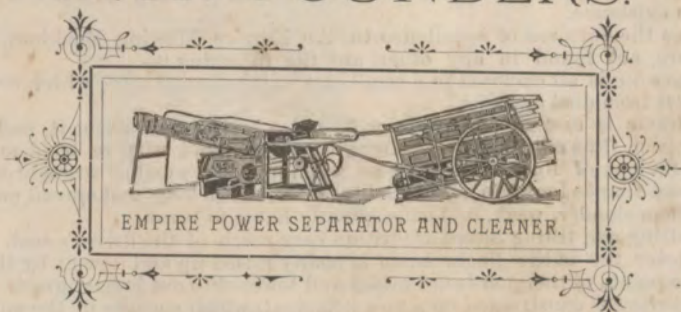


EMPIRE AGRICULTURAL WORKS.

ESTABLISHED IN 1857.

S. S. MESSINGER & SON,
IRON FOUNDERS.



EMPIRE POWER SEPARATOR AND CLEANER.

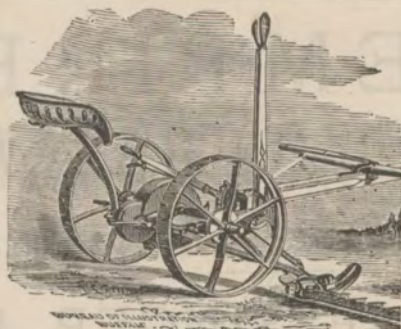
MANUFACTURERS OF ALL KINDS OF

AGRICULTURAL IMPLEMENTS,
TATAMY, NORTHAMPTON CO., PA.

ALL TELEGRAMS SHOULD BE SENT TO EASTON, PA., WHICH WILL REACH US BY
TELEPHONE AT THE WORKS.

For Sale by.....

INDEX STEAM JOB PRINT, PEN ARGYL, PA.



Empire Light Draft Mower.

The Empire Mowing Machine has the reputation of being the lightest draft machine in existence.

Among the features of excellence in the Empire Mowing Machines, many of which are not found in any other, are the following:—

The gearing is all enclosed in a small cast watch-shaped case, which completely protects it from dust and dirt.

The frame is cast in one piece, with not a bolt or rivet about it, and is short and compact, thus ensuring great strength, and will not warp or bend and throw the shafts out of line, as in the case when made of wood or wrought-iron; and unlike cast frames found in some machines, which are long and spread out, which makes them slender, weak, and consequently liable to break.

The lifting and tilting levers are within easy reach of the driver's seat. By the lifting lever the entire finger beam is bodily raised up and down; by the tilting lever the points of the guards are raised and lowered to cut lodged grass.

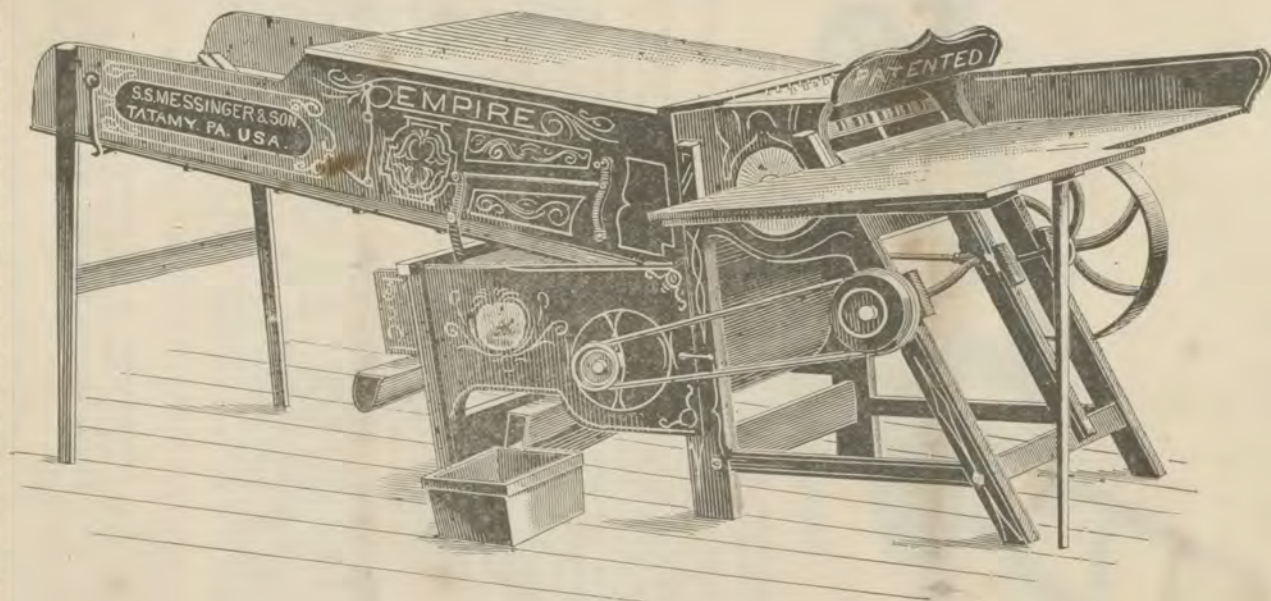
The gearing is constructed on a new principal, which consists of the spur wheel and pinion containing two sets of teeth or cogs, alternately and intermittingly arranged, the object of which is to overcome leverage, wear, back lash, draft and noise, and to permit the gearing to be reduced in size, so that only a small case is required, without the necessity of increasing the number of gear wheels, which has heretofore been the case with all machines having the gearing enclosed.

The Empire is the only practicable enclosed gear machine now built with only two wheels and two pinions for its gearing. No other with the gear wheels enclosed has less than six wheels and some as high as eight. It is evident that the greater the number of gear wheels the greater will be the friction, draft, wear and complication.

The finger bar is made of the best cold-rolled iron with malleable shoes, having steel soles by which the entire bar may be raised or lowered to cut any height desired.

The pitman hook is a steel socket, 1½ inch in diameter, which makes a large wearing surface, and can always be kept tied by turning the socket. The pitman can also be made longer or shorter by screening the pitman rod into or out of the pitman box, which is a desirable feature to make the knives centre in the guards. The pitman box is self-oiling, and is constructed on an entirely new principle.

The Empire Mower is furnished with two knives having three-inch sections and cuts four feet, four feet three inches, or four feet six inches wide, as may be desired by the purchaser. We furnish as extras to each machine, guards, knife plates, oil can, screw wrench, cast-iron wrench, rivets, etc.



Empire Thresher, Separator and Cleaner.

The Empire Thresher and Cleaner is the invention of G. F. Messinger, the junior member of the firm. It was first introduced in 1877, since which time a number of valuable improvements have been added and patents secured, covering ten different claims. Some valuable improvements have been made during this last season. We claim the Little Empire to be the simplest, easiest running, and most complete machine of its class in the market. To convince the public of this is to show them that at the present time ten different manufacturers are copying after our Separator as close as they know, and understand how, (at the same time infringing on our claims).

The cylinder spikes are made by dropped forging of the best tool steel, being 2½ inches long, and have five grooves or ribs on each side. These grooves make the spikes like a rasp, which helps greatly in rubbing the chaff from the grain, and thus avoids the many white caps which are often seen in wheat. The concaves are reversible, made of cast-iron, in two parts. The hind concave has spikes 2½ inches long on one side, and is smooth on the other side. This smooth side is turned down if a blank concave is wanted. The front concave has spikes 2½ inches long on one side and ¾ inch long on the other side. The short spikes are turned down for threshing buckwheat, rye, or similar grain.

The cylinders in both separators and common threshers are made the same with six wrought-iron beaters, fitted nicely into the cylinder heads, which are keyed permanently on a steel shaft which runs in rabbit boxes with oil cups. These beaters are very strong and have round holes with beveled slots cut out into which the teeth are nicely fitted to prevent them from turning, and secured with nuts on the inside. The cylinder is sixteen inches in diameter, and is very heavy. Most of the weight is on the outside, which makes it keep its motion regular, and is not easily checked by unregular feeding. The cylinder runs independently, no part of the machine being run from it, thus saving power, less friction, less wear, and allows it to get speed much quicker. The sides of the thresher are of solid cast-iron, strong and durable, to which the legs are bolted and cross-pieces fitted between, fastened with joint bolts, thus making a frame that can always be kept stiff and solid by drawing up the bolts, and cannot get out of shape, as in the case where frames are morticed and tenoned together.

NO MORE DUST IN THE FEEDER'S FACE.

This is arranged so that the motion of the cylinder sucks in the dust away from the feeder, and carries it off with the straw at the rear end of the machine. Said draft or suction aids greatly to feed the cylinder, and also to relieve it of straw after it has passed through the machine, by the strong blast produced by the bars, so that the cylinder is free from the straw winding around it.

The feed table is provided with hooks, where it hooks to the machine, which can be done in an instant, and it is so arranged that it can be put on to extend either right or left. All other parts are made to be used either on the right or left side, such as the cylinder pulley, shaker wheel, cone pulleys, and the spouts that carry out the grain and tailings.

The fanning mill or cleaning part is attached to the machine with two hooks, the blast is regulated by cone pulleys and the riddles, or shoes, receives its shake from the vibrating shaker bottom, which is driven by a cam shaft from the machine. The shake on the riddle can be made more or less, by hooking the rod in different holes.

The shaker or separator part is fastened to the machine with two nuts, and the vibrating bottom is made of the best sheet iron, perforated with small half-round holes, through which the grain and chaff falls, and is received by another small light shaker, made with sheet iron bottom, which carries it back in the cleaning part. The shaker is provided with two forks, which thoroughly beat the straw from the under side as it passes out of the machine, so that no grain can get out with the straw.

It has but one crank, which gives motion to all the vibrating parts, with a counterbalanced belt wheel, fastened with a set screw to the outer end of the crank shaft over which passes the main belt, with only a lap of four to six inches, which drives the fan and crank shaft. The cylinder pulley is provided with a ratchet, so that the power can be stopped in an instant, and let the cylinder run on until it stops from itself.

The machine is in four different parts, the table, thresher, cleaner, and separator, which can be put together in complete working order in five minutes' time. We also build them on sills for those who go around threshing, which combines the whole machine in one. In this shape the machine can be loaded on a mounted two-horse tread power for transportation. We make three sizes of these separa-

tors—22, 26, and 30 inch machines. The 26-inch machine is run with our two-horse railway power, or four-horse level power, and threshes from 30 to 40 bushels of wheat and 80 to 120 bushels of oats per hour.

The 30-inch machine will do more work, and can be run with our two-horse railway power, or our four to six-horse lever power. The 22-inch machine, which we run with our one-horse railway power, will not quite do as much work.

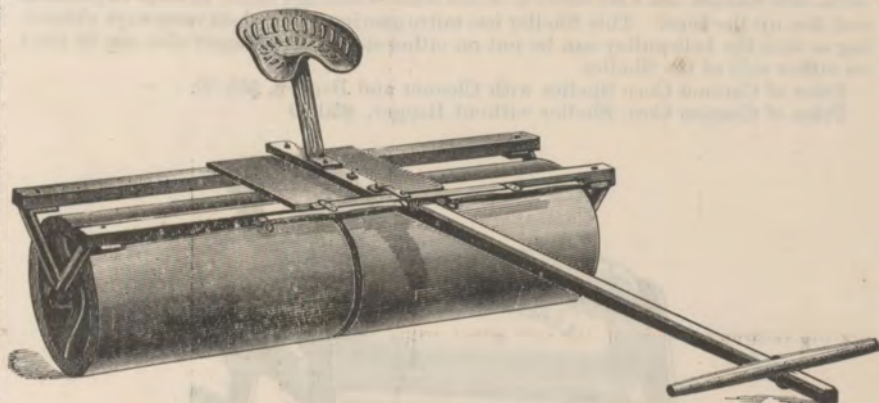
We build straw carriers of any length to fit all our machines, or any other make of threshers. These carriers are made to run the straw straight out from the machine, or, if ordered shifting straw carriers, they can be run straight, right or left from the machine. Our price for carriers 34 inches wide inside is \$12.00 for the first 10 feet, and \$1.00 for every additional foot. If carriers are to be wider than 34 inches we charge 2 cents per foot for every additional inch in width. The shifting attachment costs \$3.00 extra.

We Also Build a Special 36-inch Cleaner, mounted on truck with grain bagger, tailings elevator, straw stacker, and all extras, to be used by steam power. Parties in want of such a machine will do well by giving ours a trial, as it is guaranteed to compete with anything of the kind in the market.

PRICES OF SEPARATOR AND EXTRAS.

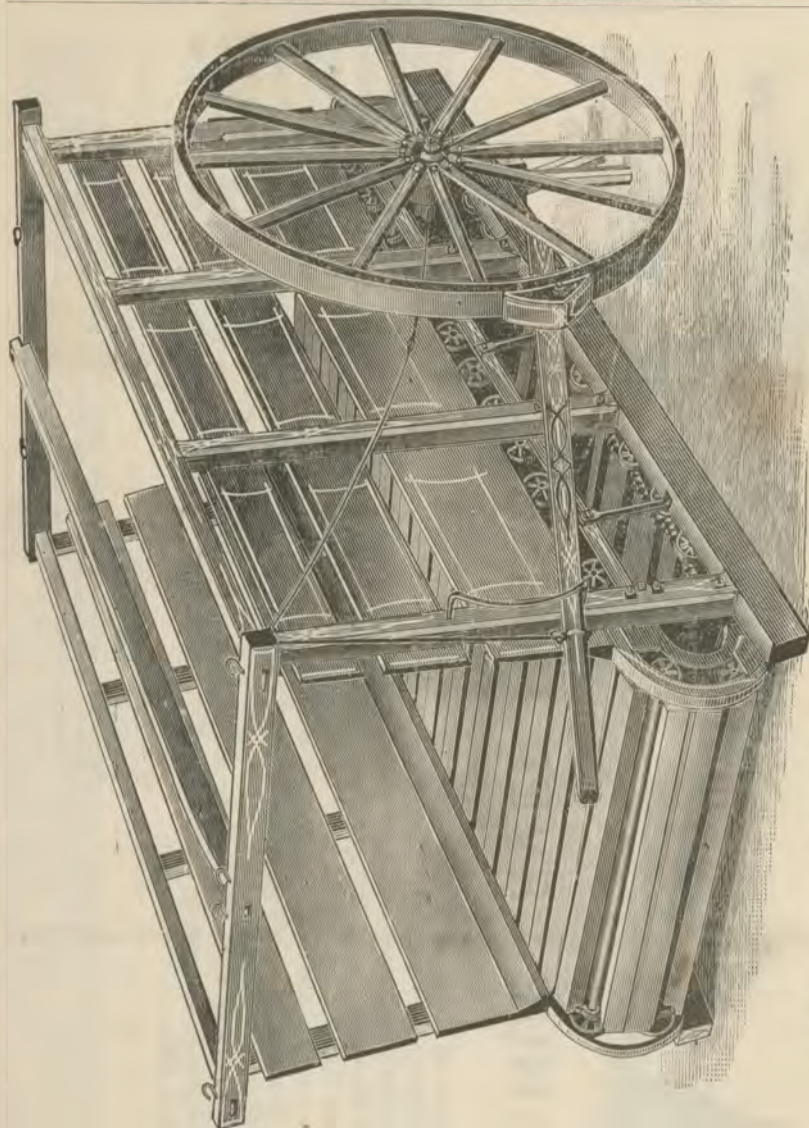
Size.	Price.	Sills.	Truck.	Bagger.	Tailings Elevator.
22-inch,	\$ 90 00	\$4 00	\$30 00	\$12 00	\$10 00
26-inch,	110 00	5 00	35 00	15 00	12 00
30-inch,	130 00	5 00	40 00	15 00	12 00
36-inch,	150 00	8 00	45 00	18 00	15 00

WROUGHT-IRON LAND ROLLER.



This cut represents our Wrought-Iron Land or Field Roller, which is 25 inches in diameter, 7½ feet wide, and weighs 800 pounds. The Roller is built in two sections, guided in the middle by a brace, and the frame is fixed with a removable box to carry stones, if so ordered. The Roller can be made of any weight by loading something on it. It is also very easy draft on the team, and the dirt will not stick to it as in the case with log or plank roller. The shell is made of ½-inch boiler iron, having at each end a cast head with high flange, so that no dirt nor stones can get inside. This Roller will last a lifetime.

We also manufacture two sizes of Plank Rollers, 24 inches and 30 inches in diameter, 7 and 8 feet long or wide. The 8-foot Roller cost \$1.00 additional. The frame seat and removable stone box are the same as on the Wrought-Iron Roller. The price for removable stone box in two parts is \$2.00.

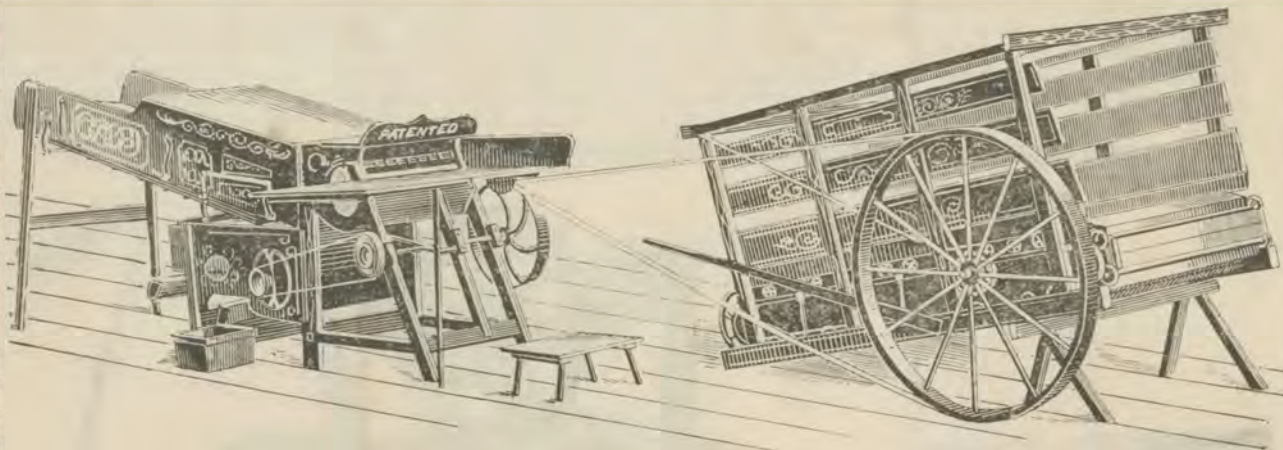


Two-Horse Tread-Power, with our Improved Governor.

This cut represents our single geared Two-horse Tread-Power. Our one-horse single-gear is made on the same principle, only that it is lighter, and has the width of a one-horse power. The single-gear tread furnishes a stronger power than any other gearing. We commenced building tread-powers in 1873, since which time we have built and sold a large number of them, which have given the very best satisfaction. The band wheel is four feet ten inches in diameter, and is so arranged that it can be used on either side. The governor or speed regulator, which we furnish to every power, is attached to the inside of the band-wheel hub, and does not interfere or need to be taken off in changing the band wheel from one side to the other. This governor regulates the speed; can be set for high or low speed; prevents accidents to the team in case the belt flies off.

[CONTINUED ON PAGES.]

We also make a Double-Geared One and Two Horse Tread-Power, which makes the same speed as our single-geared, is built with the same material and has the same advantages. The track wheels in this power are 7 inches in diameter, and the laggs 9 inches wide. All our powers are furnished with extra laggs, links and wheels, trussel, bridge, wrench and oil can.



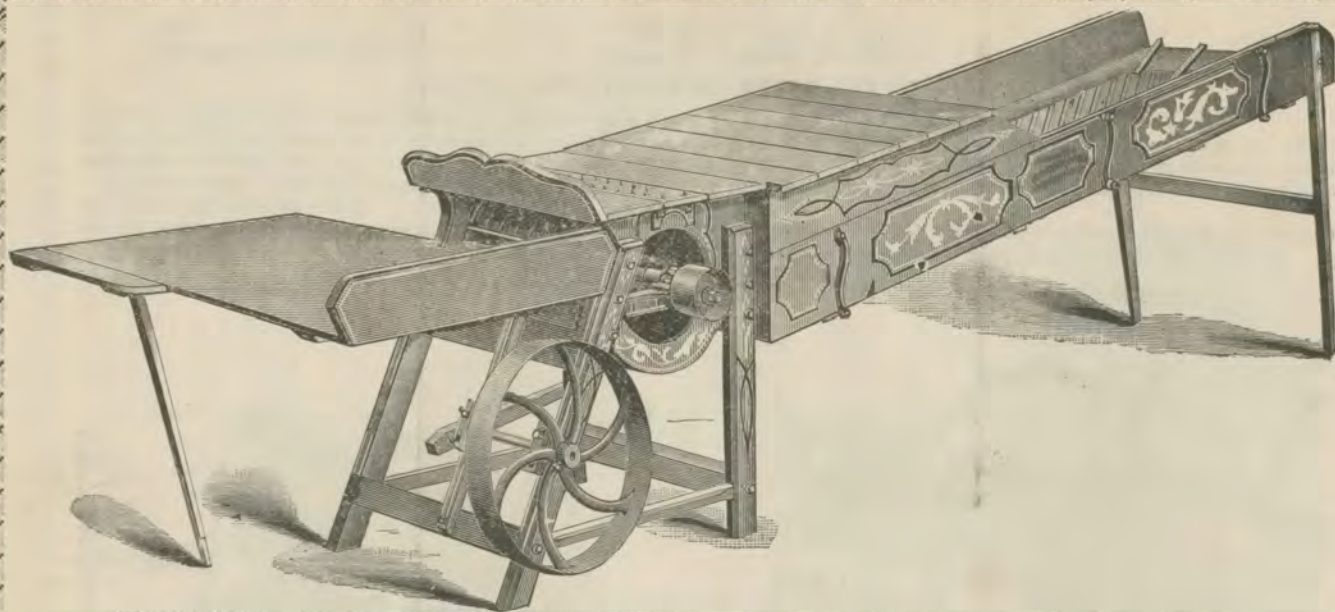
Empire Single Geared Two-Horse and 26-Inch Separator.

This cut represents our Two-Horse Tread Power and 26-Inch Cleaner as ordinarily used by farmers ready for work. We mount our Powers and Cleaners on Truck with 26 inch wrought-iron wheels, with grain bagger, tailings elevator and Straw carrier, if so ordered.

We also make a power truck with 36-inch front, and 42-inch hind wooden wheels with wrought-iron tires. On this truck the front axle with pole is placed under the hind part of the Power. When the Power is to be used the king bolt is drawn, and the front axle is run out from under the hind part of the Power, which drops the rear end, while the front end is elevated, resting on the hind wheels. This is a very convenient truck for loading the Separator in the Power.

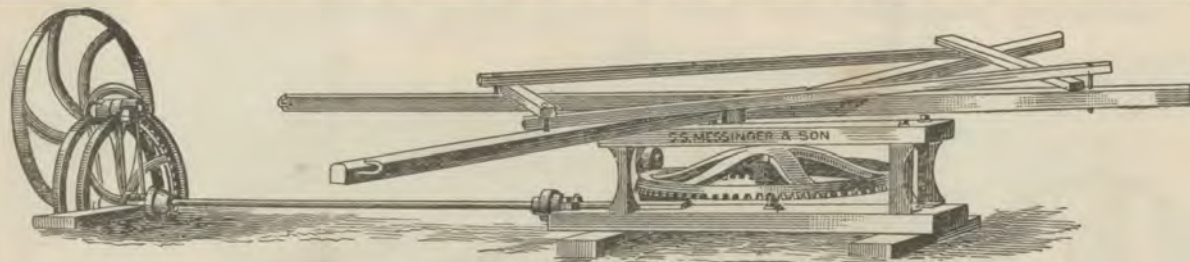
PRICE OF ONE AND TWO-HORSE TREAD-POWER.

One-Horse Power complete.....	\$100 00	Truck for same.....	\$30 00
Two " " ".....	120 00	" " ".....	35 00



EMPIRE THRESHER AND SHAKER. Overshot and Undershot.

We make three different sizes of these Threshers—22, 26, and 30 inch machines—which are extensively in use, and are very popular where known. It only threshes and separates the chaff and grain from the straw, and with it a great deal of work can be done in a day. The Thresher is constructed precisely as is the Separator, with open cylinder, six wrought-iron beaters (or bars), provided with our grooved steel teeth, steel shaft and ratchet pulley. The shake is high from the floor, making much space for grain and chaff. It has a vibrating bottom, made of the best sheet iron, perforated with small half-round holes, through which the grain falls, while the straw is carried off at the rear. The shake is provided with a fork, which thoroughly beats the straw from the under side as it passes out of the machine, so that no grain can get out with the straw. The shake sides are stationary and only the bottom vibrates, which is driven by a crank from the machine. The bottom is very light and strong, and does not jar the machine when in motion. The shake can be detached from the machine in a moment without loosening hooks or bolts. All our Threshers are made to be used either right or left.

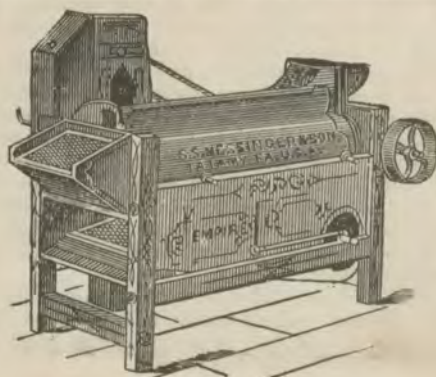


HUB LEVER HORSE-POWER.

This is one of the most durable and lightest running horse-powers in use. This power is largely used among Pennsylvania farmers. It is light of draft, durable, and simple in construction, containing only two gear wheels and two pinions, the master wheel being a bevel gear and gears into a pinion on the line shaft. At the outer end of the line shaft is attached the jack with spur gearing, which is provided with a ratchet, so that the horses can be stopped at once, and let the band wheel run on until it stops of itself. This is a very important arrangement on horse-power, and saves much labor on horses. We make three different kinds of jacks, single-gear, double-gear, and bevel-gear or universal, and use different sizes of band wheels, suitable for high or low speed. We use right and left lever caps, so that the horses can be made to go either way. This power can be used with two to six horses, and is adapted to all kinds of work that a horse-power can be used for. We mount these powers on trucks, if so ordered, at an additional cost of \$30.

[CONTINUED FROM PAGE 5.]

It is very valuable in shelling corn, sawing wood, or any such irregular work that does not take up the full power. The track wheels are bored and turned perfectly round and smooth on the face, which makes them run much easier. We use either iron or steel rods at the same price as may be desired by the purchaser. The elevation on our two-horse power tread is from fourteen to eighteen inches (according to weight of horses), for running our twenty-six-inch separator. We guarantee these powers to do as much work with the same elevation as any other, whether they are called double-gear, triple-gear, bevel-gear, chain-gear or such like. A safety floor is put in each power, which saves the horses from injury in case the chain or lags should break. The track is regular, incline or level tread.

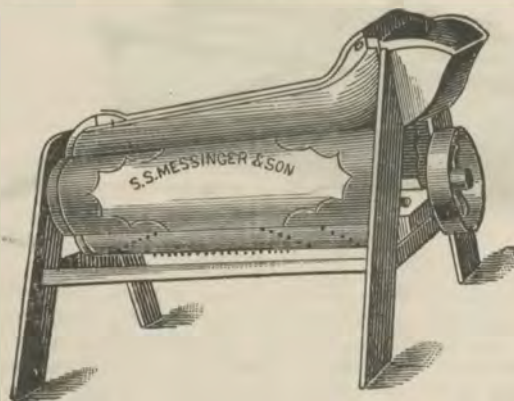


CANNON CORN SHELLER, WITH CLEANER AND BAGGER.

This cut shows a new machine which has just been invented by G. F. Messenger. It is the greatest labor-saving machine that can be put on a farm. The corn is to be handled but once instead of five times as is the case with the Shellers in general use. It takes but two men to run this Sheller, while it takes two and three to run the ordinary Sheller where the corn and cobs have to be kept away. With this Sheller one man shovels in the corn, while the other attends to the cobs and ties up the bags. This Sheller has mitre gearing and a shaft crossways extending so that the belt pulley can be put on either side. The Bagger also can be used on either side of the Sheller.

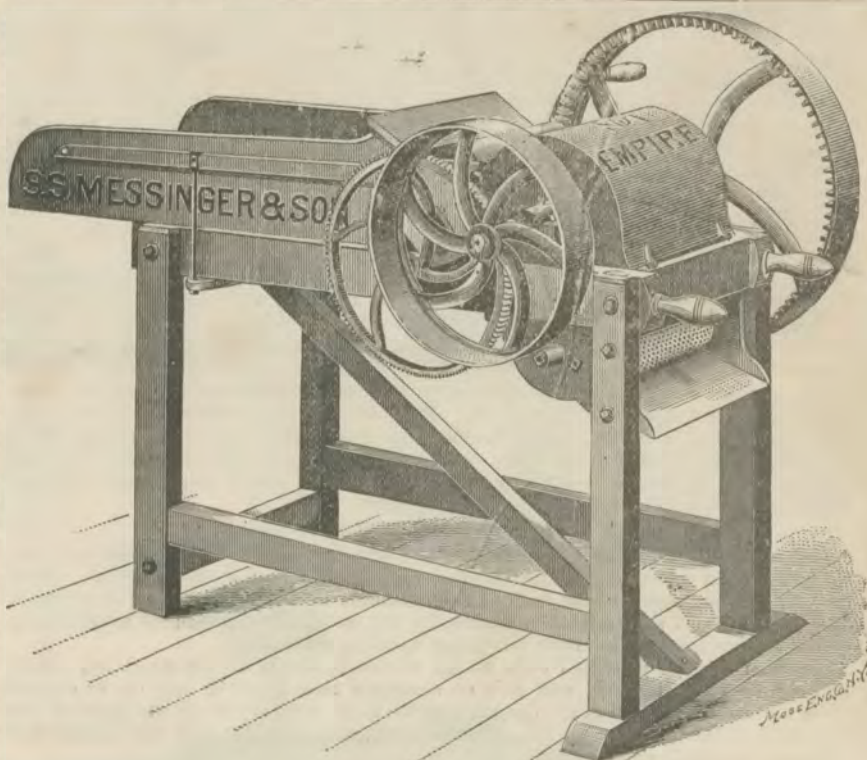
Price of Cannon Corn Sheller with Cleaner and Bagger, \$65.00.

Price of Cannon Corn Sheller without Bagger, \$50.00



CANNON CORN SHELLER.

This is the regular Cannon Corn Sheller, and is made the same as by other manufacturers, with the exception that we use a different cylinder spike which shells clean any kind of corn without breaking the grain. It also leaves the cobs mostly all whole. It is higher in the legs, making more space for shelled corn, and has a cob shute with slat bottom. Price \$35.00.



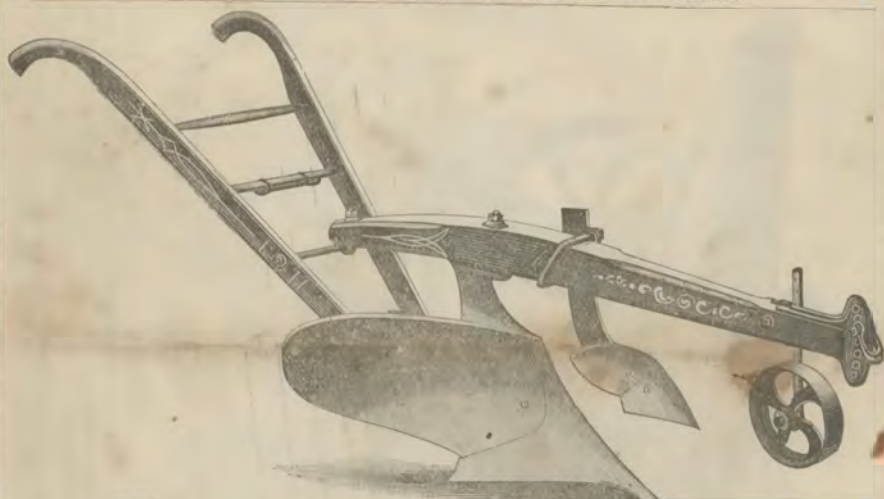
EMPIRE FEED CUTTER, WITH OR WITHOUT CORN STALK CRUSHER.

This cut shows our No. 1 Feed Cutter with Corn Stalk Crusher attachment. The Crusher cylinder is made of cast iron with short teeth in its surface, is mounted on an $1\frac{1}{4}$ inch shaft to which the driving pinion is keyed that gears into the internal geared belt and fly-wheel, thus doing away with belts, chains, and extra gearing for driving the Crusher cylinder. This Crusher cylinder runs close to a cast-iron concave plate which forms the chute into which the cut fodder drops, where it is crushed and ground through as fast as the knives can cut it. This Crusher cylinder can be taken out of the Cutter in an instant by loosening a set screw in the shaft, which can be drawn out of the cylinder, which then rolls out in front, making this machine an ordinary cutter, for which purpose it is excelled by none.

The No. 1 Cutter has three 12-inch knives, with the bevel on the inside, by which means the knives can be ground and re-set without any trouble. The knives make a shear cut and should always cut against the cutting bar. Our cutter frames are bolted together, so they can always be kept firm, and not like most cutters, which are only put together with wooden pins, which soon become loose and make the machine shaky. The No. 2 Cutter and Crusher has three 10-inch knives and is made in all parts as the No. 1. Both cutters are also made with 4 and 5 knives and will be so furnished at \$1.00 per knife extra. Length of cut with 3 knives is $\frac{3}{8}$ of an inch, with 4 knives $\frac{1}{2}$ of an inch, and with 5 knives $\frac{5}{8}$ of an inch. We also make the No. 1 and No. 2 Cutter without the Crusher attachment.

Samples of crushed corn and fodder will be mailed upon application.

We also make a No. 3 Cutter, which can be used by hand or power. But it is more particularly intended for a hand cutter, for which purpose it is second to none. It has two 10-inch knives, and makes five cuts to one turn of the crank.



Keystone Chilled Plow.

We started the manufacturing of plows in the spring of 1879, since which time we have made and sold a large number of plows.

The Keystone is comparatively a new plow, but so unprecedented has been its success, that to-day it occupies the highest rank in the family of plows.

It has had to combat fiercely, since the introduction, with its opponents.

The numerous trials we have had with all the different kinds of plows, shows that the Keystone is perfectly what we claim it to be. It has received the highest rewards in every trial for light draft, easy on the plowman, and doing good work. Where there are not many stones the plow will run from one end of the field to the other, without the plowman touching a handle.

We are now making different sizes of the Keystone plows, suited for all kinds of plowing. The mould board is made in such a shape that it will turn its furrow with less draft than any other shape of mould board that has ever been put to a plow. It is of uniform hardness and fineness throughout. It will not wear spotted after a few weeks use, as is the case with numerous plows now crowding on the market.

Our jointer is malleable iron, and it can be adjusted in more different positions than any other jointer now in use. The jointer mould board is made of the same hard metal as the plow. The jointer should be moved back or forth on the beam accordingly, to suit the plowing that is to be done. The height of the jointer has to be regulated according to the depth the plow runs. It does the best work when it only takes a shallow furrow, one or two inches deep, and it should cut on a line with the plow; never allow it to cut narrower, better half an inch wider than the plow cuts.

The plow is centre draft and has an adjustable wooden beam, which can be set for one, two, or three horses.

The adjustable wrought-iron wheel standard is very strong and light. The wheel is quickly adjusted so as to run on a line with the plow or furrow, by only turning one nut. The wheel can also be placed on either side of the beam, or under the beam, as best suits the plowman. The depth of the furrow is regulated by setting the wheel higher or lower.

In ordering plows or shares always state in what kind of soil it is to be used, so that we may be able to send the right pitch.