

HARVEST OF 1864.

BALL'S OHIO
MOWER AND REAPER,
IMPROVED.

SECURED BY SIXTEEN SEPARATE PATENTS,
AND
PROTECTED BY FIFTY-THREE PATENT CLAIMS

MANUFACTURED BY
DODGE, STEVENSON & CO.,
AUBURN, N. Y.

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G B Webb Agent

To be seen at Boardman & Co Boston

ITS PECULIARITIES AS A MOWER.

DESCRIPTION OF THE OHIO MOWER.

To describe a man, you speak of those features by which he is distinguished from other men; so we shall attempt to describe our MOWER AND REAPER.

ITS WHEELS.

The OHIO MOWER has *two driving wheels*, thirty-six inches high, side by side like a cart, which bear *all the weight* of the Machine. They communicate motion to the gearing by cogs, on a concave surface, matching into ratcheted pinions on each end of a horizontal shaft. These points distinguish this from all other Machines.

These wheels act independently of each other or in conjunction, according to direction, whether on a curve or in a straight line—each being competent to drive the cutter alone. They each have five inches tread, giving in all ten inches of bearing surface on the ground, for friction or adhesion, and to prevent sinking in soft ground. Their very large circumference makes them run lighter and steadier on uneven ground, than smaller ones do. As weight on the driving wheel is the source of its power, it is manifest that the more weight, the more power upon the gearing. But it is still a law of nature that a great weight requires a great power to move it horizontally, or up an inclined plane,—hence the lighter your Machine, the easier you move it, but you must have it strong enough, and that requires weight, and you must have a rapid and powerful motion of the gearing, and *that* requires weight; therefore it becomes important to economise for *gearing power*, all the weight you are obliged to carry in order to obtain *strength*. This object is *completely* gained in this machine, and in *no other*. A machine with only one drive wheel is very far from it. Any weight resting upon the tongue or any other part than the driver, is a loss of so much power, and yet must be carried along.

THE CUTTER-BAR AND ITS CONNECTIONS.

The Cutter-Bar, or (Finger-Bar,) is made of Cast Steel, is four feet and six inches long, and strong enough for any ordinary use or accidents. It is so attached to the frame of the machine, by hinge joints, that it is perfectly controlled by a lever in the hand of the Driver, when in his seat, to raise it over stones, stumps, sticks, cut grass or other obstructions, while in motion. He can also set it by a screw to cut high or low, and can easily fold it up to pass through narrow gates or to travel upon the road. Our plan of doing this thing we consider much better, easier and much safer, than any other yet known. The bar is hung at the hind end of the frame, back of the centre of the drive wheels about twenty-two inches. This position gives it many advantages over any other position, some of which we will briefly state:

1st. It gives the driver the fullest opportunity to see obstructions before the Guards or Knives strike them.

2d. It avoids the danger of a fractious or frightened horse backing his heels against the Guards or Knives.

3d. By reason of the lifting direction of the draft and the sled-shaped bottom of the drag-bar, it rises better out of dead furrows, ditches, and over ant-hills and bogs.

4th. It avoids the necessity of a little truck wheel to carry it, which does not run so steady, nor get over the cut grass so well as a slide, nor turn a short corner so well.

5th. It does not draw down upon the horses' necks at all, but it is carried by the drive wheels when its weight is used for power.

6th. It is the *only position* to make a good Reaper.

The complete adaptability of this Cutter-Bar to any and every variation of surface, by its perpendicular motion at each end, as well as by its rolling or wobbling motion, renders its performance not only perfect in quality, but easy and agreeable both to a team and gearing.

We must not pass this point, without saying a few words about our Guards. They are made of the best *Wrought Iron*, and at the place where the Knives pass them, they are laid with Cast Steel, brought up to an acute angle and highly tempered. No better Guards have ever been made, nor do we believe as good ones have been or can be made, without our Machine to make them with.

THE TONGUE, SIDE-DRAFT AND BALANCE.

The tongue is so attached to the frame, by a sliding bolt, as to give the Operator entire control over that annoyance, so much complained of in other machines, called "Side Draft," one pound of which is worse than twenty pounds of direct draft. There is positively no unavoidable side draft, either in mowing or reaping with this Machine. The weight of the tongue is so exactly balanced by the weight of the driver, gearing and position of the Cutter-Bar, that there is no more weight on the horses' necks than a common tongue gives.

THROWING OUT OF GEAR AND BACKING.

The motion of the first Shaft is communicated to the Crank Shaft by a bevel pinion and wheel, but this bevel pinion is under the control of a *Clutch*, which is attached to a lever at the feet of the Driver, who can instantly connect or disconnect the gearing, and when the Cutter-Bar is folded up, he can effectually block both the main wheels and bring his team to a sudden halt.

The first pinions in mesh with the Drive Wheels, have only a ratcheted connection with the gearing, i. e., connection in one direction, or when the machine moves *forward*—therefore when the machine moves backward, it is *naturally* out of gear, and runs backward as easily as a Cart.

THE REAPING ATTACHMENT FOR No. 1 MACHINE.

This consists of a Cutter-Bar, Guards, Knives, or Sickles, Platform, Grain Wheel and Reel.

The Cutter-Bar is of good White Ash Wood, two inches thick, eight inches wide and six feet long. Having no weight upon the platform, except the weight of the grain, the bar is not required to endure labor or strain, and therefore is not liable to twist or warp out of line, which would much impede the action of the Sickle. The Guards are made of Wrought Iron, and are neat and light. The Knives are Sickle edged, and the very best that can be procured.

The Grain Wheel is a Castor Wheel,—i. e., hung on a pivot so as to run in any direction. This overcomes the difficulty of turning, which has so much interfered with the comfort of working a Reaping Machine. The Reel is operated by a chain and iron shieves, and receives motion directly from the end of the axle of the driving wheel through a universal joint, which allows the Rest to preserve its fixed relation to the Platform, through all the variations of the surface ground. The inner Reel Post is of Iron, and so constructed with a long screw that the Operator can tighten or loosen the Reel Chain, while the machine is in motion.

The REAPER has all the facilities for adaptation to uneven surfaces that the Mower has, and all the power to produce motion.

POSITION OF THE PLATFORM.

To the Reaper, the position of the Platform, if not everything, is at least very important.

Ours being at the rear of the machine, enables us to get an easy and entire *Side Delivery*, while we carry the Raker upon the Carriage, where his weight increases the power and avoids the "Side Draft" and strain produced by carrying him upon the Platform. His Rake, (nearly as light as a Hay Rake,) is extended straight out, and with one pull he lays the gavel at his feet, clean and snug, quite out of the path of the machine on the next round, with the *butts toward the standing grain*, which is the best position for the Binder.

We say, then, that our REAPER is not excelled by any other REAPER, and in many points we think it *Superior to any other*.

The POWER is complete,—the REAPER is easily and quickly attached and detached,—it retains the flexibility of the MOWER,—runs quite as lightly,—gives a *Side Delivery*,—carries the Raker on the Power, and is, in fact, just as good a REAPER as we could make, if it (like many other Reapers) could not mow at all.



No. 2, or Medium Machine, with Self Rake.



No. 1 Mower Passing an Obstruction.



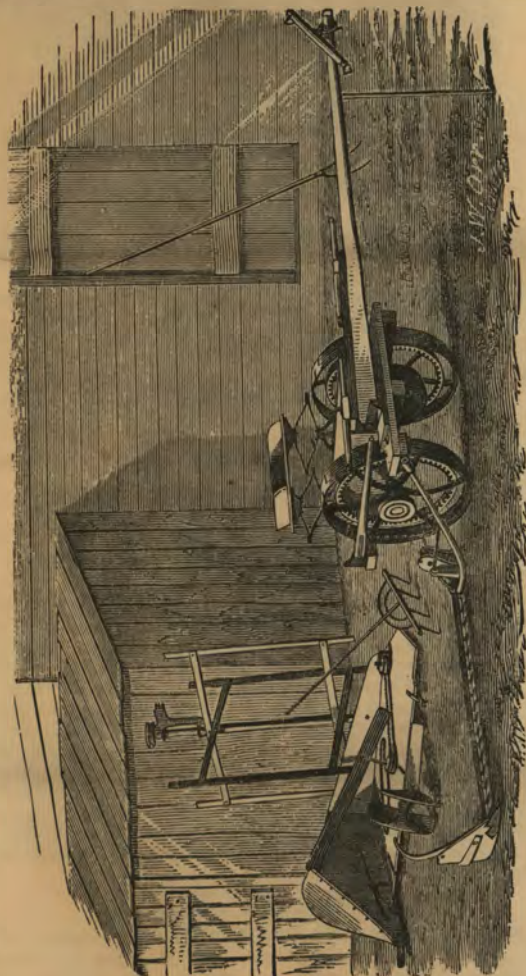
No. 2 Machine in Reaping Order.

THE OHIO MOWER AND REAPER No. 2.

This season we offer to the farming community the Medium Combined Reaper and Mower, constructed upon the same principles as the Ohio Mower and Reaper No. 1, which has given such general satisfaction. The materials used in this, as in our other Machines, are of the very best quality, and it is finished in the same style of excellence.

The wheels are thirty-two inches high; the gearing and other castings are somewhat lighter than in our No. 1 Machine, but strong enough for the test required.

When mowing, it cuts a swath of four feet, eight inches wide, and in reaping, the swath is five feet. The guards are our superior wrought iron, polished guards, placed three inches from centre to centre.



No. 2 Machine as a Mower, with Reaping Attachment in the Background.

We have also made improvements in the outside shoe, and track clearer. The Reaping Attachment is joined to the Mowing Cutter-Bar, when used as a Reaper, in the same manner as other combined machines. By these alterations, in which we have not lost sight of the peculiar advantages possessed by the Ohio Machines, heretofore manufactured by us, we are enabled to offer a COMBINED OHIO MOWER AND REAPER at a less price than we could furnish the No. 1, and yet, we think, it will be found to give general satisfaction.

THE OHIO MOWER, JUNIOR.



This Machine is essentially the same as the large Machine, except in size. The wheels are twenty-eight inches high; it has sufficient power to go through the heaviest grass without the weight of a man upon it; it will cut a swath four feet and one inch wide; its draft, as tested with a good Dynamometer, is about one hundred and fifty pounds.

This is a small, light, two-horse Mower, yet if provided with shafts, instead of a tongue, it can be operated with one horse.

The Junior is built upon the same principle as the large Machines, possessing all of its advantages of adaptation to uneven ground, facility of management, &c. The object in its construction has been to supply a demand that exists in many places for a CHEAP, LIGHT, SINGLE MOWER.

We made and sold about EIGHT HUNDRED of these small Mowers, last season, and the great satisfaction they gave, in every instance, enables us to offer them now to the farming community, with entire confidence.

MERRILL'S MACHINE RAKE.

Having tested this Rake well, in tangled and wet, as well as standing grain, the proprietor is now willing to expose it to public criticism and the rough usage of our energetic farmers. We tell them emphatically, IT WILL RAKE THE GRAIN OFF EVERY TIME. It will rake it off as well, whether straight or tangled, as the most skillful man can do it.

It weighs little, and is easily unshipped. Its weight rests on the rear of the frame, and is balanced by the weight of a man on the front. It admits a driver's seat on the Machine, obviating the necessity of riding on the horse or walking. The power required to work a machine with this Rake, is no more than the power required to run the Machine with a reel and a man raker on it. It, therefore, saves the whole expense of one of your best men, and does the work as well, or better. With it, a boy can go out and cut a whole field of grain, and leave it in nice gavels, without any other help. It is simple in construction, and is not liable to get out of order. It has been used alongside of other Machine Rakes by men who are well acquainted with Rakes.

WARRANTY.

THE OHIO MOWER & REAPER IS WARRANTED to be capable of cutting on land free from obstructions, at the rate of ONE ACRE PER HOUR OF EITHER GRAIN OR GRASS, with *One Span of Horses*, and when properly managed, to do as good work as can be done with the Cradle or Scythe. It is also warranted to be well made, of good material, and, when properly used, not liable to get out of order.

Where the Machine is put in operation, and fails to perform as warranted, it will be the duty of the purchaser to notify us or our Agent immediately of that fact; and to allow sufficient time to send a man to put it in order. If it does not operate after this, it will be taken back, and the money or notes that may have been given therefor, will be refunded.