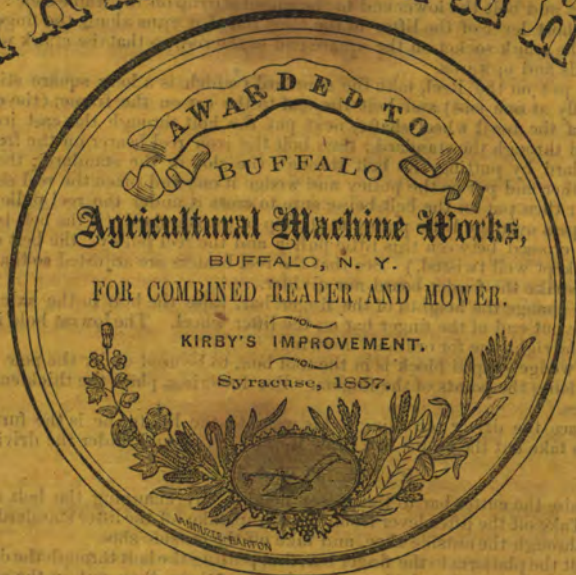


KIRBY'S AMERICAN HARVESTERS



MANUFACTURED BY

Buffalo Agricultural Machine Works,
BUFFALO, N. Y.

OFFICERS.

Geo. L. Squier, Pres't.
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For Sale by _____ Agent,

Directions for Setting Up Kirby's American Harvester.

FOR MOWING.

1. Bolt on the pole—the nuts and washers on the top. Bolt the fender board to the right hand side of the frame, through the hole nearly in the centre of that side of the frame. The object of the fender board is to keep the grass from falling on the frame and gearing.

2. Having put the knife in its place in the fingers, bolt on the finger bar with the nuts on the top, being very careful to get it down to its place on the shoes.

3. Put in the connecting rod: (for mowing in the hole farthest from the centre; for reaping, in the hole nearest to the centre.) Bolt on the track clearer by the bolt which goes through the lifter wheel.

4. Take the lifter lever and put the end through the slot in the inside stirrup and bolt it by the bolt which will be found in its place in the stirrup; then put the lifter standard (which is a curved iron with several holes) through the clip of the lifter lever and bolt the lower end to the round stirrup on the frame shoe: then connect the short lever of the lifter to the long rod that runs along the finger bar, by putting the crank socket on the square end of the rod, so that the crank will extend backwards and upwards.

5. To put on the Reel, take the standard (which is a long square stick with a small pulley at one end) and bolt the end to the ear on the frame; (the ear is near the end of the bevil wheel shaft,) next put the bolt through the cast iron slotted circle and through the standard; then bolt the iron reel bearer on the front side of the standard by putting the bolt through the slot in the standard; then put the reel together and put on the pulley and wedge it on) and place the reel shaft in the bearings; then put on the belt being sure to cross it under the reel pulley, and let the belt pass over the little pulley at the top of the standard, (if the belt is too loose it can be crossed between this little pulley and the reel pulley; the belt should always be kept well twisted.) See that the reel beaters are adjusted so that the ends will not strike the fender board nor divider.

6. To change the height of the finger bar, raise the bolt in the axle plate and throw the out end of the finger bar on the lifter wheel. The lowest hole in the axle plate is the right one for ordinary mowing.

7. A wedge-shaped block is in the tool box, to be used under the pole for lowering or raising the points of the fingers. For lowering, place the thick end towards the horses.

8. Place the driver according to his weight—the lighter he is the further back.

9. To take out the cutter bar, draw it out back of and under the driving wheel.

FOR REAPING.

1. Raise the cutter bar to the proper height, by changing the bolt in the axle plate. Take off the lifter lever from the stirrup, take off the lifter standard, draw out the rod through the outside shoe, and take off the outside shoe.

2. Bolt the platform to the finger bar, first putting the bolt through the divider and false shoe and draw the platform up to its place there, then put in the other three bolts. Put on the platform wheel, setting it the right height to bring the bar level.

3. Bolt the raker's seat to the front standard, letting the spring rest on the inside stirrup. The driver's seat in reaping is the top of the tool box—this should be leveled and adjusted by the bolt passing through the front of the seat board and the standard. The iron back on the driver's seat in mowing, is changed to the raker's seat in reaping.

4. Put on the reel the same as for mowing. **USE GOOD OIL**—it is the cheapest. See that the NUTS ARE KEPT TIGHT. Try the cutter bar and gearing, while out of gear, before starting, to see that it runs free. **KEEP THE KNIVES SHARP.** The tool box contains 1 S wrench, 1 slide wrench, 1 guard with large hole for shank of cutter bar, 2 ordinary guards, 3 bolts and washers for guards, 3 sections, 6 rivets, 1 oil can, 1 wedge for pole, 2 pole bolts and washers for same, one cold chisel, 8 bolts and washers for reel beaters: 1 extra ditto: 1 small wedge for keeping reel pulley to shaft: 2 larger wedges for keying reel arms through the shaft: and one belt hook.

If a Combined Machine it contains in addition to the above 3 bolts $1\frac{1}{4}$ inches long to bolt platform to finger bar: 1 bolt $2\frac{1}{4}$ inches long to go through false shoe and platform divider.

The following parts of the machine will be boxed and the box numbered to correspond with the number marked on the machine, viz: The Reel, Reel-bearer, Reel Standard and Reel belt: The Lifter Lever and Lifter Standard: The Rakers Seat and Spring: The Whiffrees and Neck Yoke: The Cutters.

HISTORY OF

KIRBY'S AMERICAN HARVESTER.

Mr. WILLIAM A. KIRBY, the inventor of this HARVESTER, for some years superintended the manufacture of Harvesters in Buffalo, and by this means he attained a thorough practical knowledge of the working of Harvesters, and saw the many defects of those in general use, and the need of a better Machine. More particularly was his attention directed to four prominent objections to the Machines then in use, viz., their great weight and heavy draft, the rigid finger bar, enabling them to work only on smooth land, and their wooden frames constantly getting out of shape and out of repair, and their inefficiency as combined Machines. He believed these defects might be remedied, and he devoted his whole time for many months to study and experiment, and during the summer of 1855 built one Machine, embodying the principles which he had discovered. That Machine was successful beyond his most sanguine expectations; and it is a remarkable fact that the same Machine has been in successful use every season since, and has cut over eight hundred acres of grain and grass; and the farmer who owns it says he thinks it the best Machine he ever saw. In 1856, Mr. KIRBY obtained two patents upon the principles embodied in his Machine, and during that year he made seven Machines, and sent them into different portions of the state of New York for trial. Though imperfect in manufacture, these Machines excited much attention, and worked to the entire satisfaction of those who used them. The unprecedented success of these Machines confirmed the patentee in the conviction that the principles he had combined in them, though imperfectly developed, were correct, and he applied himself with renewed vigor to the perfection of the Machine in all its details; and those manufactured by the Buffalo Agricultural Machine Works, in 1857, were the results of his ingenuity and perseverance.

This Company commenced the manufacture of KIRBY'S AMERICAN HARVESTER in the spring of 1857, and during the season manufactured and sold two hundred Machines. These were distributed over a wide range of country, and subjected to the severest tests in all kinds of work, and upon every variety of ground, and gave the most unqualified satisfaction to the farmers who purchased them. During that year the celebrated Syracuse trial occurred, and the Kirby, though still an infant and handled by green nurses, dared to compete with the "old stagers" and renowned Machines on the ground, and came off with the grand Silver Medal of the U. S. Society, awarded to it as a combined Machine. From that time to this the growth of the Kirby in popularity has been unprecedented in the history of Harvesters. It immediately took its stand at the head of the column as the BEST COMBINED MACHINE in the country, and the improvements which have been added to it from year to year, have enabled it to hold its place in the march of improvement, still at the head of the column, as is evidenced by the facts that it has met and vanquished in fair trial every

machine of any reputation in the country, has received the first premium at every State Trial that has occurred, and at nearly every State Fair at which premiums have been offered, besides innumerable premiums at county fairs and trials, and, as a crowning glory, again bore off the Silver Medal of the U. S. Agricultural Society at their last Fair held in Cincinnati, Sept. 1860, the medal being awarded to it as the **BEST COMBINED MACHINE** on exhibition.

As might be supposed the demand for this Machine has kept pace with its ever growing popularity. In 1856 there were seven Kirby Machines manufactured; in 1857 two hundred; in 1858 one thousand; in 1859 three thousand, and in 1860 four thousand. Thus during the four years of its manufacture over eight thousand machines have been scattered throughout the country to tell of its merits; and the better and more widely it becomes known the faster the demand for it increases. Four large manufactories in different parts of the country are now kept constantly running to supply this demand, and during the past year with their utmost exertions they were unable to fill their orders.

The manufacturers have found it necessary from time to time to add to the price of the machine in order to cover the increased cost of the improvements they have added, and the patents they have been obliged to buy in order to secure all the improvements they desired. And perhaps the most convincing proof of the real merits of the Machine is the fact, that notwithstanding this increase in price, the demand for it has increased so rapidly during three years of poor crops and financial distress, while the second rate machines have fallen in price and gradually disappeared from the market. There is not another machine in the country that could have raised its prices as the Kirby has done, and still have kept up such a wonderfully increasing demand. With the manufacturers it was a question of life or death—a question whether they should raise the price, or cease to manufacture. They believed that the merits of the Kirby would justify them in the course they took, that the farmers would gladly pay a remunerative price for the machine rather than have it withdrawn from the market, and the result has shown their estimate of its merits to be correct. No other machine has ever had such a history as the Kirby; none but a first class machine could have it.

Notwithstanding the perfection to which we had brought the Machine for the last harvest, we shall go into the field the coming season with still further improvements. We have added to the Machine an adjustable overhanging reel, which does away with the reel arm at the outside of the platform, is easily adjusted to any position either up or down, or backwards or forwards, and can be used in mowing as well as in reaping. Whiffletrees and neck-yokes will be furnished with each machine, the platforms will be covered with zinc, and the machines will be handsomely painted and striped.

We are taking especial pains in the workmanship, finish, and perfection of manufacture of the Machine for the coming year, and our aim is to excel every manufactory in the country on this point. The inventor Mr. Kirby gives his whole time and attention to the improvement and perfection of the machine in all its parts, and every department is under the supervision of thorough and experienced mechanics. As our Harvester is avowedly the best in principal, we intend to make it also the most thoroughly made and perfectly finished Machine in the world.



KIRBY'S AMERICAN HARVESTER AS A MOWER.

DESCRIPTION OF KIRBY'S AMERICAN HARVESTER.

We insert an illustration of Kirby's American Harvester as a Reaper with the parts numbered for reference, also on another page the same machine as a Mower, with the reaping attachment near by.

The driving wheel (14) turns on an axle attached to the axle-plate (6). The small end of this axle plate turns freely around the shaft which holds the bevel gear, and the small pinion which meshes into the gear of the driving wheel, and the large end plays up and down in a groove in the circle post which is firmly attached to the main frame. The axle plate being thus free, permits the driving wheel to play up and down entirely independent of the main frame (16); or the main frame and finger bar can play up and down entirely independent of the driving wheel—thus the wheel may run in a ditch while the finger bar runs upon the bank, and the cutters continue in motion cutting the grass close; or the wheel may run over a knoll, while the cutters run through a hollow and shave it out closely. In short, each acts independently of the other, and each follows its own ground. The axis of motion of the axle plate is the pinion shaft, consequently the play between the wheel and frame never throws the pinion out of gear.

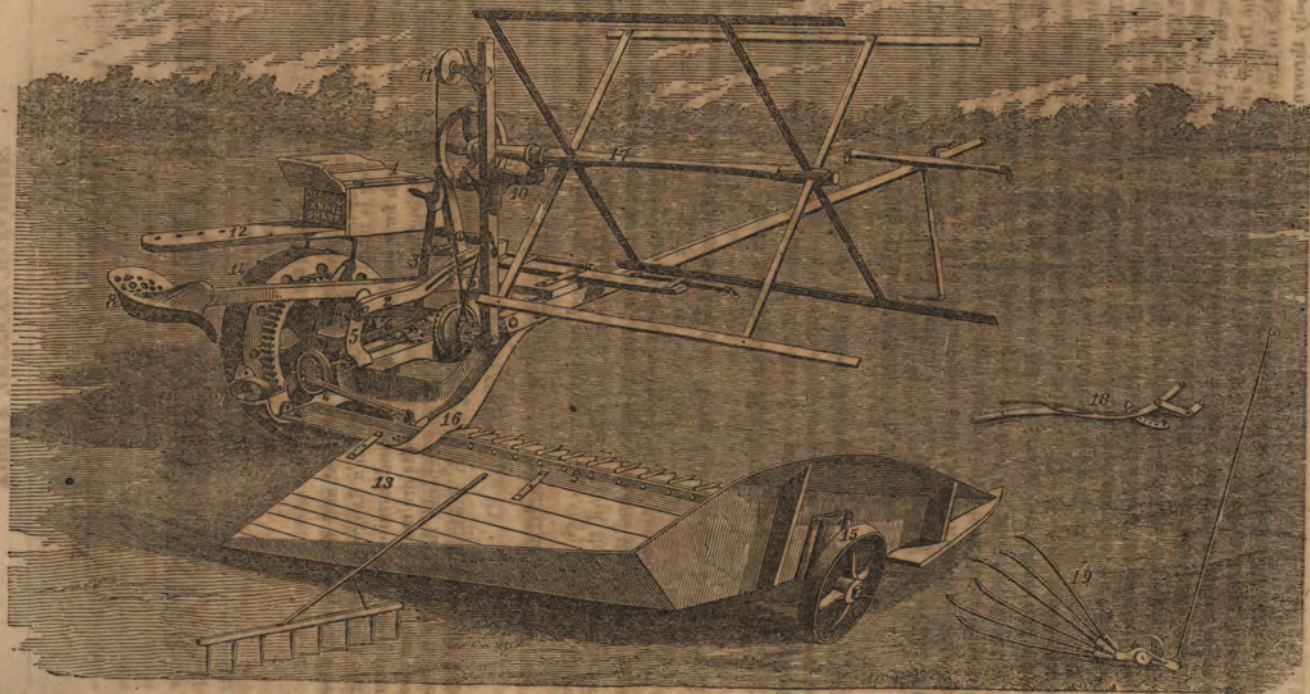
This independent action enables the operator to change the height of cut at pleasure. In mowing, the driver does it without leaving his seat, by throwing the outer end of the finger bar upon the lifter wheel by means of the lever at his side, and changing the height of the pin in the axle plate. In reaping, the change of height is made by changing the pin in the main axle plate, and the pin in the axle plate of the platform wheel (15).

In reaping the driver sits on the tool box (1) and the raker sits upon the saddle (8) with one foot in the stirrup (7) and the other upon the platform (13). In mowing the iron saddle (8) is fastened to the seat board (12), and the driver straddles the board with one foot in the stirrup (5), and the other in a corresponding stirrup upon the other side of the driving wheel. This has proved to be the *easiest* and *safest* seat that has yet been devised for a Mowing Machine. The seat board (12) acts as a lever (being pivoted over the driving wheel and the front end fastened to the main frame) by means of which the driver's weight counterbalances the weight of the frame and takes the pressure off the horses' necks. The saddle (8) should be moved forward or back according to the weight of the driver, so as to make a perfect balance.

The overhanging adjustable reel may be used both in mowing and reaping. Its height is changed by sliding the iron reel bearer (10) up and down on the standard to which it is attached. It may be moved backwards and forwards, by loosening the bolt which goes through the slot in the iron segment (2). The reel can thus be adjusted to any desired position, and the belt passing over the small pulley (11) does not require any alteration in changing the position of the reel. The belt should always be crossed below the reel pulley, and it may also be crossed above the reel pulley, if this pulley has any tendency to slip, but unless it does slip it is better not to cross it above.

Motion is given to the cutters by means of the driving head (4) which acts as a balance wheel to equalize the motion, and has four holes or boxes for the connecting rod, obviating the necessity of continually buying new boxes. The cutters are thrown out and in gear by means of the lever (3) within reach of the driver, either in mowing or reaping.

To change the machine from a reaper to a mower, take off the platform and the raker's seat, and put on the revolving track clearer (19) with the lifter rod and wheel attached to it, and connect the lifter lever (18) to the end of the lifter rod. This lifter lever stands at the side of the driver in mowing, and by pushing down the lever he throws the outer end of the finger bar upon the lifter wheel, and by raising the lever he raises the inner end of the finger bar, and a spring attached to the lever holds the finger bar in whatever position the driver puts it, and he is then ready to go where he pleases.



KIRBY'S AMERICAN HARVESTER AS A REAPER.

PECULIARITIES OF CONSTRUCTION
OF
KIRBY'S AMERICAN HARVESTER.

It is an Iron Machine.

The castings are made of Salisbury Iron—the strongest and most expensive iron in market: the finger bar is made of wrought iron with a flange on the front edge, thus giving great strength for a small weight of iron, and forming the most convenient possible place for bolting on the fingers. The bolts are made of the best Norway iron, with forged nuts. We spare no pains nor expense in selecting the best materials that can be procured for the machine, and in workmanship and finish our aim is to excel every manufactory in the country.

It is an Independent Action Machine.

The Finger Bar and Driving Wheel act independently, each following its own ground, so that the Driving Wheel can run into a hollow and the Finger Bar over a knoll at the same time; or the wheel can run in a ditch and the bar on the bank and cut. The bar can play up and down independently of the wheel from 2 to 18 inches, thus enabling it to work well on *very rough ground, lessening the liability of breakage*, and permitting the cutters to be set at *any desired height*, both in mowing and reaping.

It is a Portable Machine.

By means of a lever at the side of the driver, he can at pleasure and while the machine is in full motion raise either end or both ends of the Finger Bar to pass over obstructions, carry his swath, or move from field to field, or ride about town for pleasure.

The Driver's Seat is a Lever.

The Driver's Seat is so pivoted over the Driving Wheel that the weight of the driver counterbalances the weight of the frame and the downward pressure upon the horses' necks, and throws the whole upon the Driving Wheel, thus adding to the power of the Wheel, materially lightening the draft of the Machine, obviating the side draft, and permitting the cutters to lift more easily over stones and obstructions, and thus rendering them less liable to injury. The Machine runs lighter and better every way with the Driver's weight added than without it.

The Driver's Seat is also a very safe, convenient and easy one, he being back of the Finger Bar so that he can keep the working of the Machine constantly under his eye, and control its action by means of the Levers within his reach, while the gentle undulatory motion of the seat relieves him of the weariness of constantly sitting in one position. There is no machine in the country that has *so safe a seat*. The Driver sits straddle of his seat with his feet braced in stirrups, and it is impossible to throw him, whereas, in most of the machines in market the Driver can be easily thrown from his seat.

KIRBY'S AMERICAN HARVESTER.

Adjustable Overhanging Reel.

One of our recent improvements is an Adjustable Overhanging Reel, which does away with the Reel Arm heretofore used at the outer end of the Reel. This Reel is easily adjustable to any desired position either up or down or backwards or forwards, without any change of belt, and can be used either in mowing or reaping. This is the only really adjustable reel in use, and we think will prove to be a great improvement over the old devices.

Revolving Track Clearer.

Another of our recent improvements is a Patent Revolving Track Clearer, which rolls the grass over and spreads it evenly, instead of scraping over the ground and leaving it in bunches that require to be spread by hand.

Zinc Platform.

We are covering our Platforms with Zinc, which adds greatly to their durability and makes the raking off much easier, especially when the grain is damp and heavy.

Connecting Rod always in Line.

Whatever the position of the Finger Bar the Connecting Rod is always in the same line, and never binds the cutters, as with the jointed bar machines. The Driving Head contains four boxes, thus doing away with the continuous expense of renewing boxes as with other machines. The boxes are also set at different distances from the center, to give longer or shorter stroke, according to the work to be done, and the Driving Head acts as a Balance Wheel to equalize the motion.

Patent Device to Prevent Clogging.

The Cutters are fastened with *Patent Projecting Rivet Heads*, which play through slots in the fingers, *effectually clearing the Machine at every stroke*, so that it cannot be clogged, in any kind of grass, be the same wet or dry. This device also enables us to use the *Closed Guard Finger*, which is more than four times as strong as the common open guard finger of the same weight and material.

Shipping Lever.

A Lever is attached in a convenient position for the Driver to throw the Cutters out and in gear at pleasure, while the machine is in motion.

Simple Gearing.

The Gearing is *very simple*, and the speed so regulated that it does not require a fast walking team to operate the Machine. Oxen are frequently used to good advantage. All the Gear Wheels are guarded so that grass and dirt cannot get in to clog them.

The Raker's Seat.

The Raker's seat is very easy, and his position the most convenient possible for raking off the grain. By a natural and easy quarter turn sweep of the arms he delivers the gavels at the side, out of the way of the machine on its next round. This position is secured by Patent.

Simplicity of Construction, Strength and Durability are attained in the highest degree, by the ingenious and simple combination of all parts of the Machine.



THE SUPERIORITY OF THE KIRBY

Over all other Machines will become more obvious by looking at its several superior points in detail and then considering that all these separate excellences are combined in one Machine, in the most simple and effective manner. While other machines may equal it in one or two of its meritorious points, we can safely say there is not another machine in the world which *combines all the excellences* that are found combined in Kirby's American Harvester. These excellences are

I. STRENGTH.

The Machine is made of Iron, and the patterns so formed and the weight so distributed as to give the greatest amount of strength with the least weight of iron. Our experience with the machine during the four years it has been manufactured by us, has enabled us to detect and remedy any weak points which have been developed, and all parts that are liable to strain have been made doubly strong. We have repeatedly known of the machine's striking against stumps or other obstructions and bringing a heavy team all up standing without any breakage whatever. We pay extra prices for materials, for the sake of getting the strongest the market affords, and we believe the machine will stand a heavier test of strength than any other two horse machine in market.

II. DURABILITY.

Being made of iron the Machine is not liable to decay, nor shrink, nor check, nor warp by exposure to the weather. It is well known that wooden machines are liable to all these difficulties, which besides gradually weakening and destroying the frame, throws the iron work and running parts out of place, causing one part to bind and another to wear, and every hot day, and every shower, and every night's exposure, increases the difficulty until the Machine is destroyed. These difficulties cannot be overcome in a wood frame machine, but are entirely obviated in one with an iron frame. The simplicity of the Kirby also increases its durability, for every one knows that the more complicated a machine is, the greater is its liability to get out of order. There are but few parts in this machine that are liable to wear, and those parts are so constructed that they can be easily removed and replaced. The independent action of the finger bar greatly lessens its liability to breakage. When the finger bar is attached rigidly to the frame and driving wheel, upon coming suddenly in contact with any obstruction, the whole weight and force of the machine is brought to bear at once upon the point of resistance; but with a flexible and

KIRBY'S AMERICAN HARVESTER.

movable finger bar there is a giving and lifting of the bar which brings the strain upon it gradually and slowly, and very much lessens the liability to breakage. Again a flexible bar will *pass over* many obstructions which would stop or break a machine with a rigid bar. The guard fingers being whole on the top are much less liable to break than the common open finger. We think experience will prove the Kirby to be very much the most durable machine in market. There are many machines that have been used since the first year of its manufacture with no expense for repairs, and we can see no reason why the machine should not last twenty years or more with occasional renewal of the knives and some other minor parts.

III. SIMPLICITY.

A glance at the Machine will render obvious its marvellous simplicity in all its parts. It is easily put together, easily handled, easily altered to adapt it to different kinds of work, and is entirely free from the "traps" with which most machines are encumbered. We have frequently heard strangers remark upon seeing the machine for the first time "why there is nothing of it,"—and we consider that one of the strongest points of its superiority. It does not require an experienced mechanic to work it, nor a machine shop to keep it in order. Every farmer will appreciate these advantages.

IV. EASE OF DRAFT.

Upon this point the Kirby Machine is unequalled. In every important trial that has occurred from the celebrated Syracuse Trial in 1857 to the present time it has been subjected to an accurate test of draft by the Dynamometer, and in every instance where it has had a fair test it has been proved to be the lightest draft machine in the field. The tables of draft to be found on another page of this book are conclusive evidence of the superiority of the Kirby in *Ease of Draft* over every other machine in market. And in confirmation of this evidence we have the united testimony of the farmers who have used the machine. Many of them have had much experience in the use of other machines, and some of them testify that the Kirby draws as light for two horses as other machines for three, others say that it requires four horses to handle other machines as easily as two can handle the Kirby, and all agree that it is the lightest draft machine they know of, and that an ordinary span of horses can work it all day, and day after day, without worry, and as easily as they can do ordinary average farm work. The remarkable ease of draft which the Kirby exhibits is attributable to various causes, among which are its *Lightness*,—it being the *lightest Combined Machine in use*: its *Lever Driver's Seat*—by which the weight of the driver is made to throw the weight of the frame on the driving wheel; its *Independent Action*,—by means of which the finger bar is enabled to pass lightly over any inequality of the ground; and the *Simplicity of its Gearing*—which does away with a large amount of friction necessary to more complicated machines.

V. PORTABILITY.

It is provided with a wheel at the outer end of the finger bar, connected with a lever at the side of the driver, by means of which the cutters can at any moment be elevated to travel from field to field or pass over cut grass or other obstruction. It is also a light and easy machine to handle.

VI. ADJUSTABILITY.

This is one of the *great* merits of the Kirby wherein it far surpasses all other machines. Its principle of *Independent Action* and its *Adjustable Reel* are unequalled. In mowing, the finger bar, without any assistance from the driver, easily *adjusts itself* to the inequalities of the ground, while at the same time the driver can at pleasure *raise or lower either end or both ends* of the finger bar, or set it so as to *cut any highth* he desires. In reaping it is also easily adjusted to cut the stubble any desired length. Both in mowing and in reaping the reel can be adjusted to any desired position either up or down or backwards or forwards, without any change of belt.

VII. Ability to Work on Rough Ground.

In this respect it is entirely unequalled by any machine yet produced. Its one wheel combined with the independent action of the finger bar enables it to go through dead furrows and ditches, among stones and bogs, and over knolls and hills, where no other machine can follow it, and where it would not seem possible for any machine to work.

VIII. Adaptation to all Kinds of Work.

The independent action of the finger bar not only enables it to work on rough ground, but adapts it to every variety of soil—whether sand, clay, or wet marsh; whether soft or hard, rough or smooth, stony or hilly; to all kinds of forage, early and late, light and heavy, soft, fine, and wet grass, lodged and standing clover; to all kinds of work—whether mowing or reaping, or gathering grass and clover seed, or cutting flax. It can be set to work at any height, from two inches up to eighteen inches, and the change can be made in an instant.

IX. A Perfect Combined Machine.

This is an advantage which cannot be too highly prized. While there are many machines that are very good mowers, and others that are good reapers, there is no other good *Combined Machine* to be found. Mr. Kirby has furnished to the farmer the *two machines combined* at the cost of a single one, and so thoroughly perfected, that as a Mower it will work as well as the best of those adapted only to mowing; and as a Reaper, as well as the best of those adapted only to reaping; and yet so simple in construction, that the change from Mower to Reaper is made in a few minutes.

X. Ease of the Raker's Position.

In all other machines having a side delivery, the raker is obliged to stand in an awkward and tiresome position to rake the grain off. In the Kirby Machine, the new and peculiar position of the raker's seat, enables him to sit upon a spring seat in an easy position, and, with a rake of novel form, to take off the gavels at the side, out of the way of the horses, with but one movement of his arms, which is as natural and easy as if he were standing on the ground and raking. A boy can rake off all day without unusual fatigue.

 WE CHALLENGE THE WORLD TO PRODUCE A MACHINE WHICH COMBINES ALL THESE ADVANTAGES SO PERFECTLY AS KIRBY'S AMERICAN HARVESTER.

SOME REASONS

Why Kirby's Harvesters are the Best in Market.

As many Farmers are not acquainted with the peculiarities of the various Harvesters in market, we will briefly point out to them the prominent features of the leading machines, that they may know what they are buying when they purchase a machine. In what we have to say, we shall speak of the other machines in classes, as they embody similar principles, and you can apply the argument to the various machines that come to your notice, as they come under the one or the other class.

I. The first class which we shall mention, as it is the most important one, is the INDEPENDENT ACTION MACHINES. These machines have been introduced within three or four years, and their distinctive feature is *their ability to work on rough ground*, and this is accomplished by the *independent action of the finger bar*, which freely rises and falls in following the inequalities of the ground, independently of the driving wheel. This independent action gives the machine so many advantages on smooth as well as rough land, that the older machines not possessing this feature are fast going into disuse, and will soon be wholly abandoned. Indeed, the manufacturers are now *pressing these machines off, on any time and at almost any price, to get rid of them*. You will find the independent action machines are the only machines that can be sold wherever the Farmers are posted up as to their merits. We shall therefore explain somewhat at length the advantages of Mr. Kirby's method of obtaining the independent action.

In the machines now before the public the independent action is attained in two ways. 1st. By a peculiar mode of attaching the driving wheel to the main frame, thus establishing the independent action between the wheel and frame, as in the Kirby Machine. 2d. By a joint or spring in the finger bar near its connection with the frame, establishing the independent action between the bar and frame. These are the only modes of obtaining an independent action of the finger bar now in use. With the last mode it is *necessary* to use two wheels to carry the frame, or else the machine would *tip over*; and the manufacturers' being forced into a two wheel machine, make a virtue of their necessity, and attempt to brag over it. If it was the object of a Harvester to be used as a cart for hauling manure, or a buggy to ride to church in, there might perhaps be some sense in bragging over the two wheels, but we suppose Harvesters are made primarily and solely for mowing and reaping grass and grain, and should be adapted to that as their chief end. For all the *practical* purposes of a *Mower and Reaper* two wheels are decidedly objectionable. For instance, the Kirby machine, having but one wheel, can run in a ditch while the bar runs on the bank and cuts; no two wheel machine can do this, nor can it run in dead furrows or water furrows, *nor wherever the form of the land has a tendency to bring the machine into a similar position*. Again, the two wheel machines track so wide that it is impossible in reaping to deliver the grain out of the way of the machine on the next swath. Hence no successful two wheel Reaper has ever yet been made, and in regions where it is necessary to *pretend* the machine is a combined machine, in order to sell it at all, the manufacturers, while they recommend

and warrant it as a Mower, say, "The *reaping attachment* is warranted to work satisfactorily, and should it *fail to do so*, the *attachment may be returned*."

There are other reasons besides the width of track why a two wheel jointed-bar machine cannot be made a successful reaper. The bar of a reaper should be stiff, as it has to carry the platform and load of grain, and usually the raker also. If the bar is jointed, of course there must be extra and complicated and cumbrous fixings to hold it and its load in place, and there must be a strong wheel at the outer end of the bar and sometimes another at the inner end to hold it up and carry it. Thus you have three or more wheels running on the ground abreast, or nearly so, to hold the machine up, and keep its joints straight, and every turn of the machine and every uneven place cramps and strains both the wheels and the machine: and the side draft is very great. A successful reaper with two wheels and a jointed bar, is an impossibility.

The objections to a jointed bar for mowing are these: The joint comes in the very place in the bar where there is the most strain, and even if it is made strong enough to stand the strain, still as it takes all the strain of the bar it must wear rapidly, and the outer end of the bar must drop back; this, of course, increases the strain and the friction, makes the cutters work hard, and the longer it is used the worse it gets, till it finds its way into the scrap heap. Again, the joint comes at or near the point of connection between the connecting rod or pitman and the cutters, and only when the machine is working on a dead level does the connecting rod work in line with the cutters. Whenever the finger bar is out of a level the connecting rod works at an angle, pulling and pushing the cutters against the top or bottom of the fingers, wearing them rapidly and creating friction; and whenever the ground is so rough as to throw the bar considerably out of level, the cutters bind and will not work at all. Hence you will find the agents of these machines will never allow you to lift the outer end of the bar while the machine is in motion. Still again, there is only the weight of the bar to hold it down to its work, and whenever the ground is sideling or in such shape as to give the outer end of the bar a tendency to raise, it goes "bobbing around," haggling the grass badly. Once more: in certain positions these jointed machines are dangerous to operate, especially so in stumpy ground, for when the horses are in full motion if the outer shoe comes in contact with some fixed obstruction the joint will double up like a "jack-knife," and the driver be converted into a two horse projectile, shooting through the air with more speed than safety.

None of these objections hold against the Kirby machine. The finger bar is stiff and firm, and yet *perfectly free in its play up and down* in following the inequalities of the ground. Either end will rise and fall, or the whole bar will rise and fall without any cramping to the machine, or connecting rod, or cutters. Whatever may be the angle of the bar *the connecting rod is always in the same line*—turn the machine upside down and it is still in the same line, and the cutters perfectly free. With its one wheel it can run anywhere where a wheelbarrow can run. Hence it will work on rough land where the two wheel jointed machines can't stir. It has the weight of the frame added to the weight of the bar to hold it down to its work, and don't go "bobbing around." It is perfectly safe for the operator in all positions, and just as portable and convenient to ride to church on, if desired for that purpose, as the two wheeled machines,

In reference to the machines which have springs in place of the joint, the same objections exist. They are only mowers, and make no pretensions to reaping. They possess the objectionable feature of two wheels, and we should judge the objection of weakness would apply with still more force to the spring than to the joint, while it must allow less freedom of play to the finger bar, especially at the inner end.

Thus while the independent action machines are very much superior to and destined to supersede all others, it is demonstrated that Mr. Kirby's method of obtaining the independent action is the best for a Mower, and the *only one* that is good for anything in Reaping.

II. WOODEN MACHINES. Most of the machines now before the public are wooden machines, whether with the old fashioned rigid bars or the independent action. The old style wooden finger bar is so objectionable on every account that it has been generally abandoned, but most of the machines still retain the wooden frame. The objections to it are these: To obtain the required strength it must be cumbrous and heavy. It shrinks and swells and warps with every exposure to dew, or shower,

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or hot sun. The nuts must then be tightened, throwing the gearing out of place, creating extra friction and wear, and after one or two years' work and storage the machine is used up and has to be laid aside. The Kirby is an *iron* machine, and not open to these objections. The gearing will be found in precisely the same position after being run twenty years as when it left the workmen's hands. The finger bar retains its shape, the guards are in line, and everything remains without being subjected to change by every shower and every dew.

III. COMBINED MACHINES. Here we have the field almost to ourselves. As you have seen, it is the only successful combined machine among the independent action machines, and among the old fashioned rigid bar machines there never has been but one that has gained any reputation as a combined machine. That is a wooden machine, and so heavy and cumbrous that it is generally known as the "Horse Killer;" and is rapidly going out of use. Of the other rigid bar machines, while one or two have had their day as Mowers, most of them have been only Reapers. None of these have ever been successful in both mowing and reaping, and it has only been within a few years, since combined machines have come into general demand, that they have set up any pretensions to the ability to both mow and reap. Our independent action gives us an incalculable advantage over them as Mowers, to say nothing of our lightness of draft, portability, convenience, iron frame, &c., and we will only take space to give some of the reasons why the Kirby is superior to any of them as Reapers:

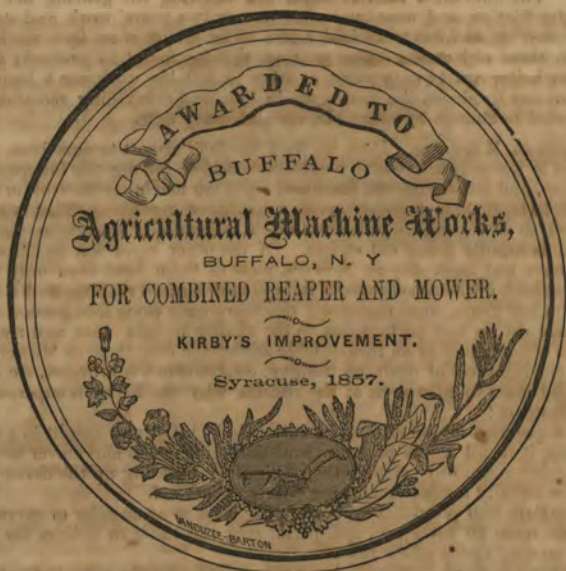
1. The independent action allows the cutters to be set at any height in a moment, thus adapting it to all kinds of grain, and gathering grass and clover seed, while the other machines can only change their height by building up the driving wheel, or some other equally bungling and inconvenient method.

2. Our platform is of peculiar form, extending back in an angular or curved shape, giving ample room for the grain, and permitting the raker to deliver the grain at the side by an easy sweep of the rake.

3. The Raker's position. The most common position for the raker in the machines now before the public is a stand at the back or outer corner of the platform. Here the raker stands with his breast against a support, and with a fork, by two distinct and unnatural motions, pushes the grain off at the side by main force. Riding thus on the small wheel which supports the platform, he receives a blow on his breast every time the wheel passes over an obstruction or drops into a hole or dead furrow; but few constitutions can stand such usage long. Again, in order to sustain the raker's weight in this position, the platform and its supports must be made strong and heavy. The raker's weight is carried on the small platform wheel, instead of on the driving wheel where it should be, thus creating a very heavy side draft, and every time the platform wheel passes over an obstruction or drops into a hole, the pole is thrown against the horses' sides, and the instances are numerous in which horses have been actually killed by this heavy thumping against their sides. In the Kirby machine the raker is placed directly behind the horses, on a comfortable seat, his weight directly on the driving wheel where it is most easily carried, and with a rake of peculiar construction he can, by a quarter turn of the arms which is perfectly natural and easy, leave the grain in good condition for binding, entirely out of the way of the machine on its succeeding swath. This position gives him full control of the grain, and enables him to work the machine with or without a reel, as he chooses, and is the *only* position in which a machine can be worked without a reel. It also permits the raker to dispense with a driver, which cannot be done in any other position. This position of the raker and form of the platform are secured by patent.

In reference to the machines that deliver the grain in rear, it is only necessary to say, that it requires several men to follow the machine and bind the grain while it is green, and move it before the next swath can be cut. This method of delivery is now generally abandoned.

Thus you will see that the Kirby Machine is superior as a Mower to any that is adapted to *mowing only*, and surpasses as a Reaper any machine adapted to *reaping only*, and is really a *perfect* combined machine, and the only one in market entitled to that name. When you add to the advantages above named, its lightness of draft, *wherein it surpasses all machines*, its simplicity, durability, portability and convenience, we think you will feel no hesitation in coming to the conclusion that the Kirby machine is the *best* one in the market.



TRIALS AND PREMIUMS.

There has never been a Harvester invented, which, during the first four years of its existence has received so many and so important premiums as have been awarded to the Kirby Machine. It is true that premiums sometimes go by favor rather than by merit, (had it not been so, we feel certain that the list of Kirby premiums would be still larger than it is,) yet it is at the same time true that though a second rate machine may sometimes receive an award by favor, it cannot do this often, and year after year, especially at trials. None but a first class machine could have taken the premiums that have been awarded to the Kirby, for they follow each other in an increasing ratio year after year, as the machine becomes more and more known and tested, and many of them have been awarded after severe and protracted trials, in competition with all the successful machines in the country, and under circumstances where a second rate machine must of necessity show its weak points. From the Syracuse trial in 1857, to the fair of the United States Agricultural Society in 1860, the course of the Kirby has been one grand triumphal march, from honor to honor, and victory to victory, vanquishing every competitor, till, like Alexander, it must weep that there are no more machines to conquer.

We had hoped to have given a full and accurate list of the first premiums that have been awarded to the Kirby since its birth, but our agents are so dilatory in sending in their reports that we are unable to do so, and can only give such as have already been reported to us, as follows:—

PREMIUMS IN 1860.

- FIRST PREMIUM (Silver Medal,) as Combined Machine at Fair of U. S. Agricultural Society, in Cincinnati.
- FIRST PREMIUM as Combined Machine, at the New Jersey State Fair.
- FIRST PREMIUM as Combined Machine, at the Geneseo Trial, by the Livingston Co. Agricultural Society.
- FIRST PREMIUM as Combined Machine, at the Geneseo Trial, to Kirby's one horse Machine.
- FIRST PREMIUM as Reaper, at the Geneseo Trial, to Kirby's one horse Machine.
- FIRST PREMIUM as Combined Machine, at Erie Co. Fair, N. Y.
- FIRST PREMIUM as Combined Machine, at Niagara Co. Fair, N. Y.
- FIRST PREMIUM as Combined Machine, at Huron Co. Fair, O.
- FIRST PREMIUM as Combined Machine, at Fairfield Co. Fair, O.
- FIRST PREMIUM as Combined Machine, at Fayette Co. Fair, O.
- FIRST PREMIUM as Reaper, at Fayette Co. Fair, O.
- FIRST PREMIUM as Combined Machine, at Crawford Co. Fair, Pa.
- FIRST PREMIUM as Combined Machine, at Lenawee Co. Fair, Mich.
- FIRST PREMIUM as Combined Machine, at Racine Co. Fair, Wis.
- FIRST PREMIUM as Mower, at the Pontoosuc Society Fair, Mass.
- FIRST PREMIUM as Mower, at the Conn. River Valley Fair, N. H.
- FIRST PREMIUM as Reaper, at the Girard Pa. Trial.
- FIRST PREMIUM as Mower, at the Fabius N. Y. Trial.
- FIRST PREMIUM as Mower, at the Lawrence, N. J. Trial.
- FIRST PREMIUM as Mower, at the Bakers' Basin, N. J. Trial.
- FIRST PREMIUM as Combined Machine, at Genesee Co. Fair.
- FIRST PREMIUM as Combined Machine, at Berkshire Co. Fair.
- FIRST PREMIUM as Mower, at the Lee Trial, Mass.
- FIRST PREMIUM as Mower, at the Niagara Trial, N. Y.
- FIRST PREMIUM as Combined Machine, at the Gowanda Fair, N. Y.
- FIRST PREMIUM as Reaper, at the Conneautville Trial, Pa.
- FIRST PREMIUM as Mower, at the Laporte Trial, Ind.
- FIRST PREMIUM as Reaper, at the Greencastle Trial, Ind.
- FIRST PREMIUM as Combined Machine, at the Indianapolis Trial, Ind.
- FIRST PREMIUM as Combined Machine, at the Wayne Co. Fair, Ind.
- FIRST PREMIUM as Combined Machine, at the Ripley Co. Fair, Ind.
- FIRST PREMIUM as Combined Machine, at the Ohio Co. Fair, Ind.
- FIRST PREMIUM as Combined Machine, at the Switzerland Co. Fair, Ind.
- FIRST PREMIUM as Combined Machine, at the Hendricks Co. Fair, Ind.
- FIRST PREMIUM as Combined Machine, at the Grant Co. Fair, Ind.
- FIRST PREMIUM as Combined Machine, at the Vermillion Co. Fair, Ind.
- FIRST PREMIUM as Mower, at the Gibson Co. Fair, Ind.
- FIRST PREMIUM as Mower, at the Vigo Co. Fair, Ind.
- FIRST PREMIUM as Reaper, at the Vigo Co. Fair, Ind.
- FIRST PREMIUM as Reaper, at the Posey Co. Fair, Ind.
- FIRST PREMIUM as Reaper, at the Vandenberg Co. Fair, Ind.
- FIRST PREMIUM as Reaper, at the Warwick Co. Fair, Ind.
- FIRST PREMIUM as Combined Machine, at the Rush, Hancock, Henry and Shelby Co. Union Fair, Ind.

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FIRST PREMIUM as Combined Machine, at the Putnam, Park, Montgomery and Vermillion Co. Union Fair, Ind.

FIRST PREMIUM as Mower, at the Surry Trial, N. H.

FIRST PREMIUM as Reaper, at the Charleston Trial, N. H.

PREMIUMS OF 1859.

FIRST PREMIUM and the only one, granted at the New York State Fair.

FIRST PREMIUM as Combined Machine, at the Michigan State Fair.

FIRST PREMIUM as Combined Machine, at the Wisconsin State Fair.

FIRST PREMIUM as one horse Combined Machine at the Wisconsin State Fair.

FIRST PREMIUM as one horse Reaper, at the Wisconsin State Fair.

FIRST PREMIUM as Combined Machine, at the Tennessee State Fair.

FIRST PREMIUM as Combined Machine, at Tennessee State Trial.

FIRST PREMIUM as Combined Machine, at Erie Co. Fair, N. Y.

FIRST PREMIUM as Reaper, at Erie Co. Fair, N. Y.

FIRST PREMIUM as Clover Harvester, at Erie Co. Fair, N. Y.

FIRST PREMIUM as Combined Machine, at Lenawee Co. Fair, Mich.

FIRST PREMIUM as Combined Machine, at Crawford Co. Fair, Pa.

FIRST PREMIUM as Combined Machine, at Belmont Co. Fair, O.

FIRST PREMIUM as Combined Machine, at Morrow Co. Fair, O.

FIRST PREMIUM as Combined Machine, at Carroll Co. Fair, O.

FIRST PREMIUM as Combined Machine, at Fairfield Co. Fair, O.

FIRST PREMIUM as Mower, at the Kalamazoo Trial, Mich.

FIRST PREMIUM as one horse Mower at the Greenfield Trial, Mass.

PREMIUMS IN 1858.

FIRST PREMIUM as Reaper, at the New York State Fair.

FIRST PREMIUM as Combined Machine, at the Indiana State Fair.

FIRST PREMIUM as Combined Machine, at the Indiana State Trial.

FIRST PREMIUM as Combined Machine, at Erie Co. Fair, N. Y.

FIRST PREMIUM as Combined Machine, at Tonawanda Valley Fair, N. Y.

FIRST PREMIUM as Mower, at the Wyoming Trial, N. Y.

FIRST PREMIUM as Mower, at the North Java Trial, N. Y.

FIRST PREMIUM as Reaper, at the Delaware Co. Trial, O.

FIRST PREMIUM as Combined Machine, at Crawford Co. Fair, Pa.

FIRST PREMIUM as Mower, at Crawford Co. Fair, Pa.

FIRST PREMIUM as Mower, at the Cortlandville Trial, N. Y.

FIRST PREMIUM as Mower, at the Phelps Trial, N. Y.

PREMIUMS IN 1857.

SILVER MEDAL as Combined Machine, at Syracuse Trial, by the United States Agricultural Society.

DIPLOMA "For ingenious adaptation of Cutters to uneven surfaces," at Syracuse Trial.

FIRST PREMIUM as Mower, at Tonawanda Valley Trial, N. Y.

FIRST PREMIUM as Combined Machine, at Wyoming Co. Fair, N. Y.

FIRST PREMIUM as Mower, at the Cayuga Co. Trial, N. Y.

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In reference to this list of Premiums there are several things worthy of notice, viz:

1. They are all *First Premiums*. The machine is not rated second best to any machine on earth, but all these different sets of judges, who have examined and decided upon it under every variety of circumstance and condition, and in comparison and competition with all the other machines in market, unite in pronouncing it to be *the very best*.

2. While in trials of mowers it receives the first premium as a mower, and in trials of reapers the first premium as a reaper, it will be noticed that most of the premiums are awarded to it as a *Combined Machine*, thus pronouncing it to be *the very best both in Mowing and in Reaping*.

3. The *high class* of premiums which it has received is another noticeable feature. In 1860 it was exhibited at the fair of the United States Agricultural Society, and received its highest honors. It was also exhibited at the New York, Ohio, Michigan and Wisconsin State Fairs, and received the general approbation of the many farmers who examined it, but no premiums were offered or awarded to harvesters at either of these fairs. The most important trial that occurred in 1860 was the Geneseo trial, under the auspices of the Livingston County Agricultural Society, which occupied three days and was very thorough both in grass and grain. The Kirby came out of this trial with *three* first premiums. In most of the local trials that occur, there are no judges appointed and no premiums awarded. The Kirby has been through a large number of these with great credit, adding very much to its reputation, and satisfying the farmers present as to its merits. At most of them it is a very noticeable fact that agents for other machines almost invariably combine to pitch into the Kirby, thus testifying in the most emphatic manner which machine *they* consider their strongest competitor and the *best* one on the ground.

In 1859 the Kirby was exhibited at the New York, Michigan, Wisconsin and Tennessee State Fairs, and received the highest honors of each. At the New York State Fair there was the largest and most complete exhibition of harvesters ever made in the world, there being over *seventy* machines on the ground, and the Kirby was *the only one* to which a premium was awarded, and the award was the highest encomium ever passed upon any harvester; for the Judges awarded to the Kirby Machine a Silver Medal and Diploma, "*AS THE MOST VALUABLE MACHINE OR IMPLEMENT FOR THE FARMER, EITHER NEWLY INVENTED, OR AN IMPROVEMENT ON ANY ONE IN USE,*" thus not only placing it ahead of all the seventy harvesters on the ground, but adjudging it to be of more value to the farmer than any other implement of any kind on exhibition.

The only State Trial that occurred in 1859 was the Tennessee Trial, at Nashville, from which the Kirby came off as usual with the highest award.

In 1858 the only State Trial was the Indiana State Trial, at Laporte, when the Kirby again received the highest award. In 1857 when the Kirby was an infant and unknown to fame, and unperfected by the many and important improvements which have since been added, it bore off the Silver Medal in the celebrated Syracuse Trial, and an extra Diploma, "*for ingenious adaptation of cutter to uneven surfaces.*" Would it be possible for any second rate machine under any circumstances to have such a history?

4. At these various trials and fairs the Kirby has met and vanquished every successful machine in the country, besides a great many unsuccessful ones.

5. The increasing number of premiums awarded to the Kirby from year to year, as the machine becomes better known, is another important fact. It is

possible for a second rate machine to meet with remarkable success at trials and fairs for a single year, as was the case with the Heath machine, but it must soon die out and disappear as did that machine. It is *not* possible for a second rate machine to go on with ever increasing success from year to year, always conquering every competitor at every important trial, and receiving the first premiums at every important fair. Again there are machines which in their day were first class machines, but have now been superseded by more recent inventions, and have disappeared from the premium lists. The continually increasing list of Kirby premiums, proves that the American Harvester has not yet had its day, nor even reached the zenith of its glory, but may be relied upon to be the leading machine for some years to come.

REPORTS OF TRIALS.

Our space will permit us to make but a few brief extracts from reports of trials. We commence by giving the very comprehensive and judicious remarks of judges at

THE SYRACUSE TRIAL.

Upon the general utility of mowing and reaping machines, and the great saving to farmers in buying the *best machines*.

"The interest of farmers, and most emphatically of farmers' wives and daughters, in these machines, is, in the aggregate, still greater than the manufacturers.

"An estimate by a committee of the New York State Agricultural Society, of the cost of cutting and curing a ton of hay with the scythe, or with a machine, shows a saving of *seventy-five* cents a ton in favor of the latter. A more careful comparison would show a still greater saving. The diminution of the number of hands employed in harvesting, lightens the labors of the females of a farmer's family very greatly, at a period when their energies are already taxed to the utmost. The food consumed by extra hands is also saved. The grass being evenly spread by the machine, dries, and is ready to put into cock much sooner than when cut by a scythe; and is therefore less subject to injury from dews and rains. Chemical philosophy and practical trial, alike concur in proving that the greatest amount of nutritive matter is secured in hay when the grass is cut while in blossom. Since this period is a very brief one, farmers having large meadows to cut, are unable to secure a great proportion of their crops while it is in the best condition, if it is done by hand; but the more rapid action of the machine enables them to cut the whole while in the most perfect state. It is now well settled, that good machines will cut more grass from an acre than a scythe can possibly do; probably the best machines will average one twenty-fifth more to an acre than the best scythe cutting; or a machine will cut twenty-six tons of hay from ground where a scythe could obtain only twenty-five tons.

"These advantages were not taken into the calculation which measures the superior economy of mowing machines by seventy-five cents a ton. If they are admitted, they will largely increase the pecuniary difference between the two modes of cutting. Without insisting on these latter advantages, and assuming seventy-five cents as the true measure of the difference, we find that the substitution of these machines for scythes will effect a saving of ten millions three hundred and seventy-

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eight thousand, nine hundred and eighty-one dollars to the United States; two millions, seven hundred and ninety-six thousand, five hundred and ninety-seven dollars to the state of New York; one million, three hundred and eighty-two thousand, one hundred and twenty-six dollars to the state of Pennsylvania; and one million and eighty-two thousand three hundred and fifty-six dollars to the state of Ohio.

"Suppose a machine to be invented which will effect a further saving of twenty per cent. over the best of those now in use, the annual saving effected by such machines in the United States would be two millions, seventy-five thousand, seven hundred and ninety-six dollars; in the state of New York, five hundred and fifty-nine thousand, three hundred and eighteen dollars; and in the state of Pennsylvania, two hundred and seventy-six thousand, four hundred and twenty-four dollars. Should the farmers of the United States use a machine, twenty per cent. worse than the best of those now in existence, they would sustain a corresponding loss. There was much more than twenty per cent difference between the machines exhibited at Syracuse; and this fact conclusively shows how deeply the farmers of our country need a reliable guide in purchasing mowing and reaping machines, and how necessary it is that bodies, charged with the responsibilities of affording them such a guide, should spare no effort to ascertain the truth, the whole truth, and nothing but the truth, respecting their operation.

"It has been our object, from the beginning, to conduct the trials that they might be self-determining, so that the announcement of the results of our weights and measures might determine the question of the relative merits of the different machines without the intervention of our own judgments or opinions. We have steadily adhered to that determination throughout the trials. We have had no partialities for individuals or localities to gratify, and our single aim has been to award the palm to merit alone. How far we have succeeded in our endeavors is now for you and the public to determine."

In reference to the Kirby Machine, the Judges in the same report speak as follows:

"THE KIRBY MACHINE.—The chief peculiarity of this machine consists in the independent action of the finger bar, which is secured by the peculiar mode of attaching the driving wheel to the frame, so that the wheel, in passing over uneven ground, does not carry the finger bar up and down with it; but each acting independently, the fingers follow the ground. This independent action and flexibility of the finger bar lessens the liability to breakage when in contact with obstructions. It also permits the finger bar to be set at any desired height, and to facilitate its motion in soft ground. This contrivance for securing the rise and fall of the cutter bar is very ingenious, and is worthy of commendation. The gearing is good. This machine had the misfortune to draw the worst lots in both fields, which made its performance seem worse than it really was. We consider it a good and useful machine, destined to take a high rank."

"The lot out by the Kirby Machine was crossed by a water furrow two feet deep by actual measurement; and if a field had been made on purpose to interpose all imaginable obstacles to reaping by horse power, it could scarcely have been more difficult. The profile below shows a section of the field crossed by the machine at right angles."



In their general remarks on Harvesters the Judges say:

"It is often overlooked that time, as well as force, is an element in the consideration of power. A variation of ten pounds in the draft of two machines is looked upon by many as a mere bagatelle. It is not considered that this force is extended throughout every second of time of working. If, then, the two machines work for ten hours, the difference of force is not represented by 10 lbs., but by that number multiplied into the number of seconds in ten hours, viz: 10 h. x 60 m. x 60 sec. x 10 lbs.—360,000 lbs. Our excuse for allusion to a principle so entirely elementary

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must be found in the fact, that it is so strangely overlooked by many farmers and mechanics; and we hope that the remark may stimulate inventors to attempt every possible reduction of force, even if it be apparently very small, being assured that in the long run it will be very considerable."

"It is also very clear, from this trial *the cutter bar should be flexible, as connected with the frame of the machine.* The grass is cut more evenly, and side draft is prevented; for when the knife on a stiff machine rises over a knoll or other obstruction, the pressure on the surface of the ground increases the resistance, and causes side draft. For this reason, those machines which have flexible fastenings of the cutter bar to the frame have the least side draft, provided the draft is properly attached.

"Much difference of opinion exists among the builders, with regard to the comparative merits of cast and wrought iron fingers or guards. We do not suppose that that our judgment will settle conflicting opinions on this point; yet we deem it proper to say that we believe *the cast iron finger to be the best* on the whole. We think it better that a guard should break than bend. In the latter case the friction will be greatly increased, consuming an increase of power, which is expended in wearing out and deranging other parts of the machinery. Many country blacksmiths are not qualified for such a job, and make it worse by their attempts to repair it, while any farmer can take off a broken guard and replace it by a new one in a few minutes.

"A difference of opinion also exists with respect to the advantages of wooden and iron finger bars. In our opinion, iron finger bars (which can be made much narrower than wooden ones,) are better adapted to the cutting of fine, short grass than wooden ones, on which, from their greater breadth, the grass piles up and tends to clog the knife.

"When the grass is long, and the wind is blowing in the same direction that the machine travels, it is very difficult, if not (in some cases,) impossible to cut without a reel. In other cases it is much better to cut without one, as the grass after cutting is in a much better condition for drying. We therefore consider it desirable that mowers should be furnished with reels, which can be quickly and easily removed and replaced. They would then be enabled to cut under all circumstances."

It will be observed that all of these marked advantages which the Judges consider of so great importance are possessed by KIRBY'S AMERICAN HARVESTER.

From the Report of the Indiana State Trial.

"COMBINED MACHINES.—There were nine entries of Combined Machines, in each of which there was much to commend. A few of these performed very well as Mowers, although they had less merit as Reapers; while others were better Reapers though not so good Mowers. Ketchum's and McCormick's machines, as mowers, have some superior claims, while Rugg's, Riley's, and the New York Combined, are entitled to favorable consideration.

"Your committee, however, after the most thorough examination, are unanimous in their award of the FIRST PREMIUM to KIRBY'S AMERICAN HARVESTER. THIS IS, BEYOND ALL QUESTION, THE LIGHTEST DRAFT MACHINE ON EXHIBITION. The weight is 850 lbs. and the actual draft for mowing was 170.

From the Report of the Cortland Co. N. Y., Agricultural Society.

"There were seven mowers entered for trial—Allen's, Kirby's, Buckeye, Hollenbeck's, Card's, Manny's and Wood's. The ground chosen was of a character to test at the same time the temper and capabilities of both machines and exhibitors. The grass was in many places down, the surface was uneven and covered with stones, and it would have been hard mowing with a scythe. Your Committee were unanimous in awarding the first place to Kirby's Mower.

CHAS. R. BEACH,
E. PER. LEE,
HIRAM HOPKINS,

ALVAH RISLEY,
J. W. ROOD,

Committee.

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The Lee, Mass. Trial—From the Berkshire Co. Eagle.

There was a trial of mowing machines at Lee last Tuesday,—the Ketchum, Manny's improved, Wood's, Buckeye, Kirby, Little Giant, and Hubbard patents being the competing machines.

Of failures, that of the Hubbard was the most signal, getting clogged and tangled so that it could neither move ahead or back. The position of the knife bar is against it, being entirely too far astern, and demands a greater flexibility of neck than most men possess to watch it and guide the team.

The Manny's Improved came next in the list of failures,—a portion of its land was bad, but it did not half mow where the land was good.

The Buckeye clogged several times, and in places made bad work.

The Wood, with the best horses on the field, got badly clogged, struck a stone, broke a guard, and got beat by the Kirby, with which it was in immediate competition.

The Little Giant mowed on a trot, cut indifferently well, and got clogged several times.

The Ketchum made very poor work, got very badly clogged several times, and required two or three men to wait upon it. It has great side draft, which is in a measure obviated by a double tree, bolted immovably to the pole.

The Kirby machine, the winner of the day in the opinion of the people and by the judgment of committee, did its work handsomely, cut six inches the widest, was drawn at a moderate walk, and did not get clogged or stopped once. It spread its grass the best, and moved around the field in an easy and effective manner. In one place it struck an abrupt rock over a foot high, but leaped over it and passed on without a pause. The great strength and simplicity of this machine must commend it to the public.

The Clinton, Mich. Trial—From the Adrian Watchman.

"Seven machines entered the lists, viz:—Allen's, Kirby's, Fisher's, Buckeye, Wood's, Ball's and Mully's. Of all the machines the Kirby was the favorite of the greatest number of spectators. Attempts were made to clog the several machines by throwing piles of grass in their way, and the Kirby passed this trial, giving most satisfaction.

"It has a peculiar simple contrivance—a sort of revolving distaff—that clears the track, next to the standing grass, ready for the next turn,—better than the usual board that scrapes the grass away and often leaves it in piles. The machine is operated with comparative ease, as was shown by three men drawing it some distance, and cutting a swath as when the horses were attached. Mr. Simeon Davidson, having used one of the machines last season, and had a good opportunity to compare its performances with other machines, being present at this trial, made a speech to the crowd, in which he recounted its performances as a mower and reaper, and was quite enthusiastic in the praise of it, declaring his willingness to stake \$100, that it would do its work better and more of it, and require less repairs than any mower in use. This we consider the highest testimony in its favor."

From the Report of the Harwich Agricultural Society, Canada West.

"The next thing the society turned their attention to was the introduction of new and approved implements. As there was but one reaping and mowing machine in the township, they thought it would be advisable to purchase one and have it sold to some of the subscribers for the benefit of the society; but before doing so, it was thought it would be a wise thing to see a trial of as many of the above machines as could be got together. A deputation was appointed to have the merits of two machines tried, one of which was made in Ingersoll, C. W., after Manny's Patent; the other was made at Buffalo, after Kirby's Patent. The trial was made on a field belonging to our President. We regret to be obliged to say that the Canadian machine was fairly beaten in every respect. The one from Buffalo was purchased next day after the trial, by two young men of our township, who have since done good work and good service with it to many of our subscribers."

DAVID WILSON, *Pres't.*
ALEX. HOUSTON, *Sec'y.*

KIRBY'S AMERICAN HARVESTER.

From the Annual Report of the Kent Agricultural Society, Canada West.

"At a trial of mowing machines, between one made at Ingersoll called Manny's Patent, and one made at Buffalo by the Agricultural Machine Works, and called Kirby's Patent, Kirby's was, by all odds, the best. It cut clean and was free from clogging, and in draft far easier to the horses; in fact, an ordinary pair of horses could work the entire day without being distressed. Your directors have no hesitation in recommending "Kirby's Patent," both for mowing and reaping, beyond any other machine introduced into this county, notwithstanding our very natural desire, if facts would admit to give the Canadian machine a similar recommendation."

GEO. WADE FOOT, *Pres't.*
RICH'D MONCK, *Sec'y.*

From the Report of the Fabius, N. Y. Trial.

"The following machines were entered: the Buckeye, the Hubbard, the Kirby, the McNamara, and the Allen. The committee were of the opinion that the Kirby did its work the best, and accordingly gave it their preference. It is perhaps proper to add that the committee was composed of gentlemen, none of whom own, or have any interest in any mowing machine.

HIRAM ADAMS, *Pres't.*
WM. W. VAN BROCKLYN, *Sec'y.*

From the Report of the Baker's Basin, N. J. Trial

"There were six machines on the ground—Kirby's, Buckeye, Champion, Pennock's, New Jersey, Dunham & Staats'. Two committees were appointed—one on machines, and one on cutting. The six machines were put through the various tests suggested by the two committees, and the award was First Premium to the Kirby."

From the Report of the Sandy Hill, Pa. Trial.

"We had the pleasure of attending a trial of mowers and reapers, on the 2d inst., on the farm of A. J. Knox, Esq., Sandy Hill. The different machines in competition were the Buckeye, Manny, New Jersey with Dorsey's Self-raker, and Kirby's Harvester. There were a large number of farmers, and others interested in machinery present—all capable of judging of the merits and demerits of each machine. The New Jersey machine did its work very well, but we do not consider the Self-rake any improvement, it making the machine cumbrous and requiring too much power. The Buckeye cut very well; but among the large army of *barkers* on the ground, there were none present able to deliver the grain from the machine—and in rye they made a perfect failure, notwithstanding they had a machine rigged expressly for the trial with a great many improvements not put on the machines generally sold through the country; this machine from its construction could not possibly make a reaper. The Buckeye's failing to reap has caused quite a dissatisfaction and fluttering among those who purchased them; and we understand there will be, and have been, a great many returned. In our humble opinion the Kirby was decidedly the best machine on the ground. It came at a late hour, was not rigged expressly for the trial, being an old machine, did its work better than any machine on the ground, delivering the grain in good size gavels, without scattering. It is the lightest draft machine in use; and we think it is destined to take the lead of all the machines yet out, from the fact of its simplicity, durability, portability, convenience and entire absence of side draft."

KIRBY'S AMERICAN HARVESTER.

From the Report of the Lawrence, N. J. Trial.

"The machines upon the ground were Kirby's, the Buckeye, the New Jersey, the Champion, Pennoek's, and Dunham & Staat's. The following gentlemen were appointed Judges: Jacob Taylor, A. T. Burroughs, Gideon Corwine. It was soon discovered there was a difference in the cutting, and especially in the facility for throwing off and distributing the grass. As the work progressed the farmers began to look at another matter: the lightness of draft—the simplicity, durability and convenience in construction and operation. The test was made by two horses, then with one horse, and then with four men. After the whole field had been cut down, the Judges got together and made up their decision as follows: "We give the preference for draft and work to Kirby's American Harvester."

From a Pennsylvania Paper.

"There was a trial of different machines on the 11th inst., at the Green Tree Tavern, Lower Merion, and on the 15th inst., at Broad Axe. At each of these places there were a large number of farmers, all of whom gave the preference to Kirby's American Mower and Reaper."

From the Report of the Committee at the Skaneateles, N. Y. Trial.

"The Kirby machine is a light but durable one-wheeled machine, and a splendid mower, made almost wholly of iron, and with the best track clearer in the whole lot. Also another peculiarity, the bevel of the knives being placed on the under side, which saves the friction of the knives against the under side of the guards."

EASE OF DRAFT.

The manufacturers of the Kirby machines claim that they are the lightest draft two-horse machines yet invented. To substantiate this claim they offer two kinds of evidence, either of which would be conclusive in any court of justice. The first kind is the universal testimony of the eight thousand farmers who are now using the machines—many of whom have owned and used the various machines in market—that the Kirby is the lightest draft machine within their knowledge, and that an ordinary span of horses can work the machine all day, day after day, without worry, and as easily as they can do any ordinary farm work.

The other kind of evidence which we offer, is the actual dynamometer tests of draft at trials in competition with other machines. And that each man may examine for himself, we present below the tables of draft taken from the reports of the committees at the various trials where the dynamometer has been applied. If this evidence does not produce conviction, we would advise you by all means to buy a machine and convince yourself by personal experience.

Draft at the Syracuse Trial.

A large portion of the machines that were tested at the Syracuse trial have since died out and disappeared from the market, and we will not occupy space by giving their draft.

NAME OF MACHINE.	Draft, lbs.	Length of cut, inches.	Draft pr. in. of cut, lbs.
Kirby,	383	54	7.0
Buckeye,	442	52	8.5
Ball,	418	51	8.2
Ketchum,	412	56	7.3
Warder & Childs,	466	56	8.2

Draft at the Seneca, N. Y. Trial.

At this trial a different draft was given for each machine on each of the four sides of the lot, and in the following table we give the average of each machine.

NAME OF MACHINE.	Draft, lbs.	Length of cut, inches.	Draft pr. in. of cut, lbs.
Kirby,	337	56	6.0
Hubbard,	381	52	7.3
Wheeler,	387	54	7.1

KIRBY'S AMERICAN HARVESTER.

Draft at the Canfield, O. Trial.

NAME OF MACHINE.	Draft lbs.	Length of cut, inches.	Draft pr. in. of cut, lbs.
Kirby,	150	52	2.8
Buckeye,	200	52	3.8
Buckeye, Jr.	150	46	3.2
Wood,	150	46	3.2
Ball,	200	52	3.8
Hubbard,	200	52	3.8
Ketchum's Imp.	175	48	3.6
Russell,	175	52	3.3
Fisher,	175	52	3.3
Allen's Improved,	200	48	4.1

Draft at the Geneseo, N. Y. Trial.

NAME OF MACHINE.	Draft, lbs.	Length of cut, inches.	Draft pr. in. of cut, lbs.
Kirby,	250	56	4.4
Buckeye,	280	55	5.0
Buckeye, Jr.	275	48	5.7
Wood's Mower,	295	48	6.0
Hubbard,	330	54	6.0
Ketchum,	325	52	6.2
Ketchum's Mower,	275	51	5.4
Wood's Imp.	300	58	5.2
Hussey,	300	60	5.0
Seymour & Morgan,	425	58	7.3
Parkhurst,	300	55	5.4
Rogers,	275	52	5.3
Burrall,	275	52	5.3
Genesee Valley,	300	52	5.7

Draft at the Indiana State Trial.

Kirby,	170	56	3.0
Buckeye,	225	54	4.1
Ketchum,	300	56	5.3
Allen,	225	56	4.0
Warder & Childs,	250	63	4.0
McCormick,	350	72	4.8
Esterly,	275	60	4.5
Riley,	350	60	5.8
Seymour & Morgan,	338	80	4.2
J. J. Mann,	250	54	4.6
H. F. Mann,	275	56	4.9
Rugg,	325	78	4.1
Heath,	250	57	6.0
Deitz & Dunham,	350	56	6.2

Draft at the Skaneateles, N. Y. Trial.

Kirby,	300	56	5.3
Buckeye,	300	55	5.4
Hubbard,	400	54	7.4
Wheeler,	350	56	6.2
Ketchum,	275	52	5.3
Parkhurst,	325	56	5.8
Esterly,	400	66	6.0

From the foregoing tables we have compiled the two following tables, which give a condensed view of the draft of the leading machines at the various trials. The first table gives the total draft of each machine, and the second gives the draft per inch of cut.

Table of Draft at the Different Trials.

MACHINE.	Canfield Trial.	Indiana Trial.	Geneseo Trial.	Skaneateles, Trial.	Seneca Trial.	Syracuse Trial.
Kirby,	150	170	250	300	337	383
Buckeye,	200	225	280	300	*	442
Ketchum,	175	300	275	275	*	412
Hubbard,	200	*	330	400	381	*
Buckeye, Jr.	150	*	275	*	*	*
Wood,	150	*	295	*	*	*
Ball,	200	*	*	*	*	418
Wheeler,	*	*	*	350	387	*
Esterly,	*	275	*	400	*	*

* Machine not present.

Draft per Inch of Cut at Different Trials.

MACHINE.	Canfield Trial.	Indiana Trial.	Geneseo Trial.	Skaneateles, Trial.	Seneca Trial.	Syracuse Trial.
Kirby,	2.8	3.0	4.4	5.3	6.0	7.0
Buckeye,	3.8	4.1	5.0	5.4	*	8.5
Ketchum,	3.6	5.3	5.4	5.3	*	7.3
Hubbard,	3.8	*	6.0	7.4	7.3	*
Buckeye, Jr.	3.2	*	5.7	*	*	*
Wood,	3.2	*	6.0	*	*	*
Ball,	3.8	*	*	*	*	8.2
Wheeler,	*	*	*	6.2	7.1	*
Esterly,	*	4.5	*	6.0	*	*

* Machine not present.

In reference to these tables of draft there are several points worthy of notice.

1. To one not accustomed to the use of the dynamometer, the difference of draft of the same machine at different trials may seem unaccountable. This difference is caused by the difference in the ground and grass, by the difference in the width of swath cut, and by the difference in the instruments used to test the draft. In one trial the ground on which the test is made may be very smooth and the grass light, while in another trial the ground may be very rough and the grass very heavy and lodged, and this difference in the ground and grass would cause a very decided difference in the draft of the same machine. It also frequently happens that machines do not cut their full width of swath in testing draft, and should only have credit for the width actually cut, and this would of course make a difference in

the draft of the same machine at different times. Again, there are several kinds of dynamometer in use, and they may differ, the same as different scales may differ in weighing. Yet, if at any one trial, all the machines are tested by the same instrument on the same kind of ground, it is as fair for one as for another, and the result will show the relative draft of the different machines on the ground. And it is a remarkable fact that at all these various trials with different instruments on different kinds of ground, and with all kinds of machines, the Kirby holds its place at the head of the column as the *lightest draft* machine on the ground. In fact, so well is it understood among the agents of other machines that the Kirby is the lightest draft machine, that at many trials it was impossible to get them to consent to a test of draft.

2. It would be natural to suppose that a machine got up simply for mowing with no reference to its adaptation to reaping, might be and ought to be, of lighter draft than a *combined machine*; yet, by reference to the foregoing tables, it will be seen that even the light, narrow cut, single mowers, like Buckeye, Jr., and the Wood mower, are heavier draft machines than the Kirby Combined. This difference is still more apparent when the cut is reduced to inches, and the draft per inch is estimated. It will then be seen that the Kirby averages *over a pound per inch lighter draft than the lightest single mower*. There could not be more conclusive proof that the principle of the Kirby machine is the *correct* one, and that it is far in advance of any other machine yet invented.

3. It has been frequently urged in favor of the two-wheeled machines, that although they could not work on as rough ground as the one-wheel machines, yet when the ground is smooth enough for them to do good work, their two wheels gives them a lighter draft than is possible for a one-wheel machine. These tables of draft effectually explode that theory. It will be seen that there is not a two-wheeled machine made that does not average over a pound per inch of cut heavier draft than the Kirby one-wheel machine.

4. Now just examine these tables of draft with reference to the principle laid down by the Judges at the Syracuse Trial, "that *time*, as well as force, is an element in the consideration of power." This principle is mathematically correct, and should be fully considered by every farmer who uses a machine. The Judges go on to say: "A variation of ten pounds in the draft of a machine, is looked upon by many as a mere bagatelle. It is not considered that this force is extended throughout *every second of time of working*. If, then, the two machines work for ten hours, the difference of force is not represented by 10 lbs., but by that number multiplied into the number of seconds in ten hours, viz.: 10 h. $\times$ 60 m. $\times$ 60 s. $\times$ 10 lbs. = 360,000 lbs. Our excuse for allusion to a principle so entirely elementary must be found in the fact that it is so strangely overlooked by many farmers and mechanics." Now apply this principle to the foregoing tables. The Kirby averages say a pound to an inch lighter draft than any other machine. Taking the whole length of cut (56 in.), it would give 56 lbs. lighter draft than any other machine for the same amount of work. Call it 50 lbs to be on the safe side, and then reckon up the difference in a day's work between the Kirby and any other machine doing the same amount of work; thus, 10 h. $\times$ 60 m. $\times$ 60 s. $\times$ 50 lbs. = 1,800,000 lbs. In other words your horses draw 900 tons less in doing a day's work with the Kirby than they would in doing the same amount of work with any other machine. Now suppose you use your machine 30 days in a year for five years, how much wear and tear of horse flesh will you save by using the Kirby rather than any other machine? Ans. 900 tons $\times$ 30 d. $\times$ 5 yrs. = 135,000 tons. Now considering the wear and tear of your horses, especially if they are valuable ones, and the extra feed which it requires to enable them to do an extra amount of work, you had better pay \$150 for the Kirby than to take any other machine as a gift and be obliged to use it. Talk of *cheap machines*! The *price* of a machine is a small item in determining its *cheapness*.

But it is must be remembered that there is much *more* than fifty pounds difference for the same amount of work between the Kirby and most of the machines in use, so that each farmer can compute for himself how much horse flesh and feed he is throwing away by not owning a Kirby. Now when you add to the lightness of draft of the Kirby, its simplicity, its durability, its portability, its adjustability, its convenience, and its adaptation to all kinds of work as a mower and reaper,—who can say that any other machine would be cheap as a gift so long as the Kirby can be bought at a reasonable price?

NOTICES OF THE PRESS.

The Kirby Machine has received many very highly flattering commendations, and, frequently, extended descriptions and notices from the Press. The Agricultural papers of the country, especially, have spoken of it in the highest terms. Our space will permit us only to make a few brief extracts.

The Wisconsin Farmer, of Nov. 1860,

In describing and commenting upon the various Harvesters on exhibition at the Wisconsin State Fair, speaks of the Kirby Machine as follows:—

"The Kirby Reaper and Mower was also on exhibition, and carefully noticed by thousands, and, as nearly as we could judge, greatly admired. It is so compact and neat in all its parts, and drafts so easy, and, withal, has such an indestructible iron frame work, that we cannot see how it can fail to come rapidly and widely into use. Many who tried them the last season assured us that they worked to perfection, both as a Reaper and as a Mower. If we are not much mistaken they are destined to give most of the others a hard run for Wisconsin patronage. As a winding up comparison, we would say that it seemed to us that McCormick's machine represents the beginning of reapers, and Kirby's mighty near the ending, or perfection of them."

From the Ohio Farmer.

"While there are many good Mowers that are not good Reapers, and many good Reapers that are not good Mowers, there are very few successful *Combined Machines*; and it is one of the distinctive features of the Kirby Machine, that it is a *perfect Combined Machine*, working equally well whether mowing or reaping. Since most farmers are unable to buy two machines, one for mowing, and one for reaping, the single machine that will successfully perform both operations, is a desideratum; with such a machine the purchaser buys a perfect reaper for only \$20, and if he can afford to buy the mower he cannot well afford to omit the reaping attachment, even if he has but five acres of grain to harvest, for the saving of labor and the further advantages of being able to gather the crop at the *right time*, and to *save more of it* than can be done with a cradle, especially if the grain be badly lodged, will pay him a very large interest on his investment of \$20. We have before us a large number of testimonials from farmers in Trumbull, Wayne, Richland, Knox, Delaware, Franklin, Marion, Logan and other grain growing counties in Ohio, where the American Harvester was in use last season, speaking in the highest terms of its convenience, efficiency and light draft as a Reaper."

"For lodged and tangled grain the Kirby Machines are unrivalled, the independent action of the finger bar enabling the operator to accommodate the height of cut to the condition of the grain, and the raker's position enabling him fully to control the grain, however tangled."

From the Michigan Farmer.

"During the three seasons in which the Kirby Machine has been in use it has proved itself to be the lightest in weight and draft of any machine in use. The finger bar is perfectly flexible and free to follow the inequalities of the ground. All parts of the machine are simple and durable, and it works *perfectly* both in mowing and reaping. We know of no machine that has attained so high a rank so early in its history."

KIRBY'S AMERICAN HARVESTER.

From Moore's Rural New Yorker.

"We take pleasure in giving an illustration and description of this valuable machine, which is gaining wide celebrity. It is made entirely of iron, except seat and pole, and is consequently very durable. The finger bar, frame and driving wheel are so arranged as to act entirely independently, each following the inequalities of the ground, and enabling the machine to do good work on very rough ground. The driver's seat is so pivoted over the driving wheel as to take all pressure off the horses' necks, and throw the weight upon the wheel. The driver's position is both easy and convenient."

"The raker's position is peculiar, and enables him to do his work with ease; he being placed at the side of the machine, facing obliquely the uncut grain, and in the center of motion of the rake, so that by an easy quarter turn motion he delivers the grain in gavels at the side of the machine. The day is past for selling single mowers and single reapers. Every farmer who wants a machine at all, wants one capable of performing both operations, and here is one which is a *perfect* combined machine, and while it is the cheapest machine in market, it is by far the lightest draft, most desirable and efficient."

From the Country Gentleman.

"Mowing and reaping machines have come into so general use and have so fully vindicated their worth, that they have become almost as necessary to the farmer as the plow. They have more than doubled the cereal crops of the country, and rendered possible and profitable the immense wheat fields which are now waving on our Western Prairies. They had their birth in the necessities of the West, but the enterprising farmers of the East have not been slow to seize upon their advantages, and now there is scarcely a township in the country where these machines are not in use. At the West, farmers have hitherto sought machines more particularly for reaping: while at the East they have paid but little attention to reaping by machinery, and sought only for good Mowers: but now the farmers of both sections are becoming convinced of the utility and economy of performing both operations by machinery, and as but few farmers are able to buy two machines, one for mowing and one for reaping, the machine that will successfully and easily do both is a desideratum. All the Kirby machines are *combined* machines, and the mower is converted into a reaper simply by bolting on the platform, reel and raker's seat. The mower is sold without the reaping attachment when desired, and in such case the purchaser can at any future time procure the reaping attachment for his machine. For lodged and tangled grain the Kirby machines are unrivalled. They are *perfect combined machines*, working equally well, whether mowing or reaping. In mowing the finger bar is stiff and firm, *yet perfectly free in its play up and down*. Either end, or the whole bar will rise and fall without any cramping to the machine or connecting rod or cutters. Whatever may be the angle of the bar the connecting rod is *always in the same line and the cutters perfectly free*. With its *one wheel* it can run anywhere; it is very much lighter in draft, more simple in construction, and being an *iron* instead of a wooden machine, it is much more durable, and more portable and convenient in all respects than the *two wheel* machines. In fine, simplicity, durability, convenience, adaptation to all kinds of work, light draft, low price, freedom from side draft and clogging, portability, perfection of work—all these desirable features are combined in the Kirby Harvester."

From Emery's Journal of Agriculture.

"The marked peculiarity of this machine is its adaptability to uneven surfaces. The finger bar and driving wheel act independently of each other, each following its own ground. This peculiarity of the machine enables it to work on very rough land, and adapts it to all kinds of work, whether mowing or reaping or gathering grass or clover seed. We witnessed its operation in the clover field at the Syracuse Trial, and in our judgment there was no machine that did superior work."

KIRBY'S AMERICAN HARVESTER.

From the Springfield Republican, (Mass.)

"HARVESTING AND HARVESTERS IN WEST SPRINGFIELD.—It is n't necessary to go West a great ways to see prairie land or a large grain field. Just across the river are broad meadows waving with grass and grain, mutely waiting their appointed time for the reaper and mower. Justin Ely of that town has a thirty-three acre rye field, in solid body over there, around which a score of persons gathered in the shade, sultry yesterday afternoon, to see the motions of the Kirby Harvester. The machine was in perfect order and mowed grandly, and we believe satisfactorily, around a tract of about ten acres, cutting a swath four feet eight inches wide, better than it could be done with the cradle, and leaving it in gavels ready for binding. Phineas Stedman of Chicopee, the Harvest Club President, was of course on hand to see that his favorite received due justice, and we noticed other gentlemen from several of the adjoining towns. The machine is usually ridden and driven by a boy, while a man rides behind to rake off the bundles of grain. C. L. Buel of Ludlow was present with a pair of black ponies that harvested last year 125 acres with a similar machine, and taking them from his buggy, he attached them to the Harvester and went thrice alone around the field, doing the work handsomely. The horses were so well trained that they hardly needed guidance at the corners, and they walked rapidly as if after the latest horse show premium. Young America appeared delighted with the new fangled notion, but a few old men gathered wistfully around a broken handled sickle that fortunately stuck in the fence, and recounted the exploits of their boyhood. It's of no use, however—the reaper's occupation's gone. Farm machinery must revolutionize agriculture. The Kirby has harvested an acre of grain in thirty-four minutes, and it can safely be depended on for an acre an hour. There was a gentleman present that had cut eighteen acres in a day with it. There is a one horse reaper, with a three and a half feet cutting bar, of the Kirby kind, that is said to work well."

From the Toledo Blade.

"Another important consideration in selecting a harvester, is to find one that is a PERFECT COMBINED Machine—that will work equally well as a mower and a reaper. There are many good single mowers, and many good single reapers; but very few good combined reapers and mowers. There seems to have been many signal failures in this respect.

Mr. KIRBY, on the contrary, appears to have been eminently successful in combining the two; and has this year brought his invention to a state of perfection that seems to have left no room for further improvement."

From the Daily Times, Toledo.

"Probably the best Mowing and Reaping Machine as yet invented, is Kirby's. It has been proved, after the severest tests, that it obviates the serious objections which other machines possess, and it is taking its stand as the best Harvester in use."

From the Observer, Madison, N. Y.

"The Kirby Machine combines more important points than any other machine before the public, having the lightest draft, lightest weight, lowest price, and the least liable to get out of repair. It is also the most simply constructed, the frame being all made of iron, and therefore will not warp when exposed to the weather as do most other machines. Having a cutter bar acting independent of the driving wheel, it works over uneven ground where no other machine can follow it; and having also an adjustable wheel on the outside of the cutter bar attached to a lever near the driver's seat, it is always within the driver's control. This machine, thus combining all these desirable points, commends itself to the favorable consideration of the farming community, in preference to any other machine before the public."

KIRBY'S AMERICAN HARVESTER.

From the Daily Sentinel, Rome, N. Y.

"Kirby's American Harvester did its work admirably. It has light draft, does not require a heavy team, and easily accommodates itself to knolls, uneven surfaces, &c., and cuts close and clean. It is a simple machine, having but very little machinery about it and is light in weight."

From the Buffalo Commercial Advertiser.

"We are informed that in every trial the dynamometer has shown this to be by far the lightest draft machine in the market, and being made of iron, it is very durable, while its construction is very simple. By an ingenious arrangement, the cutter bar is compelled to follow the irregularities of the ground, enabling the machine to work well on rough land, where it has heretofore been deemed impracticable for Harvesters to be used with any degree of success."

From the Brockport Republic, June 25, 1858.

"KIRBY'S MOWER AND REAPER.—We took a ride out to the farm of Mr. Crawford, the fore part of the week for the purpose of examining the operation of the above named machine. During our stay it was put not only to a thorough but to a very severe test. The machine in its construction, is so well balanced, as to form scarcely any side draft, (a difficulty with many machines,) and cuts the grass on an average, lower than ordinarily done with a scythe. It is drawn with perfect ease by a single span of horses, and the grass, whether heavy or light, dry or wet, never clogs it. During our stay, it was accidentally run over a solid rock that projected about a foot above the surface of the ground, without any damage to the machine. It shaves the bottom of furrows and tops of ridges alike with wonderful precision. The owner says, under fair circumstances, it will cut fifteen acres of grass a day, which we do not doubt after seeing it operate. We commend it to the attention of farmers."

Correspondent Commercial Reporter.

"It is considered, by skillful mechanics and scientific farmers, as the most durable and complete machine for either mowing or reaping, ever yet invented. It is emphatically *the* machine for the farmer, and needs but to be seen to be admired, and used to be appreciated."

From the Detroit Free Press.

"Among the many useful agricultural machines on exhibition at the late Fair, and conspicuous for its numerous good qualities, was Kirby's Mower and Reaper. It is the lightest machine in use, and there is no pressure upon the horses' necks. It is a single wheel machine, and is far superior to those with two wheels."

From the State Sentinel, Harrisburgh, Pa.

"That the Kirby Machine is superior to, and is rapidly superseding all others, is a fact no longer in doubt. There is not a machine known that combines all the excellences that are found combined in Kirby's American Harvester."

From the Girard Republican, Pa.

"The Kirby cuts smoothly, lays the grain evenly, and with the aid of any ordinary rake delivers the gavel with neatness and despatch, and meets the expectations of the most sanguine. For lightness, portability and easy draft it has no equal."

TESTIMONIALS.

We have testimonials of farmers who own and use the Kirby Machine, enough to fill a large volume. But they only reiterate from actual experience the facts which we have stated in the preceding pages. They speak with remarkable unanimity of the *lightness of draft, simplicity, durability, ease of management, adaptability to uneven surfaces and perfection of work*, both in Mowing and Reaping, of the Kirby Machines. They confirm all that we have said in favor of the Machine, but they throw no new light upon the subject, and we have therefore concluded not to take up the room necessary to publish them, but to refer the reader directly to the eight thousand farmers who now own and use the Kirby Machines, for any further information he may desire concerning its qualities. Of these eight thousand farmers, we have yet to see the first one who does not honestly believe the Kirby to be the best Combined Machine yet invented, and who will not say that it is all we have recommended it to be. We have not space to give the names of the whole eight thousand, but will give the names of some in each county where the Machine has been introduced by us. The names are taken at random from the reports of sales of our agents, and any personal knowledge by us of the men or their opinions, but we have no fears in leaving the reputation of the Kirby in their hands—for *they have used it.*

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W. F. Patterson.

Highland Co.

Geo. Trout,
Wm. P. Stewart,
A. Lowman,
John Brock.

Miami Co.

Wm. Swain,
J. Fenner,
J. Houtz,
Wm. McKee,
J. C. Winans,
C. A. Winans,
J. Mlover.

Union Co.

Thos. W. Long.

Fayette Co.

James G. Beatty
M. Severs,
M. W. Mark,
Aaron Hyer,
John King,
Jas. C. King.

Gallia Co.

J. Keams,
C. W. Gee,
G. W. Shannon,
A. Guthrie.

Adams Co.

Andrew McLaren,
Samuel McCall.

Meigs Co.

Isaac Carleton,
Wm. Carleton,
Leroy Jones,
Allen Blackwood,
Livingston Smith,
Bellows & Price,
John C. Hysell, 2d.,
Hon. V. B. Horton,
Windon & Radford,
Robert Simpson,
V. B. Horton, Jr.,
Willard Halsey,
Giles B. Forrest,
John Koster.

Madison Co.

Samuel Pringle,
James Denton,
L. H. Burnham.

Pickaway Co.

James Reber,
J. R. Wilson,
H. Noacher,
Wm. Sturgon,
J. Thornton,
I. Faunfelter,
A. Faunfelter,
Geo. W. Pursel,
Ell Pursel.

Scioto Co.

Jesse Blair.

Washington Co.

J. D. Beach,
Wm. McIntosh,
Walter Buchanan,
Wm. B. Shaw.

Athens Co.

G. F. Chase,
Wm. T. Dean,
Oscar True,
J. E. Chase,
M. M. Green,
M. Carpenter,
A. L. Carpenter,
E. Wilson.

Champaign Co.

Joseph Wrenn,
J. M. Evans,
W. K. Williamson,
Simon Kopp,
D. Fulwider,
J. Shavely.

Lucas Co.

Wm. Van Fleet,
J. A. Hutchinson,
Edward Lee,
Mr. Wood,
Calvin Hubbell,
John Taylor,
David Farnham,
Chas. Ford,
Wm. Minturn,
A. Robertson & Bro.
Christian Ruoff,
Francis Consino, Jr.

Darke Co.

Reuben Lowrey,
James R. King & Co.,
V. & A. Aldrich,
James Griffin,
Samuel Blocher,
B. B. Reed,
Moses Calkins,
Peter Weaver,
Wm. Berry,
Jonathan Neyswanger,
John McCaslin,
Moses Potter,
H. Teagarden,
John McWethy,
Joseph Hensberger.

MICHIGAN.**Jackson Co.**

James S. Thorn,
Jerry Reynolds,
Usi Wade,
Geo. Kennedy,
J. Watkins,
James Crispell,
Theo. Quick,
M. L. Ray,
S. B. Griswold,
Jerry Marvin,
R. E. Aldrich,
Lyman Draper,
Knickerbocker & Lowe,
T. Burchard,
Oliver Fuller,
James Hawkins,
Ed. Ferris.

Shiawassee Co.

Hiram Stuart,
Cephas Stuart,
Clark D. Castle.

St. Joseph Co.

Geo. Bayles,
C. L. McMann.

Kent Co.

Hiram Allen,
Silas Yerkes,
M. L. Sweet,
E. U. Knapp,
N. Shoemaker,
John Edison,
James Rogers,
Solomon Wright.

Kalamazoo Co.

D. Church,
Alonzo Vosburgh,
Aaron Tallman,
R. B. Clark,
Henry Potts,
Geo. D. Rice,
Lewis Newton,
Thomas Cooley,
J. P. Warner,
W. H. Baldwin,
Martin Kershner,
Jonathan Taintor,
Z. Burrows,
Wm. O. Towsley,
Alanson Osborne,
E. M. Clapp,
V. Pierce,
Silas Hubbard,
T. P. Dunham,
Theron Leversee,
Delamore Duncan,
Thomas Nesbitt,
Neil Hinds,
C. F. Hayden,
J. Church.

Livingston Co.

James Pratt.

Hillsdale Co.

Abel Scott,
Cornelius Vielc,
Elijah W. Durfee,
R. M. Miller,
Leman Strong.

Lenawee Co.

Joseph B. Tilton,
Peter Burroughs,
A. J. Stitt,
George Smith,
Simeon Davidson,
A. J. Harrison,
Daniel Bates,
Henry Bournes,
Beasom Brothers,
G. W. Coffin,
Wm. H. Cavender,
C. L. Thomas,
John R. Foster,
N. K. Green,
N. B. Packard,
D. Wakefield,
John L. Hall,
Clark Baker,
James McCrilly,
A. A. & R. H. Kinney,
Leander H. Colegrove,
William Sutton,
Isaiah Lowe,
Abner Jones,
Samuel Bowerman,
P. C. Haviland,
E. S. Holdridge,
S. S. & W. W. Goff,
Charles D. Crook,
E. J. Baldwin,
Jonathan Salsbury,
Daniel Reed,
Amos Beach,
Allen Beach,
Crowell Eddy,
E. P. Corbett,
George W. Stephenson,
Moses Salsbury.

Bronson C. Knapp,
Benjamin Vu Camp,
Harvey Palmer,
Decatur Palmer,
Benjamin Beevera,
Daniel Kelley,
Daniel Clarkson,
M. Hendershot,
G. D. Perry,
Ed. Lair,
William Graves,
Peter Roberts,
Edward Roberts,
E. M. Sanford,
P. M. Wheaton,
J. A. W. Hawkins,
F. A. Dewey,
J. B. Drake,
Peter Onstead,
John L. Knapp,
H. Knapp,
Chauncey Rowlsan,
Burtis Bird,
C. H. Wirs,
Alexander Thompson,
Truman Sheldon,
Sampson Sammons,
Benson Bailey.

Ingham Co.

A. A. Kirby,
William Blair.

Eaton Co.

Cyrus Cummings,
Phelps Case,
Tracy Case.

Berrien Co.

John H. Shearer.

Oakland Co.

J. L. H. Wilber,
J. B. Aldrich,
Henry K. Mason,
Abram Lapham,
Walter Trowbridge,
John A. Bird,
P. W. Freeman,
William N. Osman,
L. H. Washburne,
Peter Voorhees,
Samuel Smith,
John M. Wilcox,
Israel Osman,
Luman Bronson,

Genesee Co.

H. Schram,
Gurdon Waterous,
Isaac B. Lum,
Isaac Jennings.

Monroe Co.

E. Chamberlin,
E. B. Lyon,
R. T. Dutton,
Seth Brunson,
Joel S. Hubbard, Jr.
A. M. Barnard,
Thomas P. Aldrich,
Alexander McIntire,
Elijah Weeks,
Henry Mason,
Rodolphus Nims,
Henro Hoyle,
Milo Tracy,
George King,
Wm. Hoag,
Samuel Rouk,
R. G. Kelley,
Enoch Kenyon,
Samuel K. Epler,
James Mulhollen,
Joel Ressler,
Levi Buck,
Levi Lewis,
Francis Consino,
A. M. Brainard,

Seth Bronson,
Sylvester Snell,
Jas. Richardson.

Wayne Co.

Harvey Saunders,
Jacob Miller,
John Miller,
John Kenyon,
John A. Purker,
John Keel,
S. Kellogg,
George Fagen,
Daniel Straight,
G. B. Truat,
Jonathan Fay,
W. S. Walters,
Geo. S. Palne,
Jonathan Shearer.

Washtenaw Co.

A. C. Root,
S. A. Sperry,
H. Arnold,
A. W. Wheeler,
John Smith,
John Finnegan.

Van Buren Co.

E. Smith,
A. R. Wilder,
Robert Morrison,
John J. Woodman,
L. A. Fitch,
John K. Pugsley,
Field & Byers,
Ira Foster,
B. A. Olney.

Calhoun Co.

John Burt,
Simeon Baker,
Benjamin F. Curtiss,
A. B. Waterman,
P. Jenney,
John A. Keifer,
J. B. Shattuck,
R. Sanderson.

Branch Co.

Jesse Olney,
Ansel Nichols,
J. E. Earle.

WISCONSIN.**Dane Co.**

H. C. Dodge,
Abraham Murphy,
Jonathan French,
W. H. Fredericks,
N. D. Fredericks.

Jefferson Co.

Allen Abernethy,
George J. Reese,
R. W. Stone,
Joel Kimball,
J. G. Fuller,
Frederick Beithle,
A. L. Wood.

Fond du Lac Co.

Bertine Pinckney,
J. W. Saunders,
J. S. White,
C. L. Sherwood,
James McCune,
Robert Hargrave,
N. Felton,
F. A. Strong,
S. T. Wilsie,
R. M. Wilsie.

Winnebago Co.

Seth Harris,
Richard Tanner,
James Reed,
J. H. Smith,
William Parker,
J. Larabee,
William A. Howard,
D. Randall.

Waushara Co.

E. H. Phillips,
B. Shumway.

Green Lake Co.

David Staples,
C. B. Dickenson,
F. B. Peck,
Samuel Clough,
Ebenezer Utley.

Dodge Co.

S. Sanborn,
B. W. Worden,
L. Marsh,
Noah P. Nash,
A. G. Young,
Harry Davis,
A. B. & C. P. Hudson,
Thomas Marshall,
John Madden,
George J. Deiter,
J. M. Arnold,
Jacob Fischer,
E. Welsh,
Joel Rich,
S. Cook,
John C. Ross,
D. Cronan,
Alexander Cameron,
O. B. & E. Hawley,
Augustus Fay,
R. N. Rhamos,
J. P. Barber,
G. W. Warner,
W. J. Woodworth,
August Haus, Jr.,
F. H. Roper,
James Rogers,
William Harrison.

Walworth Co.

J. A. Topping,
W. Hollingshead,
Josiah Topping,
E. D. Maxon,
W. T. Smith,
W. Walcott,
A. H. Allyn.

Greene Co.

Samuel Mitchell,
H. D. Putnam,
John Ferguson,
Samuel Tracey,
Thomas Fenton,
R. Doolittle,
Y. T. Lacy.

Kenosha Co.

D. Doolittle,
S. S. Lewis,
Flavel Blackman,
Robert H. Murray,
Patrick English,
Peter Honey.

Waukesha Co.

J. W. Williams,
John Andrews,
George Branch,
Robert Brown,
Leverett B. Seymour,
Dexter Bullard,
Jacob Kuney,
Parker Sawyer,
E. B. Allen,
Charles S. Smith,
Newton S. Kendrick,
James M. Garrett.

Portage Co.

John Walter,
B. Grim.

Rock Co.

John A. Peckham,
James W. Russell,
A. W. Memfield.

La Crosse Co.

Burns & Reiley,
Hemstock & Hart,
John Newman,
Mathew Newman,
C. E. Whelpley,
George H. Smith,
Austin Peterson,
M. Larson.

Racine Co.

Ezra Reed,
Thomas Barnes,
Robert W. Mosher,
James Hunter,
Caleb Allen,
Charles D. Ellison,
Royal Beach,
Captain Parker,
P. Maccaboy,
Samuel Wales,
John Karr,
Joseph Wing,
S. Sanderson,
T. Hendrickson,
M. S. Coffin,
William Baker,
Wilson Reynolds,
Ransom Reynolds,
James Thompson,
J. C. Hutchins.

PENNSYLVANIA.**Crawford Co.**

Charles Rowson,
G. P. Bancroft,
John Miller,
C. Robinson,
Thomas Stockton,
O. Andriess,
F. A. Price,
Seth Gillan,

William G. Thomas,
E. Thomas,
G. R. Hoyt.

Erie Co.

A. C. Sullivan,
Joel Olds,
Milton McCreary,
Dan Rice,

Daniel Winchester,
Charles Sherman,
Alonzo Sherman.

Mercer Co.

William Douthett,
William Miller,
J. McPherrin,
William Beman.

John North,
A. Artman,
Friend Cook,
William E. Cooper,
Richard Tunison,
Adam Stephenson,
W. Parker,
David Bracken,
C. Templeton,

MASSACHUSETTS.

Berkshire Co.

S. Squier,
Robert Colt,
John E. Merrell,
A. Mallison,
John Churchill,
A. C. Burt,
Joshua Tillotson,
Peter Goodell,
Jason Newton,
Elias Newton,
A. A. Powell,
Wm. Bradley,
Jason Newton, Jr.
Delos Northrup,
Seymour Wilcox,
Franklin Tyrell,
Stephen Newton,
D. B. Baldwin,
Henry Curtiss,
Isaac Auger,
Reuben Hawkins,
Pittsfield Shakers,
Geo. Phelps,

M. Chapin,
A. N. Cowles,
Mr. Cook,
James Kellogg,
L. M. Pixley,

Hampshire Co.

Paoli Lathrop,
O. G. Ober,
James Jones,
Phineas Bridgman,
G. W. Hobart,
R. H. Belden,
Henry Parsons,
C. H. Bates,
E. F. Cooley,
O. C. Dickinson,
H. W. & F. Field,
E. Marsh,
E. M. Eaton,
John Averel,
Wm. S. Cook.

Franklin Co.

J. J. Pierce,
Elihu Belden,
E. E. Belding,
Rufus Smith,
John B. Morton,
Allen Mansfield,
Abner Peck,
Charles Arms,
P. W. Field,
Joel Stearns,
Horace Bardwell,
Leonard Stearns,
E. G. Crafts,
Austin Foot,
Lucas Hannum,
Alfred Belden,
Stephen Belden,

Hampden Co.

Justin Ely,
Wilbur Wilson,
J. H. Demond,
Reuben Brooks,
H. E. Mosely,
Wm. M. Lyman,
Randolph Stebbins,
W. C. Goldthwait,
Phineas Stedman,
E. C. Ely,
Wm. P. Chaffee,
C. L. Buel,
E. M. Taylor,
B. H. Stedman,
T. L. Chapin,
I. O. Skeele,
M. S. Kellogg,
Sylvester Taylor,
Orrin Fuller,
H. A. Rindge.

Middlesex Co.

N. H. Warren,
Chas. V. Stearns.

Worcester Co.

Wm. H Ward.

CONNECTICUT.

Hartford Co

Henry Boardman,
Solomon Porter,
S. W. Bartlett,
Almon Noble,
Henry Elmer,
J. S. Allen,
Thos. Archer,
Ed. Balentine,
Charles Bissell,
Francis Bissell,
John A. Sheldon,
Wm. B. King,
Wm. H. King,
S. B. Pinney,

Egbert Cowles,
Chauncey Cowles,
Geo. Lewis,
J. J. Cowles,
Melner Case.

Oliver Wilson,
Carmi Lockwood,
A. E. Kroger.

New Haven Co.

M. T. Merwin,
Frost & Sons,
Dr. Hatch,
Supt. State Reform School,
J. S. Bennett,
John Burgis.

Litchfield Co.

D. L. Rogers,
D. D. M. Buck,
O. P. Root,
Wm. Wanzer,
Harrison B. Merwin,
Marcus Marsh,
S. C. Scoville.

Fairfield Co.

John B. Dimon,
John Hickok,
S. M. Brush,
Abram Mead,
H. H. Knapp,

Windham Co.

James Lyon,
Benj. Sumner.

Tolland Co.

A. M. Haling.

VERMONT.

Rutland Co.

A. D. Smith,
Wm. Otis,
M. Phillips,
M. E. Wallace.

Ambrose Arnold,
Alexander Watkins,
Geo. Sparhawk,
A. T. Watkins.

Z. Sanders,
C. H. Dudley.

Orange Co.

Jesse Johnson,
G. T. Wright,
Wm. Child,
Franklin Doton,
Chas. Hartshorn,
A. E. Hunkins,

Caledonia Co.

Benj. Fay,
A. Wilcox,
Hiram Kelsey,
A. H. Wilcox.

Windsor Co.

A. Pollard,
Solon Danforth,
J. P. Matthews,
A. M. Marsh,
A. Deming,
A. F. Baldwin,
A. R. Turner,
Wm. P. Hawley,

Windham Co.

L. F. Burrows,
L. F. Whitehead,
Alonzo Dutton,
Joel Paige,
Clark & Davis,
Pliny Fisher,

Addison Co.

Solomon Allen,
E. D. Bush.

Grand Isle Co.

Dyer Hill,
John Hazen,
A. L. Holbrook,
Warren B. Mott.

NEW HAMPSHIRE.

Cheshire Co.

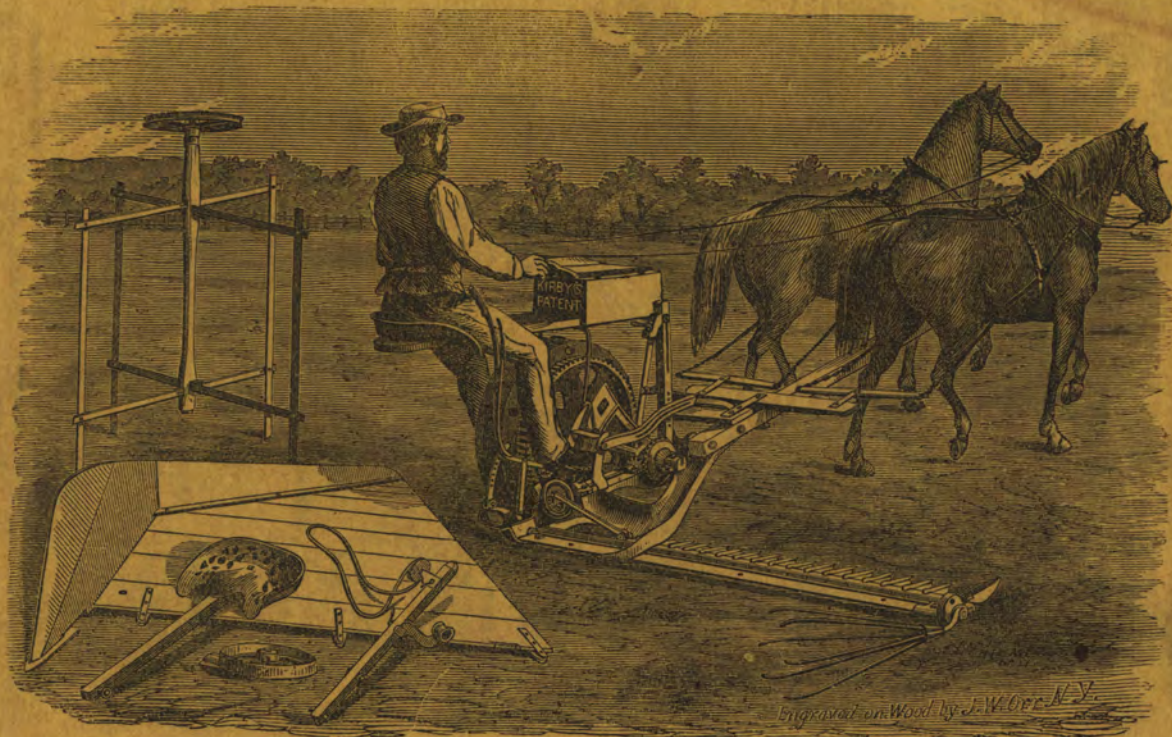
John Colony,
R. W. Pratt,
George Smith,
Otis Gibson,
Charles Watkins,
Ebenezer Barr.

Sullivan Co.

Roswell Robinson,
L. Upham,
M. Jones,
Henry Breck,
Reuben Davis,
Bradley Barr,

Grafton Co.

Henry Wood,
Thomas Perkins,
Luther Butler,
L. F. Raynsford,
Wm. Shaw,
R. C. Lucas.



KIRBY'S AMERICAN HARVESTER AS A MOWER.