

BUCKEYE AGRICULTURAL WORKS,



P. P. MAST & CO.
MANUFACTURERS OF

BUCKEYE GRAIN DRILLS

BROAD CAST SEEDER.

CULTIVATORS.

- SPRING TOOTH SULKY HARROWS -

- PLOW SULKIES -

- CIDER MILL & ETC -

SPRINGFIELD, O.

BRANCH OFFICE: 216 N. Broad St.
PHILADELPHIA, PA.

1883.

1883.

ILLUSTRATED AND DESCRIPTIVE PAMPHLET

—OF—

Farming Implements and Machines,

—MANUFACTURED AT—

BUCKEYE AGRICULTURAL WORKS

SPRINGFIELD, OHIO.

P. P. MAST & CO., Proprietors,

—MANUFACTURERS OF—

BUCKEYE GRAIN DRILLS,

BROAD-CAST SEEDERS,

RIDING AND WALKING CULTIVATORS,

SPRING TOOTH SULKY HARROWS,

—FLOW SULKIES,—

CIDER MILLS, &c., &c.



VIEW OF BUCKEYE AGRICULTURAL WORKS, SPRINGFIELD, OHIO.

GENERAL PREFATORY REMARKS.

In presenting this, our twenty-sixth annual pamphlet, descriptive of our full line of manufactures, we desire to impress on the minds of all those who may receive it, that in each and every implement we make will be found embodied all the elements of exact adaptation for the purposes designed that long experience, thoroughly drilled and skilled labor, constantly watchful care, and the selection of the *best material in every department*, may insure. We furnish constant employment to a corps of skilled mechanics, varying in number from three to four hundred, many of whom have passed upwards of a quarter of a century in our works. These men have *individually* a pride in everything that bears the familiar name of "Buckeye," and each one of them takes a special interest in seeing that no implement bearing that name shall leave the factory in anywise a retrogression or deviation from the high standard of excellence which is our interest, as it has always been our pleasure, to constantly maintain.

The very best evidence of our earnest desire to keep fully abreast of the times, in all points of improvement, should be the high character earned by the goods we have in the past sent broadcast in both Hemispheres, and which are now in the hands of tens of thousands of sturdy tillers of the soil. These men are our judges, and what the nature is of *their* pronounced judgment, may plainly be seen in our ever widening and increasing business. This, growing far beyond the present already large capacity of our works, has necessitated extensive and costly additions now in course of construction.

With very pardonable pride we may, it seems to us, point to our *past* record, and to our foreshadowed future as presaged by this compulsory enlargement of our producing ability, and we here and now, as in the past, promise our patrons that neither brain-work, hand-work nor expense shall be spared by us in our efforts to give them implements that shall be equalled by few, if any, and *excelled by none*.

Our New Force Feed for 1882.

Whilst deeming it unnecessary to enter into a detailed and elaborate description of our new feed, we yet must say that, after a most thorough and crucial test, and in comparison with other feeders, we find it to be, and unhesitatingly claim that it is,

Undoubtedly the Ne Plus Ultra of the Age;

The most even in the Distribution of Grain;

The Simplest in Construction ;

The least liable to get out of order, and, in brief,

The Best Force Feed in Existence !

THE INDICATOR.—The scale for the quantity sown, together with the Indicator which operates the feed-gauges, is placed on the rear end of the grain hopper, near to the right hand end, thus enabling the operator to quickly change quantities as he may wish to do so, or as the nature of the soil he is seeding may seem to him to demand, for it is oftentimes desirable to change the quantity for different parts of the same field, owing to differences of soil. The Indicator is so arranged that such necessary changes can be readily and quickly made.



FORCE FEED GRASS SEED SOWER.—We have also perfected a Grass Seed Sower, which is but the grain feed reduced in size, and the regulation of quantity sown made in a manner similar to that in the large feed. Last season several thousand of them were sent out; they gave such perfect satisfaction that everyone who saw them wants one of them. We have so arranged the Plain Drill that the Grass Seeder can be used either in front or in rear of the grain hopper at the option of the user, but on the Fertilizer Drill it is always behind.

OUR NEW LAND MEASURER.—This is a radically new departure in land measurers. It is placed in the end of the hopper, and so thoroughly encased as not to be disturbed by the grain. It accurately indicates the acres and *portions of acres* sown, a result not accomplished heretofore by any other land measurer, and which certainly is a feature that will commend itself to any thinking and progressive farmer.

NEW METHOD OF RAISING THE HOES.—Instead of the old style Lifting Bar in the rear of the hopper, we now have the lifter in front of it, arranged with a lever at the *end* of the Drill, which makes it convenient for the operator to handle whether he is walking or riding, and with this arrangement, gaining an increased leverage, we can raise the hoes with much less exertion than was possible by the old method. Another important advantage we claim in having this lever in *front* of the hopper is, that it thereby enables the operator to keep the hoes clear of trash without raising them out of the ground, as he can step in between the hoes while the Drill is in operation, and still be in no fear of bodily injury from so doing as is the case in old style Drills.

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

Whilst we think the Front Lifter far more desirable than the old style Rear Lifter, we do not wish it to be understood that we have entirely abandoned the latter; we are prepared to furnish the Drill, as improved in all other respects, with the Rear Lifter just the same as we have been making it for five years past, and we are thus enabled to give the farmer his choice.

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

NEW HOES.—We have new hoes on the Buckeye for 1883 which can be regulated to run at a uniform depth in any kind of soil: they are unquestionably the best **DRILL HOES** ever made.

HOPPER BOTTOM.—The bottom of the grain hopper is so constructed that all of the grain can be fed out, a feature not to be found in any other Drill. There are many other new points of merit which are to be found only on the

NEW BUCKEYE FOR 1883.

SPRING HOE.—We have experimented largely and at considerable expense with springs for Drill Teeth, and we are now prepared to furnish all who want Spring Tooth Drills with the best **SPRING HOE** in the market.



The above hoe is so constructed that we can use either the coil spring or the gum spring, at the choice of the purchaser.

Our new **SPRING HOE** for 1883 is so arranged that the *Dragbars pivot in the rear of the hoe, and form braces to the side of the hoe to prevent it from wobbling*; it also causes the hoe to fold *under* when striking and passing over an obstruction, thereby preventing damage to the gum tubes, which would otherwise be injured if not broken and rendered useless. All other Spring hoes in the market pivot *in front*, and hence have none of these advantages.



NEW BUCKEYE GRAIN DRILL FOR 1888

THE NEW BUCKEYE GRAIN DRILL

FOR 1883.

The cut on the preceding page represents our Plain Drill as made for season of 1883, and, while its general features are so well and widely known throughout the grain growing portion of the world that an extended description of it is unnecessary, we still have a few words to say about it. Absolute perfection has never been and never can be attained in this world, 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. Farmers long ago grew weary of carrying a multiplicity of cog-wheels, and of being compelled, when a change of feed was desired, to rack their brains in hunting out combinations and in making adjustments to that end—perhaps to find some necessary wheel lost or missing. What seemed to be the one great desideratum, was a positive force-feed, without change of gears, whereby in a moment they could regulate to a certainty the amount of grain desired to be sown; this we have given them in our New Feed Buckeye. It can be regulated for any quantity desired, and in an instant. The feeder consists of a feed-cup in which there is placed an adjustable revolving disk with teeth on the side near the edge. These revolving disks are all fastened on the feeder shaft, and moved laterally to vary the space between the disk and the side of the feed-cup, which varies the flow of seed as may be required. All being fastened on same shaft, when one is moved all are moved, and the change is consequently uniform in all of the feeders. The change can be made from a pint or less at a time, if so desired. The quantity sown is regulated by a simple device at the rear of the hopper, fastened to the shaft, to which is attached the Indicator arm or lever. On the rear of the hopper is a scale with figures indicating the different quantities of grain to be sown per acre, and simply moving the indicator to any desired point in the scale is all that is necessary to make the change for any desired quantity. It is so plain and simple that no one can fail to see and understand its advantages; it is just what farmers want,—something that can be adjusted instantly and without change of gears.



The New Buckeye Pin Hoe Spring Pressure Grain Drill.

THE NEW BUCKEYE
PIN HOE
SPRING PRESSURE DRILL

FOR THE SEASON OF 1883.



This Drill is constructed with STEEL SPRING DRAG BARS, instead of the ordinary Iron Bars, and is 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 guages to regulate the depth of the hoes so that 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.

This drill has also, in addition to all of these improvements, the best Force Feed of any drill in the market, with a reversible 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 that it will take the lead wherever its merits are made known.



THE NEW BUCKEYE SHOE PRESSURE GRAIN DRILL.

THE NEW BUCKEYE SHOE*PRESSURE*DRILL

FOR THE SEASON OF 1883.

For some years past there has been in sections of considerable extent a growing demand for a Shoe Pressure Drill, and as there has heretofore been nothing in the market worthy the notice of either farmer or dealer, we decided last fall to build a few of them on strictly *Scientific Principles*, and now, after giving them the most thorough field test to which we could put them, we place them before the public, confidently asserting them to be the best Drills of the kind in the market. In addition to the Shoes and Spring Pressure, they have all the modern improvements from *Regular Buckeye Drills*.

In rough, cloddy and trashy ground, such fields as are generally used for wheat in many of the small grain-growing sections of the South and Southwest, it is essentially the drill needed and the one the farmer should buy. It cuts through trash and stalks, such as heavy weed-bodies and corn-stalks, and admits of the grain being sown regularly and at a uniform depth, and the amount of pressure can be regulated at the option of the operator, so that in even the roughest and most trashy ground good work can be done. The grain being deposited uniformly no bunching follows, as is always the result in drilling with any other style of Drill in trashy ground.

The cut represents our new style of shoe for our Shoe Pressure drill, arranged with wrought iron covers, and steel blades which can readily be replaced when worn out, in same manner that points can be replaced on the regular Spring Hoe Drill.

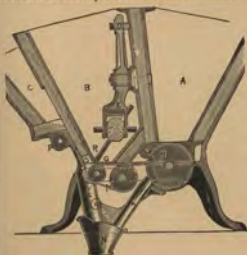




THE NEW BUCKEYE GRAIN AND FERTILIZER DRILL.

THE NEW BUCKEYE GRAIN —AND— FERTILIZER DRILL.

In a great many sections of the country, when the soil has become nearly exhausted and unproductive from continued cropping without rest or proper rotation, it has been found necessary to use artificial manures or guano. When such expensive fertilizers are used it is of course desirable to so distribute it that it shall go just where it will do the greatest amount of good,—to get a maximum of fertilization from a minimum of expenditure,—and hence it becomes necessary to sow the fertilizer or guano down through the tubes with the grain. In accomplishment of this end we know that we have by far the most desirable and the nearest perfect machine now in the market.



The Fertilizer and Grain Hoppers are combined in a Double Hopper, and, while the front one is feeding out the grain, the rear hopper, or fertilizer apartment, is feeding out the fertilizer, both grain and fertilizer passing down through the hoes and being deposited *together* in the ground. By this arrangement the fertilizer is brought into plain view of the operator before

entering the hoes, so that he can at all times see just what is being done. The greatest difficulty heretofore found in the construction of such a machine, has been that it seemed impossible to prevent the fertilizer from being worked into a sticky paste which would ball or pack. This method of feeding fertilizer is entirely novel and has proven to be entirely successful. It consists of a series of endless belts carried by two shafts on which are a series of small pulleys, the whole being placed in the bottom of the hopper. The fertilizer, coming in contact with these belts, is carried back and dropped into the tubes, the quantity used being regulated by a parallel slide, so that as small or large a quantity may be sown as is desired. There is also an agitator moving very slowly in the hopper which prevents any possibility of arching.

Since we commenced the manufacture of this Combined Drill we have sold large numbers, and these have been used in sowing all kinds of fertilizers, in all sorts of conditions, and never yet has one failed to sow the fertilizer in the desired quantity and in a regular, even manner. With this experience before us, we make this broad statement without fear of contradiction: that the Buckeye Combined Grain and Fertilizer Drill is the *only* one ever yet made which will successfully sow *all* kinds of fertilizers in all their widely varying conditions. The entire Drill is heavier and stronger, as will be seen by reference to the cut in illustration which precedes these explanatory remarks. We cannot put this arrangement for sowing fertilizer on Drills which are already without them.

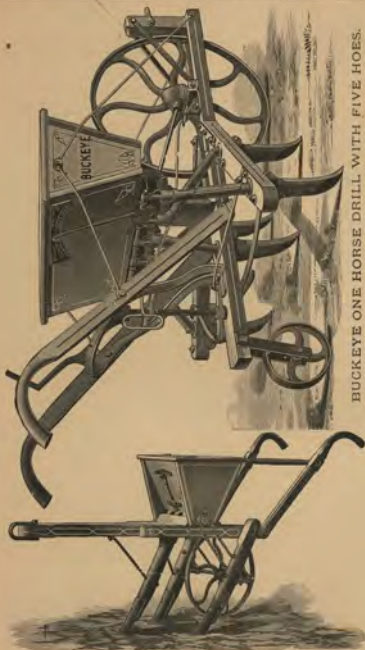
To all whose soil needs the use of fertilizers to successfully and profitably grow small grains, we therefore most confidently recommend our Combined Drill; all who use it will find it to be just what they need and just what we represent it to be.

We would say to the farmers of the country that we come before them with our Combined Grain and Fertilizer Drill for 1883 with many improvements, 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.

The principal, indeed the essential, feature required of a Grain Drill in all sections where commercial fertilizers are largely used, is a successful fertilizer feed; one that will sow dry and fine fertilizers evenly, whether the team moves fast or slow, and one that will sow damp and sticky phosphates and guanos in such wise that no clogging or arching will occur. If the feed in a guano hopper is perpendicular through a hole in the bottom, dry and fine fertilizers will run through like sand, and the farmer will sow more per acre with a slow moving team than with one that moves fast. In the Buckeye Guano 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.





BUCKEYE ONE HORSE DRILL WITH FIVE HOES.

Buckeye One Horse Drill with 3 Hoes.

THE NEW BUCKEYE
ONE HORSE DRILL, WITH FIVE HOES,
WITH OUR NEW FORCE FEED
AND BREAK PINS IN THE HOES,
Improved for 1883.

This Drill has all the modern improvements, with our new FORCE FEED, the same as we use on the Two-horse Buckeye Drill, Break Pins in the Hoes, and so arranged that it can be expanded or contracted to suit the space between the rows of corn, and that necessary changes can be made while the Drill is in operation. It has five Hoes with Steel Points, and is in every particular the most complete and efficient *One Horse Drill that has ever been offered to the trade.*

There is no doubt that at least one-fourth more wheat can be grown on corn ground, by seeding early with the Drill, than if delay is made until the corn is cut before seeding; so that even if it is intended to cut the corn, it will pay largely to seed *first* with this Drill, because seeding can thus be done early and a great deal of labor saved. We also make the NEW BUCKEYE ONE HORSE DRILL with THREE HOES, substantially the same as the Drill with FIVE HOES.

It has FORCE FEED, THREE HOES with steel points, and is strongly and substantially made. We claim it to be the best Drill of its class now made. The demand for ONE HORSE DRILLS the past season was very great, and we have therefore determined to try and supply it this season, but we would earnestly request those wishing Drills to send in their orders early so that we may make an arrangement to supply all demands, however heavy they may be.

POINTS OF DIFFERENCE —BETWEEN— GOOD DRILLS.



Whilst it is not our intention to disparage any other Drill or to claim that ours is the only one capable of doing good work or of giving satisfaction, we yet maintain that there are decided points of difference even between *good* machines. Some are much more simple in construction and convenient in arrangement than others, make a more even and accurate distribution of grain, and are more substantially made. A great many Drills have been made and sold throughout the country that subserved the purpose in their day; but, this being an age of rapid improvement, the machines that a few years ago were considered almost perfect are now, many of them, classed third or fourth rate, and, if sold at all, have to be forced on the market at low prices and on long credits, because they are behind the times, and parties holding them are virtually compelled to sell at a low rate in order to get them off at all. Farmers sometimes are induced to purchase these inferior machines, on account of the prices and the terms offered, but sad experience has taught all such that it is by far more economical to buy the *very best* article at a fair price than to buy a poor article even at a low price or on whatever length of credit may be offered as an inducement. We frequently receive letters from our agents, stating that such and such styles and makes of drills are being offered at lower prices and on longer credits than we are selling. We answer them that we do not pretend to compete with these nearly obsolete machines in prices and terms, and that, if the farmers see fit to purchase such in preference to good ones, they most certainly have the privilege of doing so. Good implements are always in demand at fair prices and on fair terms, whilst poor ones have to go begging for purchasers, at almost any price and on extended terms.

It is very important to have a Drill that will not break or cut the grain, for if it is broken it will not grow and is consequently lost. The arrangement of the Buckeye is such that it is impossible to cut or

break the grain. We use no brushes, as some do, which are liable to rot out, or to wear irregularly and cause a variation in feeding, and, as a natural consequence, increased repair expenses.

CHANGING HOES FROM STRAIGHT TO ZIGZAG.

By a simple device the operator can change the hoes from straight to zigzag, or the reverse, in an instant, without stopping his team. When the condition of the ground will admit, all practical farmers would of course prefer to use their Drills with the hoes set straight, but it often happens that a part of the field is foul with weeds and trash and it is advisable to set the hoes zigzag to avoid clogging. The old style Drill, with stationary tubes and drag bars, required too much time to make the necessary change, and consequently they were allowed to remain as at first set up.

METHOD OF ATTACHING THE GUM TUBES.

We attach the tubes to a conductor which is pivoted directly to the distributor, in such a manner as to adapt them to the hoes, when they are changed from straight to zigzag, without detaching the tubes. The arrangement dispenses with the tube board, makes the machine lighter and gives it a much neater appearance.

All the grain is brought plainly into view while passing from the hopper to the hoes, whether the hoes are set into line or zigzag and the feeders are thrown out of gear when the hoes are raised out of the ground.

GUANO, OR FERTILIZER ATTACHMENT.

In many sections, the use of manufactured manures, or fertilizers, is now regarded as necessary to successfully produce all kinds of crops. Their use is no longer a question or an experiment, but their value is known to all, either from actual experience, or by reputation, and the necessity of fertilizing the soil is disputed by none. But the want of a machine which would properly distribute manufactured manures, has prevented their coming into general use.

The Buckeye Drill, with Fertilizer Attachment, will sow guano, superphosphate, lime, plaster, bone dust, ashes, or any fine manure, either *dry* or *damp*, in quantities needed, depositing the seed and fertilizer in the ground together. The Fertilizer can be shut off at any time without stopping the team, or interfering with the sowing of grain. Therefore, you can sow fertilizer on any portion, or all, of the

field, as you may desire. Our Fertilizer Attachment, as now made, was thoroughly tested, and numbers of them sold last season, giving universal satisfaction. We, like all other manufacturers, have encountered many difficulties in our endeavors to perfect an attachment for sowing fertilizers, but, after experimenting many years, and continually improving, we can now cry, *Eureka!* and offer to the farmer the Buckeye Grain Drill with Fertilizer Attachment as a *perfect machine*.

SPRING HOE OR TOOTH.

In some sections of the country, where the land is rocky, there is a demand for a good Spring Tooth Drill. We have experimented considerably with Springs for Drill teeth, and find there is nothing reliable for the purpose but a solid India-rubber or coil spring. We are now prepared to furnish all who want Spring Tooth Drills with the best SPRING HOE in the market. The cost of Drills with Spring Hoes will be \$1.00 per hoe extra.

WELL BALANCED.

We have known valuable horses ruined by drills bearing too heavily upon their necks. This was because the drill was not properly balanced, the weight being too much in front of the axle. The "Buckeye" is so arranged that it bears lightly on the horses' necks, which is accomplished by placing the hopper back of the axle a sufficient distance to balance the weight in front.



ADVANTAGES

—OF—

→ DRILLING GRAIN. ←

—1. SAVING GRAIN.—

By the use of a good drill, the grain is distributed evenly and regularly, and being covered at a sufficient and uniform depth, it all grows at once, and comes up healthy and strong. But when sowed broadcast, part of the seed is but slightly covered, which often perishes for want of moisture; and there is only a portion of seed that is covered sufficiently deep to grow, and that comes up very irregularly. So there is at least one-fifth of the seed lost by sowing broadcast. Those who have tried drilling in their grain, will agree with us that there is at least one peck of seed per acre saved by using the Drill, which, on a crop of forty acres, would make a saving of ten bushels, which alone would more than pay the interest on the investment in a drill.

—2. SAVING LABOR.—

Every farmer, we presume, will admit that carrying sacks of grain over plowed fields is neither a pleasant nor enviable task; and, sowing in this way from ten to fifteen acres per day would be considered an average day's work, so that the sowing of forty acres would be worth at least three dollars. But there is still further saving of labor and time. In order to make good work, it is necessary, when wheat is sown broadcast, to harrow the ground three times—once before sowing and twice afterward. Allowing ten acres for a day's work, it would take a team twelve days to complete the seeding for forty acres; whereas with a drill it could be accomplished in better order in one-third less time, allowing the drill to go over as much ground in a day as a harrow, thereby saving four days for man and team on ever forty acres, which is worth at least eight dollars more.

—3. PROTECTION FROM DROUGHT.—

It is reasonable that grain drilled in will stand the drought better than when sowed broadcast. The Drill puts all the grain in sufficiently deep to retain the moisture during a dry season, and hence it is not subject to the same danger of destruction from dry weather.

—4. FREEZING OUT IN WINTER.—

There has always been much complaint about grain freezing out in winter, by those who sow winter wheat. For this there is a remedy found to a great extent in the use of the Drill. The grain being deposited at the proper time in narrow furrows, with a ridge on each side, is protected by those ridges during the severity of the winter. The freezing and thawing weather, so common in our climate during the winter, causes these ridges to gradually tumble down into the small furrows, and keep a constant supply of earth about the roots of the grain, by which it is nourished and protected through the hardest winter.

—5. INCREASE IN YIELD.—

When it is remembered that drilled grain is surer to come up and continue to grow, and that, being better rooted, it grows more vigorously, and that, being better protected and nourished, it is not so much killed in winter—we say, when all these things are remembered, it is not necessary to argue further to prove that there must be an increase of yield over broadcast sowing. And this is true, also, of spring as well as fall seeding.

According to the testimony of the best practical farmers, the average increase of yield is from three to five bushels per acre, and sometimes exceeds ten bushels. We know of instances where drilled wheat, in the same field, produced double that of broadcast sowing, and where drilled oats yielded seventeen bushels more per acre than broadcast, other circumstances being equal. Allowing the increase to be only three bushels per acre, and still we have a gain of 120 bushels on every forty acres, worth, at the usual price, \$120.

If we sum up now, we will find that to a farmer who seeds forty acres by using the Drill, there will be a gain over broadcast sowing of the same number of acres as follows:

Saving ten bushels seed.....	\$ 10 00
Saving three days in sowing.....	3 00
Saving four days' labor for man and team.....	8 00
Increase in yield on forty acres, 120 bushels	120 00

Whole amount gained on forty acres.....\$141 00

This is nearly enough to buy two Drills every season. Now what other implement gives so much actual gain to the farmer as a good GRAIN DRILL? There is really no other implement the farmer can so well afford to buy, and none by which he loses so much in not having.

The Reaper, the Mower and the Thresher are indispensable, on account of the great amount of labor saved by them ; but they add no actual bushels to the farmer's crop, whereas the DRILL not only saves labor, but increases the crop besides.

Who can Afford to be without a Drill ?

The following cuts represent the growth of Drilled and Broadcast wheat :

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.



DRILLED WHEAT.



BROADCAST WHEAT.

REASONS WHY —THE— BUCKEYE IS THE BEST.

1st.—It will sow Wheat, Rye, Oats, Barley, Buckwheat, Flax Seed, Hemp, Millet, Clover and Timothy Seed, Broom-corn, Osage and Apple Seed,

In any Desired Quantity Without Change of Gears.

- 2nd.**—Never bunches the grain. It will distribute the grain and grass more evenly and regularly than any other Drill.
- 3rd.**—It will never break the grain.
- 4th.**—It sows grass broadcast behind the Drill.
- 5th.**—Has high wheels and wide tire.
- 6th.**—Longer hoes and less liable to clog.
- 7th.**—Has a better surveyor or land measure.
- 8th.**—More easily changed from single to double rank.
- 9th.**—Grain and grass seed shut off when hoes are raised.
- 10th.**—The Gun tubes are pivoted to the feed cup, and dispense with tube board.
- 11th.**—Because the Gun Tubes need not be removed when the Drill is changed from Single to Double Rank, or the reverse.
- 12th.**—Because the Drill is properly balanced, and bears lightly on the horses' necks.
- 13th.**—It has an attachment for sowing broadcast when desired.
- 14th.**—Has the best Spring Hoe.
- 15th.**—Has the most perfect Guano Attachment.
- 16th.**—Has the broadcast Plaster Sower.
- 17th.**—More substantially made.
- 18th.**—More neatly painted, striped and varnished.
- 19th.**—Is made of the best material.
- 20th.**—There is a greater demand for them than any other Drill.
- 21st.**—More of them sold than any other kind in the West Combined.
- 22nd.**—It takes more premiums than any other Drill.
- 23rd.**—Because it is the best Drill in the world.

WHAT FARMERS SAY ABOUT IT.

"That's it;" "you have got it now;" "just what we want;" "we are tired of carrying so many gears, and then have to make a change of a peck at once;" "this just suits me, and I must have it;" "it is so easily regulated I can vary just as little as I please;" "anybody can set this without making a mistake;" "I never saw anything feed as even as this, just as regular as a stream of water;" "see! it will sow anything—wheat, rye, barley, oats, flax, peas, beans,

corn, timothy and clover seed, and then it does it so nicely, it certainly does beat them all;" "there is some satisfaction in using such a Drill." Such are the expressions which farmers make when they see the feed, and they are not mistaken; it is all they say about it.

We have had twenty-five years' experience in the manufacture of Drills, and are familiar with all the Drills manufactured in this country and in Europe, and we can confidently assert that it has no equal anywhere.

TESTIMONIALS FOR DRILL.

The fact that the BUCKEYE HAS THE LARGEST SALE OF ANY DRILL IN THE WORLD, and has a larger sale than ANY OTHER THREE DRILLS, is sufficient evidence of its superiority. We have a large number of testimonials, but have space for only three or four.

"WENT AWAY WITH TEARS IN THEIR EYES."

Mr. John Pete, near Fair View, Linn county, Iowa, says: "I drilled in 160 acres of new breaking with one of the Buckeye Drills, and, while seeding, the birds came around as usual to gather up the uncovered grain. They looked over and over, but in vain; they could find none, and left with *tears in their eyes*, and went over to my neighbors, where they were sowing broadcast."

"NO BLANKS OR BUNCHES."

HOWELL, MICHIGAN.

MESSRS. P. P. MAST & CO.:

Dear Sirs:—The Buckeye Force Feed Drill I bought of you last fall beats any I ever saw. I find, since the grain is up, there are no blanks or bunches, and the ease with which the hoes are changed from straight to zigzag does away with clogging. You can put me down for a "regular subscriber."

JAMES McCLUSKY.

"ONLY 50 CENTS REPAIRS IN DRILLING 1000 ACRES."

LOYDSDALE, OHIO.

Gents:—Inclosed please find 50 cents, for which send me hinges No. 43 and No. 47. Send by Express. I like the Drill. Have drilled about 1,000 acres, and this is the only cost for repairs, and this was an accident.

WM. K. HAMBLETON.



THE NEW BUCKEYE 11 FOOT BROADCAST SOWER.

THE NEW BUCKEYE

—ELEVEN FOOT—

BROADCAST SOWER.

On preceding page will be found a cut representing our New Buckeye Broadcast Sower, which is furnished with our new Force Feed. At the risk of repetition we will still further describe this new feed, so that all may become thoroughly acquainted with its design and action. It will be seen that we have the usual cup or case, in one side of



which is placed what is called the feed wheel. This feed wheel is a disk upon which is a ledge or rim, the outer edge of the disk being provided with teeth which assist in carrying out the grain. This Feed wheel is made to revolve by a shaft that is of such shape as to prevent any lost mo-

tion. The device to vary the quantity sown without change of gears consists of a feed regulating gate, having one end inserted and arranged to slide through a slot in the side of the feed cup or case, this gate being made of such form and so arranged as to slide into or across the grain passage or channel at a point a short distance in advance of its mouth or delivery vent, and in such manner as to diminish the size of the passage at that point, thereby limiting the outward flow of seed to a greater or less extent as occasion may require. All

these feed regulating gates are fastened to one and the same shaft, and, obviously, when this shaft is drawn endwise by the indicator, whereby quantities are fixed, *all* the gauges are drawn at once and all the feeders made to sow exactly alike.

Indicator.—The scale for the quantity with the Indicator is placed on the rear of the hopper near the right hand end, thus enabling the operator to quickly change the quantity, increasing or diminishing the outflow, as he may desire. It is often desirable to change the quantity for different parts of the same field, owing to differences in the soil, and few fields of any extent will be found where it may not be done to advantage, both in the first sowing of grain and in the resultant crop. The Indicator is so arranged that such necessary changes can be quickly and readily made.

The Surveyor.—The Land Surveyor, of which the annexed is a cut, is placed on the end of the hopper, and plainly shows the acres and *portions* of acres of ground passed over.

High Wheels and Wrought Axle.—We still continue to use high wheels, made from the very best material procurable, with wide tire to prevent them cutting into soft ground. We also still use the continuous wrought iron axle. It extends from one wheel to the other, revolving with them, and has its bearings in the boxes on the frame instead of in the hubs. By this arrangement the wheels always run true, and the whole machine runs lighter and will last much longer.

Improved Scatterer.—Experience has proven that it is desirable to have the scatterer as near the ground as possible in windy weather to prevent the wind from blowing the grain and thereby causing an



uneven distribution. To prevent these scatterers from being broken by corn stalks, roots, weed-bodies, etc., we have hinged them about one-third way down, the hinges being held rigid by wooden pins, strong enough to hold the scatterers in position, but, in case they come in contact with any obstruction, weak enough to allow them to break and so allow the scatterer to fall back entirely out of the way until the obstruction is passed over. As the scatterers are attached directly to the frame there is no danger of the feeders being broken by them. There are many other valuable improvements on the Buckeye not to be found on any other sower. Those given above will commend themselves to all who desire to be up with the times and in possession of a machine which will yield the most satisfactory results in all the varying conditions of work and soil. To sum all this up, our eleven foot Sower is precisely the same in construction as our regular Broadcast Seeder, except that it has not the drag bars and cultivators.





NEW BUCKEYE FORCE FEED BROADCAST SEEDER.

New Buckeye Force Feed Broadcast Seeder.

Fourteen years have now elapsed since we first began the manufacture of a Broadcast Seeder. In the very first year that we introduced the "Buckeye" it took first rank in the market. Each successive year has but increased its well-earned popularity, and it stands to-day the acknowledged standard among Broadcast Seeders. Many thousands are in use it in the West and Northwest, and they all give unqualified satisfaction. Although the Buckeye, as heretofore made, has achieved such an enviable reputation, we still have seen points wherein it might be improved and brought still nearer perfection. We have been constantly making experiments to this end, and have now ready for market a Seeder superior to anything heretofore made.

For over twenty-five years we have been manufacturing seeding machines, and are free to say that our Force Feed is by far the best, most accurate and in every way thoroughly reliable feed we have ever seen. We have used in many thousand machines sent out in the past two seasons to different parts of the country, and the most universal satisfaction has been expressed in all quarters. There have been less complaints and breakages than in any season since we commenced manufacturing, and we therefore have good reason for believing it to be the most perfect feed ever made.

We desire to return our thanks to our many thousands of patrons West and Northwest for their support in years past, while we come to them this season with a better Seeder than ever before. We invite attention to the following pages which enumerate a few of the salient points of superior merit to be found in our New Buckeye Broadcast Seeder.

This is not an old feed modified and changed a little, but it is a radically new and entirely different feed from any ever before made. By referring to the cuts on this page it will be seen that we have the



usual cup or case, in one side of which is placed what is called the feed wheel. This is a disk upon which is a ledge or rim, the outer edge of the disk being provided with teeth which assist in carrying the grain out. This feed wheel is made to revolve by a shaft, which shaft is of such shape as to prevent any lost motion. The device for varying the quan-

tity sown without change of gears consist of a feed-regulating gate, having one end inserted and arranged to slide through a slot of the feed cup or case, the gate being made of such form and so arranged as to slide into and across the grain passage or channel at a point a short distance in advance of its mouth or delivery, in such manner as to diminish the size of the passage at that point, thereby limiting the outward flow of seed to a greater or less extent as occasion may require. All these feed-regulating gates are fastened to one and the same shaft. Obviously when this shaft is drawn endwise by the indicator all the gauges are drawn at once, so that all feeders sow exactly alike.

INDICATOR.—The scale for the quantity sown with the Indicator is placed on the rear of the grain hopper near the right hand end, thus enabling the operator to quickly change the quantity if he so desire. It is sometimes desirable to change the quantity for different parts of the same field owing to differences in the soil. The Indicator is so arranged that such changes can be quickly and easily made.

HIGH WHEELS AND WROUGHT AXLES.—We continue to use high wheels, made from the very best of material, with wide tire to prevent them cutting in on soft ground. We still use the *continuous wrought iron axle*. It extends from one wheel to the other, revolving with and having its bearings in the boxes on the frame instead of in the hub. By this arrangement the wheels always run true; and the whole machine runs lighter and will last much longer. We also use wrought iron in many places where others use cast iron, making it still stronger than any other Seeder; its actual weight is from fifty to one hundred pounds less than any other in the market.

LIFTING ARRANGEMENT.—The arrangement for raising the drag bars is very complete. We have dispensed with the cross-pieces commonly used under the bars on other machines, and attach chains to the upper side of each of the drag bars, which leaves no obstruction below them; and by pulling down on the lever, which is easily operated, the chains are wound around the lifting bar and the hoes easily raised high to pass over obstructions, or for turning, and at the same time throws the feeder out of gear.

The quadrant is provided with several notches, so that the teeth may be partially raised to turn or for transportation.





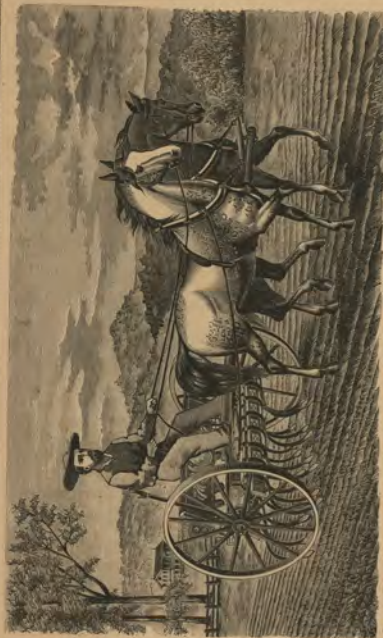
IMPROVED SCATTERER.—It is found desirable to have the Scatterer as near the ground as possible in windy weather, to prevent the wind from blowing the grain. To prevent these Scatterers from being broken by corn stalks, roots, etc., we have hinged them about one-third way down, the hinges being held rigid by wooden pins, strong enough to hold the Scatterers in position, but in case they should come in contact with any obstruction which would be likely to break them, the wooden pins will break and allow the Scatterer to fall back entirely out of the way. (See cut.)

These Scatterers being attached directly to the frame there is no danger of the feeders being broken or disarranged by them. These are entirely new features belonging to the Buckeye alone. A new and important feature is attained in our combined Clamp and Pin Break for adjusting the tooth, which is so constructed that the teeth can be held in desired position by either one or both combined. The Clamp-Washer inserted into the end of the Drag Bar gives sufficient surface to securely hold the tooth in any desired position and entirely do away with the brace, thereby giving more room for trash and making it less liable to clog. When the pin is used the clamping bolt may be loosened, making the teeth perfectly flexible, so that the machine may be backed without raising up the teeth, as is sometimes very desirable. This is an important feature and is not attainable with the rigid tooth.

There are many other valuable improvements on the Buckeye not found on any other Seeder.

P. P. MAST & CO.





New Buckeye Combined Spring Tooth Broadcast Seeder and Harrow.

NEW BUCKEYE
COMBINED FORCE FEED
SPRING TOOTH BROADCAST SEEDER
AND HARROW.

*Without Question the Most Complete Combined Seeder and Harrow
in the Market.*



WITH AN EXPERIENCE covering over a quarter of a century, and a laudable ambition to maintain our position in the front rank as the *largest manufacturers of the best seeder in the market*, we have added from year to year improvement on improvement, and the present Buckeye Seeder with wood drag bars is still the acknowledged leader of that style and class of machines.

But, believing thoroughly in *progress*, and being fully alive to the needs of farmers and the demands of the trade, we offer for the coming season both the regular Buckeye Seeder, with wood drag bars, and the *New Buckeye Spring Tooth Broadcast Seeder*, which we, without hesitation, claim to be *another improvement*.

It has the same accurate and thoroughly reliable Force Feed as is used on our famous *Buckeye Drill*, and is without doubt the nearest perfection of any feed in use. As we have stated in previous descriptions of this feed, the quantity is accurately and quickly regulated *without any change of gears*, simply by moving the indicator on the dial which is placed on the rear of the hopper in plain view of the

operator, and by the use of which quantities to be sown can be varied as much or as little as the size and condition of the grain may demand, sowing any desired amount of wheat, rye, barley, oats, flax, etc. As a *Harrow or Cultivator* it works to perfection and the seed-box can be readily detached if desired.

It has *high wheels and broad tires*, and a *continuous wrought iron axle*, extending from one wheel to the other, revolving with them, and its bearings are in the boxes on the frame instead of in the hub, thereby insuring lightness of draft, durability, and that the wheels will always run erect.

Wrought Iron and Steel, instead of cast, is used in many places, making it very strong, while its actual weight being in consequence lessened, it is fully fifty to one hundred pounds lighter than any other seeder in the market.

The lever for raising and lowering, and for regulating the depth, is placed conveniently for the driver, and it can easily be operated by a man or boy.

The pressure on the teeth is regulated by the lever, and they can be set while in motion to be run at any required depth, or the *entire* weight of the seeder can be thrown on the teeth whenever it becomes necessary or desirable to do so. The teeth used are made of the very best oil-tempered spring teeth, and all are most thoroughly tested before being sent out. The points are hardened to insure durability, and they can be readily sharpened when they become dulled by use. The vibratory action of the teeth when at work prevents any choking or clogging.

Our improved Spout and Scatterer, of which full descriptions have already been given elsewhere, conducts the grain down sufficiently near the ground to protect it from the wind, and thus is insured an even and perfect distribution. The teeth are so arranged as to thoroughly cultivate the ground and their action is such as to insure the grain being thoroughly covered.

The spring of the teeth obviates the sudden jar of the team when meeting with obstructions, insures lightness of draft, and does away with the annoyance that was incident to frequent necessary stoppages to adjust the old style tooth.

In brief, it possesses a great many advantages not to be found in combination in any other seeder, and it cannot, we think, fail to please and fully meet the requirements of even the most exacting. Such absolute faith have we ourselves in it, that we do not hesitate to pronounce it the *best Combined Spring Tooth Seeder and Harrow in the market*, and we are confident that those who will hereafter use it will sustain us in every assertion we have made regarding it.

Manufactured only by

P. P. MAST & CO.,
SPRINGFIELD, OHIO.





THE NEW BUCKEYE STEEL SPRING TOOTH WHEEL HARROW AND CULTIVATOR.

—THE—
NEW BUCKEYE

STEEL SPRING TOOTH

WHEEL HARROW AND CULTIVATOR.

THE LATEST AND THE BEST.

No plodding along Wearily on Foot when you can
ride in Comfort; and do as Good or Better Work.

Another Great Improvement!

Another Marked Improvement in the right direction!!

Another Economical Labor-saving Farm Implement!!!

SOMETHING NO FARMER CAN AFFORD TO BE WITHOUT.

Sold with or without Seeding Attachment as Desired.

With unfeigned pleasure and unlimited confidence we place before
dealers and farmers the New Buckeye Spring Tooth Harrow as the
most superior farm implement of its kind ever offered to them. A
genuine and most agreeable *surprise* awaits the purchaser, as the work
done by this harrow is so wonderful, and its cultivation of the soil so
thorough and complete.

It is furnished with high wheels, broad tires, and a continuous wrought iron axle which extends from one wheel to the other, revolving with them, its bearings being in the boxes on the frame, instead of in the hub, thereby insuring lightness of draft, durability, and that the wheels will always run erect.

It is furnished with a comfortable steel spring seat, so that the operator can ride, and thus avoid the disagreeable necessity and laborious work of plodding along behind on foot. Those who have for many weary years trudged along, heated and legsore, behind old style harrows, can appreciate to the full extent the comfort and many advantages offered them in this new departure.

The depth is quickly and readily adjusted and regulated for either deep or shallow cultivation, on hard or soft soil, by the lever, which is placed in a convenient position for the driver, and is easily operated by man or boy, either riding or walking.

The pressure on the teeth is thoroughly controllable by the lever, and they can be set to any degree of rigidity while the harrow is in motion, to run at any desired depth, as the weight of the entire harrow can be thrown on them if desired, or, with the same lever, they can be quickly raised out of the ground for transportation.

The teeth with which this harrow is furnished are made of the very best refined oil-tempered spring steel, each and all of them being thoroughly tested before they leave our works. They are formed in the best possible shape to insure thorough cultivation of the soil, and, being long and coiled around the pressure bar, they easily and readily pass over stones, roots and all kinds of obstructions without breaks or damage. The points are hardened to insure durability, and when they become dulled by use, can readily be sharpened. The ample space under the frame allows its ready passage over obstructions, while the length and vibratory action of the teeth prevents any choke or clog.

AS A CORN CULTIVATOR—Another and very important feature in this harrow is its use as a *Corn Cultivator*. During the last season we have sold a large number of the *thirteen tooth, five and a-half feet* wide, for this purpose, and have received the most flattering reports

on them. By removing the center tooth and putting on a pair of fenders or shields it makes a perfect cultivator. It is decidedly the best cultivator for small corn that ever was put in a corn field. Just try one of them for this purpose, and we are confident you will substantiate all we have said about it.

No implement ever made will so wonderfully work up and pulverize the soil, or so admirably prepare the ground for the crops, as the Buckeye Spring Tooth Wheel Harrow. No farmer can in the future afford to do without it. It will afford him more solid comfort and satisfaction than any implement which has been offered for his approval and acceptance for years. Manufactured by

P. P. MAST & CO.,

SPRINGFIELD, OHIO.





No. 1.—New Buckeye Walking Cultivator with Iron Beams, 4 Shovels, Rotary Shields and Springs.

THE NEW
BUCKEYE IRON BEAM
WALKING CULTIVATORS

*With great Improvements for 1883 not found in any other
Cultivators in the Market.*

They are Everything that Could Possibly be Desired.

The unparalleled success and immense popularity of the Buckeye Cultivators furnish positive proof that they are constructed on the most Scientific Principles and contain more Points of Merit than any of their numerous competitors. In the first year of their introduction they met with universal approval, but year after year we have continued to make valuable improvements suggested by changes in trade or actual experiments, which have greatly increased their former value and superiority, and we can now assert that we have, without the least shadow of a doubt, the Best Line of Cultivators in the Market.

—THE—
NEW BUCKEYE
—O—
WALKING CULTIVATORS,
IMPROVED FOR 1883.

We place the NEW BUCKEYE before you feeling confident that it has no equal in the market. The following are a few of its many points of superiority.

Width between Beams.—Our arrangement is such that by simply loosening the set screw in the coupling the distance between the gangs of shovels can be increased or diminished. For this we have the most perfect device ever known.

Adjustable Shovel.—All the Shovels both for wood or iron beams are easily adjustable, and can be set so as to throw the dirt to or from the corn by loosening a single bolt.

Beam Couplings.—We know the improved coupling used in the *Buckeye* cannot be surpassed. While being free from any looseness, allowing the beams to swerve or "wabble," it is perfectly free to be moved laterly or vertically and is simple and cannot get out of repair.

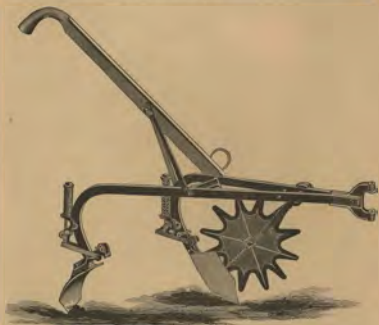
Number of Shovels.—We have so arranged the NEW BUCKEYE that we can use four shovels in cultivating corn, and five or six for cultivating fallow, also Seeding Attachment.

Springs.—Our new DOUBLE ACTING spring which has been thoroughly tested the past season, is acknowledged by every practical farmer and dealer who has examined them to be *decidedly the best in the market*. They are very simple in construction and so arranged that they are not liable to get out of order; they are so arranged that when the cultivator is in operation there is a downward pressure to hold the beams steadily in the ground, and when out of the ground to raise them high enough to hook up without any effort upon the part of the operator, thus taking off the heavy strain on the shoulders as is the case with other springs. They are easily adjusted so as to make the pressure up or down *stronger or lighter* to suit the different kinds of soil. We feel warranted in asserting that any person who will try the Buckeye Cultivator with our *New Springs* will never use any other

Single or Double Tongue.—Hereafter we will make them with either Single or Double Tongues, and we want all of our customers to be particular in ordering to state which style they want. The Cultivators are precisely the same in other respects.

Shields or Fenders.—We furnish either the celebrated *Rotary Shields* or the common Drag Shields as desired.

Security against Breakage.—All our Shovels whether on wood or iron beams, are provided with the most improved safety pin break, thus insuring security against breakage.



New Spring Shovel for Stony or Stumpy Ground.

Springs for Shovels.—The above cut represents our **NEW SPRING SHOVEL** which can be put on any of our Iron Beam Cultivators, either walkers or riders; we have given them a thorough test and find they are just what the farmer wants for stumpy or stony ground, as it saves a great amount of time in putting in break pins. The construction of this Spring Shovel is such that you can use the Cultivator with either the springs or break pins. Whilst we know this Spring Shovel works all right, and is the best and only spring for the purpose in the market, we do not recommend it only for stumpy and stony ground, first on account of the additional expense, and second for the reason that the cultivators will work just as well in ground that is clear of stumps and stones without it as with it.



No. 2--New Walking Cultivator with Wood Beams, 4 Shovels, Rotary Shields and Springs.

THE NEW
WOOD BEAM BUCKEYE
➤ WALKING CULTIVATORS ➤

With great Improvements for 1883 not found in any
other Cultivators in the Market.



They are Everything that Could Possibly be Desired.



The unparalleled success and immense popularity of the Buckeye Cultivators furnish positive proof that they are constructed on the most scientific principles and contain more points of merit than any of their numerous competitors. In the first year of their introduction they met with universal approval, but year after year we have continued to make valuable improvements, suggested by changes in trade or actual experiments, which have greatly increased their former value and superiority, and we can now assert that we have, without the least shadow of a doubt, the best line of Cultivators in the Market.

THE NEW
WOOD BEAM BUCKEYE
WALKING CULTIVATORS,
IMPROVED FOR 1888.

We place the NEW BUCKEYE before you feeling confident that it has no equal in the market. The following are a few of its many points of superiority :

Width between Beams.—Our arrangement is such that by simply loosening the set screw in the coupling the distance between the gangs of shovels can be increased or diminished. For this we have the most perfect device ever known.

Adjustable Shovel.—All the Shovels both for wood or iron beams are easily adjustable, and can be set so as to throw the dirt to or from the corn by loosening a single bolt.

Beam Couplings.—We know the improved coupling used in the BUCKEYE cannot be surpassed. While being free from any looseness, allowing the beams to swerve or "wobble," it is perfectly free to be moved laterally or vertically and is simple and cannot get out of repair.

Number of Shovels.—We have so arranged the NEW BUCKEYE that we can use four shovels in cultivating corn, and five for cultivating fallow ; also Seeding Attachment.

Springs.—Our new DOUBLE ACTING spring which has been

thoroughly tested the past season, is acknowledged by every practical farmer and dealer, who has examined them, to be *decidedly the best in the market*. They are very simple in construction and so arranged that they are not liable to get out of order; they are so arranged that when the Cultivator is in operation there is a downward pressure to hold the beams steadily in the ground, and when out of the ground to raise them high enough to hook up without any effort upon the part of the operator, thus taking off the heavy strain upon the shoulders as is the case with other springs. They are easily adjusted so as to make the pressure up or down *stronger or lighter* to suit the different kinds of soil. We feel warranted in asserting that any person who will try the BUCKEYE CULTIVATOR with our *New Springs* will never use any other.

Single or Double Tongue.—Hereafter we will make them with either Single or Double Tongues, and we want all of our customers to be particular in ordering to state which style they want. The Cultivators are precisely the same in other respects.

Shields or Fenders.—We furnish either the celebrated *Rotary Shields* or the common Drag Shields as desired.

Security against Breakage.—All our shovels whether on wood or iron beams, are provided with the most improved safety pin break, thus insuring security against breakage.

All these Cultivators are arranged for fifth Shovel and Seeding Attachment, same as our Combined Riding and Walking Cultivators. In ordering Seeding Attachments always be sure to mention the style or kind of Cultivator they are wanted to be used on.

Our No. 2 Cultivators are constructed precisely the same as the No. 1, except that they have *wood* instead of *iron beams*.



NO. 7—New Junior for 1883 with Iron Beams, 4 Shovels, Rotary Shields and Treadles.



No. 6—New Junior for 1883 with Wood Beams, 4 Shovels, Rotary Shields and Treadles.

THE NEW BUCKEYE JUNIOR CULTIVATOR

COMBINED RIDING OR WALKING.

This is either a Riding or Walking Plow and is so constructed that it is especially adapted to either mode, and very easily operated either way. It combines all the best features and valuable improvements of the Senior Cultivator, and besides has many others of importance peculiar to itself. We invite your attention to some of the advantages this plow possesses, and we confidently assert that as a combined Riding and Walking Plow it has no superior, and we think no equal in the market. Its advantages and important features are:

It has a Double Tongue, spread sufficiently wide behind to allow the operator to have, when either riding or walking, a plain view of the row, and keep the horses from getting close together to obstruct that view.

The only practical Shield in use.—It has the favorite Rotary Shield, the only practical Shield in the market, which not only protects the young plants but entirely remedies the difficulty of clogging with stalks or other trash.

Adjustable in depth and width.—It is adjustable to any required depth by means of a chain attached to the beams and pivot-posts, which allows it to adjust to greater or less width between the shovels instantly. The shovels can also be raised out of the ground by the Foot Treadles for turning around at the end of the row, or hooked up under the axle to go from field to field. The shovel braces are provided with wooden pins to prevent breaking the shovels, and also adjust them to run deep or shallow.

High wheels and axles.—The wheels and axles are sufficiently high to pass over corn in the last plowing. It is also easily arranged for marking out corn ground, and with the single center attachment is a complete cultivator for plowing in wheat, oats, barley, &c., for stirring fall plowing and for cultivating fallow ground.

From the past success of this Cultivator and the high recommendations of those who have used them, and with the improvements recently added, we confidently assert that the JUNIOR BUCKEYE RIDING AND WALKING CULTIVATOR has no superior in the market.

The Seeding Attachment can be attached to this Cultivator, whenever desired.



New Buckeye Senior Cultivator with Rotary Shields and Treadles.

—THE—
NEW BUCKEYE SENIOR
RIDING CULTIVATOR.

This Cultivator, for a Riding Cultivator, has higher wheels and is made heavier and stronger than the JUNIOR, and we do not hesitate in asserting that it is the best riding Cultivator in the market, and the following are a few of the reasons why we think so:

BECAUSE it has the Rotary Shields, the best and only Practical Shields on the face of the Globe.

BECAUSE it has the best new Improved Beam Coupling or hinge in the market which holds the beams firmly in an upright position, making them run steady and handle easy.

BECAUSE the shovels are strong, scour well, thoroughly cultivate the ground, are adjustable to throw the dirt to or from the corn, run lighter, and are easily guided around a hill of corn.

BECAUSE it has the best and most convenient Foot Treadle or Lever for raising the Shovels when turning around at the end of the row, or to get over obstructions.

BECAUSE they pivot over the axle, and it is not necessary to move out of your natural position to operate them, or stick your feet down among the beams and shields.

BECAUSE the depth of either side can be regulated from the seat without stopping the team.

BECAUSE it has high wheels, and will pass over corn in the last plowing.

BECAUSE it has an Improved Adjustable Seat, and is readily balanced for a heavy or light driver, and does not pull down on the horses' necks.

BECAUSE it is sold with four or six shovels for corn, and is readily adjusted to any desired width or depth.

IT IS the best field or fallow Cultivator now before the public, and contains improvements that are absolutely necessary to do perfect work not possessed by any other.

IT has 5, 6 or 7 shovels for fallow, and is worth its price for a field or fallow Cultivator, even if you have no corn to cultivate.



New Senior Buckeye Cultivator with Wood Beams, Wood Standards
and Seeding Attachment.

THE NEW BUCKEYE SENIOR CULTIVATOR, WITH BROADCAST SEEDER.

This is another Improvement for 1883. It is furnished with wood beams, has the best new improved beam coupling or hinge in the market entirely doing away with any lost motion, holding the beam firmly in position and is very convenient to adjust to or from the corn. It is provided with the famous Rotary Shields, has convenient Foot Treadles or Levers, and the depth on either side can be regulated from the seat while in motion.

THE BUCKEYE with NEW FORCE FEED SEEDING ATTACHMENT combines all the advantages of a corn Cultivator, a Fallow or Field Cultivator and a Broadcast Seeder in one, and is the only successful one of its kind in the market.

Our New Force Feed Seeding Attachment has the same accurate and reliable feed as the BUCKEYE FORCE FEED GRAIN DRILL and is the nearest PERFECTION of any feed now in the market. It is readily attached or detached to the Sr., Jr. or Walking Cultivators now or previously built.

It is Easily Operated, will sow any desired amount of wheat, rye, barley, oats, flax, etc. The quantity sown is regulated without any change of gears simply by moving the INDICATOR on the Dial on the rear of the hopper in plain view of the operator, and can be varied as much or little as the size or condition of the grain may demand.

Our Improved Spout and Scatterer conducts the grain down close to the ground, thus protecting it from the wind and insuring an even distribution of the grain.

The Buckeye Cultivators are sold with four shovels for corn, or with Single or Double Center Fallow Attachments. These improvements place the Buckeye ahead of any of its competitors. No other Cultivator offers so many advantages. No other Cultivator gives such satisfaction.

No other Cultivator will suit you as well as the BUCKEYE.



THE BUCKEYE PLOW SULKY.

BUCKEYE — PLOW SULKY, —

IMPROVED FOR 1888

CAN BE ATTACHED TO ANY PLOW.

It has been fully demonstrated that a Sulky can be attached to a plow and do better work with greater ease to the team, and certainly more comfort or pleasure to the man or boy, than if he were to trudge the weary rounds to hold and guide his plow. Now, the question is, where can the best Sulky be had? We have given this question our special attention, and can confidently assert that the *Buckeye is the best in the Market*, and we have the following reasons why:

- 1st. It is simple in construction.
- 2d. It is strong, durable and easily operated.
- 3d. Can be attached to any common plow either wood or iron beam.
- 4th. Can be reversed to use on right or left hand plows.
- 5th. It is adapted to either two or three horse plows.
- 6th. The depth can be regulated or the plow raised entirely out of the ground without stopping the team.
- 7th. It will always hold the plow at a uniform depth, while passing over ridges or furrows.
- 8th. With it you can turn a square corner without raising the plow.
- 9th. Can be used with a rigid lever for general use, and may be left loose and adjustable for very rough and stony land. Ask for the BUCKEYE and take no other.

Directions for Setting up and Using

—THE—

BUCKEYE PLOW SULKY.

- 1st. Put on the tongue in center of frame for two horses.
- 2d. Put on the wheels; if for using Large Plows put the furrow wheel on with the long end of the hub inside.

3d. Fasten foot rest 80 under land side of main frame, putting washer 56 on top of frame.

4th. Put on seat, clamping spring between castings No. 69 on axle.

5th. *For Using Three Horses to it.*—Move the tongue about eight inches to the right for right hand plowing, and the same distance to the left for left hand plowing.

6th. *To change your Sulky from left to right hand and the reverse.*—Loosen set screws on axle with the braces attached, also take bolt out of front end of braces, then take off the main frame and reverse it on the axle, then fasten it in its place as before. Reverse seat and foot rest and lever on crank axle.

7th. *For attaching the Plow and Using.*—Before attaching your plow to the sulky first hitch on to your plow and adjust it so it will run just the depth you wish to plow and cut the width you want, just as though you did not intend to use the Sulky; you will then level up the Sulky with the *Lever* on the land side so that when the frame is level the furrow wheel will be as much lower than the land side wheel as the depth you wish to plow. This is easiest and quickest done by blocking up the land side wheel on level ground, this will keep the frame of the Sulky level when this wheel is in the furrow; for instance if you wish to plow a furrow six inches deep, set the wheel that runs in the furrow six inches lower than the land side wheel, then clamp the plow beam to the Sulky, drawing it forward until the point of the plow comes about under the axle of the Sulky. You will observe that the clamps are made wedge shape, and in order to clamp the beam firmly you will first draw them back as far as you can, then slide them up close to the sides of the beam, then put casting 36 under the beam and draw it up tight, drawing both sides alike. When this is done drive the clamps forward until they hold the plow beam perfectly tight. These clamps can also be moved sideways to give your plow more or less land. You will also regulate the width of the land by the clevis at end of beam. When you hitch on to your plow after it is clamped in the Sulky, change your clevis or hitching devise at front end of plow beam so that the plow would *run at least one inch too deep without the Sulky*, then raise the *plow with center lever* to the depth you desire, this will make the *Sulky carry the plow* and throw the weight on the wheels of the Sulky, thereby diminishing the friction in the bottom of the furrow, making the plow run lighter with the Sulky than without it; therefore you will be very careful in adjusting the plow to the Sulky so that the weight of the plow comes on the Sulky. Inasmuch as there are so many different kinds and styles of plows used you must exercise your own judgment to some extent to adjust them to run just right, in fact you may find it necessary to experiment on the different kinds of plows you may want to use. In rough or stony ground, turn the little button on top of lever to hold ratchet lever out of the notches; this lets the plow play up and down, independent of the Sulky.

P. P. MAST & CO.

TESTIMONIALS.

Will more than pay for itself in one Season.

P. P. MAST & Co.:—I think the Plow Sulky I bought last fall of your agent, Monroe Frank, is the best arrangement I ever saw. I plowed some ground with it that never had been plowed by hand. I think that any farmer that has any amount of plowing to do should have a Buckeye Sulky, as they can, by its use, make more in one year than cost of the Sulky by getting his ground plowed a nice, uniform depth. I have plowed a great many years and do not think that I can be beat, but this Sulky did a great deal better work than I ever did by hand. Therefore, I advise my farmer friends to buy a Buckeye Plow Sulky.
SYLVESTER WARD, Westville, O.

The Plow runs lighter with the Sulky than without.

ROCKFORD, ILLINOIS.

MESSRS. P. P. MAST & Co., Springfield, Ohio:

Gents:—Having used your Buckeye Plow Sulky in Plowing corn stalks, stubble and breaking, and testing it thoroughly, I think it a great improvement over hand plowing, doing the work better and running one-third lighter on the team. Would cheerfully recommend it to all parties wishing to purchase a first class Sulky.

GEORGE WEAVER,

Superintendent County Poor Farm, Winnebago, Co., Ills.

Worth twice what it Cost.

MESSRS. P. P. MAST & Co., Springfield, Ohio:

Gents:—I have used your Buckeye Plow Sulky Attachment through last Fall and Spring plowing, and often tested it with others; think it excels anything in use; far superior and more practical than Sulky Plows; would not take twice what I paid for it if I could not get another.
S. B. TAYLOR, Rockford, Ills.

We Refer to the following who have used the BUCKEYE.

MESSRS. P. P. MAST & Co., Springfield, Ohio:

Dear Sirs:—Will you please insert in your coming pamphlet the following names of some of the farmers who have been using your Buckeye Plow Sulkies for the past one or two seasons. They are some of the best farmers in this section of the country, and it is with pleasure I refer to them knowing they will fully endorse all your claims for the Buckeye.

JOHN M. PICKERTON, Summerville, Ills.,

A. HAKES, Peoria, Ills.,

M. A. GARDNER, Harkers Corners, Ills.,

RICHARD NOTT, Peoria, Ills.,

E. R. REED, Northampton, Ills.,

SEMON ANDERSON, Harkers Corners, Ills.

HUGH M. MULLEN, Trivoli, Ills.,

JESSEE O'BRIEN, Groveland, Ills.,

BENJAMIN O'BRIEN, Groveland, Ills.,

JAS McCULLOUGH, Groveland, Ills.,

B. N. GREEN, Princeville, Ills.

Yours respectfully,

CHAS. A. TAYLOR.

THE LATEST IMPROVED
BUCKEYE CIDER MILL AND PRESS.



Until within a few years it was supposed Cider in quantities could only be made by the use of two ponderous machines—the one for grinding and the other for pressing. But now it is conceded on all hands that the most profitable and reliable machine for cider making on a farm, is a good portable mill and press combined; and this, for the obvious reasons, that the mill being always ready for use, the

apples are ground up as they fall, and none are permitted to waste. In this way, there are from even a small orchard, enough apples saved each year to pay the price of a mill, which, but for the convenience of the mill would be lost. The many thousands of these mills now in use in every section of the country fully attest their value and importance to the farmer.

This mill as offered to the public is known as the "LATEST IMPROVED BUCKEYE." This name distinguishes it from various imitations every year thrown upon the market. Please, therefore, remember the name. We have made it for twenty-five years; have a larger experience in the construction of Cider Mills than any other parties in the West, and are therefore better able, we think, to furnish good and reliable mills than any other factory. We keep constantly improving it, and have always been able to furnish the most perfect, durable and effective mill in the market.

For this season our mill will occupy less space, have larger capacity, be the most durable, lightest running mill in the market. We say nothing boasting-ly, but state merely facts, as every purchaser will realize who uses one. We therefore ask all persons in want of a good, substantial, complete and reliable Portable Mill to examine the "LATEST IMPROVED BUCKEYE" before purchasing any other.

It is embraced in a single frame 2½x3 feet; has a two inch wrought iron screw; is neatly and substantially made; is conveniently moved from place to place; is easily worked by hand, and can also be attached to horse power by a belt on the fly wheel. Two men can grind from four to eight barrels of Cider per day. The mill crushes the apples instead of grating as most others do. It has three cast iron cylinders, with straight fluted ribs. The first or upper cylinder crushes the apples into a coarse pomace; and then feeds it through the lower cylinders, which crush it into a fine pomace, it being impossible for any to pass through without being crushed.



THE JUNIOR
BUCKEYE CIDER MILL
—AND—
PRESS.

We build a Junior or small size Cider Mill, with about one-half the capacity of the large mill. This will suit many persons who have but little work to do and want a cheap mill.

This mill has been greatly improved for this season's trade and it is now far superior to all other kinds of small mills that you cannot help buying it after examining it.

PRICE LIST OF MILLS

SENIOR MILL with two Cribbs	\$35.00
JUNIOR MILL with two Cribbs	\$25.00

For further particulars address.

P. P. MAST & CO., SPRINGFIELD, OHIO.

WARRANTY ON
BUCKEYE DRILL.

Whereas, Mr. _____

has this day given us his order for a BUCKEYE GRAIN DRILL and GRASS SEED SOWER, we hereby agree in consideration of said order, and of the faithful performance of the conditions herein mentioned, to warrant said Drill to do good work when properly used with a fair trial, under ordinarily favorable circumstances.

It is an express condition of this warranty that the directions for using said Drill shall be faithfully followed, and, if for any reason after one day's trial it fails to perform as warranted, immediate actual notice of the difficulty must be communicated to the Agent to whom the order is given, or to us at Springfield, and sufficient time allowed to send a suitable person to try it, put it in order or furnish any defective part. If it then fails to perform as warranted, it will be taken back, if it is returned immediately to the agent to whom the order was given or to us at Springfield, and the purchase money refunded and the note cancelled.

And it is hereby further agreed, that if the Drill is used from day to day during the season, or at intervals, or set aside before or after use, without giving us or the Agent said notice, then in either of said cases it shall be conclusive evidence that the Drill is accepted and the warranty at an end.

We, or the agent who receives said notice, will go free of charge and remedy any difficulties which may prevent a Drill from performing as warranted; but, if on examination, the difficulty is not found to be in the Drill but in the ground or manner of using the Drill then the expenses of the visit shall be borne by the person named in the order, and his acceptance of the Drill shall be complete, and the warranty at an end.

P. P. MAST & CO., Springfield, O.

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I USE THE BUCKEYE.



I DON'T.

