THE WORLD'S MOWER AND REAPER.

1869.

THE introduction of harvesting machinery has, without doubt, marked a new era in the history of agriculture—especially in this country, where land is so abundant and cheap, and manual labor so scarce and costly. Tending, as it does, to lessen the more oppressive toil of summer, and cancel time in securing the cereal crops, with the least danger of loss, the cultivation of the soil is becoming an enjoyment to the industrious, a pastime to the intelligent, a speculation to the capitalist, and a source of wealth to all. Surely, it is not strange that such results should excite a joyous condition not favorable to criticism, and cover a multitude of faults which, from the first, have belonged to this class of machinery.

Mowing by horse power was so vast an improvement on the hard toil of the scythe, that anything like a complete execution of the work would mitigate the faults of the machine that did it. Such was the satisfaction given by the rudest Harvesters, that comparative cost in securing crops, wear and tear, durability, cost of repairs, etc., were lost sight of for the time being, and it was left for later years, under sober and costly teaching, to awaken these questions:

"Cannot we have better Harvesters?"

"Do not our Mowers and Reapers cost too much for the work they do?"

"Cannot a large share of the vexatious breakages and delays be avoided?"

These questions manufacturers have not attempted to ignore, knowing full well their force and justice. But, unfortunately, they have not led to efforts in the right direction, nor to results at all satisfactory. Inventive genius has been invoked and taxed until the land swarms with machines of varied shapes and modes of construction, all claiming, of course, to be the best; and yet it may be said that, fundamentally, *they are all alike.* All have failed to improve their machines at the point at which it is most needed, and, if defective *there*, must be

so in all their parts and operations. For instance, the farmer says to the manufacturer, "The machine I purchased of you ran with moderate ease to my team of two horses the first year, but I noticed it ran heavier the second, and the third year it took four horses, or required that the two be changed every hour, notwithstanding I oiled it well and used it with care." "I like your machine well," says another, "but can't you make me one that will run lighter?" The manufacturer, if not a dolt, knows full well the cause of all this, but, instead of proposing a radical cure, he adopts the veriest quackery, and says to the farmer, "Oh, yes, your machine is heavy—perhaps too heavy—you need a lighter one," and proceeds to cure the inherent trouble of cast gear by making a very light machine, in order to have it run easy. This is seconded by the fact that he can make light machines cheaper and with more facility than heavier ones, and thus he is able to offer it at a low price and insure sale.

We do no injustice to manufacturers in making this statement: *until recently there has been no attempt to excel, in its leading qualities, the first rude Harvester ever made.* They have accepted common cast gear as the best that could be had, and all their "improvements," so-called, have been on this false basis. Verily, this is "building on the sand," for *sand* has too much to do with the matter. The burden of effort has been to make the original rough and rude machines light enough to reduce the enormous wear and tear of horseflesh to a bearable point, and to make it attractive and cheap. If anything beyond this has been done, it has been with the view of reducing friction in the *minor points* while *the very seat of friction has been untouched.* Farmers have found light machines to be a humbug—cheap machines a cheat—and both a failure; because they cannot be relied on to do heavy work, break often, run with increasing draft, and soon wear out. No wonder, then, that the demand, to-day, everywhere rises for a Harvester *radically different* from the rude, rattling, short-lived thing of twenty years ago, and so feebly improved in later years.

This demand is earnest, because millions of dollars are at stake every harvest, and because millions have been thrown away on new-fangled devices and patent humbugs—millions which have been honestly earned in the sweat of the brow. And it is all the more outspoken and general since by the diffusion of intelligence among the honest yeomanry of the land by means of common schools and colleges, newspapers and periodicals, secular and religious books, speeches, fairs and field trials, *farmers are learning science in its best forms.* Following the law of education and development, the *wants* of every well cultivated farmer not only increase in number, but are of a more elevated character

HE WANTS THE BEST. *The best farms; the best stock; the best crops;*

World's Mower, No. 2, on Going to Field.

the best wagon; the best plow; the best mower and reaper; BEST EVERYTHING.

Answering this demand, after years of study, observation and *practice*, we have produced the WORLD'S MOWER AND REAPER—not on the plan that cast gearing is the best, but that it is not fit to be used, because *a complete machine cannot be made out of imperfect parts.* Three things must be conceded as true of ordinary Harvesters:

FIRST. *Increasing friction, rendering increased power necessary.*

SECOND. *Constant liability to break, and great trouble and cost to keep them in repair.*

THIRD. *Short life, and consequent great expense.*

Now, we affirm that these all grow out of *rude, rough cast gear!* This will be plain to every man that thinks. What is the true remedy?

Plainly, A PERFECT GEAR. This is the central idea and fact of the WORLD. By this *we reduce friction* AND KEEP DIMINISHING it, thus *reversing the law of common machines.* Consequently there is less liability to break, and *there must be long life.* These points we need not argue.

It is plain that if heavy and increasing draft, breakage, and rapid decline, are due to cast and imperfect cog-gears, it follows that opposite results will attend the use of perfect cog-wheels—*a removal of the cause changes the effects.*

But the reader is ready to ask, "How do you get a perfect wheel?" We answer, "We get it round *by turning it in a lathe!*" A wheel cannot be cast perfectly round, and, hence, if made so, must be *by true machinery, afterward.*

But do you ask, "If a wheel cannot be cast round, do you not spoil the cogs in turning it true?" We answer, "No, because *we can no more make a perfect cog than a true wheel in the sand,* and don't pretend to do it; but, *after turning the wheel to a gauge,* WE CUT EACH TOOTH OUT OF THE SOLID IRON, and hence, *have all the same size and shape.*

Fixed Relations.

Second in importance only to perfect gearing, is a permanent foundation to which to adjust it, and its parts being put together accurately and unchangeably. The lack of ordinary rough-cast machines in this respect is one of their most noticeable and palpable defects. Many, perhaps the majority, are provided with wooden frames. These, from causes too well known to be explained at length, cannot be built and kept together so substantially as to protect the gearing against the twisting strains to which the machine is liable in passing over rough or uneven ground. The bolt heads and nuts—however protected by washers—

World's Mower, No. 2, in Heavy Grass.

will in a short time cut into the wood, the joints, in time—however well seasoned the frame stuff may have been—become loose, the whole machine becomes racked, and the owner enters upon a course of patience- and purse-trying perplexities, which almost, if they do not altogether, induce the regret that he ever had anything to do with the machine. Where little attention has been given to the condition of lumber used, the case is much worse, the machine is often "dried out and loose jointed" when put into the field, and before it has been used a day it is found that a large proportion of the nuts have rattled off, and that general derangement has ensued.

Another class of machines are provided with cast-iron zone-shaped frames, the strength of which has been seriously if not fatally impaired by reducing their weight in order to lessen the draft of the machine. When it is considered that *draft* arises chiefly from the power required to drive the gearing, and that the resistance presented by the grass or grain and the actual weight of the machine have little to do with it; and that weight up to a certain point *is really an element of power*, the folly of one great mistake to correct another and lesser, will at once appear. These light iron frames, although not so loose-jointed as the wooden frames, are sufficiently flexible to admit of the disturbance of the bearings by twisting strains, and when broken they are not near so easily repaired as the other. Being rough-cast the boxing cannot be so snugly fastened as to the wood, for the bolt head on one side and the nut on the other come in contact with a rough, scaly surface. The bolt holes are cast, and the bolts fitted loosely *through* them. The wriggling and jarring of the irregular gearing soon loosen the nuts and bolts, and the result of giving the gearing greater freedom is an aggravation of the process of chewing, grinding and backlashing, which increases the draft and leads to the hasty exhaustion of the vitals of the machine.

The foundation of the WORLD is in keeping with the high order of the machinery which it is designed to support and protect. Let the reader turn to page 25, and find illustration 325 among the repairs. It will be observed:

First. The foundation or frame is cast in the form of a *solid case*, of ample strength to provide against every possible strain. The bearings for the shafting are cast in the frame and afterwards filled with babbit metal, the quality of which may be judged by the fact that it costs as much to fill one bearing as to babbit the bearings of an entire rough-cast machine. The fixing of the bearings is a matter of vital moment, as upon the accuracy of the alignment of the shafting the easy movement of the gearing largely depends. As the process by which this is done in the WORLD is one which only the more skilled mechanics are

World's Mower, No. 1, in Heavy Grass.

able to appreciate, we shall not attempt to explain further than to say that a "jig," representing the shafting with its journals, is laid in frame and the bearing filled by it. The perfecting of this "jig," cost months of careful calculation and skilled labor. By means of this, the centers of *all* the bearings are fixed with absolute precision, and liability to heating, so troublesome in ordinary machines, is entirely avoided.

Second. The bolt holes *are bored through solid iron*, a "jig" being used to locate them and guide the drill. A countersink is cut into iron around the upper side of the hole. Upon the lower side of the cap a stool is cut which fits neatly into the countersink, so that when screwed down it becomes, substantially, a part of the frame itself. After being thus adjusted, the caps are filled in the same manner as the bearings. The surface of the case below and the top of the cap, around the bolt holes, is dressed.

Third. The bolts are made, turned and the thread cut upon them upon the lathe. From beneath the head to the thread they are slightly tapered, so that considerable force is required to drive them into place. The nuts are hexagon shaped, cold pressed, the thread cut with the same care as that of the bolt. They are faced above and below, so that in all cases the point of contact presents *a planed surface.* In no class of machinery has greater care been observed to have the joints and bearings perfect and secure. *Every point of contact is turned or planed*, so that every joint is *a "planed joint."*

Fourth. The shafting is of the best quality, and *turned*, like the wheels of which it is the axis, *to a standard gauge*, so that the bore of the wheel comes in contact with a perfectly smooth and uniform surface. The key-seats, like those in the wheel, are *cut.*

Setting up the Machine.

Where the several parts of a piece of machinery are made with such mathematical precision, the combination when completed must be in keeping with the standard of the several parts. The wheels are *driven by vigorous force* to their places upon the shafting and there keyed, so that the wheel and the shaft are substantially one piece. The several parts are then placed in their bearings, and when the combination is completed, the machinery looks and moves as though the whole had been *cut from a solid piece.*

To provide against looseness in the journals, as the result of unavoidable wear of the babbit filling, tin washers are placed around the bolts beneath the cap stools, and these can be removed, one by one, as occasion requires, and thus the journal will always be kept perfectly snug, and the relations of the wheels preserved.

World's Mower, No. 1, on Hill Side.

Protection to the Gearing.

Having secured a perfect gearing, it is of the first importance to have it protected. This is partly accomplished by having a solid case frame, which defends it against anything coming from below, but we further secure it—*against every possible external danger*—by means of a closely fitting hinged top. Dust, dirt, grass, grain, water—in short, everything foreign to its good—are as effectually excluded as from the gearing of the elaborately finished "American Capped Watch," and, being built upon precisely the same principle, it is the opinion of the best mechanics in the country that it will perform its work just as long.

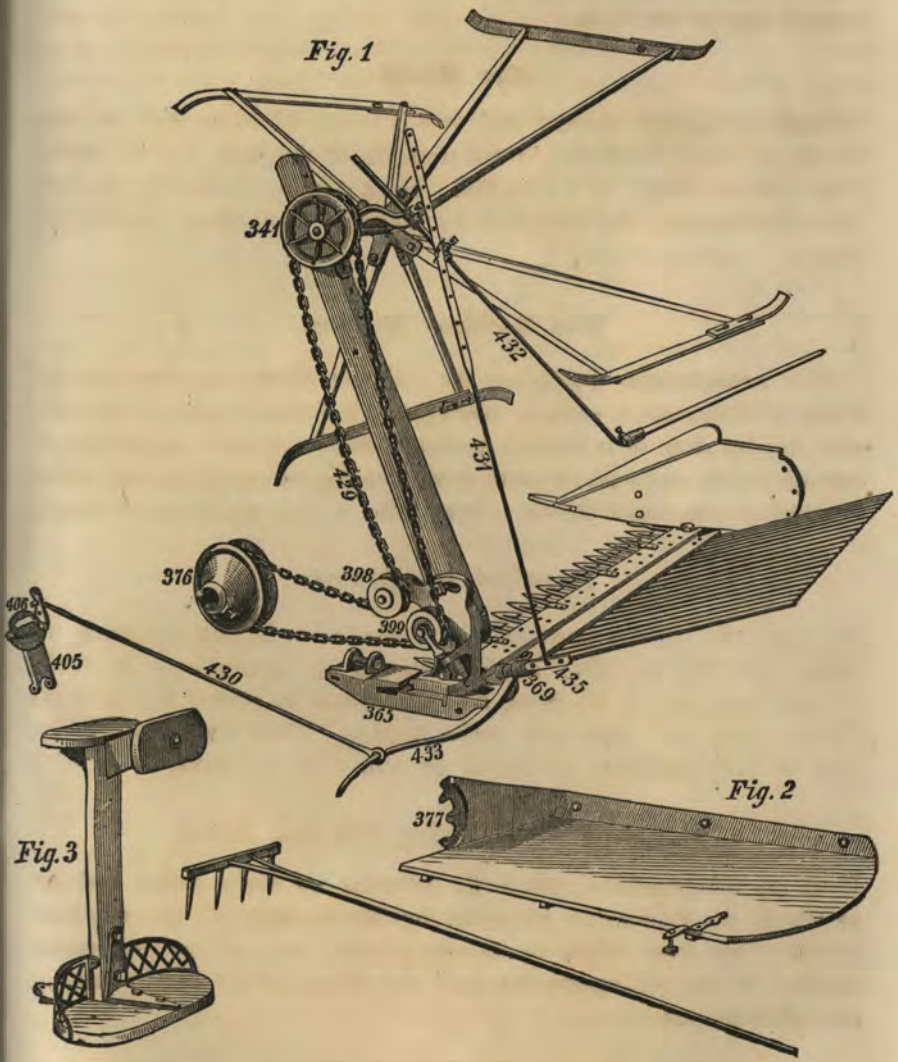
With the several parts of the machine so perfect in themselves; their relations so harmonious when put together; such precautions taken that those relations shall not be disturbed—and, if disturbed, for their prompt and easy restoration, and last, but not least, the perfect protection of the entire vital apparatus against external causes of derangement and wear, the length of time which the WORLD will perform its work can no more be determined than that of the elegantly wrought lathe, which runs for years incessantly without the slightest indication of exhaustion. We are not left to conjecture alone in these respects.

The Results of Experience

Abundantly attest the correctness of the theory upon which the machine is built. Those which have been in use during the two years past have forever closed the mouths of those who predicted the speedy destruction of cut gear in Harvesters. The invariable testimony is that, after being used two seasons, and doing an amount of work seldom accomplished with any other machine, *they do not show the slightest indications of wear.* Upon the subject of draft, the testimony is equally decisive and favorable to the WORLD. As to its freedom from liability to derangement, such expressions as, "Have n't touched a nut or bolt," "No more likely to get out of order than a fifty-six pound weight," "Run the season through without stopping to fix a thing," will suffice to indicate what is thought of it in this respect.

The Finger Bar

Of the WORLD has undergone a thorough reconstruction since last season. The improvements in the quality of the material used and workmanship render it substantially a new bar. No pains have been spared to have it fitted in the most exact and substantial manner, and it will exceed in efficiency any bar in use.



Dropping and Hand Rake Attachment.

The Guards

Are made of the best quality of iron, *laid with cast steel* on the inner side, then ground and polished, so that each one, on *both sides*, presents a sharp edge to the knife.

The Knife

Is made of the *best imported steel*, and is improved in several respects above any made heretofore in the strength of the heel, the universal joint, and the shape of the section. Such a knife, vibrating through steel-edged guards, and propelled by powerful machinery, works like a razor, "cutting sweetly."

The Rolling Motion.

This arrangement—by which the knife is allowed to play over all kinds of obstructions, such as rough ground, ditches, stones, fence rails, etc., *keeping itself in a position horizontal to the surface*—is peculiar to our machines, and enables us to work them successfully where other boasting rivals cannot follow. In addition to this, we have invented a

Parallel Movement,

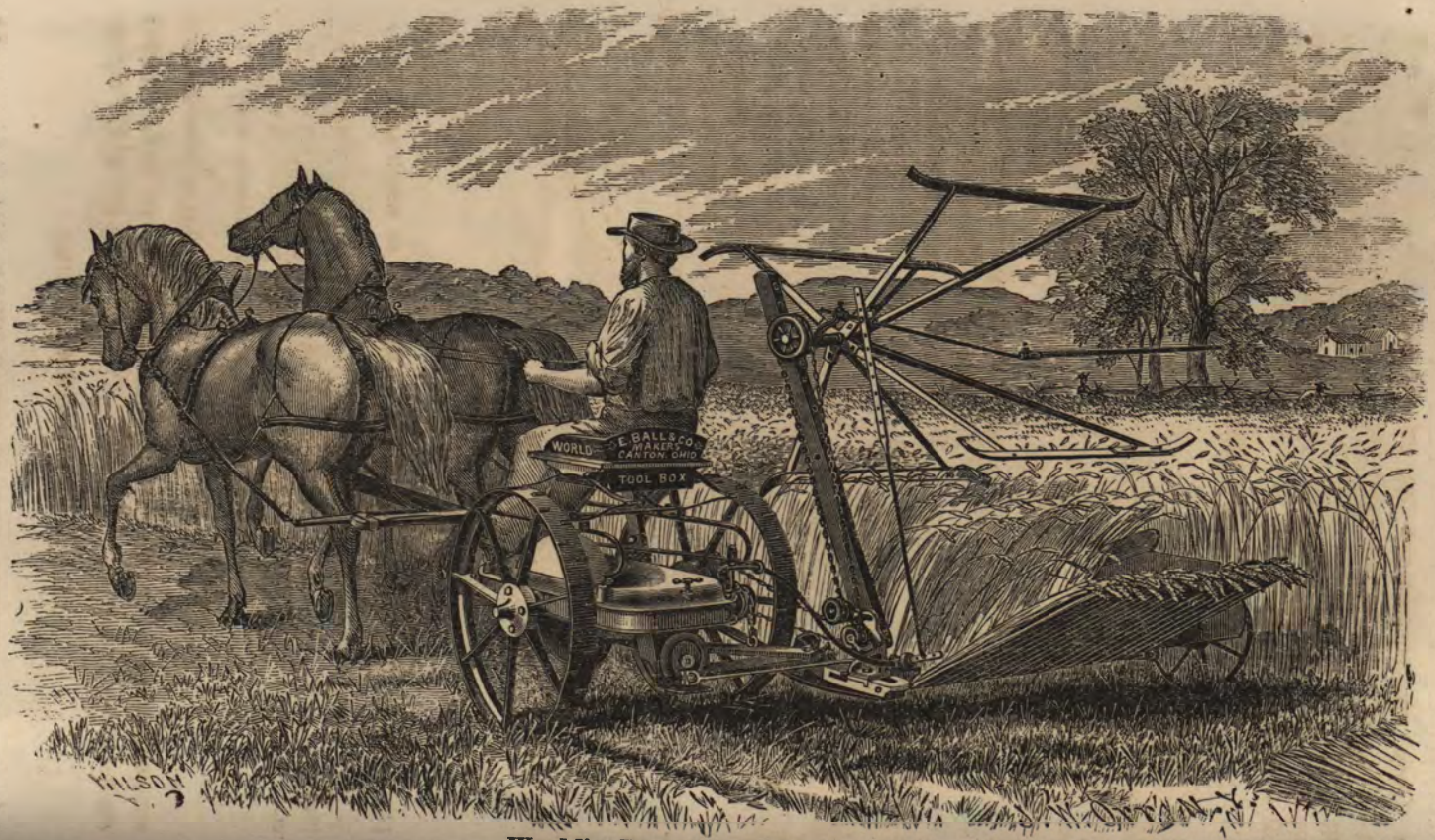
By which the relative position of the cutter bar is kept the same, no matter how low it falls; as, for instance, in cutting over a ditch. In each case, and at all times, *the knife is kept in perfect line with the Pitman crank, and works with perfect freedom.* THIS WE CLAIM TO BE ONE OF THE GREATEST TRIUMPHS OF OUR NEW MACHINE.

The Ball and Socket Pitman Joint

Used on this machine, effectually provides for every strain and jar to which the pitman is subjected by the passage of the machine or cutter bar over rough or uneven ground, as well as oscillations incident to the rolling motion and the lifting of the bar in passing over obstructions.

Every Machine is Tried

With all the attachments in place, and subjected to all the changes of position to which they are liable in the field, before leaving the shop, so that when the farmer receives it, he has but to adjust the attachments—which are all numbered so that no mistake need occur in putting them together, and boxed for convenience and safety in shipping—and put it to work.



World's Dropper, Nos. 1 and 2.

The Crowning Excellence

Of the whole, is its *durability.* Constructed as this machine is, NO FARMER NEED BE AFRAID OF WEARING IT OUT IN A LIFETIME.

We furnish it this year in the following forms, to wit:

1. As a Mower, two sizes, rear and front cut.
2. As a Combined Machine, with Dropper, two sizes.
3. As a Combined Machine, Dropper and Side Delivery, one size.
4. As a Combined Machine, Johnson's Self-Rake, one size.

For particulars as to prices, etc., please refer to our authorized Agents.

World's Self - Rake.

THE OHIO MOWER.

IT is a matter of sincere gratification, that we are not only able to present the improved machine described in the foregoing remarks, but also the *oldest and best* of the common Harvesters in use. Invented in 1848, it is *the Pioneer two-wheeled Harvester*, and has completely revolutionized the trade to farmers, all of whom now want machines with two wheels instead of one. Improvements have been made from year to year, so that its rank as

The Standard Machine

has been fully maintained.

It has shared the fate common to valuable inventions, and has been defamed and cried down by those in the interest of competing machines; but it has steadily moved forward, challenging comparison, and wears to-day the laurels of a victor on many a hotly contested field.

Its fame has been achieved in Europe as well as America, and the more recent testimonials from official sources go to prove that it stands higher in the farming districts on the Continent, than any other machine.

Not to mention the newspaper commendations in proof of this statement, we quote from Official Report of JOHN H. KLIPPART, Secretary of the Ohio Board of Agriculture, giving the result of his observations in Europe. On page 232 of that report, he says—"In consequence of the influence of the Agricultural College at Hohenheim, the farmers at Wirtemberg use more improved implements than anywhere I saw on the Continent. THIS COLLEGE HAS INTRODUCED A NUMBER OF REAPERS AND MOWERS, BUT BALL'S OHIO MOWER IS THE ONLY ONE OF THE LOT WHICH GIVES ENTIRE SATISFACTION."

This statement coming from the most experienced agricultural and scientific gentleman in the country, the acknowledged head of the State Society, given as a fact derived from the Agricultural College of

Wirtemberg, *a fact proven by impartial trial, is a testimonial of greater weight than can be produced by any competing machine in America.*

Other machines, indeed all, have testimonials, certificates and puffs, but they are for the most part from partial and incompetent judges. But we cite our farmer friends to the most enlightened and disinterested judges of our comparative merit.

The Established Character

Of our workmanship is in keeping with the established character of our machine. We purchase none but the *best material* of every kind entering into the composition of a machine. These materials, especially lumber, are prepared with the greatest care possible, and are put together by the most *skillful and reliable workmen to be had in the country.* For years we have been collecting first class mechanics in wood and iron, and to-day can boast of having in our shops the best mechanics in the West. In proof of this, we need only to say, that the most complicated and improved engine tools are invented and built in our works in a manner that challenges the oldest tool-shops of the East.

Distinctive Features.

The Ohio Mower is distinguished from other machines in these points:

1st. By master cog-wheels attached to the drivers. 2nd. A drag bar supporting the end of the cutter bar, and attaching the same to the main frame. 3rd. A hinged arrangement at the rear of the drag bar, which provides for an undulating motion.

It is too late to argue these three grand points, because they have passed through the severest tests to a

Grand Demonstration

of the following facts:

1st. By gearing directly with the main drivers by means of pinions, *we obtain a direct motion and power the instant the machine is moved forward.* On this point we have challenged competition on many a field, *and challenge it now.* In the tough "wire grass" of the western prairies, heavy and lodged at that, our large Mower moves with perfect facility, stopping at any moment, and starting with the guards full of grass. *This no other machine can do,* because the direct motion and power are wanting.

2nd. By means of a drag bar, we are able to carry the finger bar with little friction, secure the certain action of the knife, and surmount any obstacle over which the machine may pass. Holding the socket at

the front, and free to undulate at the rear, it rides over obstacles or down into cross ditches with equal facility. Many other machines must be lifted over ditches by a lever for the purpose, else their small carrying wheel would stick fast, and arrest the motion of the machine, either backward or forward.

3rd. The "rolling motion" of our machine has gained it troops of friends, especially in the West. By this arrangement, we are able to keep the knife and finger bar in position parallel to the surface over which it moves, the knife thus adjusting itself to the most abrupt variations of the ground, and sudden movements of the drag bar. Inequalities of all kinds, transverse or longitudinal, are thus provided for, and the driver can pass a ditch, or cut on a steep sidehill, with equal facility.

Rear Cut.

This is one of the peculiarities of the Pioneer Mower, and commends it to popular favor with great force, because:

1st. It preserves the main frame from severe and damaging shocks.

2nd. It enables the driver to *see obstacles in advance of the knife*, and thus avoid them.

3rd. It brings the resistance nearer the team.

4th. It renders the machine more compact, by shortening the tongue and bringing the whiffle-trees nearer the center of the driving wheels.

5th. It balances the machine and relieves the horses' necks.

6th. It throws all the weight on the drive wheels and uses it for power.

7th. The driver is not so apt to fall on the right side of the machine, and if he should, instead of falling immediately in front of the knife he alights sufficient distance in front of the knife to get out of the way.

8th. There is no possible chance of cutting the legs of the team, as is often done by front-cut machines.

9th. In reaping, it gives you the best possible position for raking off the gavels at the side. Observe, the man who rakes the grain from the platform, sits (or stands) in line with the sickle, and with his rake draws the gavel toward him in *a straight line*, while in all front-cut Reapers the gavel has to be thrown round on a *circular platform*, with violent strain on the arms and body of the unfortunate rakeman. So obvious is our advantage in this particular, that we often sell our machine to dealers who are partial to front-cut Mowers, because it is a better Reaper.

Large Combined Ohio Machine, Hand Rake.

Parallel Motion.

This is an important arrangement by which the knife and pitman-rod are kept in perfect line with the wrist-pin in the pitman. No matter how high or low the drag bar runs, the knife is never cramped. This is a rare excellence, and adds vastly to the advantage of our machine. By this means,

Cutting over Obstacles,

Such as stumps and rocks, is done with perfect ease, by a simple motion of the lever, as is shown in the accompanying cut.

Turning Corners.

The motion of either driver forward moves the knife, so that the machine can be turned either way and keep the knife vibrating all the while. This enables us to turn in any direction, and cut grass or grain all the time. Besides, the cutter bar being in the rear and not carried on the wheels, *we can turn corners without backing the team or lifting the cutter bar*, thus saving time and hard work.

Our Knives and Sickles

Are made in the only shape that has been proven by scientific observation to cut grass and grain with the least power. They are also made of the best steel in the world, and are carefully tempered.

The Guards

Are made of tough wrought iron laid with cast steel, formed with exact precision over a former, and ground to an edge on both sides. The space thus traversed by the knive is thus made true, and being of cast steel and ground to an edge, the knife operates like a pair of shears, one side of which is stationary while the other vibrates with great rapidity.

If the knife is kept in ordinary edge, with such guards, there is no danger of choking in any kind of grass. Machines made with cast iron guards are wholly unfit for use in any kind of grass as soon as the keen edge is off the knife, and unreliable when sharpest, in tough grasses.

The Finger Bar,

Because it does the work, is the most important part of the machine, and as such has to be constructed with great care. Each of our combined machines has two bars, one for mowing, the other for reaping. The one for mowing is made of cast steel, or, if the pur-

chaser prefers, of cold rolled iron, and is of such shape as to provide for the peculiar, twisting strains that are on it. The one for reaping, being longer than the mowing bar, is made of tough iron, with a flange turned down on the back edge to give additional strength, answering in this respect the same purpose that the rim does on the back of a tenon saw. In both cases, the slot for the sickle is made as true as the most improved tools can make it. The whole is so attached to the frame of the machine that either end can be raised or lowered at the will of the driver, and be made to cut high or low.

Bar Folded.

It is often a great convenience in transporting the machine from one point to another, to fold the knife and bar in an upright position, as represented in the accompanying cut. This arrangement enables the farmer to hitch up his machine in the yard and drive to any part of his farm, or anywhere that he could go with a wagon.

Side Draft.

In machines constructed to cut one width in grass and another width in grain, it is very difficult to avoid *side draft*, and not make the work too heavy for the "off horse." Long experience has enabled us to overcome the difficulty perfectly, by means of a re-adjustment of the tongue to any desirable point, right or left.

Draft.

We are not among those whose chief aim in building Harvesters is to make them as light as possible, in order to run light. Our first aim has been rather to make a machine that will do your work, do it well, do it always. In order to this, there must be traction, and in order to traction, there must be *weight.* In many a contest when the grass was heavy and tough, we have seen the folly of light machines illustrated, by the rear end of the machine jumping up, and requiring the weight of two of its friends to keep it on the ground, while with our Mower built for work, we could drive anywhere, and stop and start at pleasure, and all with a draft easy to the horses. This we think, is all a sensible farmer wants—*to do his work, do it well, and do it easily.* We offer these remarks because there is a great deal of specious talk about draft, and it is time the farming public wake up to the fact that it is even less than a secondary consideration.

When it comes to the test, we are ready to compare draft with any first class Harvester.

Capacity and Size.

We build three sizes of Ohio Mowers, as follows:

The Large Mower,

Cutting in grass four feet four inches, weighing about 850 pounds; a powerful and serviceable machine. Its capacity is one acre per hour, but that is a low estimate.

The Medium Mower,

Cutting in grass four feet four inches, weighing about 650 pounds; a machine well adapted to timothy, clover, and lighter grasses.

The Junior Mower,

Cutting in grass four feet, weighing about 500 pounds; light built, and specially adapted to rough ground, hill sides, etc. It is one of our most popular machines.

The Large Combined

Cuts, in grass, four feet four inches; in grain, five feet. The combinations of this size are three, viz.: as a hand-rake, as a dropper, and as a dropper and hand-rake. Of these the most popular is

The Dropper.

This is a light and simple arrangement for laying the grain smoothly on the ground, in gavels as large or small as the driver may choose. It is to all intents a *self-rake*, but far less complicated, more easily managed, and less liable to get out of repair. It is the cheapest, and, in our view, the best, attachment for delivering grain now in use. Should any object to a rear delivery of the gavel, we can accommodate them with a platform and hand-rake, for side delivery.

Printed Directions

In full, are sent with each machine, enabling any one to set up their machine, and put it in running order. Should these not be fully understood, application should at once be made to our nearest Agent.

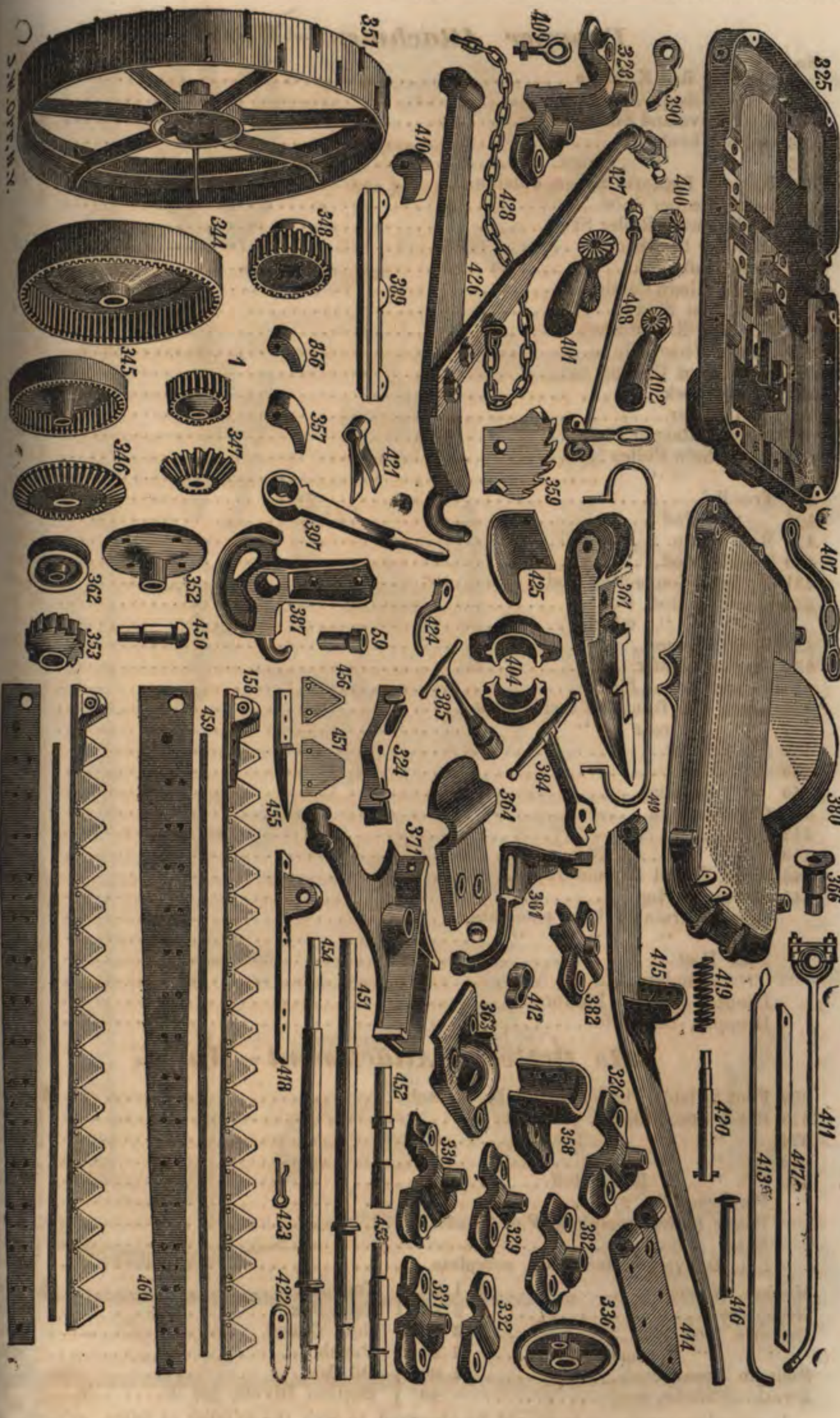
Junior Mower, in Heavy Grass.

PRICE LIST OF REPAIRS.

World's Mower and Reaper, No. 1.

No.	Name.	Price.
1	Spur Pinion	$ 2 00
288	Tongue Ferrule	50
324	Seat Spring Casting	50
325	Frame	30 00
326	Drive Wheel Shaft Box	2 00
327	Crank " " O. S.	2 00
328	Double Box	2 00
329	Bevel Pinion Shaft Box	1 75
330	" Wheel "	1 75
331	" " " upper	1 75
332	" " " lower	1 75
335	Lid	5 00
336	Crank Wheel	2 00
337	Shield, O. S	1 00
340	Shipper Stand	50
344	Spur Wheel, large	12 00
345	" " small	6 50
346	Bevel Wheel, large	7 00
347	" Pinion	3 50
348	Shipper Pinion	3 00
350	" Fork, O. S	50
351	Drive Wheel	10 00
352	" " Flange, old style	2 50
353	" " Ratchet	1 25
354	Lever Ratchet Pawl, O. S	25
355	Shipper Pawl, O. S	25
356	Ratchet Pawl	75
357	" "	75
358	Drag Bar Stand	1 50
359	Lever Ratchet	75
360	" Chain Shive, O. S	1 00
361	Outside Mower Shoe	2 50
362	Chain Shive Roller	1 50
363	Front Shoe Cap	2 00
364–1	Rear " "	1 00
371	Tongue Socket	3 50
380	Hinged Cover	10 00
381	Shipper	1 25
382	Crank Box Cap	2 00
383	Lid Holder	60
384	Socket Wrench, large	50
385	Pitman "	25
387	Lever Shive	1 00
388	" " Ratchet, O. S	75
390	" Ratchet Pawl	25

No.	Name.	Price.
391	Swathing Stick Socket, upper	$ 50
392	" " " lower	50
397	Shipper Handle	50
400	Swathing Stick Irons, new style,	60
401	" " " "	60
402	" " " "	60
403	Tongue Ferrule	50
404	Ball Pitman Box, brass	2 00
407	Hammer Strap	50
408	Folding Rod	1 00
409	Seat Rod Eye Bolt	25
410	Ratchet Pawl	25
411	Pitman, complete	4 50
412	Lever Ferrule	25
413	" Thumb Rod	50
414	Shoe Sole, wrought iron	3 50
415	Drag Bar, complete	5 00
416	Drag Bar Hinge Pin	50
417	Seat Brace	1 25
418	Knife Heel	1 50
419	Shipper Spring	75
420	Shipper Shaft	1 00
421	Ratchet Spring	25
422	Knife Caps, each	25
423	Spring Key	05
424	Pitman Guard	20
425	Crank Shield	1 00
426	Hook Brace	4 50
427	Draw Brace	3 00
428	Brace Chain	2 00
447	Inside Divider Casting	25
448	" " "	25
449	Seat Rods, each	2 00
450	Pitman Wrist	1 00
451	Drive Wheel Shaft	5 00
452	Bevel " "	2 50
453	Bevel Pinion "	2 75
454	Crank Shaft	3 50
455	Mower Guards, each	65
456	" Knife Sections, each	30
457	" " Blanks, each	25
458	" "	7 50
459	Stay Rod	1 00
460	Mower Bar	7 50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S.W.OTT,N.Y.
WILSON, DEL.

Dropper Attachment—World.

No.		Price.
7	Dividing Rod Knuckle	$ 40
333	Grain Wheel	2 50
341	Reel Shive and Shaft, upper	2 00
342	Grain Wheel Arm	1 50
343	" " Hinge	75
349	Dropper Platform Hinge, outside	40
365	Inside Reaper Shoe	3 50
366	Chain Shive Roller Stud	40
367	Dividing Rod Hinge	1 00
368	Reel Shaft Box	2 00
369	Lever Hinge Casting	1 00
370	Reel Post Stand	2 50
372	Dividing Rod Socket	50
376	Drive Wheel Shive	2 00
377	End Board Casting	1 00
394	Pulley Fork	40
395	Reel Spider	2 00
396	Outside Reaper Shoe	2 00
398	Reel Chain Pulley	50
399	" "	50
405	Treadle	1 00
406	" Pad	50
429	Reel Chain	2 00
430	Treadle Rod	1 25
431	Upright Connecting Rod	1 40
432	Dividing Rod, iron	2 00
	" " wood	25
433	Hinged Lever	1 50
434	Platform Hook	60
435	Hinged Lever Pin	50
436	Brace Pin, front end Inside Shoe	30
437	" " rear " "	55
438	Sickle Heel	1 50
439	" Cap	20
440	" Sections	30
441	Guards, each	60
442	Sickle	7 25
443	Cutter Bar	6 50
444	Grain Wheel Ferrule	40
445	Rubber Spring	50
	Outside Grain Divider, complete	3 00
	Inside " " "	2 00
	Reel Post	70
	" complete	7 00
	Dropper (slatted) Platform	5 00
	Dropper, complete	40 00

Side Delivery Attachment—World.

339	Foot Shields, right and left hand, each	$ 50
373	Raker Stand Brace, rear	1 00
374	" " front	1 25
375	" Stirrup	50
430	" Brace Rod	1 25
	Platform (Fig. 2)	3 00
	Raker Stand, complete (Fig. 3)	7 00
	Rake	75
	Side Delivery Attachment, complete	10 00

Monkey Wrench	$ 1 00	Tongue	$ 3 00
Neckyoke	2 50	Tool Box	50
Driver's Seat	3 00	Cold Chisel	25
" " Springs, each	2 25	Punch	25
Swingle Trees, each	1 00	Oil Can	20
Swathing Sticks, each	40	Section Rivets, per lb	30

In ordering repairs care should be observed to give the number or name, or both, as shown in the foregoing list. No. 430 answers the double purpose of Dropper Treadle Rod and Raker Stand Brace.


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WILSON
J.W.Orr N.Y.

[*Large Ohio Mower.*

No.		Price.
123	Drive Wheel, right hand	$10 00
124	" " left hand	10 00
168	" " Shaft	4 25
160	" " Coupling	50
155	Bevel Wheel	3 00
164 & 180	Bevel Wheel Caps and Hinges	50
150	Bevel Wheel Clutch	75
152	" " Shaft	3 00
185	" " " Box	50
148	" " " Ratchets, right hand	1 00
146	" " " " left hand	1 00
145	" " " Spur Pinion, with Pawl and Spring, right hand	1 75
144	" " " " " " left hand	1 75
141	Spur Pinion Covers, right hand	25
142	" " left hand	25
162	Crank	2 00
170	" Wrist	50
153	" Shaft	2 75
154	Bevel Pinion	1 25
177	Front Hanger	2 50
143	" " Cap	75
181	Rear Hanger	3 50
179	" " Cap	75
132	Inside Mower Shoe	3 00
125	Outside Mower Shoe	2 00
183	Drag Bar Stand	1 75
167	" " Socket	1 25
157	Tongue Socket	2 00
163	Shipper	1 00
159	" Fulcrum	25
175	" Holder	50
138	Seat Spring	2 50
140	" Castings	40
173	Chain Shive	1 00
172	" " Ratchet	75
169	Lever Shaft	75
137	" " Box	25
174	Lever Socket	75
	Shield Plate under Bevel Wheel	75
161	Oil Cup, on Frame	25
	Socket on front end of Tongue	40
	Guards, Mower, each	65
126	Cutter Bar, drilled	8 50
	" " with Guards	18 00
	Set of Guards, put on	10 00
127	Mower Knife	7 00
133	Knife Section	30
128	Heel Blanks	25
134	Knife Bar Heel	1 50
165	Raker Seat Socket	75
135	Pitman, complete	4 50
136	" Box	2 00
	" Fork	1 00
156	Swath Stick Sockets, set	1 00
	Swath Sticks, each	40


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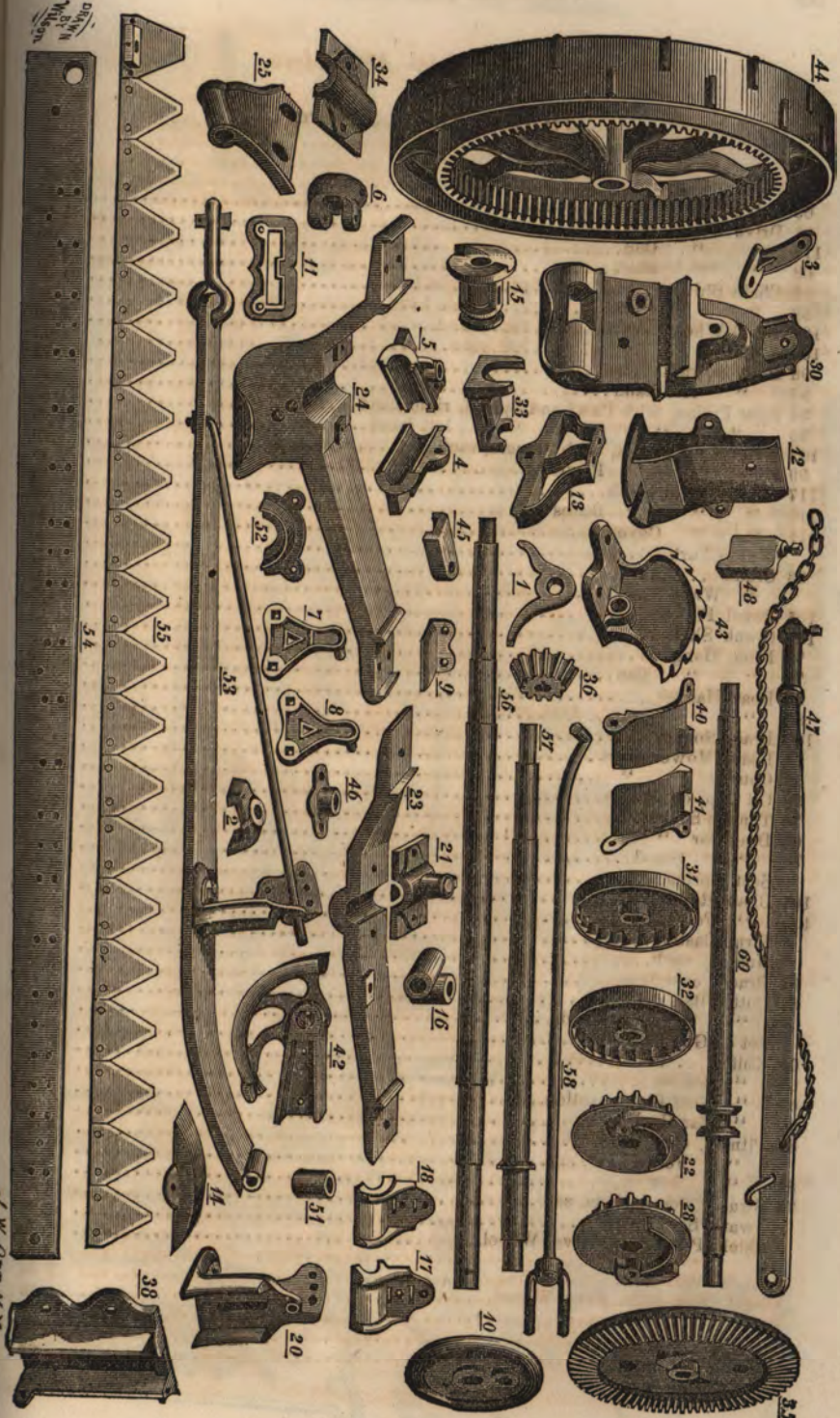
NEW YORK

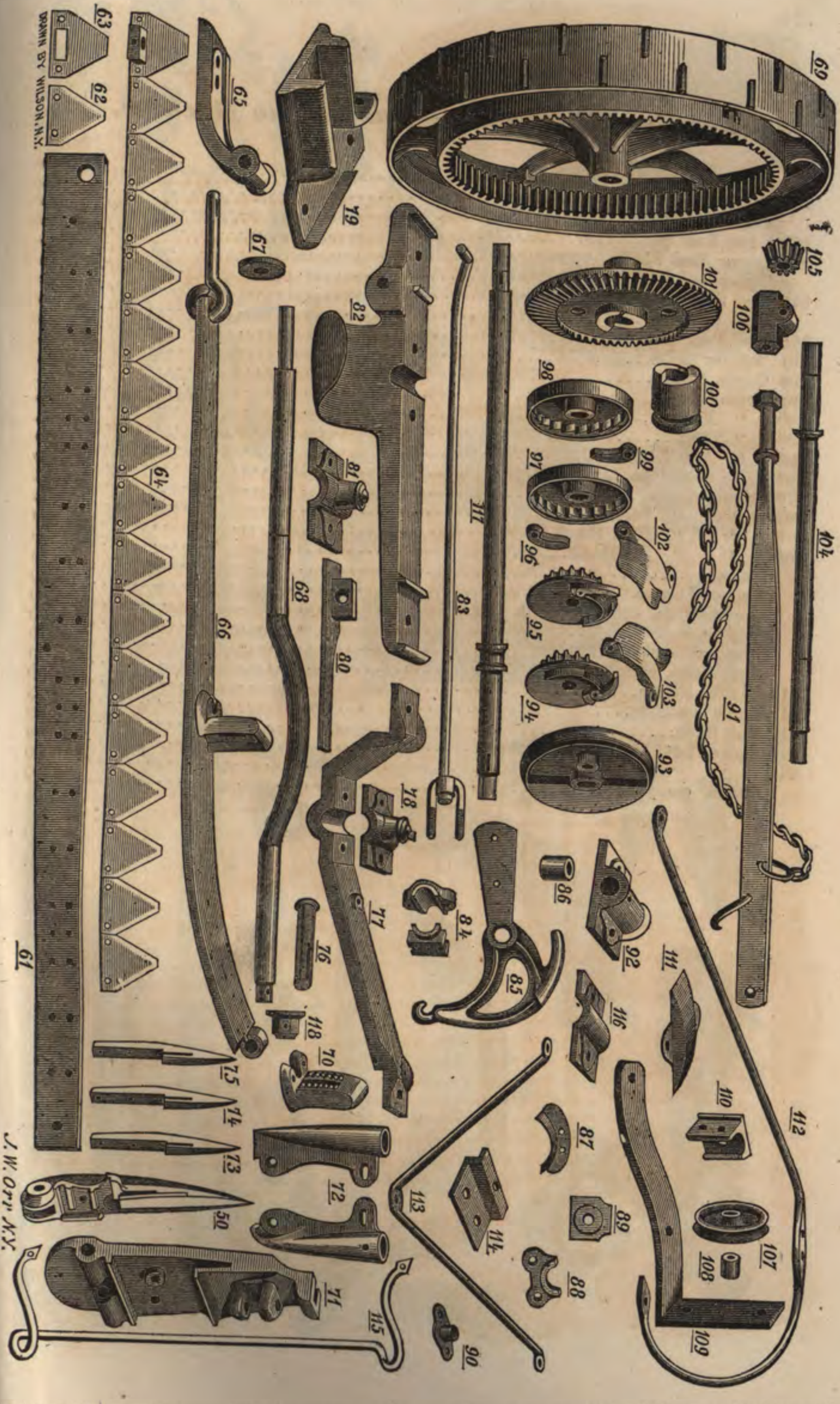
Medium Ohio Machine.

No.		Price.
44	Drive Wheel	$ 8 00
56	" " Shaft	3 75
6	" " Coupling	50
17 & 18	Drive Wheel Coupling Box	50
35	Bevel Wheel	2 50
15	Clutch	75
31	Ratchet, right hand	90
32	" left hand	90
23	Spur Pinion, with Pawl and Spring, right hand	1 65
22	" " " " left hand	1 65
40	Covers for Spur Pinion, each, right hand	25
41	" " " left hand	25
	Pawls for Spur Pinion, each	15
60	Bevel Wheel Shaft	2 88
34	" " " Boxes	50
14	" " Cover	20
10	Crank	1 75
	" Wrist	50
36	Bevel Pinion	1 00
57	Crank Shaft	2 25
23	Front Hanger	2 00
21	" " Cap	75
24	Rear Hanger	3 25
4 & 5	Rear Hanger Boxes, both sides	1 25
45	Brace Pin Gap	15
16	" " Socket	50
48	Mower Shoe Stop	50
30	Inside Mower Shoe	3 00
	Outside Mower	1 15
	" " Reaping Attachment	2 00
46	Oil Cup, on Frame	10
38	Tongue Socket	2 00
25	Drag Bar Socket	1 25
20	" " Stand	1 50
12	Raker Seat Socket	75
13	Seat Spring Casting	40
42	Chain Shive	1 50
51	" Ferrule	25
43	" Ratchet	1 00
33	Clutch Fork	50
3	Box Hinge Stand	25
7 & 8	Box Hinges, each	25
11	Shipper Holder	25
2	" Fulcrum Cap	20
	Guards, each, Mower	50
54	Cutter Bar, drilled	8 50
	" " with Guards	18 00
	Set of Guards, put on	10 00
55	Knife, Mower	7 80
	" Section	30
	" Heel Blank Section	25
	" Bar Heel	1 50
58	Pitman, complete	4 25
	" Fork	1 00
	" Box	2 00
	Swath Stick Sockets, set	1 00
	" Sticks, each	40
	Seat Springs, each	2 00
	Shield Plate under Bevel Wheel	75
	Grain Wheel	2 25
	" " Arm	50
	" " Hinges	50


J. W. ORTON, N.Y.

Junior Ohio Mower.

No.		Price.
69	Drive Wheels, each	$ 6 00
92	Drive Wheel Box	1 00
118	" " Cap	25
68	" " Shaft	3 50
85	Chain Shive	1 50
86	" " Ferrule	20
101	Bevel Wheel	2 00
100	Clutch	75
98	Ratchet, right hand	75
97	" left hand	75
94	Spur Pinion, with Pawl and Spring, right hand	1 50
95	" " " " left hand	1 50
102 & 103	Spur Pinion, with Covers, each	25
99 & 96	" Pawl	10
117	Bevel Wheel Shaft	75
116	" " " Boxes	50
111	" " Cover	20
	Clutch Fork	40
93	Crank	1 50
	" Wrist	50
105	Bevel Pinion	50
104	Crank Shaft	1 75
77	Front Hanger	1 75
78	" " Cap	70
82	Rear Hanger	3 00
81	" " Cap	70
106	Brace Socket	40
71	Inside Mower Shoe	3 00
50	Outside " "	1 50
90	Oil Cup, on Frame	10
79	Tongue Sockets	2 00
65	Drag Bar "	25
70	" " Stand	1 00
	Seat Spring	2 00
107	Chain Roller	40
108	" Ferrule	30
	Strap Casting	40
	Guards, each	60
91	Brace, complete	3 75
61	Cutter Bar, drilled	8 00
	" " with Guards	16 75
	Set of Guards, put on	8 00
64	Knife	7 00
62	" Section	30
63	" Heel Blank section	25
80	" Bar Heel	1 50
83	Pitman, complete	4 25
	" Fork	1 00
84	" Box	2 00
72	Swath Stick Sockets, set	1 00
	Swath Sticks, set	80
	Shield Plate under Bevel Wheel	75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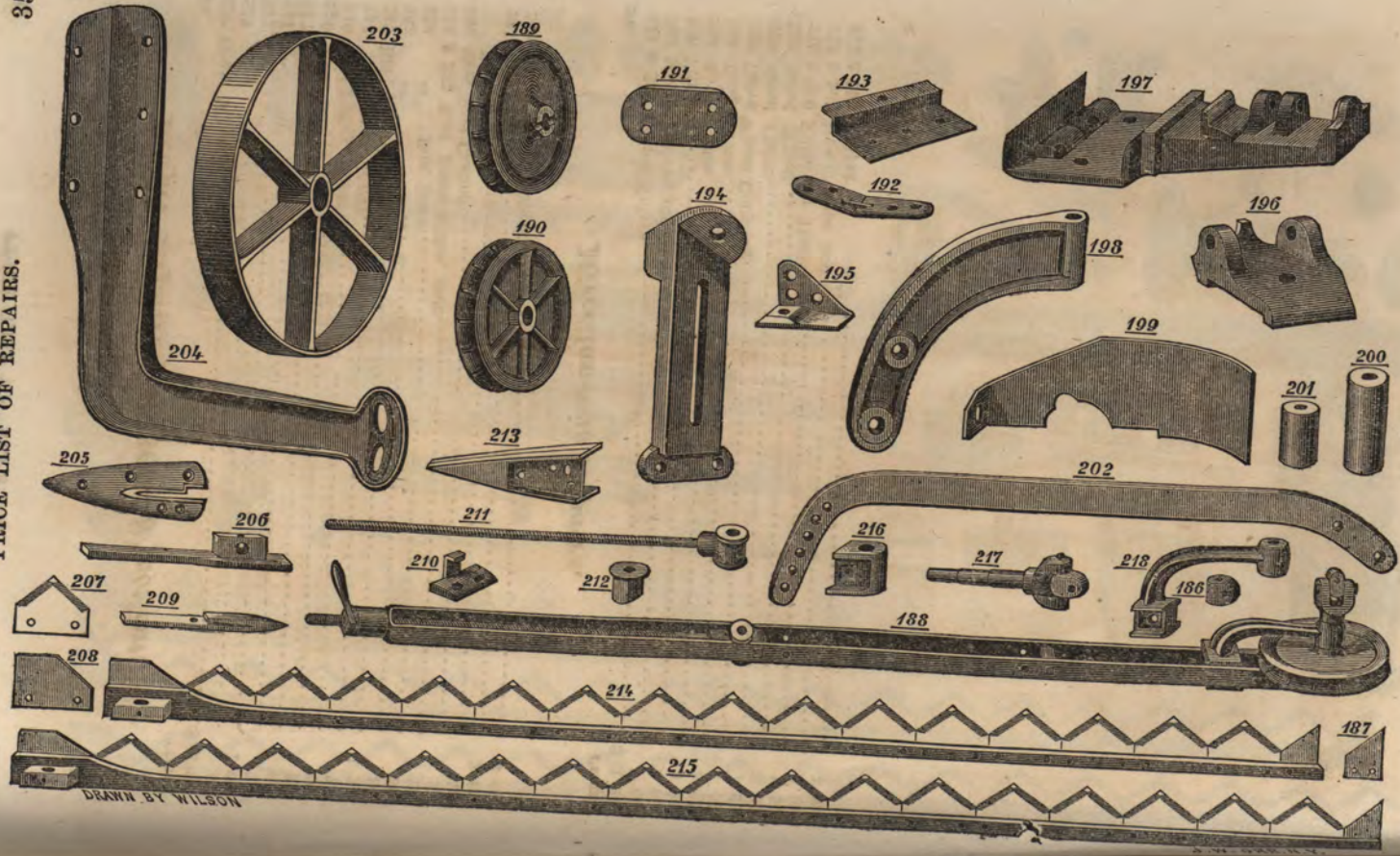
DRAWN BY WILSON, N.Y.
J. W. Orr N.Y.

Reaping Attachment—Large Ohio Machine.

No.		Price.
		$ 4 00
197	Reaper Shoe	75
199	" Shield Plate	3 50
	Cutter Bar, (wood)	60
189 & 190	Reel Shive	1 00
217	Lower Reel Shaft	3 00
	Upper "	1 00
211	Reel Screw, with nut and slide	2 00
	Reel Chain	6 00
188	Reel Post, complete	50
201	Rubber Balls	2 75
204	Goose Neck	2 75
203	Grain Wheel	40
200	" Ferrule	1 25
198	" Arm	1 00
196	" " Hinge	1 00
194	Slide for Hinge	7 25
215	Reaper Knife	25
207	" " Section	30
218	" " Heel Blank Section	1 50
206	" " Bar Heels	75
	Rake	3 00
	Reaper Tongue	5 00
	Double Tree, complete, with Single Tree	7 00
	Reel, complete	2 50
	Seat, without Springs	60
	Reel Hubs, each	50
213	Divide Points	15
210	Knife Catches	20
212	Ball Slide	40
216	Lower Reel Shaft Journal Box	50
218	" " Arm	4 00
	Brace, complete	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DRAWN BY WILSON

Reaper Repairs for 1865—5 foot cut.

No.		Price.
236	Grain Wheel	$ 2 50
239	" " Ferrule	40
242	" " Arm	1 00
241	" " Hinge	75
237	Reel Hub	50
236	"	50
240	Reel Pulley, upper	75
253	" " lower	1 25
249	Reel Shaft Support	50
243	" "	50
234	" Box, lower	25
256 & 233	Reel Brace Slides, each	25
250	Reel Post Casting	75
	Reel Screw	2 00
257	Reel Post Iron	2 00
248	Grain Wheel Support	

Miscellaneous Repairs.

No		Price.
221 & 222	Reaper Knives	$ 7 25
223	Mower Knives, old style	7 00
226	Pitman	2 00
225	Mower Shoe	2 00
235	Tongue Plate	1 50
229	Drive Wheel Coupling	50
230	Bevel Pinion	1 25
228	Bevel Wheel	3 00
219 & 220	Knife Bar Heels, each	1 50
231 & 233	Mower Shoe and Cap	3 00
232 & 234	Reaper " "	3 50

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DRAWN BY WILSON.
J.W.ORR N.Y.

Medium Ohio Mower, Passing a Stump.

REAR VIEW OF WORKS.