

P. P. MAST & CO

SPRINGFIELD, O.

MANUFACTURERS OF.

BUCKEYE



GRAIN DRILLS

CIDER MILLS & C.

Branch Office, 216 N. Broad St. PHILADELPHIA, PA.



THE NEW BUCKEYE GRAIN DRILL.

Buckeye Agricultural Works, P. P. MAST & CO.,

Springfield, O., Jan. 1st, 1886

Dear Sir: In presenting this, our TWENTY-NINTH ANNUAL CIRCULAR, we desire again to tender our thanks to our agents and patrons for their very liberal patronage. The past season has been particularly marked with success in the sale of our machines.

We were compelled to run our factory day and night, working two sets of men during a considerable portion of the time, to enable us to supply the demand. Our buildings were large, but were taxed beyond their capacity so that we were compelled during the Fall to build large additions, enlarging several of the departments fully one-third. Our Factory buildings now embrace a floor space of over seven acres. We have also made large additions to our improved machinery for getting out the work, so that we are now prepared to fill all reasonable demands for our machines, with greater promptness than in past seasons. We have a large corps of skilled mechanics, some of them having been with us from the time the Buckeye Works were established, over a quarter of a century ago.

Many changes have taken place since we commenced in 1856—great changes have been made in the style and mechanism of Farming Machinery. Our aim has been to keep up with the times, and as far as possible anticipate the wants of our customers, by producing improved Implements, which would better serve their purposes. We would also acknowledge our obligations to many of our customers for the very valuable suggestions made by them from time to time, and shall be ever ready to hear them, as we regard our interests and theirs identical, and we desire to make what is best suited to their wants. How far we have succeeded in this, we must leave them to judge, but the best evidence we have of this, is the constantly increasing demand for the Buckeye Machines.

In this circular we call your attention, particularly, to the *Buckeye Drill*, which has the largest sale of ANY DRILL in the world. It is being sold and used all over the Globe where grain is raised, and we can say without fear of successful contradiction, that the BUCKEYE has no equal anywhere. We ask your attention to the different kinds of Drills we make to suit the different kinds of soils, (see the following pages.)

We manufacture also, *One Horse Drills*, for drilling among standing corn, also, the *Buckeye Broadcast Seeder*, *Buckeye Spring Tooth Harrows*, *Buckeye Blow Sulky*, *Buckeye Senior and Junior Cultivators*, (Riding or Walking) *Buckeye Walking Cultivators, with Iron or Wooden Beams and Standards*, and the *Latest Improved Buckeye Cider Mills*. For description of all but Drills, send for special circulars of either. Thanking you again for past favors, and soliciting your continued patronage, we are

Very truly,
P. P. MAST & CO.

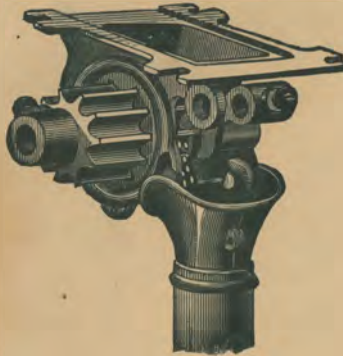
Change
to 6
from 5

THE NEW BUCKEYE GRAIN DRILL

The cut on page 1 represents our plain Drill, as made for the season of 1885; and while its general features are well known throughout the grain-growing portions of the world, we wish to say a few words descriptive of it. Absolute perfection has not and cannot be attained, but years of careful study and experience have, we think, enabled us to present to our patrons something which at least very nearly touches perfection as a grain sower.

WE CALL YOUR ATTENTION TO SOME OF THE MERITS OF THIS DRILL.

By examining the cut of our new feeder on this page, you will readily see that it is a positive force feed, and so arranged that the



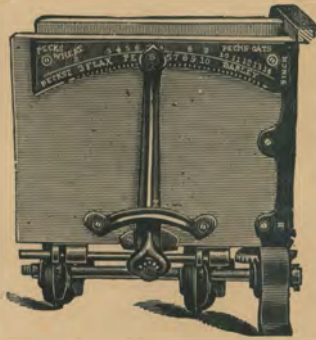
quantity of grain to be sown to the acre can be changed to any desired quantity, from one-half bushel to four bushels, in an instant,

WITHOUT A CHANGE OF GEARING.

The gauges or cut-offs in the feeders are all attached to one rod or shaft, and by a very simple device are moved endwise at once, thus increasing or diminishing the spaces in all the cups precisely the same, so that there can be no variation in the quantity of grain sown by each feeder. The quantity can be varied as little or as much as desired.

As the grain varies in condition, sometimes clean, sometimes damp or foul with straw or bits of weed, etc., it may be necessary to vary a little from the regular gauge; by this device you can vary just to suit the condition of the grain. The regulating gates are moved by a very simple device, as shown in the accompanying cut. It consists of an indicator arm, the lower end being connected to the shaft on which *all* the regulating gates are attached. Above is a dial with notches and figures indicating the different quantities, by simply moving the upper end of the indicator arm to the notch and figure indicating the number of pecks per acre you desire, and you have it without any further trouble. The dial plate is placed near the right-hand end of the hopper, where it is easy of access by the operator.

FORCE FEED GRASS SEED SOWER.—We have also perfected a Grass Seed Sower, which is simply the grain feed reduced in size. The regulation of quantity sown is made in a manner similar to that in the



large feed. Last season several thousand of them were sent out, and they gave such perfect satisfaction that every one who saw them wants one. We have so arranged the Plain Drill that the Grass Seeder can be used either in front or rear of the grain hopper, at the option of the user.

NEW LAND MEASURER.—This is a radically new departure in land measurers. It is placed in the end of the hopper, and is so encased as to not be disturbed by the grain. It indicates the acres and portions of acres sown, a feature hitherto not accomplished by any other land measurer.

NEW METHOD OF RAISING THE HOES.—Instead of the old style lifting bar, with handles in the center, we now have it arranged with a lever at the right-hand side of the drill, which is very convenient for the operator to handle, either walking or riding. With this arrangement we raise the hoes much easier than by the old method. We make the Drills with this lifting lever either in front or rear of the grain hopper, as desired, and designate them as "front lift" or "rear lift."

A quadrant or ratchet with notches is so arranged that the hoes can be raised any desired height, and with this one motion the feeders, both grain and grass seed, are thrown out of gear.

NEW HOE SHIFTER.—We have an entirely new, but proven and practical device for shifting the hoes. It is simple, easily operated, not liable to get out of order and for which we make no additional charge.

NEW HOES.—We have new hoes on the Buckeye for 1885 which can be regulated to run a uniform depth in any kind of soil, and are unquestionably the best Drill Hoes ever made.

HOPPER BOTTOM.—The bottom of the grain hopper is so constructed that all the grain can be fed out, a point not found in any other Drill. These and many other points of merit are found only in the New Buckeye for 1885.

SPRING HOE.—We have experimented considerably with Springs for Drill Hoes, and we are now prepared to furnish all who want Spring Hoe Drills with the best SPRING HOE in the market. Our New Spring



Hoe for 1885 is so arranged that *the Drag Bars pivot in the rear of the hoe and form braces to the side of the hoe to keep it from wobbling*; it also enables the hoe to fold *under* when striking an obstruction, which prevents the breaking of the gum tubes. All other Spring Hoes in the market pivot in front; hence, have none of these advantages.

Who can afford to be without a Drill?

When grain is put in with a good Drill the plants grow stronger and more healthy, the heads are larger and more uniform in height and size, are much better filled, ripen earlier, and are not as liable to be injured by rust. This is because the grain is planted evenly and regularly, and at a uniform depth, comes up at one time, is not so much affected by the drought, is better nourished and protected, and has free circulation of air between the rows.

1885! →



BUCKEYE GLASS FEED GRAIN AND FERTILIZER DRILL.

THE NEW BUCKEYE

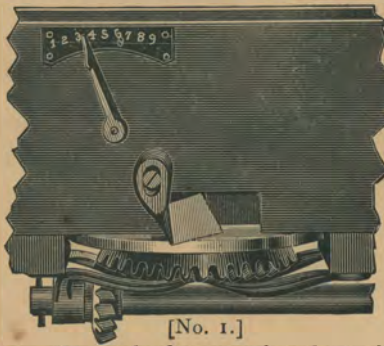
GLASS FEED

FERTILIZER DRILL,

THE GREATEST IMPROVEMENT OF THE AGE.

IT BEATS THEM ALL. DON'T FAIL TO SEE IT.

After thoroughly testing this new Drill last season, we can now say, without fear of contradiction, that we have the best combined Grain and Fertilizer Drill that has ever been offered to the trade. Every



[No. 1.]

farmer or dealer who has had experience with Fertilizer Drills knows how difficult it is to keep the feeders from corroding, rusting and clogging up. These difficulties we have entirely overcome, by the use of *Glass Disks*, or *Feeders*, instead of metal, and we find them a perfect success in all kinds of fertilizers; no matter how much acid they contain, they cannot affect the feeders.

These feeders consist of a series of horizontally rotating *Glass Disks*, projecting through openings in the rear of the hopper, and provided with scrapers or cut-offs, whereby the proper flow of fertilizer is secured and directed, as described in cut No. 1 on this page. Cut No. 2 shows the manner of driving the feeders; cut No. 3 the *Glass Disk* or *Feeder*. So far we have



[No. 2.]

spoken only of the Fertilizer Feed, but we can talk just as confidently of our New Force Feed Grain Feed, and our Force Feed Grass Seed Sower.



[No. 3.]

The Fertilizer and Grain Hoppers are combined in a double hopper, and while the front one is feeding out the grain the rear or fertilizer apartment is feeding out the fertilizer, both grain and fertilizer passing down through

the hoes and being deposited together in the ground. The fertilizer is brought in plain view of the operator before entering the hoes, so that he can see just what is being done. The greatest difficulty hitherto found in constructing such a machine has been that it seemed impossible to prevent the fertilizer from being worked into a sticky paste and then packing. This method of feeding fertilizer is entirely novel.

To all whose soil needs the use of fertilizers to successfully and profitably grow small grains, we therefor most confidently recommend our Combined Drill. All who use it will find it to be just what they need and just what we represent it to be.

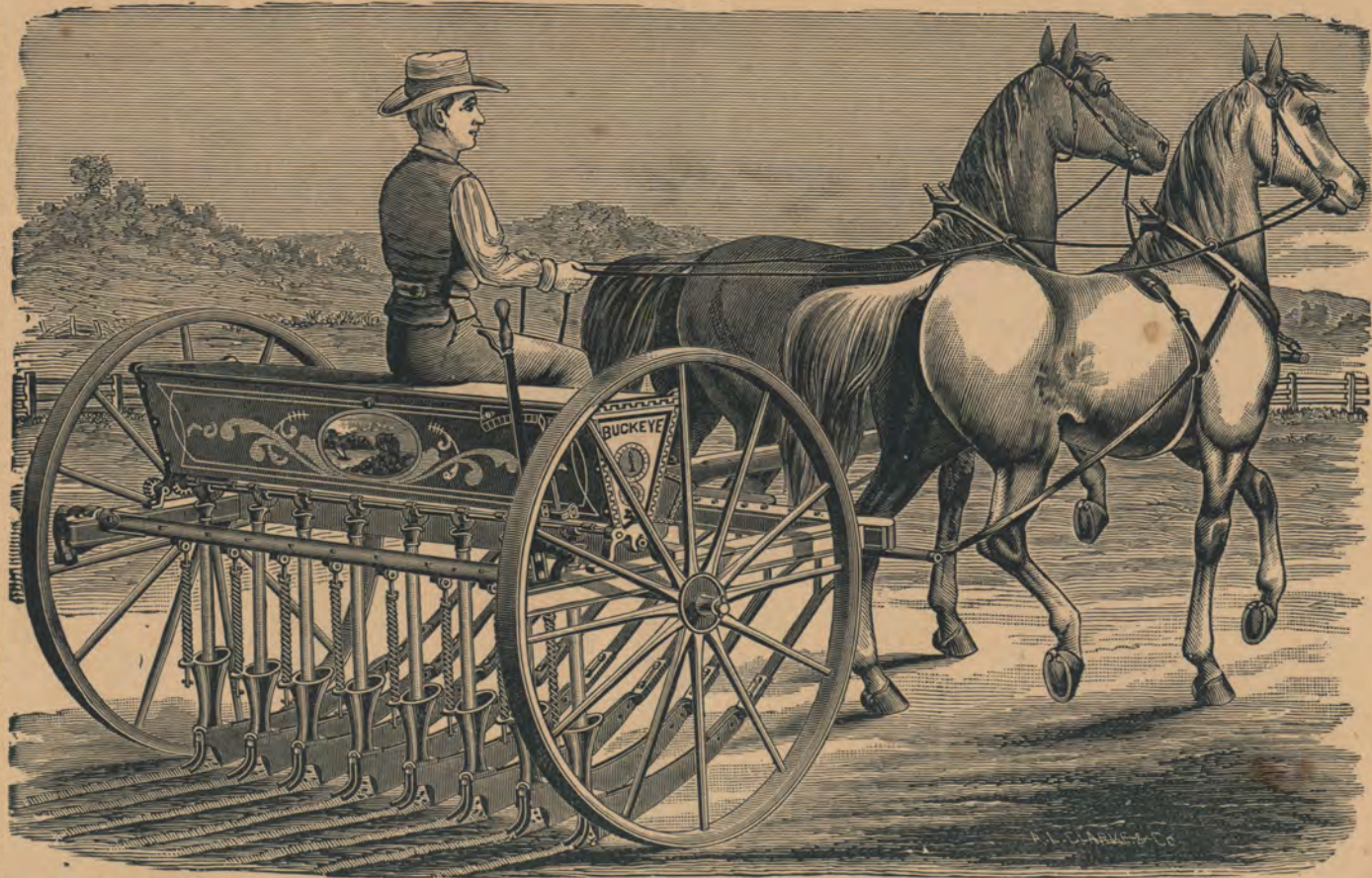
We would say to the farmers that we come before them with our Combined Grain and Fertilizer Drill for 1884 with many improvements and made in the following kinds, viz: Pin Hoe Drills, Spring Hoe Drills, Spring Pressure Drills, Shoe or Runner Drills, Roller Press Drills with Shoes, Roller Press Drills with Hoes, and we would ask of them that they carefully compare it point by point with all other Drills in the market before making a purchase. Examine carefully the grain feed, and see how quickly and easily, and, above all, to what degree of exactness, the changes are made for different quantities. In many drills made, exactness in quantities can only be effected by a brain-puzzling operation. In others, the point of exactness is overlooked in the endeavor to make ready changes. *We* offer you on the Buckeye a positive force feed, quickly changed to sow *any* quantity desired, and so simple in arrangement that any one can operate it. We will warrant our Drill to sow all kinds of grain more accurately for what it is set than the average of Drills that require a change of gears to effect a change of feed.

In all Fertilizer Drills where the opening is in the bottom of the hopper, and directly under the Fertilizer, when dry and fine, it will run through like sand, without any or but little agitation, and cannot distribute regularly. With the Buckeye Drill the Fertilizer will only pass out of the hopper as it is carried out by the movement of the ground wheel; when the motion is stopped the flow of guano ceases. It is to the interest, therefore, of every one needing a Combined Drill to carefully examine this new feed, as it is a radical departure from the fertilizer feeds in general use, and we can confidently recommend it to be the most perfect distributor in the market.

Do not fail to see the New Buckeye before you purchase a Drill this fall. For prices and terms, please write to us or any of our agents.

Respectfully,

P. P. MAST & CO., Springfield, Ohio.



THE NEW BUCKEYE SHOE DRILL.

New Buckeye Shoe Drill.

It is an established fact demonstrated by numerous experiments, that grain should not be covered more than from one to one and one-half inches deep. Complaints are sometimes made against Drills, that they do not distribute the seed regularly, and in some cases the charges may be justly made, but the unevenness is more frequently caused by the grain being covered too deeply, much of the grain not coming up at all, and some that does come through the thick covering is sickly and feeble, and the failure to come up evenly is charged upon the Drill. Many farmers have discovered the real difficulty, especially where they have sandy or light loamy soils. In some sections of country there has been a demand for a *Shoe Drill* to remedy the difficulties above named.

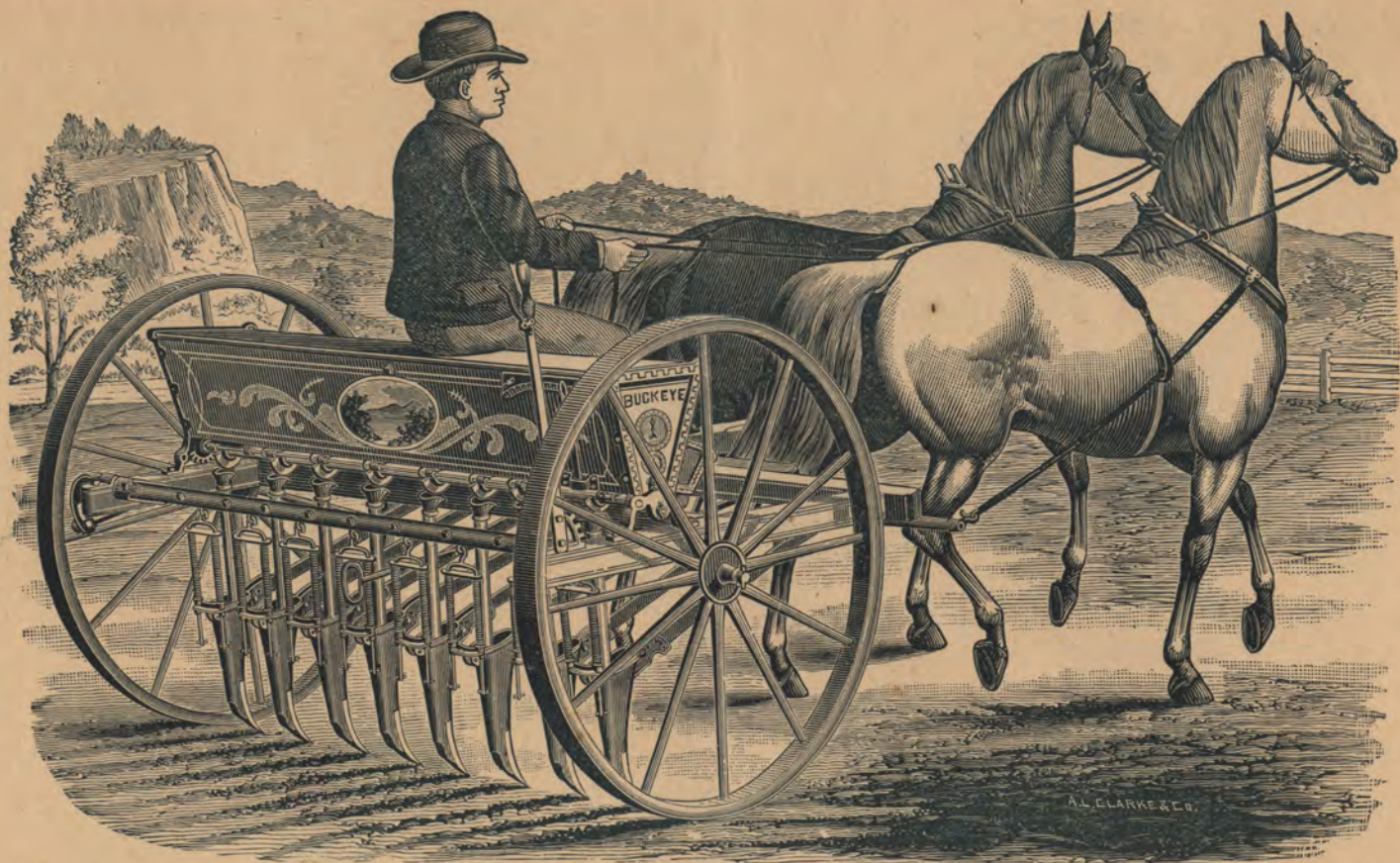
Several attempts have been made to produce one that would meet the wants, some partially succeeded but met with many difficulties. Cast Shoes without steel edges were tried, but they soon became blunted and could not be sharpened, and did not scour; were not made so they could be forced in the ground the proper depth, consequently the grain was not properly covered. Such drills were condemned.

We have carefully noted all these defects, and have constructed a Shoe Pressure Drill to remedy them. The cut on preceding page represents our new improvement in this style of Drill.

THE SHOES are made of the very best of Steel and shaped just about the same as the Shoes on a Double Corn Planter which are now extensively in use, and arranged with Cast Boots in the rear through which Rubber Tubes extend to conduct the Grain from the Hopper to the ground, and with spiral springs and pivot posts, which extend from the pressure or lifting Bar to the rear edge of the boot, which enables the operator to put the pressure right where it should be, and give a direct pressure. They are also provided with adjustable coverers attached to the rear, which serves to drag the soil into the furrows when needed. A lock lever is attached to the lifting bar by which the Shoes are forced into the ground or raised out. There are several hundreds of our Shoe Pressure Drills in use in different parts of the Country, and where the soil is adapted to this style, they work well. We do not recommend them for heavy clay.

All heavy soils, especially after rains, require the pointed tooth to sufficiently enter the ground to cover the grain, and we would recommend the Shoe Drill only for light loamy or sandy soils. Some seasons where clay soils were dry and well pulverized, the Shoe would work all right, but the next season the soil may be so hard that the Shoe would not be satisfactory. Therefore, for all heavy soils, we recommend the pointed hoe, with adjustable gauges attached to the rear of the hoe, to regulate the depth.

The Caster Attachment can be put on this as well as the Hoe Drill.



THE NEW BUCKEYE REAR SPRING PRESSURE DRILL.

THE NEW BUCKEYE

Rear Spring Pressure Drill.

The New Buckeye Rear Spring Pressure Drill is constructed with the ordinary Iron Bars and Springs, and so arranged that any desired amount of pressure can be put on the hoes with the Lever, or that it can be used without any pressure if so desired. It is also supplied with gauges to regulate the depth of the hoes so they will drill uniformly in depth whether at work in hard or soft ground. The Drag Bars are also arranged with a drop to let the hoes follow the unevenness of the ground.

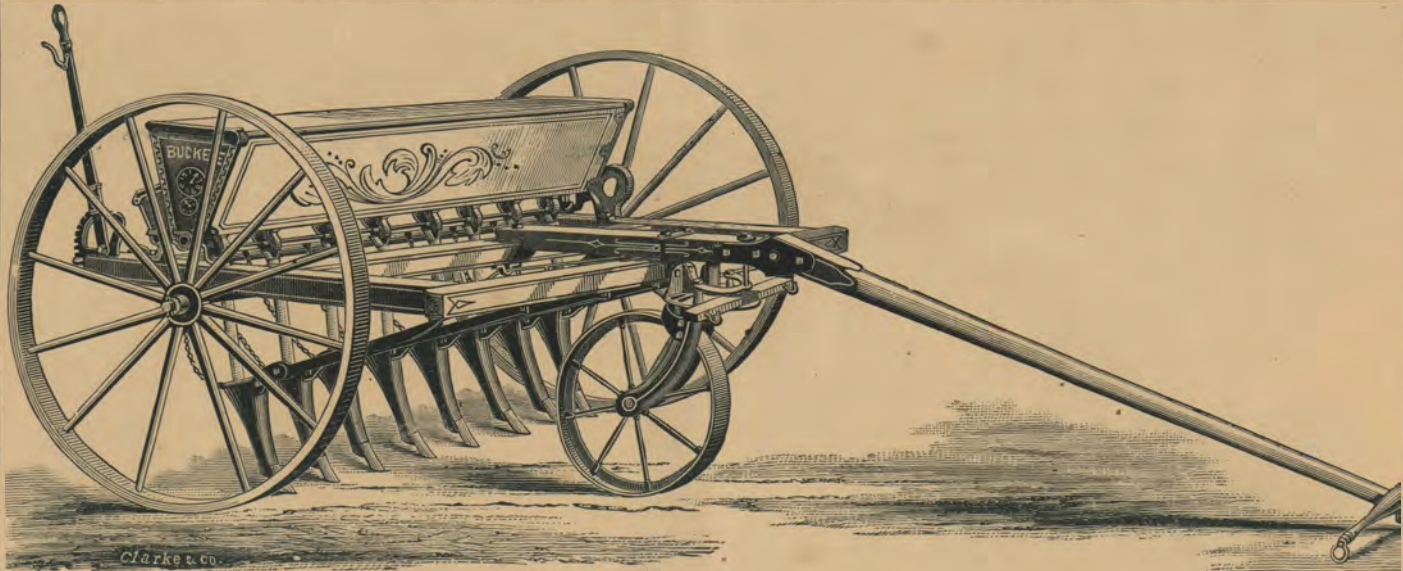
We would again call attention to the fact, that a common fault in seeding is to allow the hoes to run too deeply; from one to two inches is as deep as grain should ever be covered, see description of Shoe Pressure Drill in reference to depth and results. With this Drill you can regulate the depth, by adjusting the gauges on rear of hoe.

It has in addition to all of these improvements the best Force Feed of any Drill in the market also a **Positive** Force Feed Grass Seed Sower which can be put on either in front or rear of the Grain Hopper. It embraces in fact all of the latest and best improvements of the day, and we do not hesitate in recommending it as being the best and most complete *SPRING PRESSURE DRILL* in the market. We have abundant proof of every assertion or claim we have made in reference to this Drill, and feel assured it will take the lead wherever its merits are made known.

THE NEW BUCKEYE GRAIN DRILL, WITH CASTER.

A NEW DEPARTURE IN WHEAT DRILLS.

A ROTATING CASTER OR THIRD WHEEL ATTACHMENT. NO WEIGHT ON HORSES' NECKS.
NO SIDE LASH OF TONGUE. DRILL ALWAYS LEVEL WITH FACE OF GROUND.

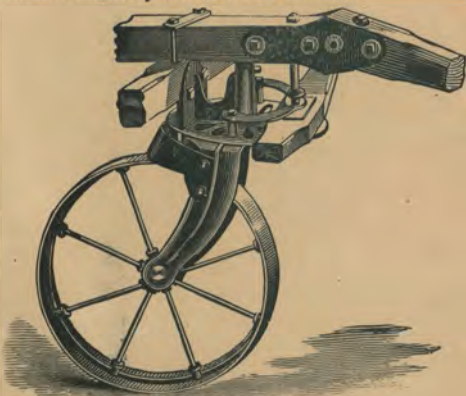


THE CASTER DRILL PUTS GRAIN EVEN DEPTH IN THE SOIL.

THE BUCKEYE CASTER GRAIN DRILL.

We know, and the intelligent farmer knows, that a long felt want has existed in the construction of *Grain Drills*: by which the **weight of the machine could be removed from the horses' necks, and the side lash and jerking of the tongue prevented**, from which causes some of the best horses in the country have been ruined.

This invention or improvement for wheat drills and other agricultural implements consists of an anti-friction **CASTER**, which is attached beneath, and to the under side of the front beam and tongue of the machine, and upon this Caster rests the front weight of the implement. The tongue is hinged in front of the Caster, and *limber* up and down, but *solid* sidewise,



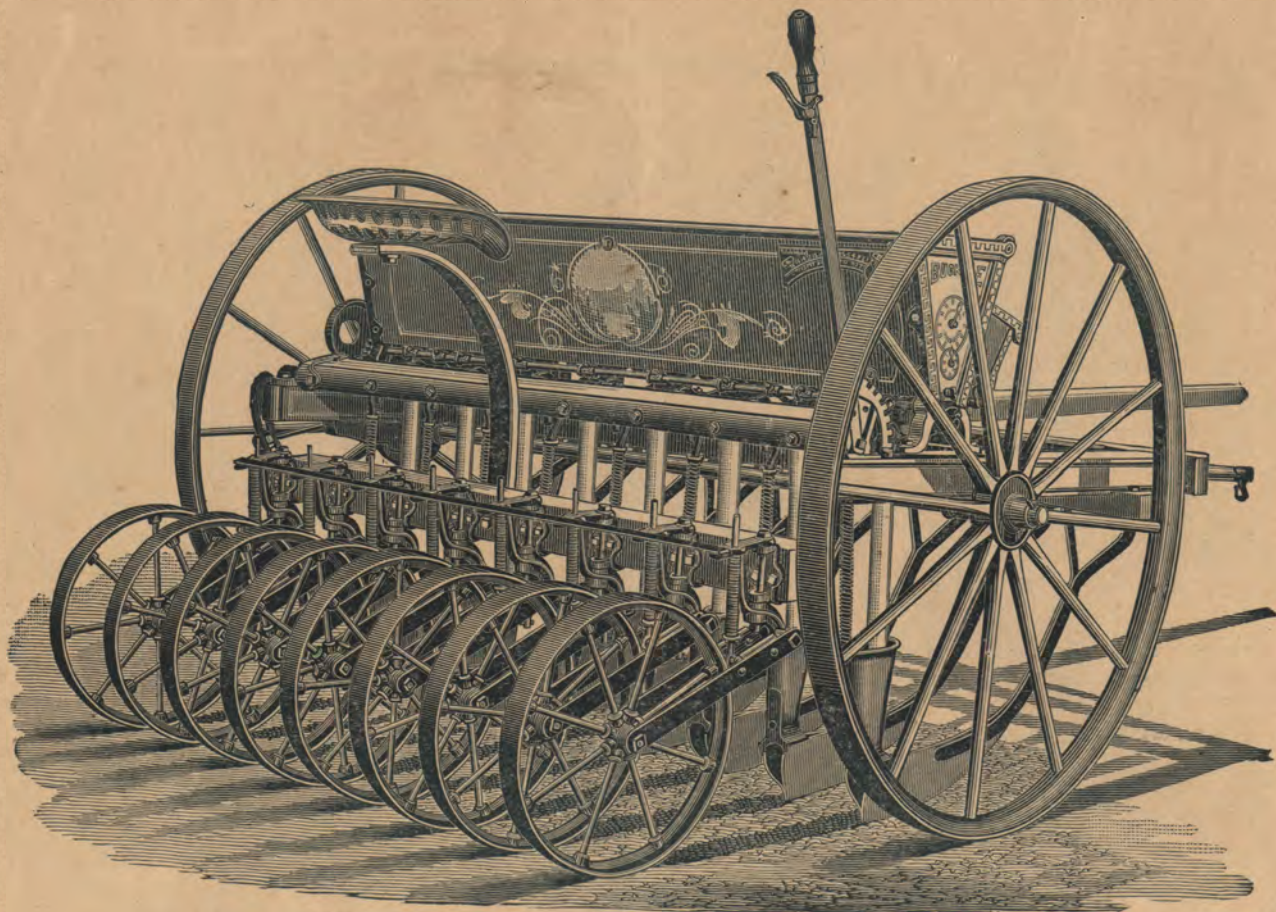
so as to *guide* the Drill, but not *support* it on the horses' necks, as all such do, as now constructed. This hinge is so arranged that the tongue can be used as a stiff or limber tongue as desired, by means of a bolt through the hinge and tongue, and as a matter of convenience and safety the large wheel and saddle can be taken off and carried on the machine in traveling the Drill over rough roads, from one farm to another.

The following are some of the advantages we claim for our Caster Grain Drill.

- 1st. No weight on the horses' necks.
- 2d. No side lash or jerking of the tongue.
- 3d. **THE HORSES' BEST FRIEND.**
- 4th. It puts grain even depth in the ground.
- 5th. The grain comes up and ripens more even.
- 6th. The Drill runs steadier and lighter.
- 7th. A decided advantage in corn ground, and in getting around corn shocks.
- 8th. The Drill is stronger and will last longer, and is more convenient in handling.
- 9th. The tongue can be taken off in a moment, and the Drill will still occupy its upright position, and can easily be put away in some spare corner of the barn or out house till required for service again.

Dealers and farmers already having our *common* Drill, or *old Drills* of other makes, can order the Caster and Tongue, and attach the same to their Drill, without any trouble, by following the directions and drawings as given. Or the farmer may only order the Caster and hinge, and use his old Tongue.

The construction and application of this Caster is well secured and protected by recent patents, under which we have the **exclusive license** for the United States.



THE NEW BUCKEYE ROLLER PRESS DRILL.

THE NEW BUCKEYE ROLLER PRESS DRILL,

Furnished Either as a Shoe or Runner Drill,
or as a Hoe Drill.

There is a growing demand for a Drill of this style that will *press the grain in the furrows* as it is being drilled, crushing the clods and leaving the ground perfectly smooth, so that the grain will come up sooner and more regular. We have given special attention to this style of Drill, and by carefully experimenting have produced the best Drill of the kind in the market.

This Drill, with the *Shoe* or *Runner*, is specially called for in loose, loamy soils, but for clay or heavy soils we recommend it with the *Hoes* instead of the *Shoes* or *Runners*, feeling confident that it is the best Drill of the kind in the market.

We wish to call your attention to a few points of superiority over all other Roller Press Drills.

The Rollers, or Press Wheels, are so arranged that they are entirely independent of each other—that is, each Roller follows the unevenness of the ground independently of the others, and still independent of the Hoes or Shoes, and follow directly in the furrows made by the Hoes or Shoes in crooked driving.

There is a Spring attached to each Roller, each independent of the other.

The Rollers do not interfere with raising the Hoes or Shoes.

Over the series of Rollers is arranged a convenient Seat, so located that the weight of the operator is thrown upon the Rollers in such manner as not to interfere with their independent action.

The Drill can be used without the Roller when desired.

We can furnish it with any of the following kinds of Drills made by us: Combined Fertilizer Drill, Plain Pin Hoe Drill, Spring Hoe Drill, Spring Pressure Drill, and the Shoe or Runner Drill.

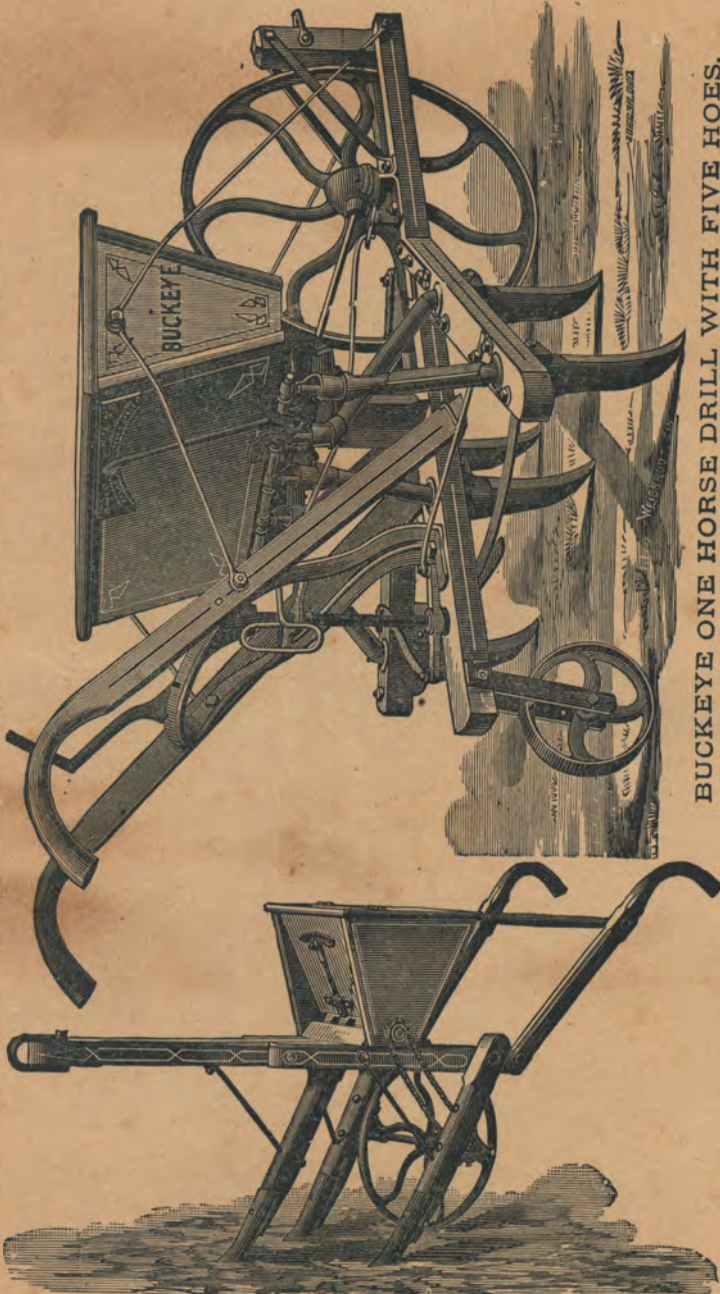
We can also furnish the Roller or Pressure part as an attachment to any of our Drills, or any other make of Drills with frames similar to the Buckeye.

We have without doubt the best Roller Pressure arrangement in the market, and if you desire a Drill of this style we are confident this will suit you.

Be sure to call on or write to us or any of our agents or branch houses before purchasing any other kind.

P. P. MAST & CO., Springfield, Ohio.

Branch Houses.—St. Louis, Mo., 811 North Main St.; San Francisco, Cal., 33 Market St.; Philadelphia, Pa., 216 North Broad St.; Kansas City, Mo., and Mast, Buford & Burwell Co., St. Paul, Minn.



BUCKEYE ONE HORSE DRILL WITH FIVE HOES.

Buckeye One Horse Drill with 3 Hoes.



NEW BUCKEYE GRAIN DRILL, FRONT LIFTER.

H. G. Kulp & Co., Agts.,
Pottstown, Pa.



W. H. Kulp & Co. 1711-1712

W. H. Kulp & Co. 1711-1712