Drill with its 1903 improvements surpasses all previous efforts in the Grain Drill art. Frame perfectly balanced, patented box and roller bearings, and extended chilled hub, relieving the axle of all weight and leaving it free to drive the mechanism of the drill.

Farmers!!
Dealers!

TEST OUR STATEMENT AS FOLLOWS:

When drill is set up complete remove axle from the machine and you will find the drill will not only stand up without the axle but the ground wheels will be in perfect alignment and the drill can be hauled along without the axle. Did you ever see another drill that would stand this test?

The Farmers' Favorite.
The Horses' Friend.

The Farmers' Favorite Drill, purchased of you in April last, fulfilled every claim you made for it. I found it to be of very light draft, being easily handled by two horses on very hilly land. I sowed 10 acres of oats, using the seeder at same time for alfalfa, and the results were a splendid crop of oats and an exceptionally fine field of alfalfa, perfectly even. I also seeded or planted 28 acres of corn and the evenness of the field of corn was very gratifying. A test to which we subjected this drill was one outside your list of guarantees. A pair of colts 24 years of age tested it by running away with it, and the abruptness with which they stopped showed that the drill was properly and strongly constructed. This team ran across a 10-acre lot and collided with a gate post. There they left the drill in a somewhat battered condition, but after a few repairs which you promptly made it was in as good condition as ever. In fact the runaway took place the first hour we used it. I heartily endorse this drill and take pleasure in commending it in every particular.

DAVID M. GERE.

Solvay, N. Y., Dec. 18, 1902.

The Most Perfect Piece of Farming Machinery Made.
The Product of 60 Years' Application of Grain-Drill Genius.

Plain, Grain, Hoe Drill

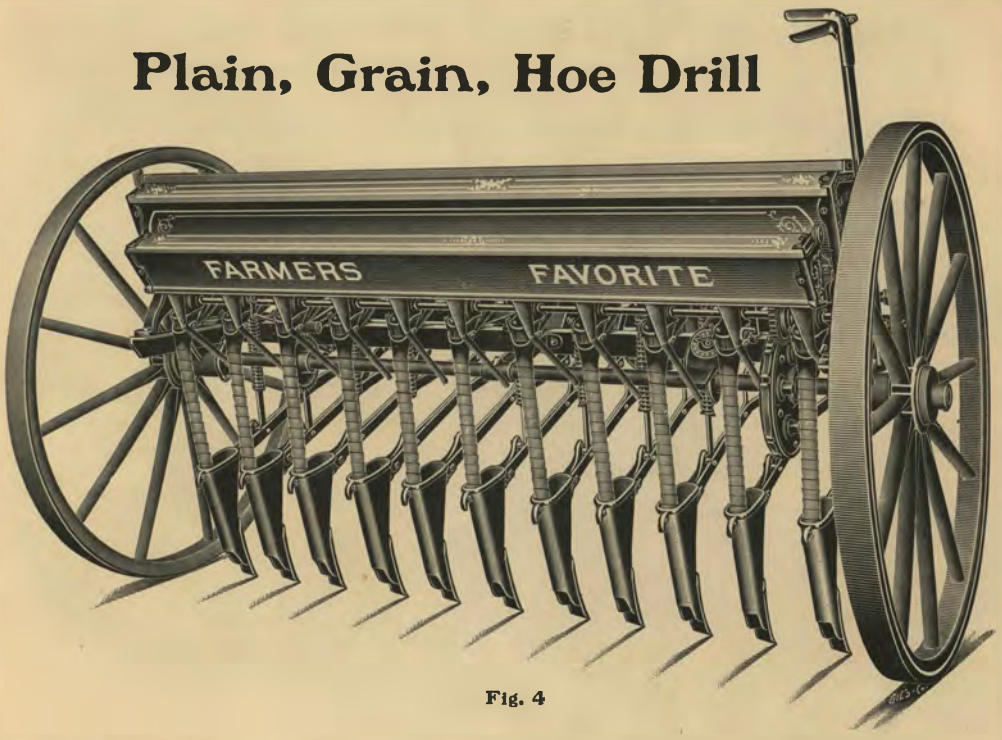


Fig. 4

By actual dynamometric tests we have demonstrated that this machine runs 100 pounds lighter under working conditions than any drill of the same size and class ever manufactured.

Sows Wheat, Oats, Barley, Rye, Flax, Millet, Beets, Buckwheat, Peas, Beans, Corn and Grass Seed.

The Plain Drill is used where fertilizers are not required. This machine embodies all the same points of excellence of material and workmanship as the combined machine shown on page 5.

You may fool some of the people all of the time, and all the people some of the time, but not all the people all of the time.

The use of a disc on seeding machines is old in the art. As far back as 1854 Bullock applied the disc to a drill. It is a fact that hundreds of patents have been granted on different applications of the disc to seeders. The most important of these have been as follows : Lee in 1857 ; Hunt & Kennedy in 1858 ; Haworth in 1870, and again in 1875 and 1879 ; Hoflund in 1881 ; McSherry in 1886 ; Arnett in 1889 ; Lee in 1895 ; Pelton in 1895; Packham in 1896; Jones in 1897. Each of these in turn has been a mechanical re-arrangement of practically the same important elements. Bickford & Huffman Co., always alive to the necessity for using the most practical devices, have heretofore been satisfied with a combination of the McSherry 1886 and Jones 1897 patents, under which up to last year Farmers' Favorite Disc Drills were manufactured. Exhaustive and practical trials long ago demonstrated the necessity for a double drag bar for discs. Some manufacturers with an eye to cheapness have used a single drag bar on disc drills. One manufacturer advertises as follows :

From a Competitor's Catalog.

"We use a single drag bar on all our disc drills. This bar is made of heavy high-carbon steel and is to a certain extent flexible, but always retains its shape. Will not bend or twist under the most severe strain."

How misleading and fallacious a statement. Farmers ! Dealers ! You certainly know that "flexibility" means " ability to bend," but here we have a claim to a flexible "single drag bar" that will not bend "under the most severe strain." Furthermore, the claim that a "heavy high-carbon steel bar is to a certain extent flexible" is too translucent an absurdity to fool anyone. Don't be fooled with a single drag bar even though it is of heavy high-carbon steel that is "flexible but won't bend."

Consider the side thrust, twisting, strain, rocks, stumps, hard ground, etc., which the disc must overcome, and it is easy to understand the absolute necessity for a double drag bar in a durable machine. Flexibility is desirable. On the Farmers' Favorite Disc we get it through a pressure spring of superlative oil-tempered steel (not "high carbon").

For many years our experts have studied the disc question, and in 1903, after exhaustive practical trials in 38 widely-separated localities, we offer to the trade the climax of disc construction :

The "Plowfur" Disc!!

Invented by our own people in Macedon, N. Y., the cradle of the grain drill industry ! For cuts and description see pages 10 and 11.

This Disc is the Disc of Mechanical Merit, Not the Disc of Discord.

Plain Grain Single-Disc Drill

The "Plowfur" **The Grain Drill Sensation of 1903.**

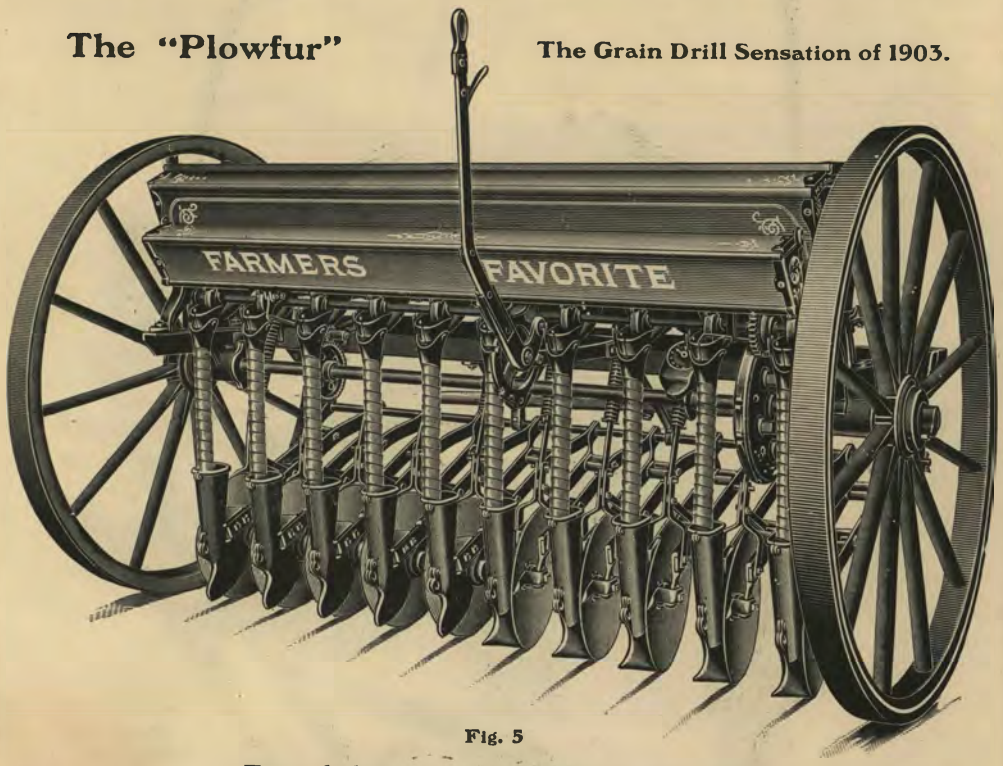


Fig. 5

Even lighter running than our Hoe Drill

To the same frame can be attached either discs or hoes. This is an advantage over any other make of drill.

Sows Wheat, Oats, Barley, Rye, Flax, Millet, Beets, Buckwheat, Peas, Beans, Corn and Grass Seed.

The Disc Drill is also supplied with fertilizer attachment.

The Plowfur Disc

Fig. 6

Concave side of Disc

Fig. 7

Convex side of Disc

Fig. 8

Rear of Disc

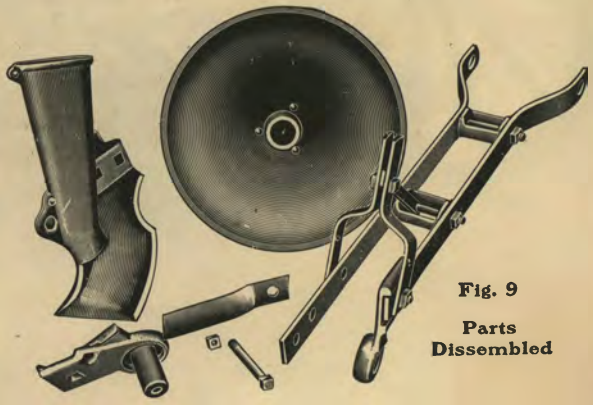


Fig. 9

Parts Dissembled

See that moldboard! We challenge the world to produce a disc drill heretofore on the market that makes a proper seed bed for grain. All disc drills make a narrow V-shaped seed bed in which the grain is jammed and crowded. The "Plowfur" makes a broad flat seed bed, giving each seed of grain room for germination and development. Like a human being, grain wants room. There is as much difference between the grain planted with the "Plowfur" and that planted with the "shield-within-the-furrow" kind of disc, as there is between the healthy country-bred farmer and the sickly tenement-crowded being of a large city.

"Plowfur"

(See Cuts on Opposite Page)

Fig. 6 shows concave side of disc. The disc travels at the correct angle to prepare the way for the furrow opener which follows its cutting edge. Note that the disc is scraped perfectly clean of soil from circumference to hub.

Fig. 7. Convex side of disc. The perfect fit of the boot is here shown, ensuring a clean-cut furrow.

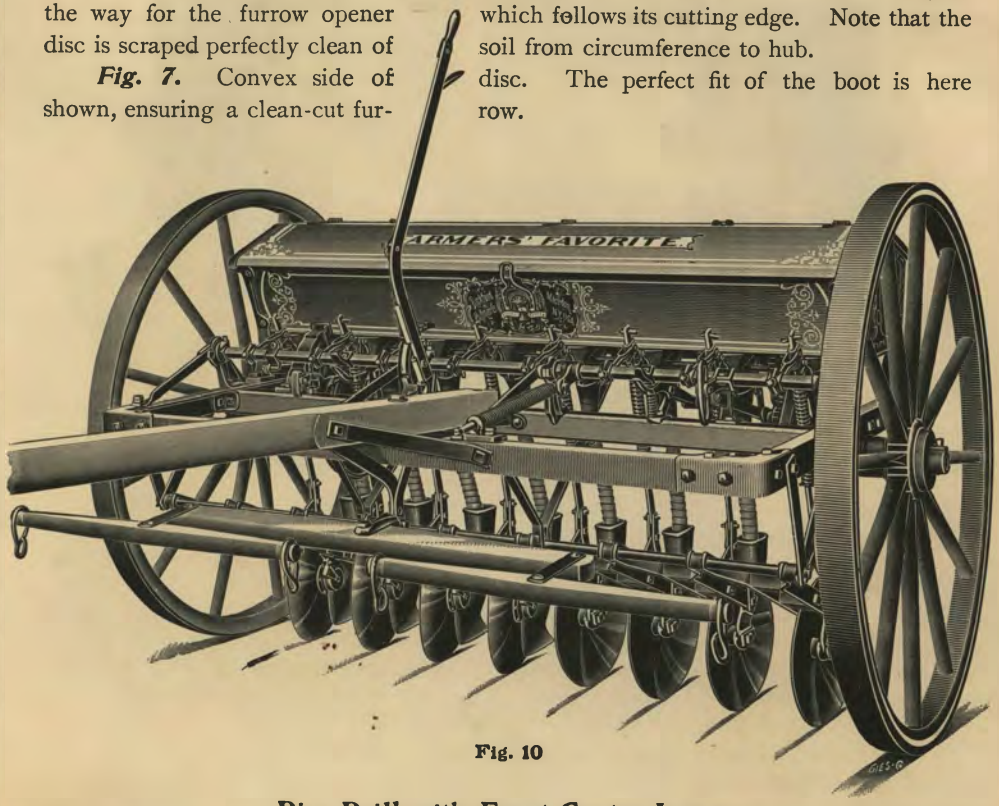


Fig. 10

Disc Drill with Front Center Lever.

Fig. 8. See that moldboard! This furrow opener insures a flat-bottomed seed bed unlike the old-fashioned disc "shield entirely within the furrow," producing its pointed V-shaped cramped grave into which the grain was "interred." Here is a device which in itself, practice has shown, produces and is responsible for a greater yield of grain than any other planting device ever put on the market.

Fig. 9 shows the parts dissembled. Double drag bars, insuring stability, strength and reliability. *Chilled hub bushing*, the hardest to wear out and the easiest to replace. Can be renewed for five cents. Experience and acquired genius in grain drill devices make this possible.

Double Force-Feed Grain Distributers

Fig. 11

Fig. 12

Sows Wheat, Rye, Buckwheat, Flax, Millet, Beet Seed, Oats, Peas, Corn and Beans of all kinds.

The superiority of a Double Force-Feed Distributer over single feed is best shown by the fact that nearly 90 per cent. of all the seed drills sold are equipped with double distributers—this is a fact, not a theory. *A Double Force-Feed Grain Distributer* furnishes practically two drills in one. It is adapted to the distribution of every variety of field grain or seed, from flax to corn and beans, sowing all equally well and uniformly. It does not bunch, clog or skip in operating. Its motion is positive and continuous when sowing large or small quantities, and without variation, up hill or down. The feeding channel is never altered in size. The feed wheel simply runs faster or slower to regulate the quantities sown per acre.

The bottom of body or grain box consists of a series of hoppers, one over the mouth of each distributer. One side of double distributer is especially adapted to sowing coarse, bulky grain, such as corn, oats and barley, while the other side is equally well adapted to the proper distribution of fine grain, such as wheat, rye and flax seed.

For sowing long-nosed Texas or southern rust-proof oats, we furnish an effective *agitator*, which insures uniform distribution. This must be ordered with the drill and built as a part of same at the factory. It cannot be attached to drills already out.

Caution!! Beware of spurious claims on Double Distributers. It is not difficult to satisfy yourself where the first Double Distributer was made.

In the past four years 22,000 practical tests have been made by us to insure the accuracy and positiveness of the old reliable Double Distributer.

Imitated! adjudicated! compromised! but never yet equalled. We still stick to our original device, of which several millions are giving universal satisfaction to-day.

Grain Speed Device

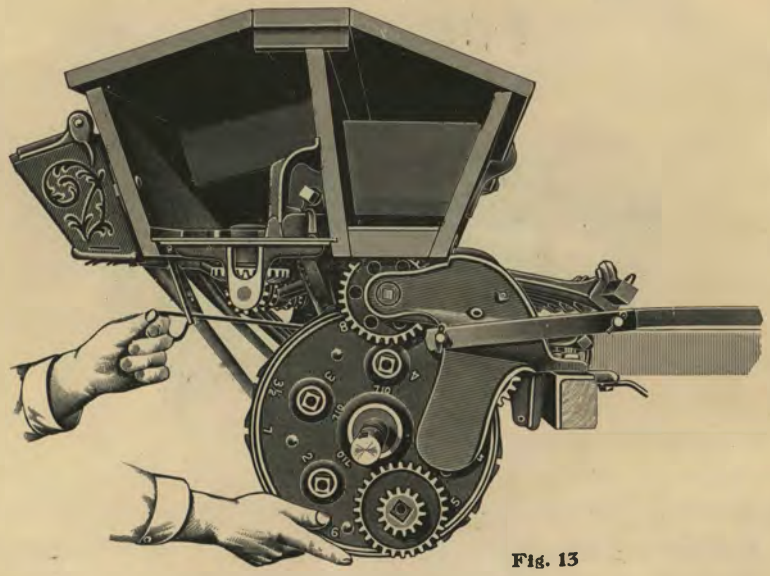


Fig. 13

We operate our grain feeds by our patented gear speed device. All changes of quantity ranging from 20 quarts of fine grain (wheat, rye and flax) to 216 quarts of coarse grain (oats, barley, corn, etc.) are effected by the use of one change gear only. A *geared* drive is positive—no chains, no ball and socket, or bevel gear compromises between good mechanical principles and salesmen's "talking points." Just a dependable, safe, reliable, positive geared drive without the inconvenience of a box full of loose change wheels or the annoyance of a slippery and uncertain "honeycomb catch-and-miss" device.

The speed device is located upon the axle of the drill inside of the frame, out of the way of soil, stones, sticks or trash, which are often carried up by the ground wheels, breaking other styles of gearing costly to repair. The axle upon which the ground wheels are ratcheted independent of each other gives a continuous positive motion with the revolution of either or both of the ground wheels, avoiding side draft, and securing a more uniform flow and distribution of seed than is possible with any side geared drill.

The speed device has five projecting studs, and change of quantity is instantaneously effected by placing the change gear on the desired stud and locking it in position. This is done in the rear of the drill with a plain view of the operating directions. It is not necessary to walk around to the front of the machine, to be kicked by the horses in making the change, nor does it require a cold chisel to loosen gears to slide along a rusty shaft, nor is it necessary to loosen any thumb nuts or bolts. Simplicity, positiveness, reliability!

Our Wizard Fertilizer Force Feed

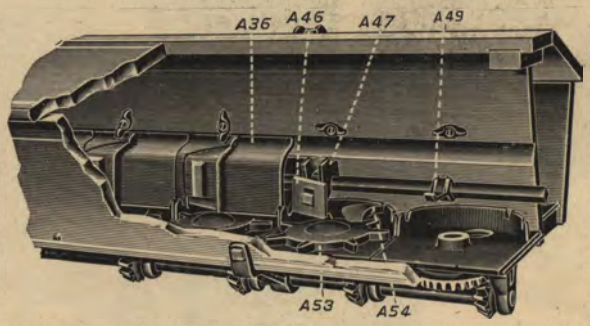


Fig. 14

For years we have built and still have the right to build the Marks Fertilizer Feed, now being used by many of our competitors, although some of them are experimenting with the expired Wizard patents. The difficulty we experienced in distributing wet and sticky fertilizers led to the invention of the Wizard, which distributes any and all varieties of commercial fertilizer. The Wizard has been covered by five patents which we solely own, each embodying an improvement over its predecessor. Three of these five patents have expired and are being widely copied. The two remaining patents, however, insure to the Farmers' Favorite a commanding position in the sowing of fertilizer.

Refer to cut above. The revolving prongs of A 53, the stirrer or wheel, cut off the under side of the body of fertilizer and carry the same under the cut-off gate A 46. Beyond this gate the fertilizer is carried to a large discharge opening. Lumps or hairy sticky substances are forced through this discharge opening by the knocker A 54, which raises and drops as each finger of the stirrer A 53 passes it. The cut-off gate A 46 may be raised to increase, or lowered to decrease, quantities by a simple lever at the end of the hopper. See Fig. 15, next page.

Positive Force Feed

Fig. 15

The quantity of average commercial fertilizer sowed at slow speed, locking the lever (see Fig. 15) in the lower notch, on 8-inch drills is reliably 40 lbs. to the acre, and on 7-inch drills 45 lbs. to the acre. This quantity is gradually increased, by raising the lever in the different notches, to 185 lbs. to the acre on 8-inch drills or 215 lbs. to the acre on 7-inch drills. By a simple change of speed at which the feeds are driven the quantities may be further increased, and by locking the lever in the lower notch 8-inch drills will sow reliably 200 lbs. to the acre and 7-inch drills 225 lbs. to the acre, increasing gradually and positively with each notch to 800 and 820 lbs., respectively.

Fertilizer Speed Device

This simple and little device is located, like the Grain Speed Device (see page 13), on the axle of the drill, inside of frame, and is operated from the rear in practically the same way. The device, however, has only one stud, and the change of quantity is obtained by placing the large or small gear on this stud for fast or slow speed, as the case may be.

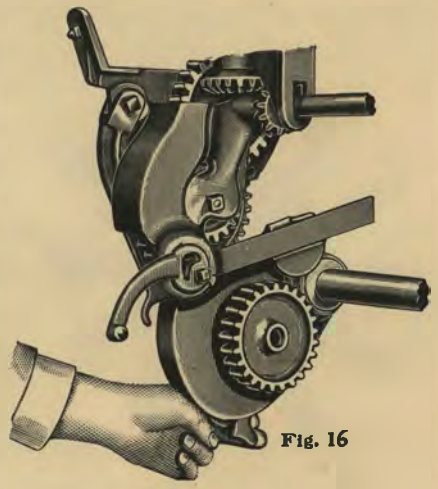


Fig. 16

Draught! Weight! Wheel Construction!

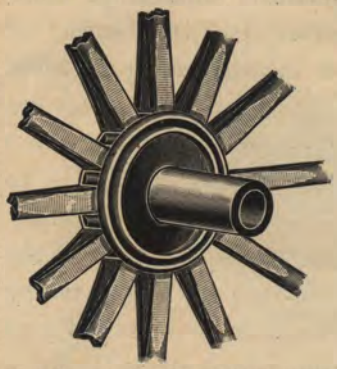


Fig. 17

The draft of our drill, always light, has been reduced an average of a further 150 pounds by a patented re-arrangement of parts and a new application of the roller bearings. ***Fig. 17*** shows the ground wheel substantially made of the soundest and most carefully selected high grade lumber—tires with 3-inch tread of soft-welding low-carbon steel. Note the hub! Did you ever see a grain drill with the wheels falling in at the top and rubbing the box? This hub extension insures a permanence to the alignment of the wheels never before attained. ***Fig. 18*** shows the anti-friction roller bearings in which the hub extension revolves, itself driving the axle by the usual pawl and ratchet device, ***Fig. 19.*** The roller bearings pass into the hanger box ***Fig. 20,*** insuring a perfect alignment and wonderful lightness of draft. In 1902 we had reports of fourteen runaways with our drill—see page 6. The horses simply mistook the drill for a light buggy. Operators of the Farmers' Favorite are economizers of horse flesh. There are sixteen ounces to the pound in the Farmers' Favorite, but it is carried and operated, by scientific and correct mechanical means, to produce the lightest draft drill in the world.

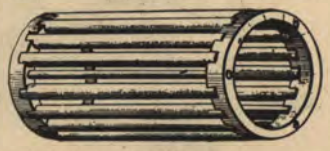


Fig. 18. Roller Bearing

Fig. 19

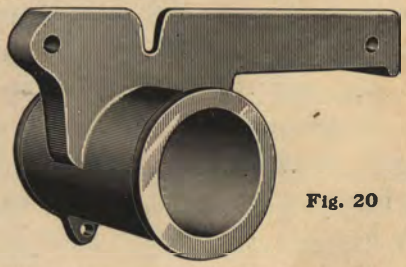


Fig. 20

Steel Frame

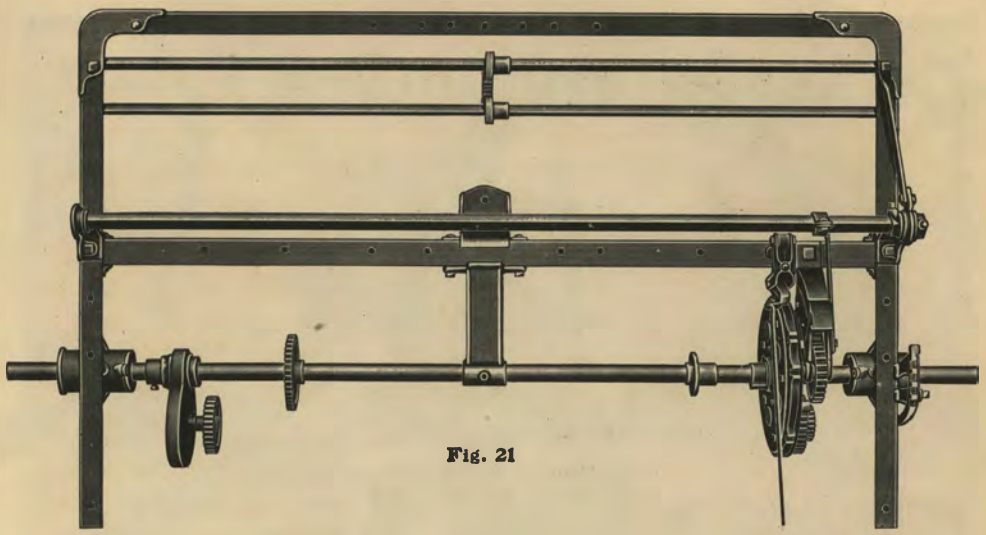


Fig. 21

The maximum of strength with a saving of weight has led us to adopt the high-carbon angle steel for our frame.

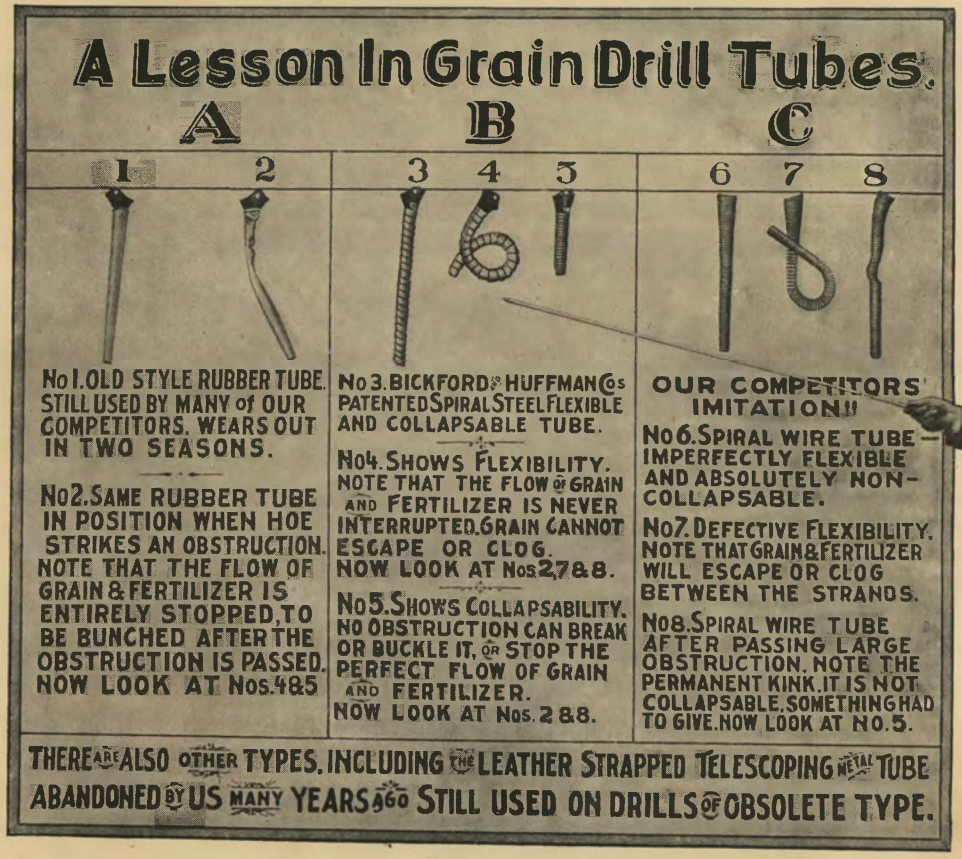
The frame is constructed of four pieces, all of angle steel—steel front rail, steel side arms and steel bed piece. The last named is reinforced with a stiff hardwood filling piece to further strengthen the backbone of the drill.

The corners are securely bolted and riveted to malleable caps, making breakage impossible.

The advantages of a frame the front rail and side arms of which are in three separate pieces are apparent. In case of damage in transit or other accident it is more economical to replace one piece than the whole frame, as is necessary in the case of the one-piece frame drill with the corners bent.

We were first to introduce the steel bed piece, the value of which, in adding strength and rigidity, is recognized by our several imitators.

Steel Versus Rubber



The spiral steel funnel or grain tube is a source of much concern to competitors. They cannot use it or anything equally effective, as we are fully protected by patent rights.

Its Non-Rusting Qualities.

The steel funnel for 1903 is treated with talismanic oil and Prussian blue, insuring against rust or corrosion under ordinary circumstances.

Steel-Ribbon Grain Tubes

Fig. 23

The great and constantly growing popularity of our Steel-Ribbon Grain Tubes warrants us in unhesitatingly recommending them as far and away the very best conductors made. We introduced their use in America four years ago and the result has warranted the price we paid for this remarkable patented device. The tube is made of one continuous piece of ribbon steel, helically rolled, perfectly flexible and perfectly collapsable—cannot buckle or stop the flow of grain or fertilizer. There is nothing else like it. Rubber tubes will buckle and have to be replaced at frequent intervals. Tubes made of leather and metal combined are not only clumsy but cause much annoyance to the user by reason of the leather getting hard and dry, and breaking.

Lifting and Pressure Lever

Hoe Drills

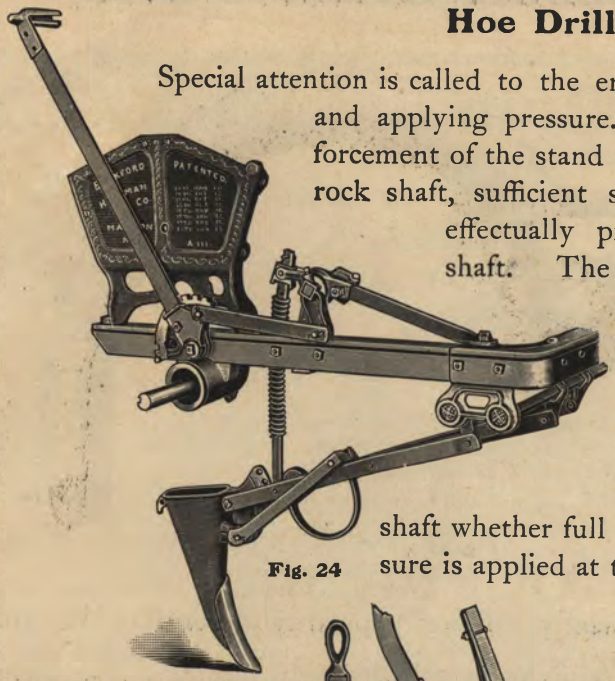


Fig. 24

Special attention is called to the end lever for raising hoes and applying pressure. By a wrought reinforcement of the stand castings supporting the rock shaft, sufficient strength is obtained to effectually prevent torsion on the shaft. The hoes, whether peg or spring, are adjusted to break back promptly and easily on striking any unusual obstruction, avoiding any undue strain upon the rock shaft whether full or only part of the pressure is applied at the time.

Disc Drills

Fig. 25

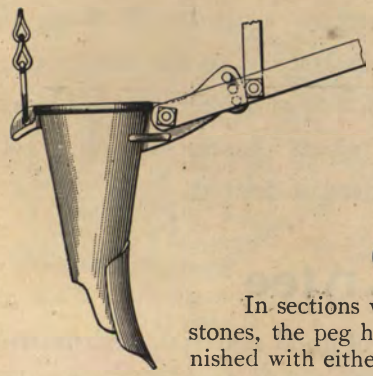
We do not recommend an end lift for disc drills, because, unlike the hoe, the disc must ride over stumps or other unusual obstructions, thereby putting a strain on the rock shaft which is more effectually overcome in locking the pressure lever on the rock shaft in the center than at the end. Exhaustive trials and many years of actual use have demonstrated the desirability of the center lever on disc drills.

Combined Spring and Peg Hoe

Our Spring Hoes are simple, strong and durable. The spring hoe, a device for adapting the drill to use on rough stony farms, where a break-pin would be entirely impracticable, is a special feature of our manufacture. It is certain in operation, durable as any part of the drill, and is the desideratum of its class, with less parts and more endurance than any other device of its kind.

If spring should break, put in wood peg and continue work. Spring does not mesh and become worthless, like a coil spring.

Fig. 26



The drag bars are steel, and the hoes are of an improved pattern, with double and reversible steel points. The distance between the center of the outside hoes and the center of tire on the ground wheels is same as space between hoes on both 7 and 8-inch drills.

Our Peg Hoe

In sections where the land is light and free from stumps and stones, the peg hoe is desirable and is always used. Drills are furnished with either spring or peg hoes, as ordered.

Hoe Chain Attachment

In some sections the hoe chain attachment is still popular. When desired, it must be specially ordered and will be supplied at small extra price.

The attachment consists of a bar of stiff structural tubing attached to rear ends of side arms of frame. Staples are fastened on this bar at equal distances. Chains fastened to rear of hoes pass upwards through these staples, so that any hoe can be raised singly at will.

Fig. 27

Force-Feed Grass Seeder

Fig. 28

Is very simple, strong and durable in construction, has a wide range of quantities and is simply adjusted. It is attached to the rear of the body, where it is most convenient for filling and operating. Metal spouts are supplied as in the above cut, which illustrates how grass seed may be sown in front of the hoes or discs, if desired.

Our Guarantee

We warrant our drill to be well made, of good material, well finished and durable with proper care. If on one day's trial it should not work well, the purchaser shall give immediate notice to the Bickford & Huffman Company and their agents, and allow time to send a competent person to put it in order. Such purchaser shall, on the arrival of an expert, immediately and personally render friendly assistance, and give the drill further and impartial trial. If it cannot be made to work well, the purchaser shall return it at once to the agent from whom he received it, and his payment will be refunded. Continuous use of the drill, or use at intervals through season, or failure to notify as above, or to return drill as agreed, and loaning or leasing drill to any other party, shall be deemed positive acceptance of the drill by purchaser.

Sowing Corn, Peas and Beans with Drill

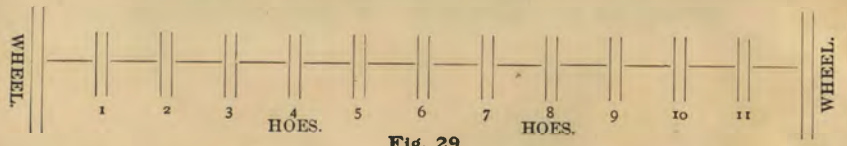


Fig. 29

The Favorite is largely used for the drill planting of field crops for cultivation, such as corn, peas and beans, the rows of which can be made to stand any distance apart desired within the limit of range in your drill, as shown in *diagram*. For instance, using an 11-hoe drill, and planting only from numbers 3 and 9, if the hoes are 7 inches apart in the drill, the rows of seed will be 3½ feet apart, and with an 11-hoe, 8-inch drill, 4 feet apart, the wheel track serving as a guide for the return bout. Two rows of corn are generally planted with drills of these sizes.. Any size drill can be used by providing a simple guide or marker for driving. With our *fertilizer drills* the most desirable method is to run one stream of fertilizer into the row *with the seed*, and an *additional stream* through one hoe on each side. This is more beneficial than when the entire amount of fertilizer is sown with the seed. *Be careful not to plant too much seed.*

DRILL-PLANTED CORN FOR FIELD CROP BY OLD METHOD.

Fig. 30

CORN PLANTED BY NEW METHOD.

Another Step Forward

A very simple device, recently patented by Bickford & Huffman Co., enables the operator to plant corn and beans approximately in hills. A limited number of seeds is dropped through the hoes, in lines from 5 to 7 inches in length, and then a space is passed in the trenches without dropping seed, these spaces varying in length from about 11 to 46 inches, according to the various adjustments quickly and easily made. While this device will not drop the corn quite as well as an expensive check-row planter, still we believe that it will do practically as good work as the one-horse single-row planters, and do the work much more speedily. It is generally conceded that corn or beans so planted are more easily cultivated, can be kept freer of weeds, and the growing crop is afforded better sun and air exposure than is possible where the seed is planted in continuous lines.

BEANS PLANTED BY NEW METHOD.

Fig. 31

Bean Growers' Delight

In order to secure the best and most satisfactory results, it is advisable to have the seed bed in good condition, and care should be taken to keep the hoe points free from rubbish. Otherwise, in trailing they will catch and strew, or improperly bunch the falling seed. To every purchaser of *Favorite Drills*, our patent corn wheels are furnished free of charge, when ordered. This device is especially valuable for the planting of sweet corn for canneries. In planting beans they are bunched so as to be more convenient to pull, permitting the growing plants to branch out and better sustain an upright growth, and produce a largely increased yield.

Sugar Beet Planting

Fig. 32

Sugar beets should be planted in narrow drills, to save labor in thinning, and to more effectually permit of proper and close cultivation. The above cut shows our beet hoe with chilled forward extension point and follow cover wheels, extensively and successfully used in many countries.

Bristow Turnip Seeder

Fig. 33

The cultivation of turnips has been carried on most extensively in New Zealand, where they are chiefly raised to feed sheep, the enormous flocks of which produce a large share of the world's wool crop. This company owns rights to the Bristow Turnip Seeder—the only successful device ever invented whereby the cost and labor of thinning turnips are avoided. The Bristow Seeder deposits reliably one seed at a time, any distance apart from 2 to 18 inches, and in rows 14, 21 and 28 inches apart.

301 YEARS
of
GRAIN DRILL EXPERIENCE

The above photograph, made December 16th, 1902, shows ten employees in BICKFORD & HUFFMAN Co's factory, MACEDON, N.Y., U.S.A., whose combined service in that factory totals 301 YEARS.

FARMERS' FAVORITE DRILLS
ARE THE PRODUCT OF
PRACTICAL EXPERIENCE.
Beware of Inexperience & Experiments.