

MASSEY-HARRIS





AMERICAN SPARROW HAWK
ADULT MALE $\frac{1}{2}$ LENGTH



CLIFF SWALLOW
ADULT MALE $\frac{1}{4}$ LENGTH



BLUE BIRD
ADULT MALE $\frac{1}{2}$ LENGTH



SCARLET TANAGER
ADULT MALE $\frac{1}{2}$ LENGTH



BOBOLINK
ADULT MALE $\frac{1}{2}$ LENGTH



CEDAR WAXWING
ADULT MALE $\frac{1}{2}$ LENGTH



RED-EYED VIREO
ADULT MALE $\frac{2}{3}$ LENGTH



CANADIAN WARBLER
ADULT MALE $\frac{2}{3}$ LENGTH



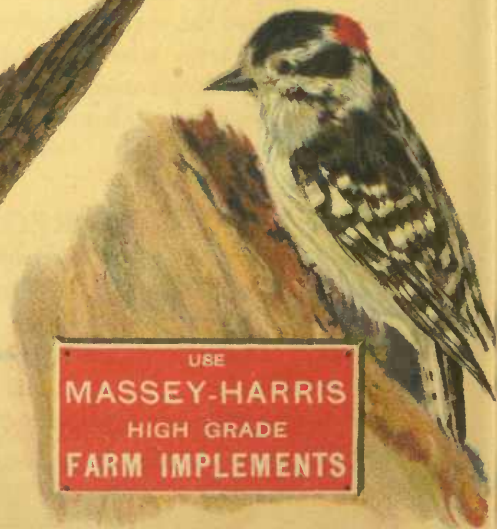
CHIPPING SPARROW
ADULT MALE $\frac{2}{3}$ LENGTH



MEADOWLARK
ADULT MALE $\frac{1}{2}$ LENGTH



WHIP-POOR-WILL
ADULT MALE $\frac{1}{2}$ LENGTH



DOWNY WOODPECKER
ADULT MALE $\frac{1}{2}$ LENGTH

USE
MASSEY-HARRIS
HIGH GRADE
FARM IMPLEMENTS



BALTIMORE ORIOLE
ADULT MALE $\frac{1}{2}$ LENGTH



NORTHERN FLICKER
ADULT MALE $\frac{1}{2}$ LENGTH



BARRED OWL
ADULT MALE $\frac{1}{3}$ LENGTH



PHOEBE
ADULT MALE $\frac{2}{3}$ LENGTH

OFFICE OF THE
DOMINION ENTOMOLOGIST.



OTTAWA , Sept. 12, 1916.

BIRDS, THE FARMER'S FRIENDS

In Canada insect pests each year destroy crops to the total value of over \$125,000,000. which is an enormous loss to the country. Few farmers have not experienced the effects of insect depredations at sometime or other. The chief and natural enemies of insect pests are birds. It is to the farmers interest, therefore, to do all he can to encourage and protect the birds around the farm and orchard. Destroy stray and marauding cats; these are the birds' greatest enemies. Encourage the boys to make nesting boxes for such species as bluebirds, wrens, chickadees, flickers, etc. Plant clumps of trees and thick shrubbery to afford nesting places. Kill off the aggressive house sparrow; it not only destroys more grain than all the other grain eating birds put together but drives away the useful native birds such as swallows, phoebes, etc. Interest the children in the birds and their songs. Our birds make the world a more pleasant and cheerful place to live in besides making agriculture more profitable.

C. Jordan Harris.

Dominion Entomologist.

The following are brief notes on a few of our Canadian birds illustrated herewith:

★ ★

Massey-Harris High-Grade Farm Machinery



Massey-Harris Co., Limited.

Head Offices—Toronto, Canada.

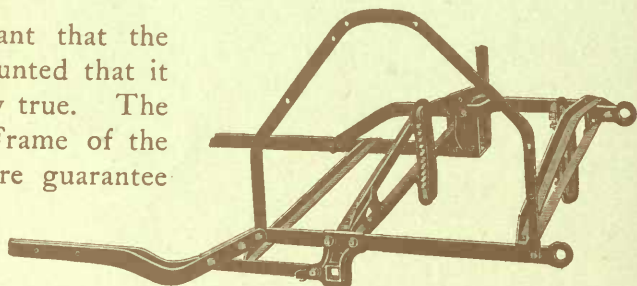
★ ★



MASSEY-HARRIS NEW No. 5 BINDER

The Seat Board is mounted on Angle Steel Supports at front and rear and acts as a powerful brace to the Frame. The Seat can be adjusted forward or back on this board to balance the machine with a heavy or light driver. A comfortable Spring Seat is provided for the operator, all the Levers are within easy reach, and he has a good view of the work which is being done.

It is very important that the Main Wheel be so mounted that it always remains perfectly true. The Double Truss Main Frame of the Massey-Harris is a sure guarantee that the Wheel cannot get out of line, for the Hangers are supported at both ends, and it makes no difference whether the machine is raised to the highest point or lowered to the opposite extreme,—the Wheel cannot “wobble” or sag to one side.



A solid Steel Platform, securely rivetted in place, and re-inforced by Angle Steel Cross Bars, gives great strength and rigidity. The outer or Grain Wheel end of the Platform is in the form of a Truss—the strongest possible form of construction.



The connection between the Main Frame and Platform has received especial attention and is re-inforced in a most substantial way.

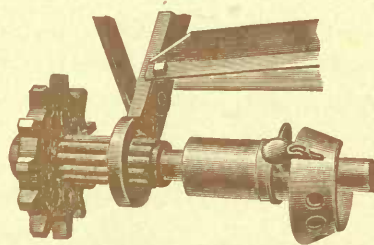
Bearings for Platform Rollers are of Hard Maple soaked in boiling tallow, and each is filled with grease by means of a Screw Compression Pump, as shown in cut, before leaving our factory.



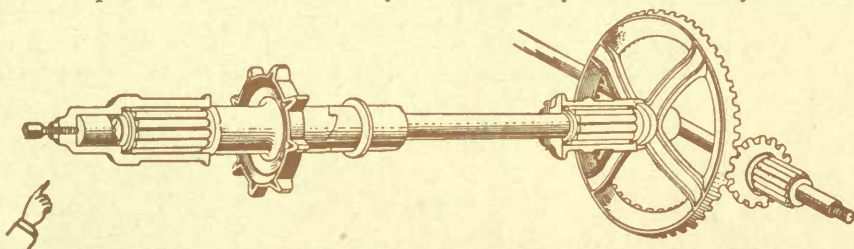
MASSEY-HARRIS NEW No. 5 BINDER

Take the Frame all the way through and you will find every part scientifically proportioned to the strain which it has to bear, and all put together in the most substantial manner—in every sense of the word it is a Frame "*built for service.*"

The Main Wheel is practically a Steel Wheel, but it is given additional strength by a heavy hardwood Rim. The wide Tire has ample Steel Traction Lugs which prevent slipping in heavy cutting or when the ground is soft and wet. A relief Spring prevents jar on hard or rough ground.



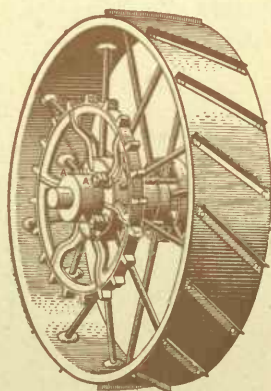
Self-Aligning Bearings are used at points where ordinary Bearings would be apt to cause unnecessary friction. By automatically conforming



to the Shaft at all times, these improved Bearings reduce friction and wear to a minimum, thus lightening the draft and prolonging the life of the machine. Roller Bearings are freely used on Massey-Harris Binders and all Bearings are easily accessible for oiling.

From the Main Wheel, power is transmitted by means of a heavy Sprocket Chain kept at proper tension by means of an Automatic Tightener Roller. The Crank Shaft is driven by Bevel Gears, which can be adjusted by simply turning a Set Screw, as shown in cut, to take up any slackness on these Gears.

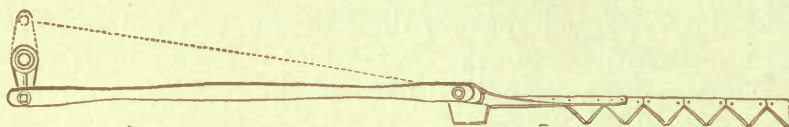
The machine is put in and out of gear by means of a Positive Four-Point Clutch on the Bevel Gear Shaft, operated by a Lever easily reached by the operator.



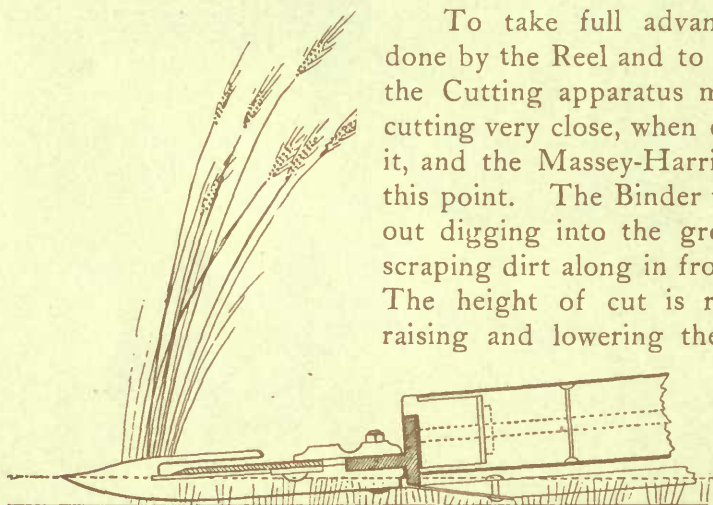
Spokes in Wheels kept tight by simply turning Nuts marked "A" in cut.



MASSEY-HARRIS NEW No. 5 BINDER



The Direct-Acting Pitman is of good length and works as nearly in line with the Knife as practicable, reducing friction and wear to a minimum, and giving to the Knife a positive, sure-cutting motion.



To take full advantage of the work done by the Reel and to save all the grain, the Cutting apparatus must be capable of cutting very close, when conditions demand it, and the Massey-Harris has no equal on this point. The Binder will cut close without digging into the ground and without scraping dirt along in front of the Platform. The height of cut is readily changed by raising and lowering the Platform and by

means of the convenient Tilting Lever. This cut shows how the Cutter Bar is

constructed to enable the Knife to cut a very short stubble, as close as 1 in. when desired.

The Elevator Chain on the Massey-Harris runs on the outside of all Sprockets. A Chain which winds in and out, greatly increases friction and shortens the life of Sprockets, Chains and Bearings. An easily adjusted Idler Roller keeps this Chain at the proper tension.



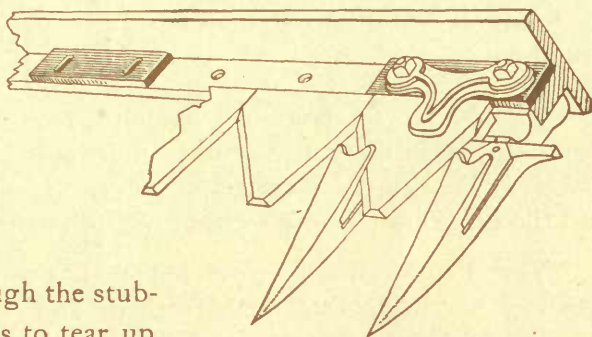


MASSEY-HARRIS NEW No. 5 BINDER



The Knife Sections have specially tempered, keen-cutting edge with soft centre of tough Steel, giving first-class cutting qualities and retaining the full strength of the unhardened tough centre portion. The tempering is done by our Patented Automatic Process, which ensures all Sections being hardened just right.

Specially Rolled Steel is used for the Knife Back, giving ample strength and smooth wearing surfaces.



The Guards are of approved design, so shaped that they readily pass through the stubble, and have no projections to tear up

the ground and increase the draft. They are carefully fitted and securely attached to the Cutter Bar so that they remain in proper alignment.



The Dividers are effective under all conditions. The Outer Divider raises fallen grain so that it is readily cut and finds its way to the Elevators and thence to the Binding Mechanism. The Grain

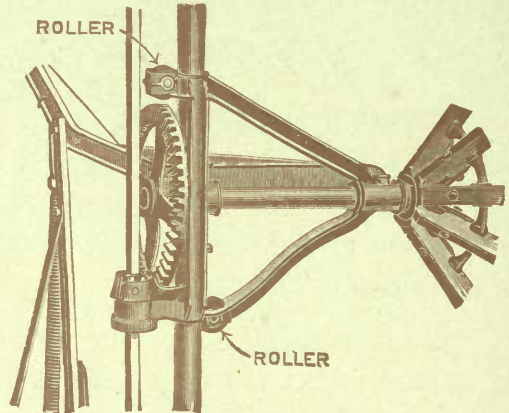
Wheel is so placed that it does not run down any grain. Both Dividers are perfectly rigid when at work, but can be folded in an instant so that the Binder will pass through a narrow gateway when mounted on Transport Truck.





MASSEY-HARRIS NEW No. 5 BINDER

Conditions vary so in nearly every field of grain that the Reel is a very important point to be considered in the selection of a Binder. It must have a wide range of adjustment and must be convenient to operate, so as to enable the driver to quickly change its position, and thus handle grain in whatever condition it may be found.

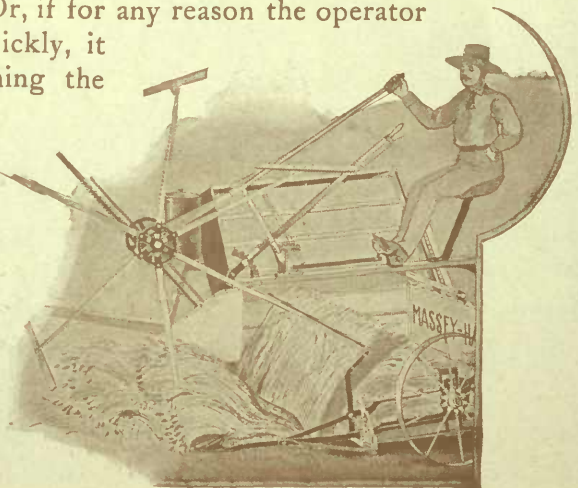


The Massey-Harris Reel has an exceptionally wide range of adjustment—seventy different positions—more than any other—and is controlled *entirely by one Lever*. This Lever has two latches, one operated by hand, and the other by the foot—either or both can be operated at will.

The Reel Yoke is provided with two Rollers, as shown in the illustration, causing it to move freely up and down the Reel Standard. A strong Coil Spring counterbalances the weight of the Reel, making it an easy matter to change its position as required.

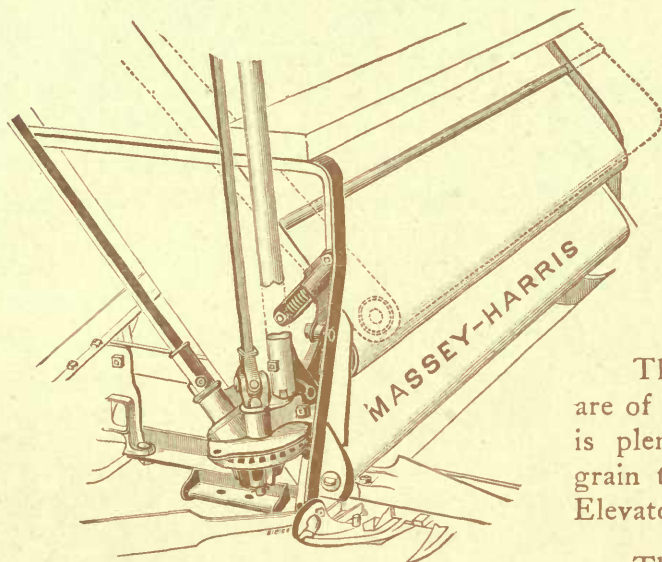
Should the Reel come in contact with a stump or other obstruction it can rise automatically to its extreme height if necessary, to free itself and to prevent breakage. Or, if for any reason the operator wishes to raise the Reel quickly, it can be done without touching the hand latch.

A sagging Reel is an unsightly thing and also interferes with the proper working of Binder. On the Massey-Harris if the Reel shows any tendency to sag, it can be readily overcome by means of the Adjustable Reel Brace.





MASSEY-HARRIS NEW No. 5 BINDER

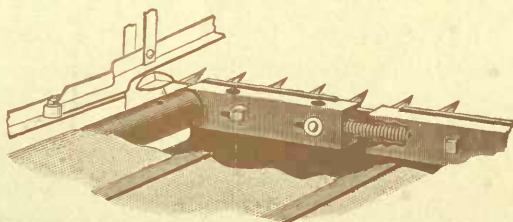


This Reel has a positive Gear-Drive, the Gears being enclosed in such a manner as to prevent straw or trash becoming entangled and causing delay or breakage.

The Elevator Canvases are of good width and there is plenty of room for tall grain to readily pass up the Elevator.

The Upper Elevator floats both at front and rear—an exclusive Massey-Harris feature—insuring positive elevation of light and heavy grain, grass bottoms, etc. It automatically adjusts itself to any volume of grain and saves wear and tear on the canvas.

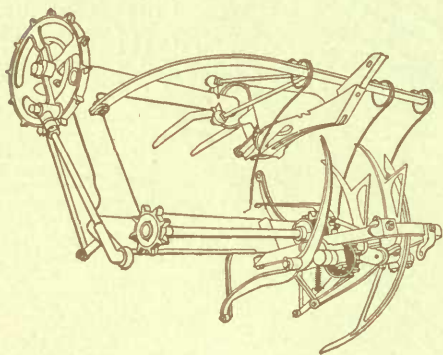
The Seventh Roller at the upper end of Elevator prevents straggling and waste of straw and grain at this point. Straw cannot wind on Rollers for the Trunnions are provided with iron caps, absolutely preventing trouble of this sort.



The Platform Canvas is automatically kept at proper tension by an Automatic Spring Device, as shown in the cut. This is a great advantage when working in damp grain or under any conditions causing the canvas to stretch or shrink, and often prevents tearing of the canvas when it shrinks.

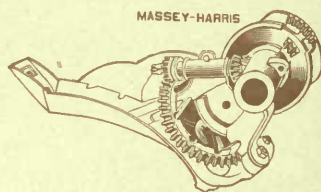


MASSEY-HARRIS NEW No. 5 BINDER

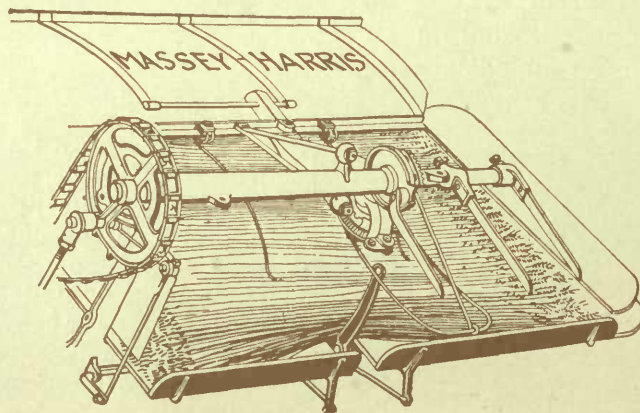


The work of a Binder is judged to a large extent by the appearance of the sheaf. The Massey-Harris makes neat, square-butted sheaves of any desired size and puts the band where you want it with tall or short grain. Three Packers, one of which works very close to the butts, working in conjunction with the positive vibrating Butter carry the grain forward to the Knotter.

The reliability of the Massey-Harris Knotter has long since become a matter of common knowledge. It has remained unchanged for years because no improvement has seemed to be necessary or desirable. Composed of the fewest possible parts and with provision made for taking up wear on the Pinions, it is an easy matter to keep it always in perfect working order.



Any desired tension can be placed on the twine by means of the simple, but effective, Spring Tension, and any ordinary knot, or enlargement, may pass through the tension and Knotter without interfering with the work of the Binder.

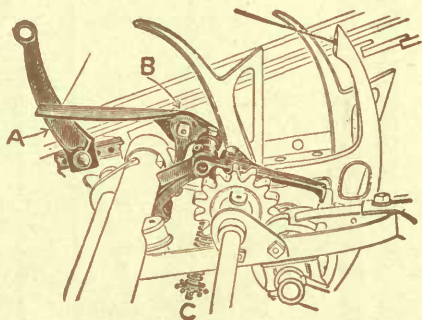




MASSEY-HARRIS NEW No. 5 BINDER

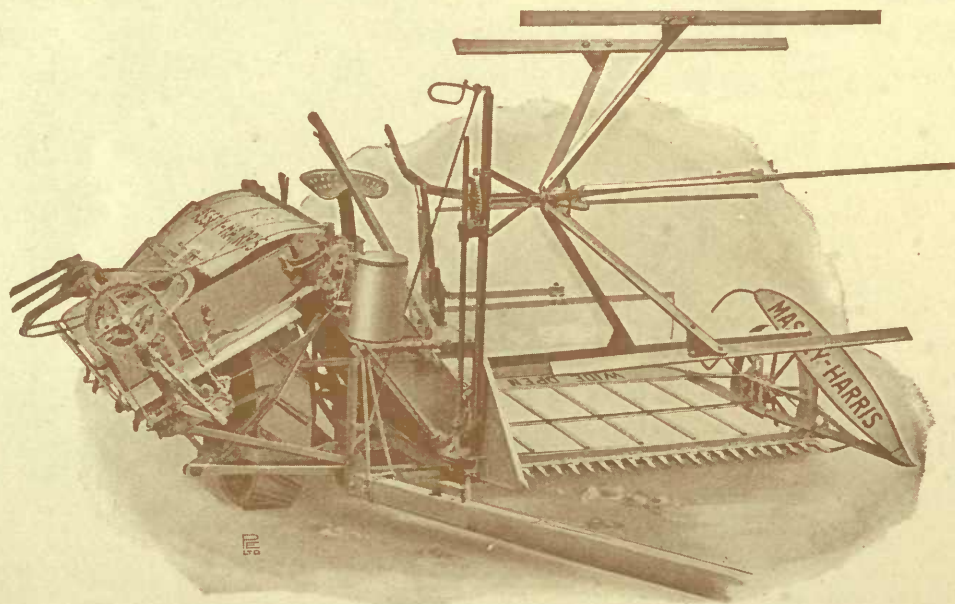
The Knotter may be shifted in a moment's time so as to place the band in the middle of the sheaf with straw of varying length.

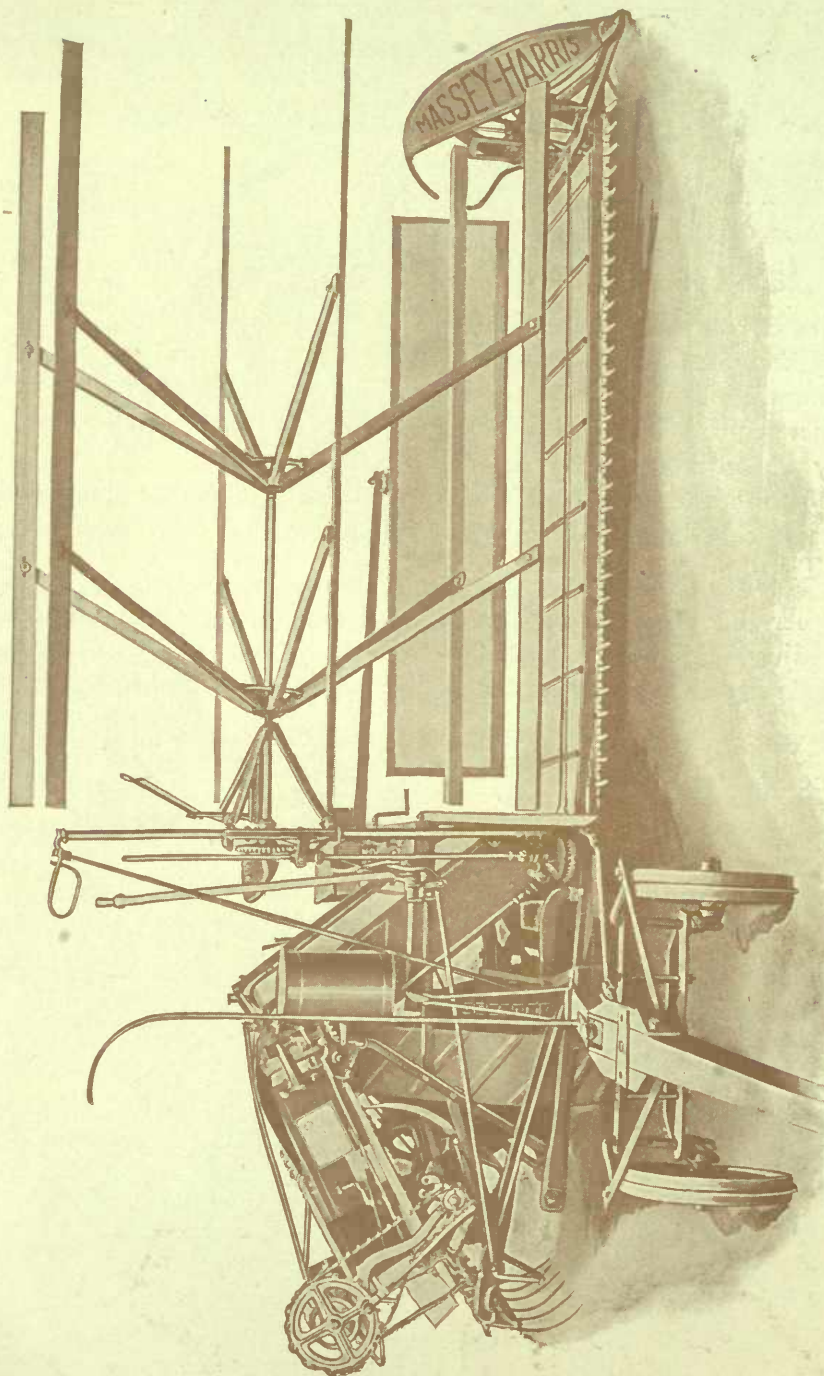
Sheaves can be made large or small and can be bound as tightly as desired. The accompanying illustration shows these adjustments. The Compressor "A" may be adjusted to any of the four holes shown, and the Trip Lever "B" is also adjustable. Tightness of the sheaf is regulated by turning the Malleable Nut "C" which acts upon the Trip Spring.



No other Binder has so wide a range of adjustment, and on no other are these adjustments so easily made as on the Massey-Harris. Three Discharge Arms insure the sheaf being discharged quickly and positively.

The Twine Box is so placed that the driver can see at all times how much twine remains therein.





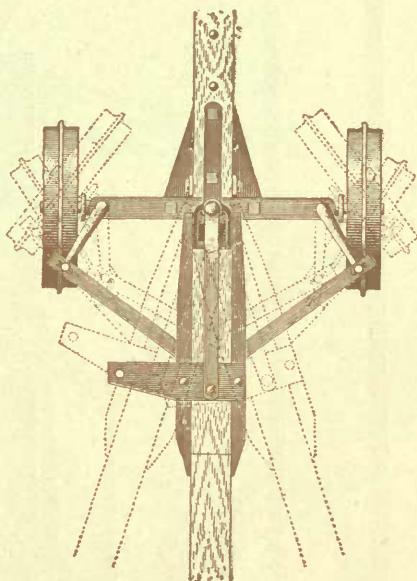
MASSEY-HARRIS 8-FT. BINDER WITH No. 8 FORECARRIAGE.



MASSEY-HARRIS No. 8 FORECARRIAGE

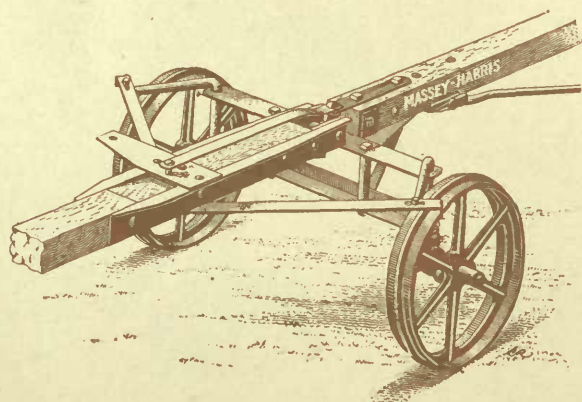
A Forecarriage is a most valuable addition to the Binder, lightening the draft, overcoming side draft, relieving the horses of all neck weight and making the Binder run steadier, consequently will do better work. When hitching or unhitching it is not necessary to lift the weight of the machine.

The Massey-Harris No. 8 Forecarriage is of the Automobile type—the Wheels are pivoted in the same manner and are controlled by the Pole in such a way that they turn at a greater angle than the Pole. This is a great help when turning, and also makes the Binder self-steering, for, if the Platform begins to pull back, the Wheels are turned in the opposite direction, thus straightening the Binder back to position. This makes it an easy matter to cut a full swath all the time.

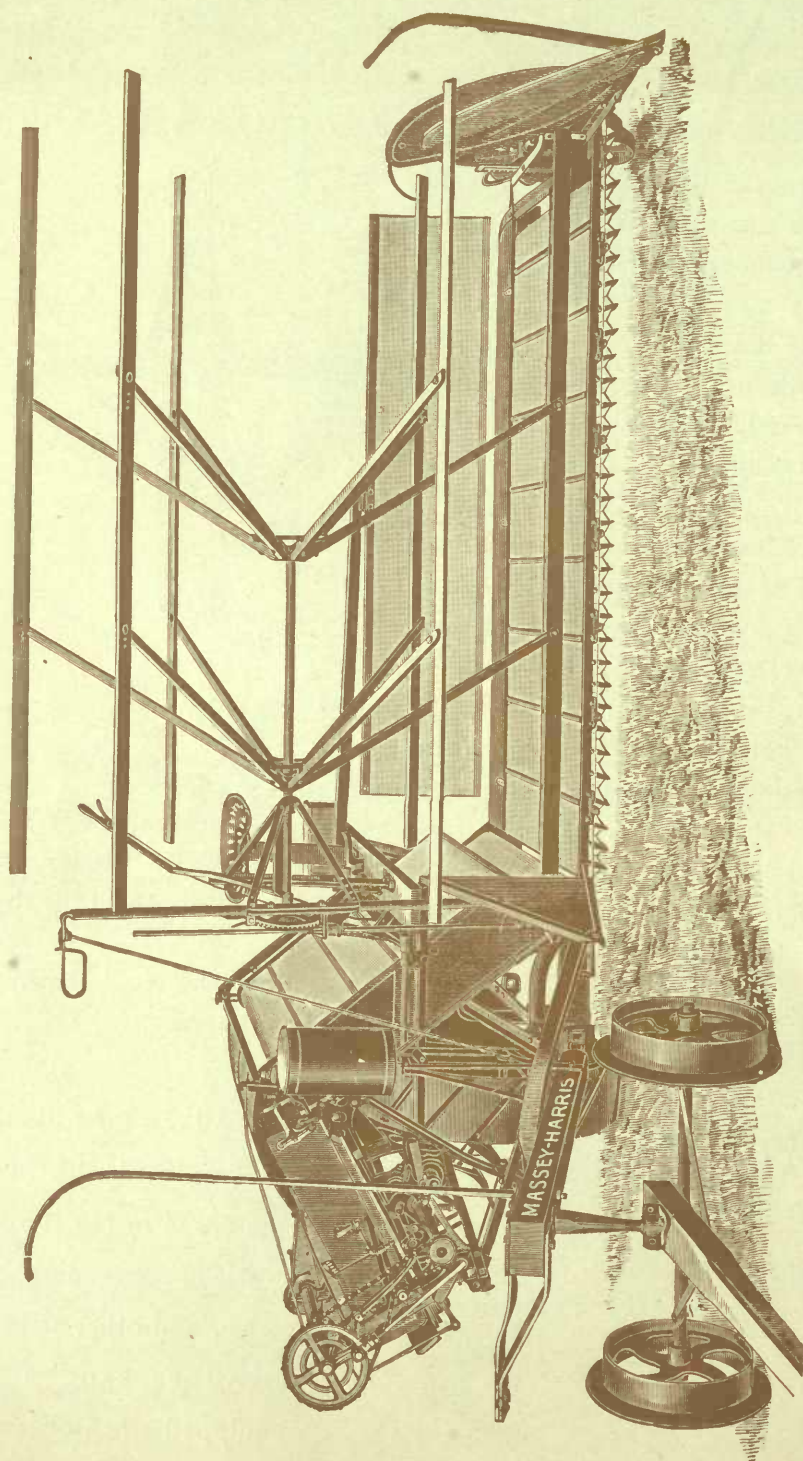


The Wheels turn at a greater angle than the Pole.

This Forecarriage is slightly higher in price than the No 4 shown on next page, but many consider it is well worth the difference.



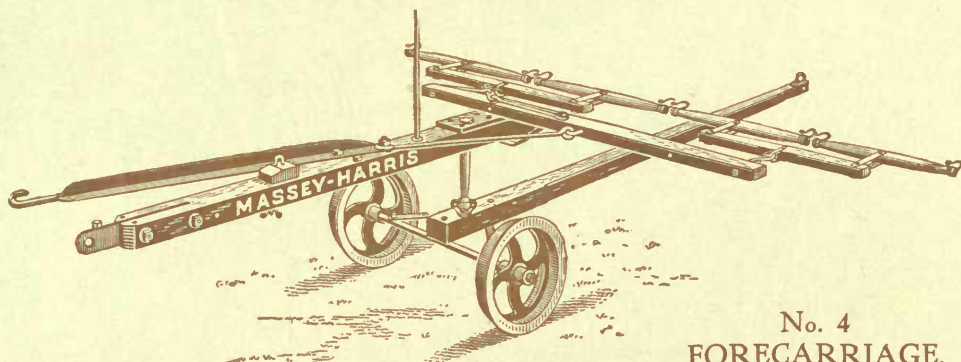
All our 8-ft. Binders are furnished with either the No. 4 or No. 8 Forecarriage according to price, and other sizes of Binders can be so equipped when ordered.



MASSEY-HARRIS 8-FT. BINDER WITH No. 4 FORECARRIAGE.

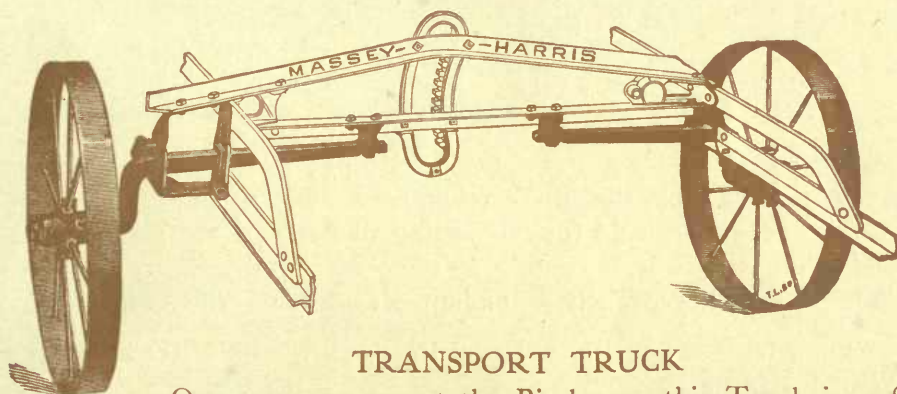


ATTACHMENTS FOR BINDERS



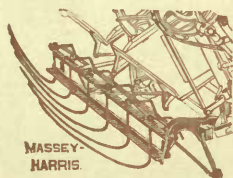
No. 4
FORECARRIAGE.

A reliable Forecarriage at a moderate price, and by many is preferred to the No. 8 shown on pages 12 and 13.



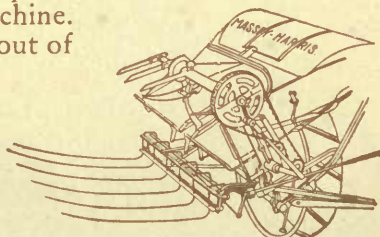
TRANSPORT TRUCK

One man can mount the Binder on this Truck in a few minutes. When mounted the weight is so perfectly balanced that there is no danger of straining or twisting the machine. Both the Outside and Inside Dividers fold out of the way.



Folded

SHEAF CARRIER

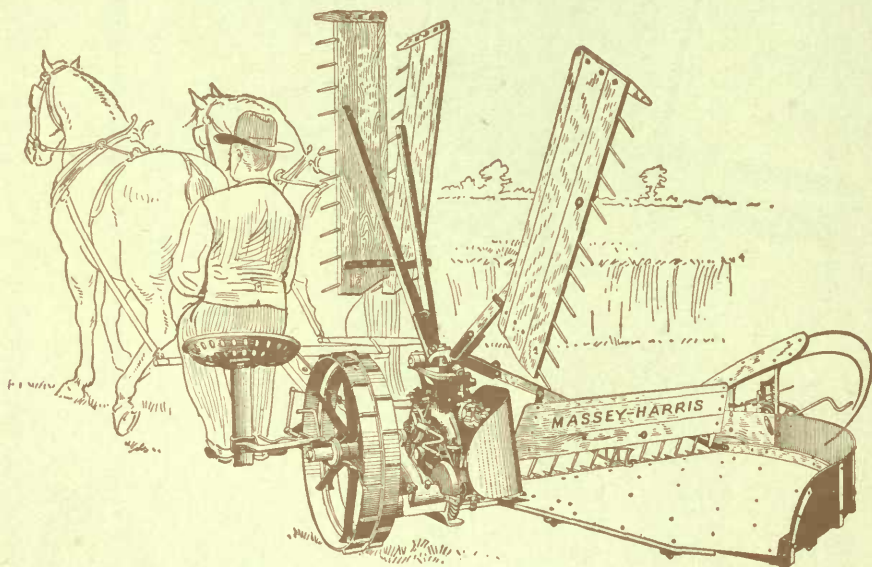


Ready to Receive Sheaves.

Simple, strong, does not sag, is easily tripped by the driver's foot and discharges the sheaves without shelling grain. It works satisfactorily on the level or on a hillside. If it strikes a stump or other obstruction it folds automatically and prevents breakage. It is not necessary to climb over or on it to oil the machine as it folds close to side of Binder; it is always ready but never in the way. (15)



MASSEY-HARRIS No. 2 REAPER



ALTHOUGH in Canada the Reaper has been almost entirely replaced by the Binder for harvesting grain, many of these Reapers are sold for the cutting of flax and are giving splendid satisfaction. Flax is becoming an important crop in many sections and this implement is especially well adapted for cutting this crop.

The Massey-Harris New No. 2 Reaper is the only Reaper made with a Steel Platform.

It is not a thin facing of metal on a wood foundation, but is made from heavy Sheet Steel, well braced and protected by heavy hardwood Cross Bars from injury by stones and stumps.

Main Wheel is large, has deep lugs, and, as it carries nearly all the weight of machine and driver, gives ample traction.

Gears are carefully fitted, run smoothly, and are well protected by Shields.

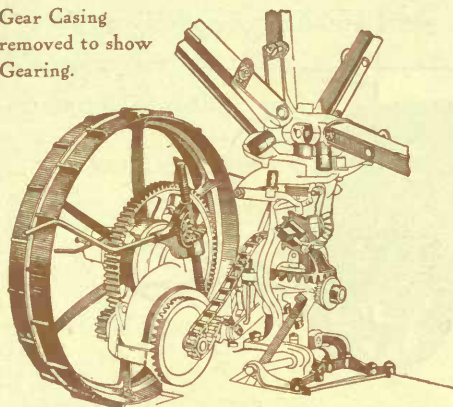
Cutting Mechanism is the well-known Massey-Harris standard—easy-running, sure-cutting, long-lasting. Width of cut, 5½ feet.

Pitman has Steel Straps at Knife End, and Removable Brass Bushing at Crank End.

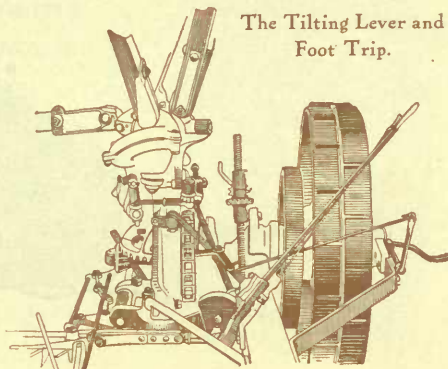


MASSEY-HARRIS No. 2 REAPER

Gear Casing
removed to show
Gearing.



The Tilting Lever and
Foot Trip.



Rakes have steady and positive movements, free from the jerky motions so common to Reapers.

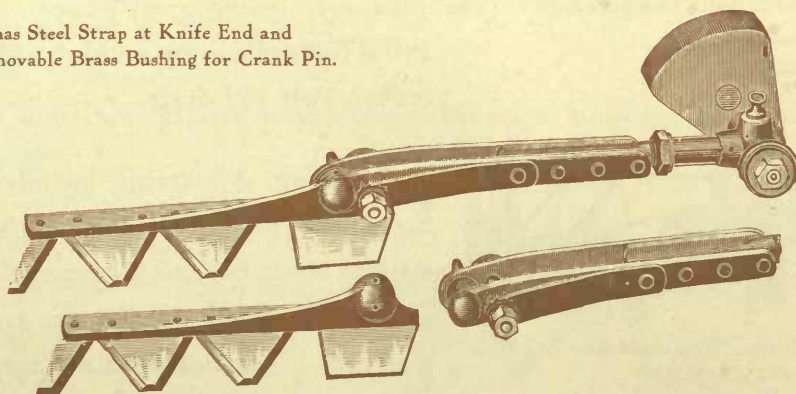
A Foot Trip enables the operator to cause every rake, every second, third, fourth or sixth rake to sweep the Platform.

Platform is easily raised and lowered by means of a Crank at each end.

A convenient Tilting Lever enables driver to tilt the Platform as required for picking up lodged grain.

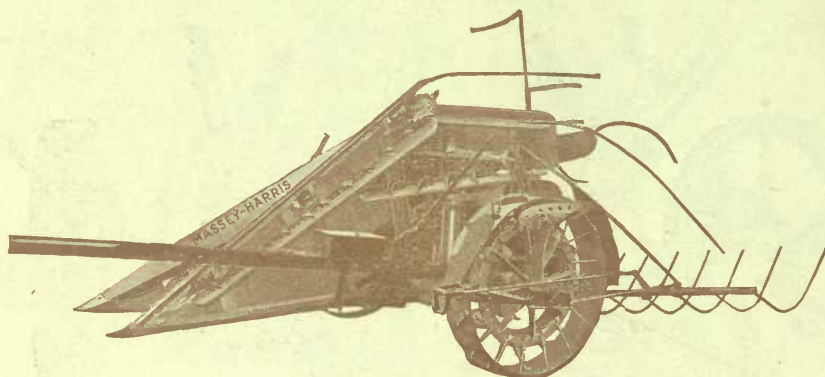
It is an easy matter to fold this Reaper for transport. No extra parts are needed, therefore none to get misplaced.

Pitman has Steel Strap at Knife End and
Removable Brass Bushing for Crank Pin.





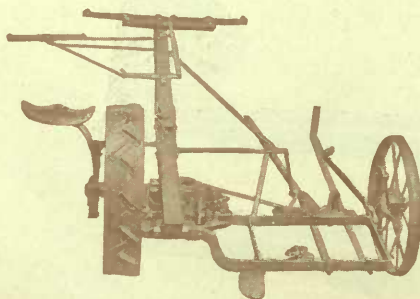
MASSEY-HARRIS No. 4 CORN BINDER



CORN is now being raised in many parts of the West, resulting in a demand for a suitable Corn Binder to handle the crop. The Massey-Harris has been in use for a number of years harvesting the heavy crops in the East and has given splendid satisfaction.

The Main Frame is of Steel in one piece and wide enough to permit the machine to work easily on side hills. Ours is the only machine of this type having the Pole attached to the Frame on the inside of Wheel—this divides the weight and work between Wheel and operator on one side and Elevators and Gearing on the other, with the Binder Attachment directly in the line of draft. Always in perfect balance. No side draft.

We use a large Drive Wheel which is 40 inches in diameter, with a wide Rim and Angle Steel Traction Lugs—giving great power. Dust-Proof Roller Bearings on Hub of Wheel reduce wear and draft.



Showing Frame, Wheels and location of Pole and Seat.

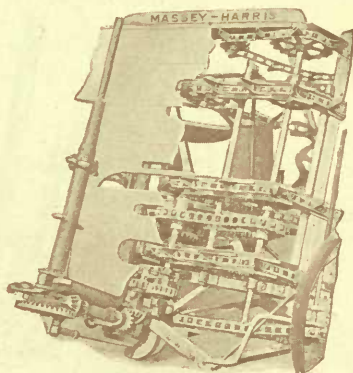
Cutting Apparatus includes two Stationary Side Knives that give the stalks a shear cut and the regular Sickle or Smooth Knife finishes the cutting. The corn is cut clean and not torn.



MASSEY-HARRIS No. 4 CORN BINDER

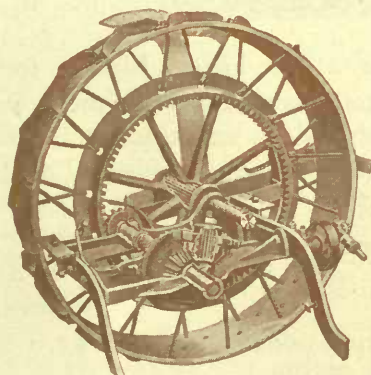
The Gathering Chains with Stationary Fingers pick up the row knocked down in opening the field.

The Conveyor Chains with Folding Fingers carry the corn to the Binder Attachment. Just before the Needle passes around the bundle, Automatic Gates (found only on the Massey-Harris) release the Fingers. These fold and keep the incoming corn from crowding.



The Conveyor Chains.

There are no packers, as a result, there is practically no loss from ears of corn being knocked off.



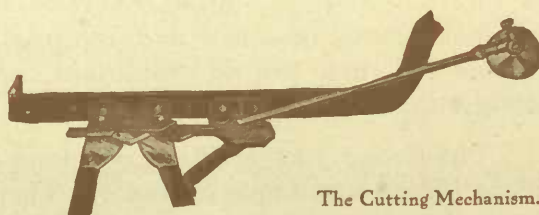
Forty-Inch Wheel, Roller and Brass Bush Bearings.

The Binder Attachment is Gear driven —binds 32 inches from the butts or as low as 18 inches. Can bind above or below the ears. For very short corn the Binder Frame Extension is removed and Needle and Knotter lowered. The stalk channel has a 4-inch adjustment.

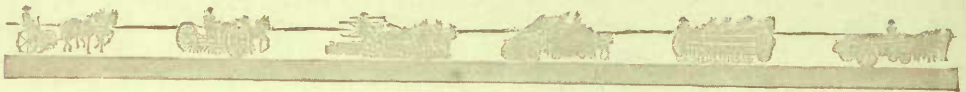
All Levers are convenient to the operator.

The Massey-Harris Steel Carrier takes five bundles, and trips from the Seat.

The machine is only 5 ft. 11 in. wide and will easily pass through the ordinary farm gateway.

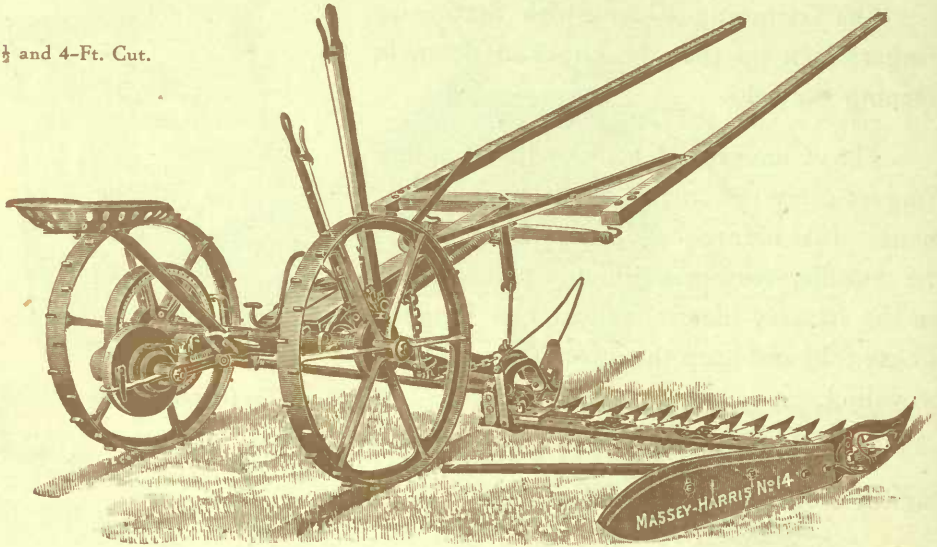


The Cutting Mechanism.



MASSEY-HARRIS No. 14 MOWER

3½ and 4-Ft. Cut.



THE Massey-Harris No. 14 Mower is a One-Horse Mower for small farms, parks, etc. The Main Frame is made in one piece, is light and symmetrical, but, being designed on scientific lines, the strain is evenly distributed and it has proved to be amply strong. There are no weak points in it.

No flying start is necessary—there is no lost motion—the Knives begin to operate the instant the Wheels begin to turn.

The large Drive Wheels give ample traction under all conditions.

Light-running and long-lasting Bearings are the order in these Mowers—Roller and Ball Bearings and Brass Bushings, each of the type best adapted to the place it is used. An adjustable Ball Bearing takes the end thrust of the Bevel Gear Shaft and makes it an easy matter to keep Gear and Pinion in proper mesh.

The Guards of a new and approved type pass readily through the stubble and there are no projections below to tear up the ground and increase the draft.

The Raised Ledger Plates give long cutting edge—the whole length of the Plate,—and ample clearance. They have serrated edges.



MASSEY-HARRIS No. 14 MOWER

The Knife is held in position for clean, easy cutting by broad-faced Steel Clips, and works against Hardened Steel Wearing Plates with long wearing surfaces.

The Front and Rear Push Bars are joined together near the outer end of the Hinged Coupling in such manner that there is no chance for slackness at this point. The Coupling extends for considerable distance along the Front Push Bar, greatly strengthening the connection.

Knife Sections are all made by our Patented Soft-Centering, Edge-Hardening Process which gives a tough centre with a hardened knife-keen cutting edge. Cutter Bar is free to follow the ground to ensure perfect cutting on uneven surfaces, and can be tilted to cut high or low as desired.

The Finger Bar is made of specially Rolled Steel of the quality best adapted for the purpose, the same material also being used for the Knife backs.

Both ends of the Pitman and Knife Heel are made of solid Forged Steel, giving much greater wear than the usual malleable iron ones, and being easily welded by any ordinary blacksmith in case of accidental breakage. The Crank Head End of Pitman has a Brass Bushing enclosed in an Oil Chamber from which the oil is drawn while Pitman is in motion only. When Pitman is at rest the oil is retained in the Reservoir.

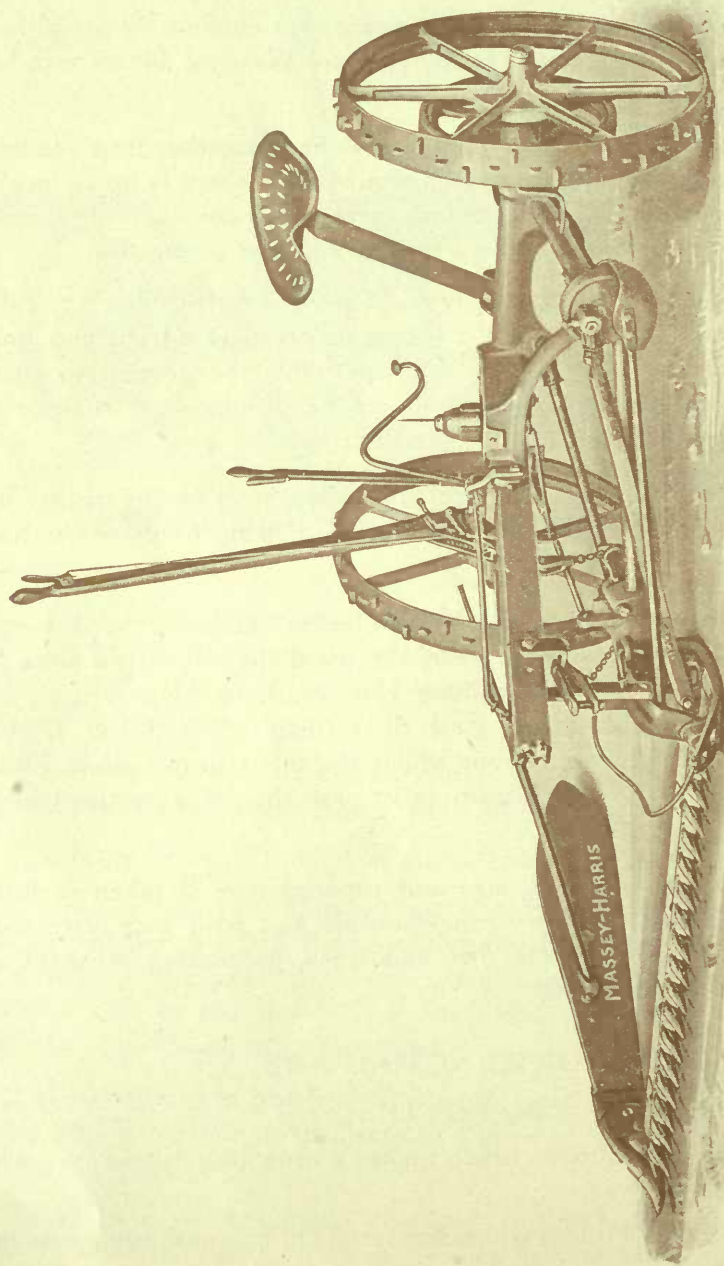
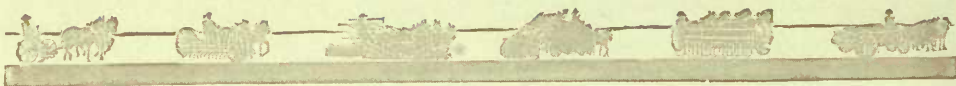
The Gears are ample in size and especial care is taken in fitting them, with the result that they run smoothly and with very little noise. Shields protect the Gears from dirt and trash, preventing breakage and excessive wear on these parts.

OTHER FEATURES WORTH NOTING ARE:

The convenient, easy-acting Foot Lift.

The Flexible Swathboard which makes a wide clear track, even when working in a heavy crop.

The new Oil Can Holder which holds the Oil Can securely, regardless of jolts and bumps.



MASSEY-HARRIS NEW No. 20 MOWER—4½ and 5-Ft. CUT.

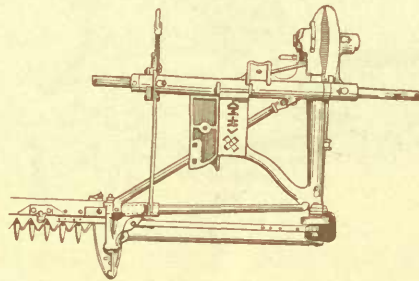


MASSEY-HARRIS NEW No. 20 MOWER

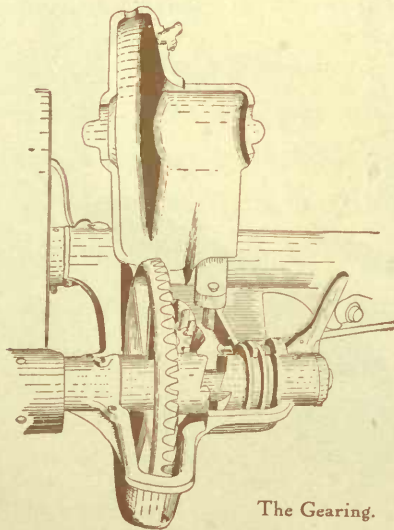
THE great success of our No. 21 Big Mower has resulted in the demand for a smaller Mower along similar lines and with Vertical Lift. The Massey-Harris New No. 20 Mower is the result. It is no experiment—most of the Features having been in use for several years on the No. 21, and the distinctive points of this Mower having all received the most careful tests in actual work.

It has a strong, One-Piece Frame. A Frame which will hold all parts in proper relation one with another is an essential feature in a Mower. The Frame of the Massey-Harris New No. 20 is made in a single piece, designed on scientific lines so as to give ample strength without unnecessary weight.

All the Bearings are bored out at the same time by a machine especially designed for the purpose, thus bringing all Shafts in exactly the right relation so that the Gears will mesh properly and run smoothly.



The Substantial Frame.



The Gearing.

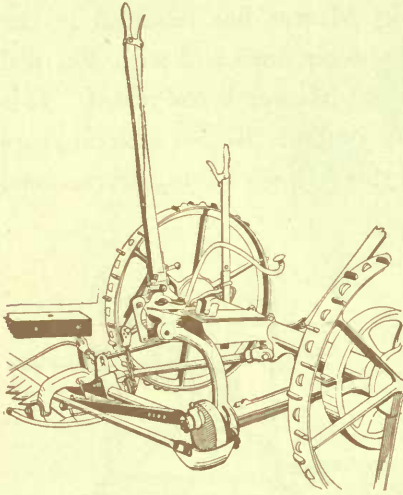
The Tread is wider than on other Mowers of the same width of cut, and the Wheels are of good size. This eliminates side draft and makes the Mower run smoothly.

The Push Bars are extra heavy and both are attached to the Frame, by machine-fitted connections with Screw Adjustment for lining up the Cutter Bar.

The Gears are of ample size, are carefully fitted, and run smoothly and quietly. The Clutch is extremely simple,



MASSEY-HARRIS NEW No. 20 MOWER



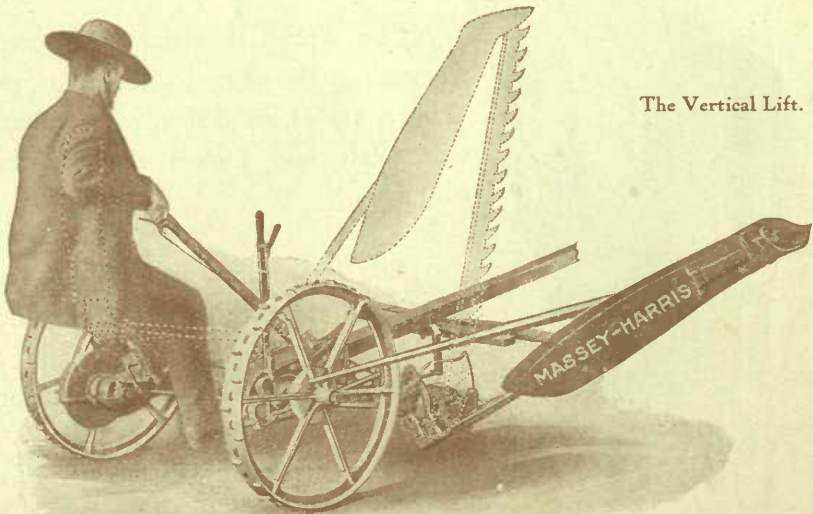
Easily Detachable Pole.

as will be seen by referring to the illustration. It gives a more direct connection than other forms of Clutch, and the Throw-out Device is very simple.

The Bevel Gear Shaft runs in Removable Bushings at both ends. These can be easily and cheaply replaced should they become worn.

The Bearing at Crank End of Crank Shaft is a Removable Brass Bushing.

The Cutting Mechanism consists of a heavy, specially rolled Cutter Bar, with carefully fitted Guards and a Knife with extra long Sections, driven by a long Pitman, working as nearly in line with the Knife as practicable—always ready for any kind of cutting.



The Vertical Lift.



MASSEY-HARRIS NEW No. 20 MOWER

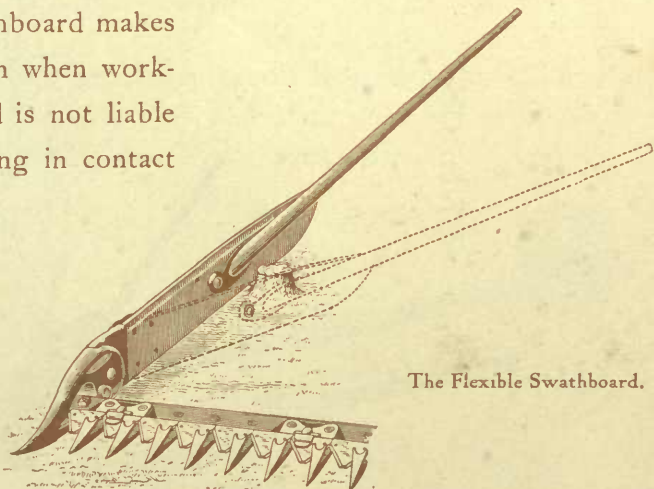
The Pole can be easily detached by simply removing three bolts, without affecting any other parts or changing any adjustment. This makes it possible to ship the Mower set up complete except the Pole and Cutter Bar, and this is also a great convenience for storing.

Special attention has been paid to the Lift, with the result that we have produced a Vertical Lift which is both simple and easy to operate. The cut on page 24 shows the Cutter Bar in the position to which it is raised by moving the Hand Lever back to its farthest limit. If it is desired to raise the Bar to a vertical position, the Lever is raised to the position shown when it engages another notch in the Raising Cam and the Lever is in position to enable the operator to easily bring the Bar upright.

The Lift-Spring is at the rear. This gives a direct connection to the Lift, it is much more readily accessible for adjusting, and is not affected when Pole is removed.

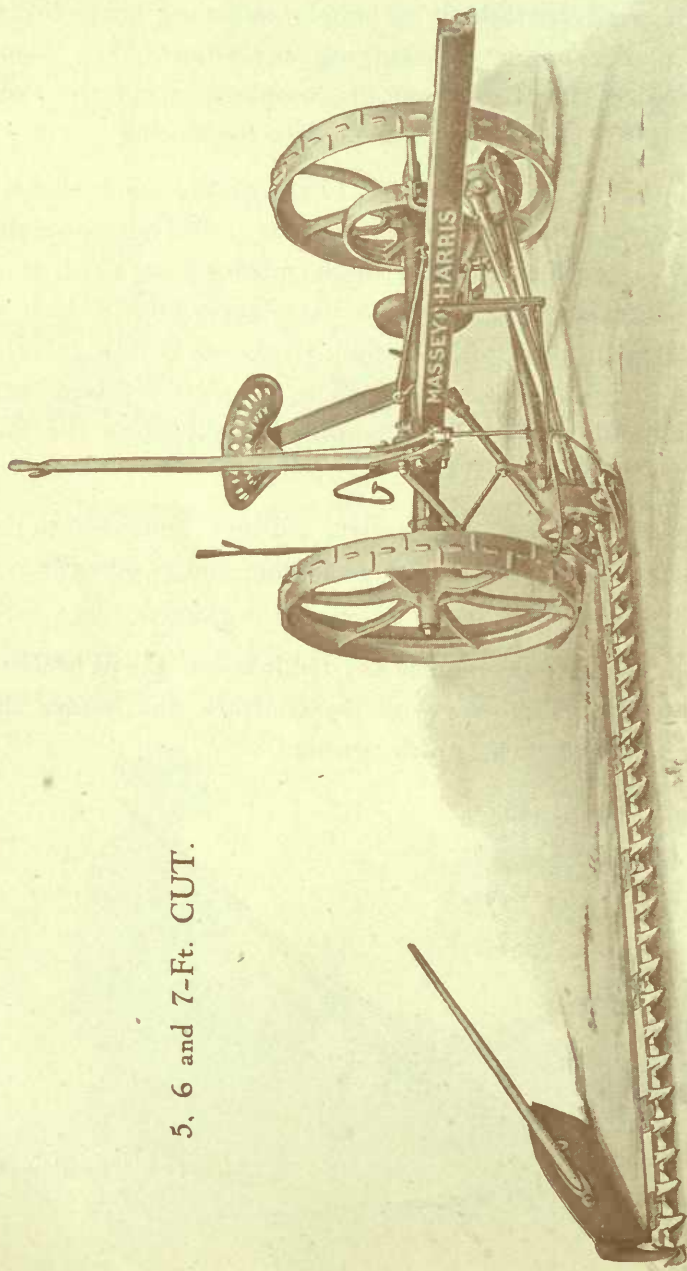
The Under-Draft Feature overcomes any tendency of the Wheels to lift off the ground in heavy cutting—on the contrary, the harder the pull, the harder do the Wheels bear on the ground.

The Flexible Swathboard makes a wide, clear track, even when working in a heavy crop and is not liable to be broken by coming in contact with stones or stumps, as the Spring allows it to yield until the obstruction is passed when it quickly returns to position.



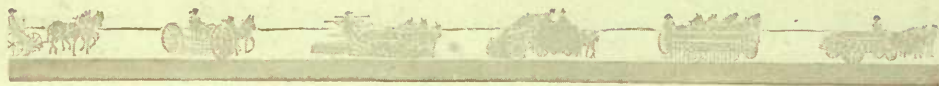
The Flexible Swathboard.

5, 6 and 7-Ft. CUT.



MASSEY-HARRIS NEW No. 21 MOWER.

A Big, Powerful Mower, embodying many New and Original Features which have been worked out by a Series of the most careful Tests in actual Field Work.





MASSEY-HARRIS NEW No. 21 MOWER

HOWEVER large your field may be—however heavy may be the crop—this Mower enables you to cut it surely and quickly.

From the time of its introduction several years ago, it has fully justified the claims we have made for it, and the enormous sales have been a good indication of its popularity.

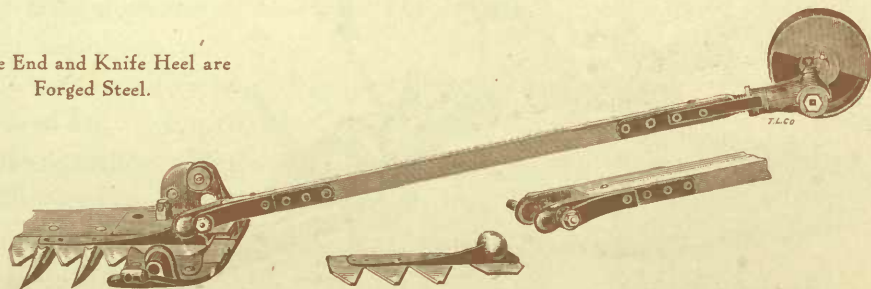
Its great strength, easy-running, absence of side-draft, clean-cutting and ease of handling are some of the Features which commend it to the Progressive Farmer.

The Tread is wider than on other large Mowers, and the Wheels are high and broad-faced. This eliminates side-draft, makes a steadier, smoother-running machine, and there is no danger of upsetting on the steepest hillside.

On Mowers carrying a long Bar, the Coupling and Push Bars are subjected to a great strain, and for this reason we have given especial attention to these parts, so that the Cutter Bar may always be kept in line and working properly. Both Push Bars are exceptionally heavy and stiff. Both are attached to the Frame by machine-fitted connections with screw adjustments for lining up the Bar.

The Hinged Coupling has exceptionally long Bearing on the Push Bar, large Bearings for the Shoe Pins, and these Pins are extra heavy—effectually preventing any looseness of the Cutter Bar.

Knife End and Knife Heel are
Forged Steel.



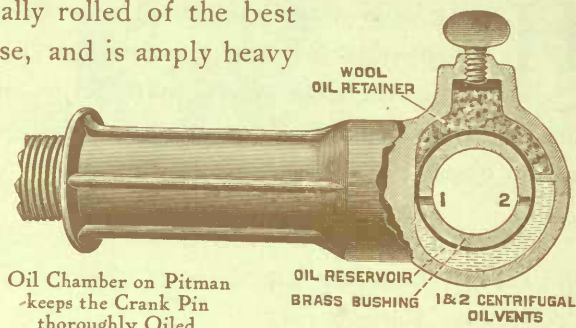


MASSEY-HARRIS NEW No. 21 MOWER

The Cutter Bar is specially rolled of the best grade of Steel for the purpose, and is amply heavy to keep its shape under the most severe strains.

The Bearing at Crank end of Crank Shaft is a Removable Brass Bushing as used for years on

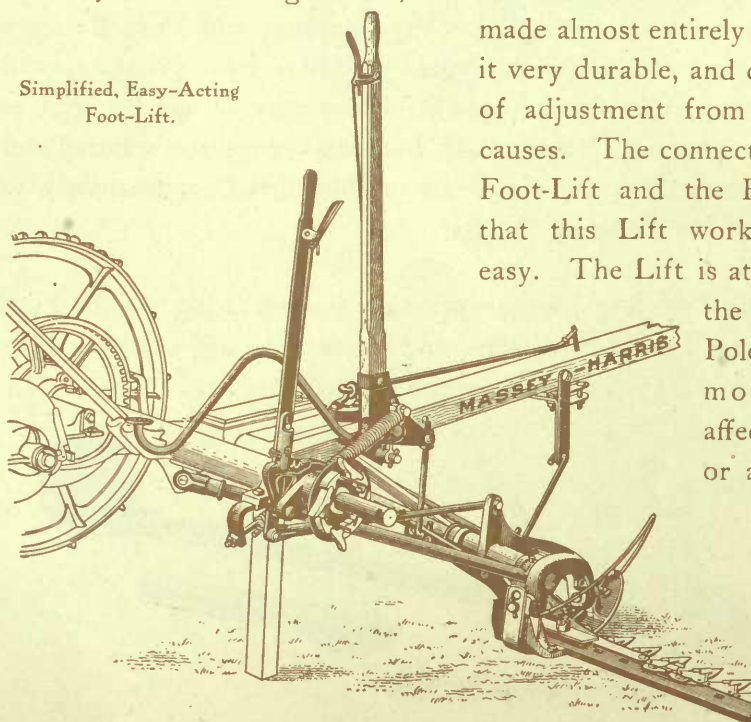
Massey-Harris Mowers and has given the best of satisfaction.



The Pitman is extra long and works in line with the Knife, reducing friction and wear to the minimum.

A simplified Foot-Lift of an entirely new design enables the operator to easily raise the longest Bar, and the outer end does not sag. It is made almost entirely of Steel, making it very durable, and does not get out of adjustment from wear or other causes. The connection between the Foot-Lift and the Bar is so direct that this Lift works exceptionally easy. The Lift is attached direct to the Frame, and the Pole may be removed without affecting the Lift or any other parts.

Simplified, Easy-Acting
Foot-Lift.



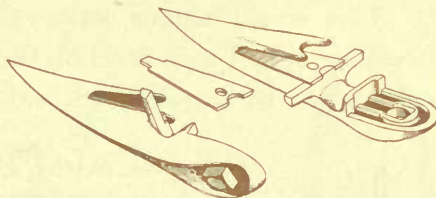
The Lift Spring is at the rear. This gives a direct connection to



MASSEY-HARRIS NEW No. 21 MOWER

the Lift, it is much more readily accessible for adjusting, and is not affected when Pole is removed.

The Gears are of ample size, are carefully fitted, and run smoothly and quietly. The Clutch is extremely simple, as will be seen by referring to the illustration. It gives a more direct connection than other forms of Clutch, and the Throw-out Device is very simple.



Guards are carefully fitted and do not get out of line and are of such shape as to readily pass through the stubble.

The Bevel Gear Shaft runs in removable Bushings at both ends. These can be easily and cheaply replaced should they become worn.

The Knife Sections are longer than on other Mowers, giving longer cutting edges and greater clearance.

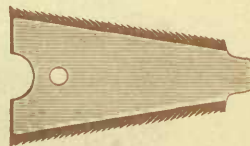


Adjustable Wearing Plates and Steel Clips closer together than on other Mowers.

By simply removing two bolts, the Pole may be removed without affecting any parts or changing any adjustments. This makes it possible to ship the Mowers set up complete except the Pole and Cutter Bar, and is also a great convenience when storing the Mower.

Great care has been exercised in the balancing of the Mower, and the draft is directly on the Cutter Bar, effectually overcoming neck weight.

Other Features which have been used with great success on our other Mowers are: Improved Guards with Raised Serrated Ledger Plates; Flexible Swathboard; Adjustable Wearing Plates and Steel Clips; Four-Pawl Ratchets; Under Draft; Steel Pitman Ends and Knife Heel.



Serrated Ledger Plates.

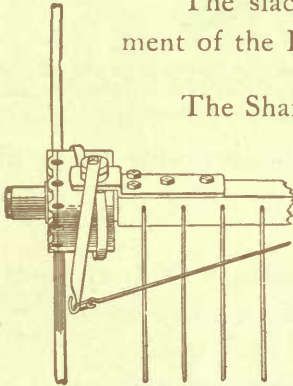


MASSEY-HARRIS SHARP'S RAKE

This world-famous Rake is supplied with 24 or 30 Oil-Tempered Steel Teeth, and with Steel or Wood Wheels. It dumps easily by means of a friction band, rakes well and leaves a clean stubble.

The slack in the Dump Band is taken up by the adjustment of the Ratchet Washers.

The Shafts can be changed to a Pole if desired.

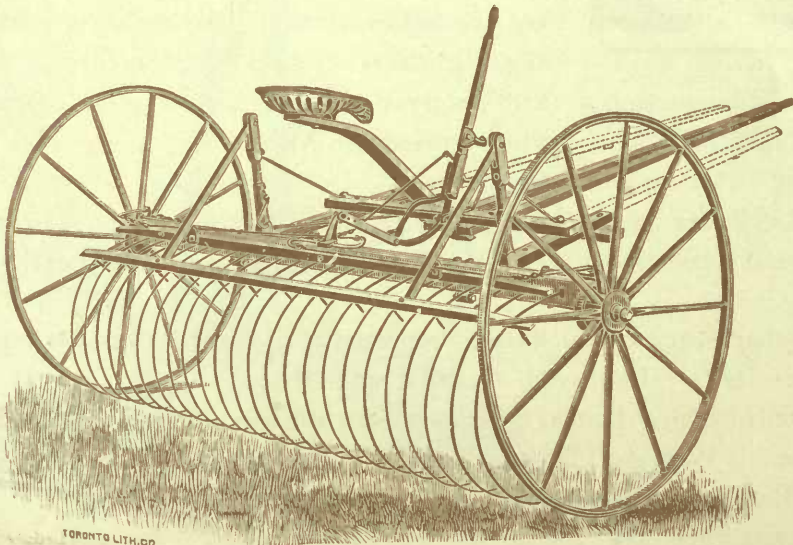


Sectional View, showing the Dumping Mechanism of the Sharp's Rake.

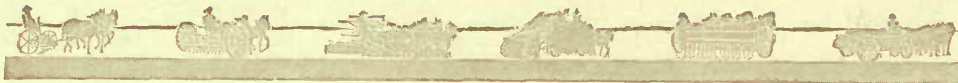
The Teeth are all made of the best quality of Steel and are Oil-Tempered. They are very strong.

A very easy-acting Rake with great capacity and very strong, not liable to get out of order.

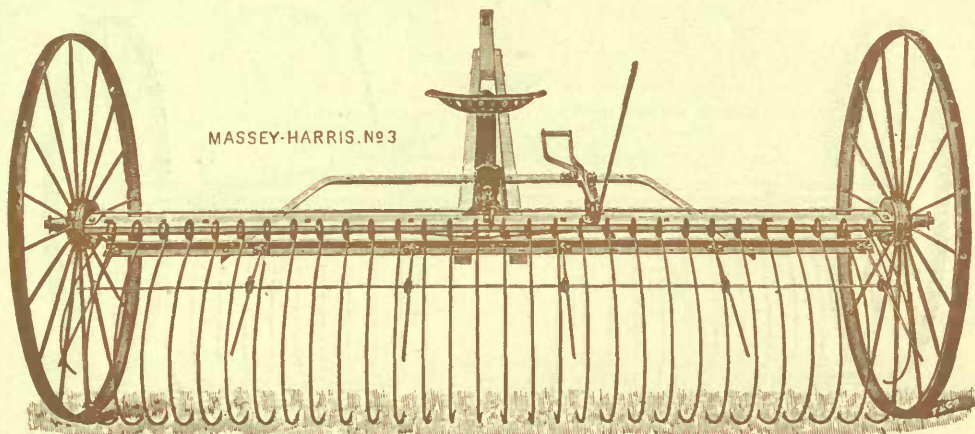
It has been a favorite for many years, and its friends are legion.



TORONTO LITH.CO



MASSEY-HARRIS No. 3 STEEL RAKE



THE Massey-Harris No. 3 Steel Rake is a light but very strong Rake, well adapted for raking light or heavy hay, can be dumped by the hand or by the Automatic Dump operated by the foot, and is light draft.

Angle Steel is used in the construction of the Frame and the Wheels are of Steel.

It has great capacity—the basket is large and the Teeth lift well above the windrow. The Cleaners are oval-shaped Steel and are connected by a Rod extending the entire width of the Rake.

The Cleaners are effective when dumping, preventing the Points catching the windrow and stringing hay along behind the Rake.

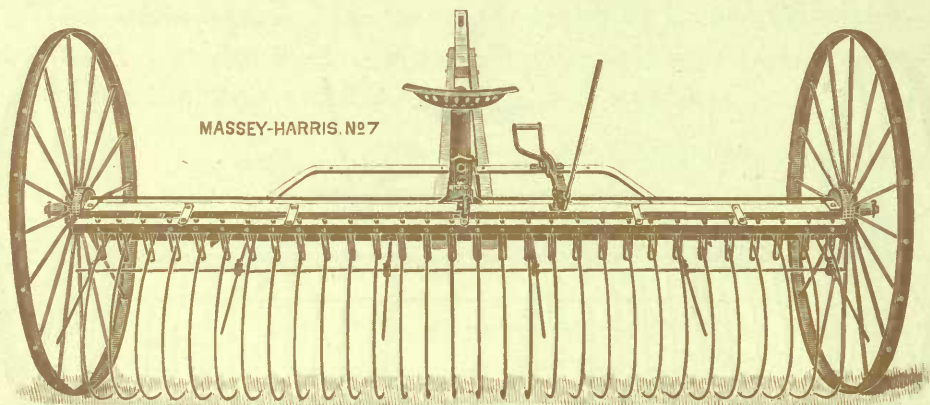
Teeth are made from high-grade Steel, Oil-Tempered and with Coil Section to give flexibility and prevent breakage. They have Swedged Points which pass smoothly over the ground and through the stubble without digging into the ground, thus preventing the breaking of Teeth and saving all the hay without loss.

Every Rake is equipped with two Guard Teeth without extra charge, as shown in cut; these not only add to the width of the Rake but also keep the hay out of the Wheels.

Made in 3 sizes: 24 Teeth, 8 ft., 30 Teeth, 10 ft. and 36 Teeth, 12 ft.



MASSEY-HARRIS No. 7 STEEL RAKE



IN general construction this Rake is similar to the No. 3 described on preceding pages, but the Teeth, instead of having Coil Sections as in that Rake, are flexibly mounted in the Rake Heads, allowing them to conform to rough and uneven land.

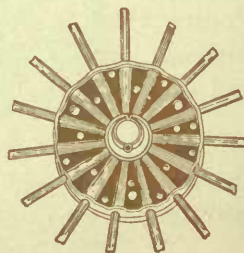
This adapts it especially for use on rough land where an ordinary Rake will not rake clean—the flexible mounting of the Teeth on this Rake ensuring the saving of all the hay.

Angle Steel is used in the construction of the Frame and is braced and trussed in such a manner as to prevent sagging or buckling.

The Automatic Dump works by means of Ratchets inside of both Hubs. By simply pressing a Foot Trip near the centre, the Rake is dumped, both Wheels acting as drivers and giving quick and positive motion. The Teeth return to raking position close to the windrow, so the whole field is raked clean. The Rake can be dumped by hand if desired.

A convenient Lock is provided to hold the Teeth in a raised position, from which a touch of the foot causes them to drop to raking position.

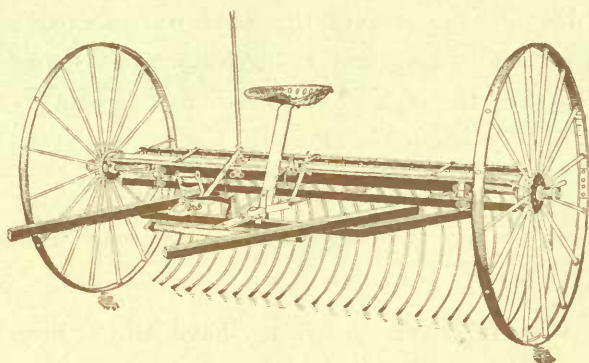
This Rake has great capacity—the basket is large and the Teeth lift well above the windrow.



Strong, Steel Wheels.



MASSEY-HARRIS No. 7 STEEL RAKE



Cleaners are oval-shaped Steel and are connected by a Steel Rod extending the entire width of the Rake. Teeth are lifted well above the Cleaners in dumping, thus preventing the windrow being held by the points of the Teeth and strung along behind the Rake.

The Teeth are made from a high-grade Steel on our Patented Bending Machine which does not injure the fibre of the Steel when bending the Teeth, and are oil-tempered. They are securely attached to the main angle of the Rake but do not pass through it. Each Tooth can move independently to better conform to rough, uneven land.

Wheels are big and have wide Channel Steel Tires and heavy oval-shaped Steel Spokes.

The No. 7 Steel Rake is made in two widths:—26 Teeth raking 8 feet, and 32 Teeth raking 10 feet.

MASSEY-HARRIS ITHACA RAKE



This is a very serviceable Rake. It has 24 of the Massey-Harris high-grade Rake Teeth, Strong Wood Wheels, and Spring Lift. With the new Spring Lift the work of dumping is made easy—a boy can do it.

This Rake is a great favorite in certain localities, and its popularity is well deserved.



No. 3 SIDE RAKE AND TEDDER

TWO machines in one—saves the cost of one machine, the time required for unhitching and re-hitching when using two separate machines, and the space required for storing an additional machine.

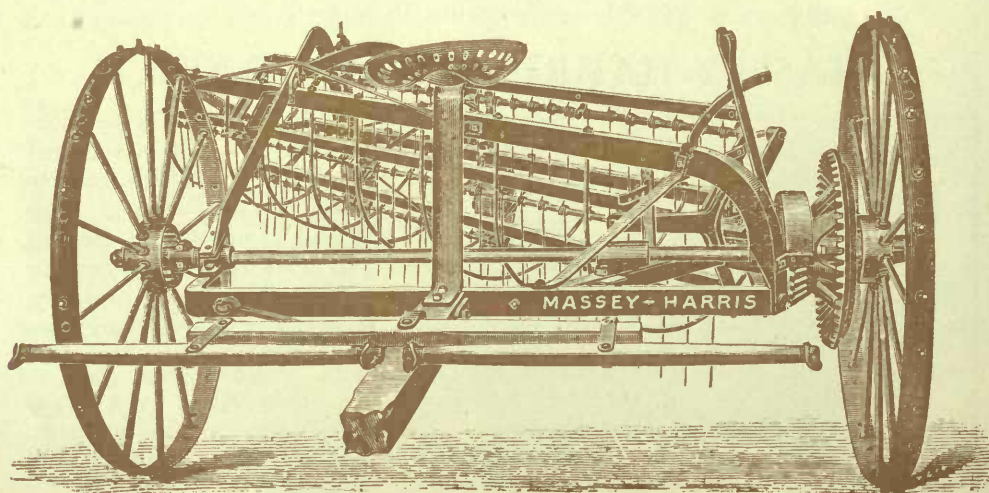
A strong, well-trussed, Angle Steel Frame carries the Raking Cylinder in easy-running Bearings and keeps the working parts in proper relation.

The Main Wheels are very strong, have wide Tires with liberal Traction Spuds, and, as both are drivers, there is no slipping when working in a heavy crop.

Rear end of Frame is carried by two Castor Wheels which can be adjusted to carry the Frame at any desired height.

A Coil Spring in connection with each Castor Wheel lessens the jar on rough ground.

Gearing is very simple; one Lever is used for putting the Raking Cylinder in gear either forward or backward, the backward motion having the higher speed for tedding; another Lever adjusting the angle of the Teeth.





No. 3 SIDE RAKE AND TEDDER

AS A TEDDER

This Implement is a Great Success.

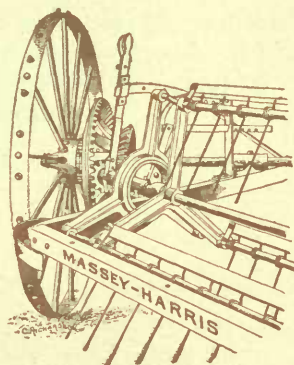
The Hay is thoroughly stirred and left in the best possible shape for rapid curing.

Changed from Rake to Tedder in an instant.

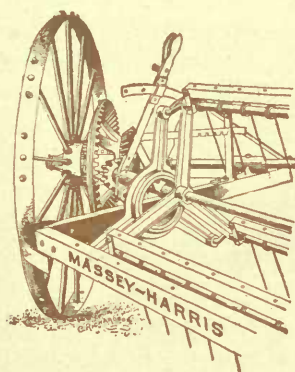
Raker Teeth are of Steel and made flexible by means of a coil in each Tooth. This enables them to spring back either singly or together and

thus prevent breakage. The Teeth draw straight out of the hay as they leave it without any tendency to carry it back over the Rake Drum.

The motion of the Teeth when raking is easy but positive, their action being very similar to the work of hand Rakes, handling the hay gently, without beating or threshing.



The Drive Mechanism set for Tedding.

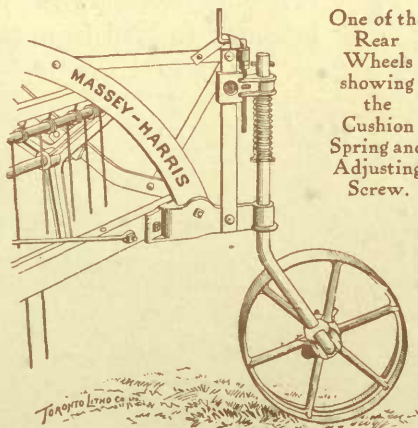


The Drive Mechanism set for Raking.

9½ ft. Cylinder, which is the standard width, and 10½ ft. Cylinder, *which is intended for raking Beans*, the extra width allowing turning around without trampling down the beans.

When desired, this implement can be supplied as a Side Rake only, which at any time can be converted into the combination machine.

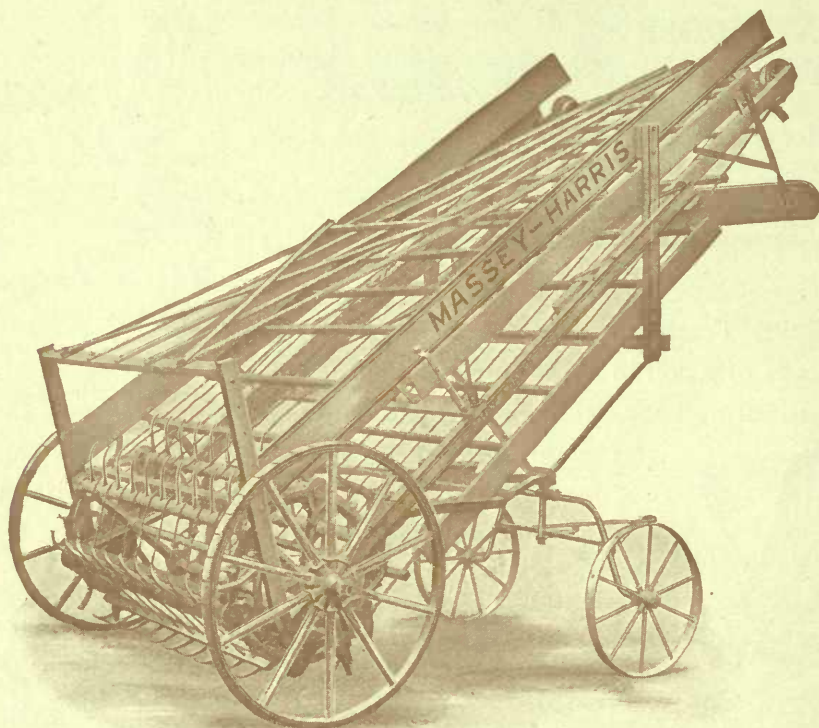
Made in two sizes :



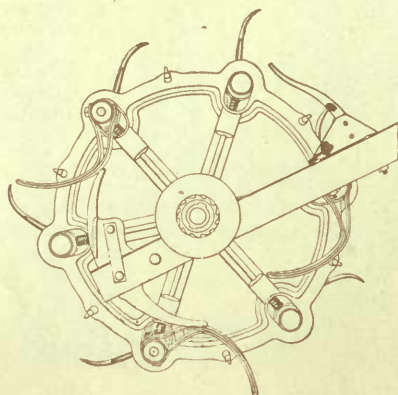
One of the Rear Wheels showing the Cushion Spring and Adjusting Screw.



MASSEY-HARRIS CYLINDER HAY LOADER



THE Massey-Harris Hay Loader is very simple and easily operated—it is only necessary to hitch it to the wagon and drive ahead. It is intended to load from the windrow and is generally used in connection with a Side Delivery Rake, although this is not essential.



The Framework is made of the best seasoned hardwood, held together by Steel Brackets. We have recently added two round Steel Braces which cross in the form of an X on the underside of the Frame, adding greatly to its rigidity. These Braces are adjustable—the Frame can be readily squared up and kept in that position.



MASSEY-HARRIS CYLINDER HAY LOADER

The Gathering Drum is 5 ft. 6 in. in length and has 60 Malleable Teeth arranged on six Roller Bars. These Bars are so controlled that the Teeth enter the hay in the same manner as the tines of a pitch fork and hold it securely until it is taken up by the Carrier.

A Cam Device has been added by means of which the Roller Bars are positively turned to such a position that the Teeth draw straight out of the hay without a chance of catching on the Carrier Slats or holding onto the hay.

Each Roller has Steel Springs at both ends to relieve the jar when an obstruction is encountered. and also to allow for an unusually large volume of hay.

Wheels are well constructed, are amply strong and are provided with Traction Lugs. Both are drivers.

The Carrier delivers the hay well onto the load so it can be readily placed as desired. Tension of the Carrier can be easily regulated by means of a Crank at each side.

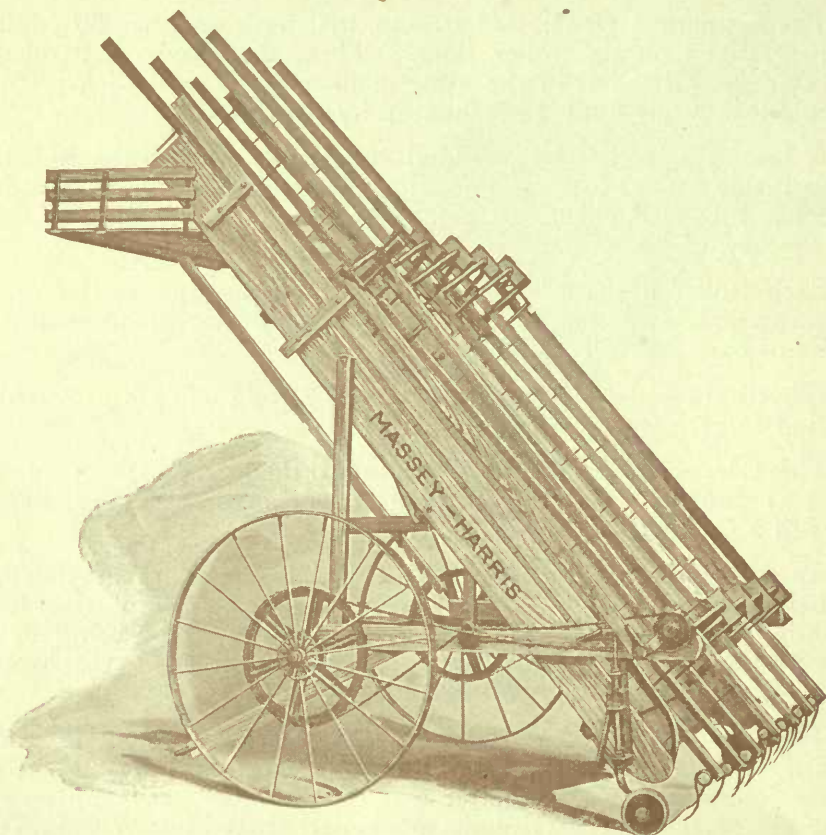
An Adjustable Apron is attached to the upper end of the Frame, just below the returning Carrier, which is especially useful when loading in windy weather, as it prevents the hay dropping off or being dragged down by the Carrier. An effective windbreak prevents the hay being blown off while passing up to the load.

This Loader is regularly fitted with Forecarriage which takes all the forward weight of the Loader so that it can be easily attached, the Loader follows the wagon better and can be more easily moved about. The Axle of the Forecarriage is so pivoted that either Wheel may pass over uneven ground without straining the machine.





MASSEY-HARRIS RAKE BAR HAY LOADER



THE construction is especially rigid, having strong Sills and Cross Bars, thoroughly braced to withstand any strain. The continuous Steel Axle of good size adds additional strength to the Frame.

The Wheels are large, having Wide Tires fitted with Traction Lugs, and are built entirely of Steel.

The Rear Castor Wheels have Roller Bearings, and are mounted in Steel Brackets provided with Screw Adjustment for regulating the height.

The hay is elevated by means of Rake Bars which are mounted on two Crank Shafts connected by Pitmans, giving an easy and positive motion to the Rake Bars, and lifting the Teeth out of the hay without any tendency to drag it backward on the down stroke.



MASSEY-HARRIS RAKE BAR HAY LOADER

The motion is such that the hay is pushed well forward on the load, enabling one man to build the load providing the windrow is not too large.

Both the Raking and Lifting Teeth are made of Oil-Tempered Spring Steel.

The Lower Crank Shaft is driven from both ends by means of a Direct Chain Drive from the large Sprockets on the Drive Wheels which are operated by simple Ratchet Pawls.

This simple Chain Drive does away with all Cogs, greatly reducing the number of wearing parts and lightening the draft.

The Hinged Board at bottom of the Inclined Slat Bed is provided with an Automatic Device which holds it in working position, for light hay, or out of the way when heavy hay is being handled.

The Hinged Apron at upper end of Slat Bed has an Adjustable Brace which enables the operator to raise this Apron from the load from time to time as the load rises, and locks in its successive positions automatically.

The method of hitching to the Wagon is very convenient, and by simply changing a Pin in the Pole, the length of the Hitch can be adjusted to suit various lengths of rack.

The Rake Bars have a Floating Adjustment at the upper end to allow for varying volumes of hay.

This Loader has a raking width of about 6 feet and has 8 Rake Bars, giving positive elevation of the hay.

Perhaps a feature which will appeal more strongly than any other to the prospective purchaser is the light draft. Add to this the saving in help, as one man can handle the hay because it is pushed well forward on the load, and it is easy to see that this Loader is destined to become very popular on that account.



MASSEY-HARRIS STEEL TEDDER

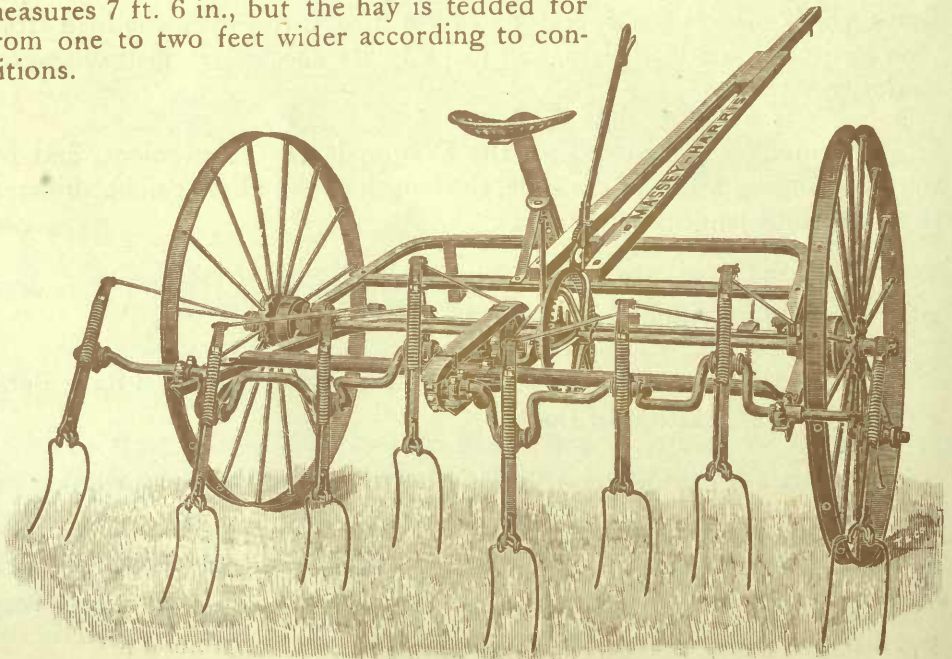
FARMERS with a large acreage of hay will find the No. 3 Steel Hay Tedder a great labor saver and it will often save a field from a wetting, since by its use the hay is cured in the shortest possible time.

There are two Frames made entirely of Angle Steel with the exception of the rear Cross Bar on lower Frame, which is a heavy pipe re-inforced at both ends where it is flattened out and securely riveted to the Frame. These Frames will hold their shape under the most severe strain. Fork Arms are Angle Steel and the Fork Arm Rods work in Steel Bearings at both ends. Forks have a quick and positive motion. The Springs on Fork Arms give elasticity to each stroke and, with the Frame Cushion Springs, prevent breakage. One Fork works outside each Wheel—all the hay is thoroughly teded.

By means of a convenient Lever the height of the Forks is easily regulated, and another Lever puts the Forks in and out of gear.

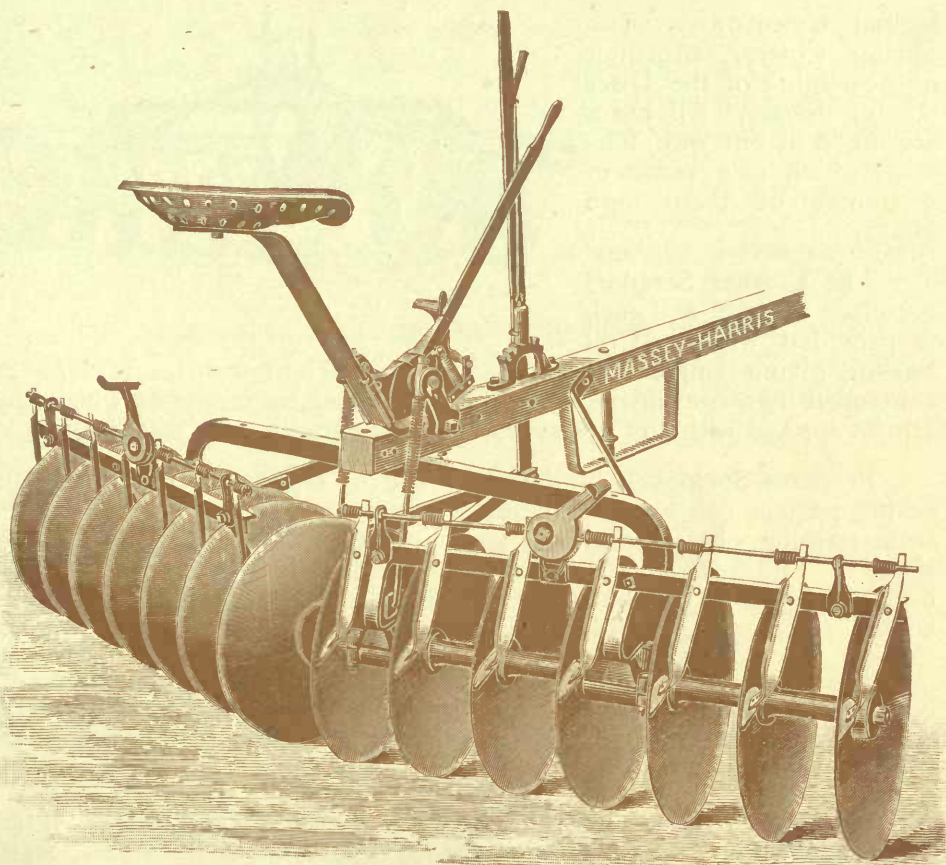
Wheels are strongly built with heavy Channel Steel Tire and both are drivers. Axle runs on Roller Bearings. Drive Chain is protected by a shield. Machine is equipped with combined Pole and Shafts for use of one or two horses and furnished with 6 or 8 Forks.

The 6 Fork measures 6 ft. across the outside Forks—the 8 Fork measures 7 ft. 6 in., but the hay is teded for from one to two feet wider according to conditions.





Nos. 8 AND 9 OUT-THROW DISC HARROWS



EVERY farm needs a Disc Harrow, and it pays to have the best. The Massey-Harris Disc Harrow with Spring Pressure has many advantages over any other Disc Harrow—no other will do such satisfactory work under any and all conditions of soil as will the Massey-Harris.

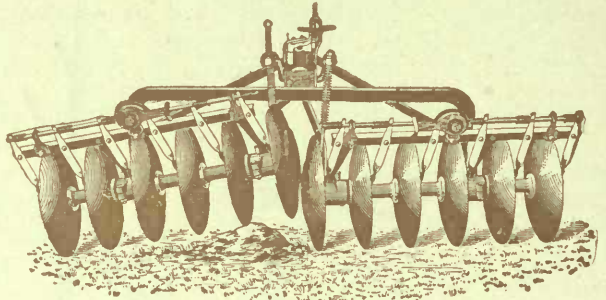
The Arch is of heavy Angle Steel, strongly braced, and both the Arch and Braces are re-inforced at the points where they meet, forming an exceptionally strong Frame.

The Discs are mounted on a heavy, square Steel Bar, threaded at the end, and provided with a large Malleable Nut which is securely



Nos. 8 AND 9 OUT-THROW DISC HARROWS

locked by means of a Spring Cotter, affording no possibility of the Discs coming loose. All Discs are made in our own Factory, which is a sufficient guarantee of their high quality.

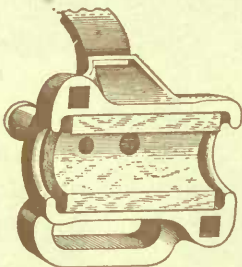


Showing Flexibility of Gangs.

The Cleaner Scrapers are made of Steel and each is provided with a Coil Spring, giving ample flexibility. All the Scrapers on each Gang are controlled by a convenient eccentric Foot Lever by means of which they can be applied with any pressure or locked entirely clear of the Discs.

Pressure Springs hold the inner end of Gangs to their work, and ensure perfect cultivation. They also prevent damage to the machine from striking obstructions and save both team and driver from sudden shock. The Springs are entirely independent in their action although both are controlled by one powerful Hand Lever. This Lever makes it an easy matter to apply any required pressure.

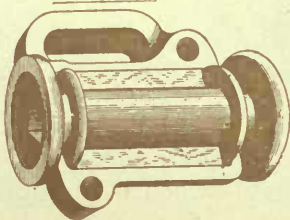
The Gangs are flexibly mounted on ends of the Arch and readily conform to uneven surfaces of the ground, as shown in cut. One end of either Gang may rise to pass an obstruction while the balance of the Harrow remains at work.



The Bearing surfaces are oil-soaked Hard Maple which have proven to be more durable than iron, run easier, and when finally they become worn can be easily and cheaply replaced.

Self-Closing Spring Oil Cups which cannot get lost, afford an easy means of oiling and prevent dirt and dust mingling with the oil and cutting out the Bearings.

Other Features are:—Low Hitch—no Side Draft—easily taken apart for storing—Weight Boxes on special orders.



The No. 8 has twelve, fourteen, or sixteen 16-in. Discs, also a one-horse size with eight 16-in. Discs and fitted with Shafts; the No. 9 has twelve, fourteen or sixteen 18-in. Discs.



MASSEY-HARRIS FORECARRIAGE

IN using a Disc Harrow in rough or scrubby land, this Forecarriage will be found a great advantage. All side draft, neck weight and whipping of the Pole are overcome, the draft is made much lighter, and turning corners becomes an easy matter, for, instead of *pushing* it around in an exceedingly awkward manner, your horses *pull* the machine around—it turns as easily as a wagon.

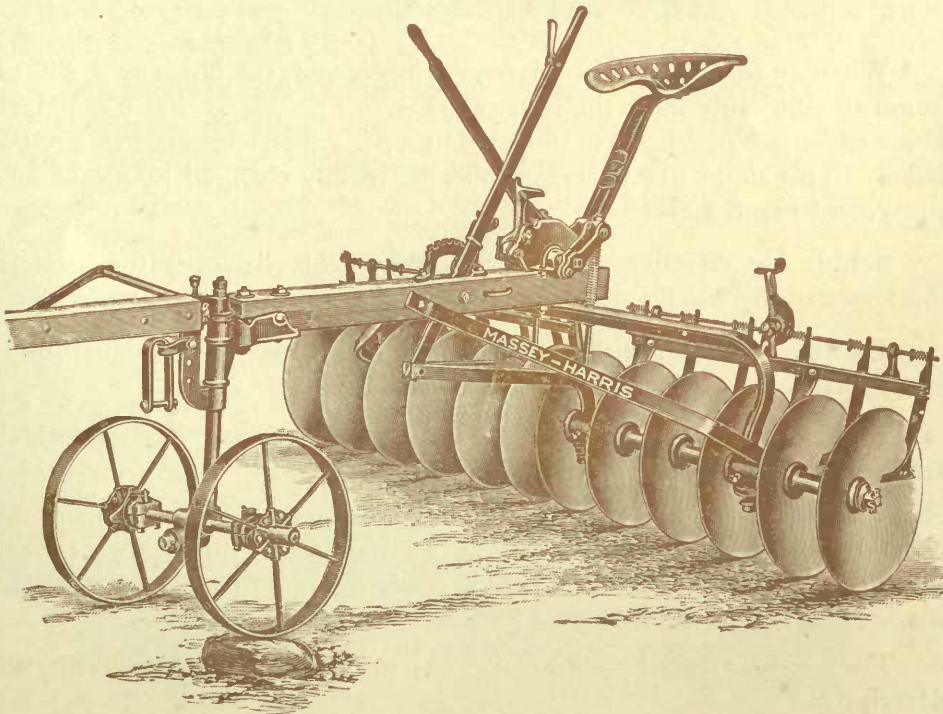
The Pivoted Axle allows Wheels to adapt themselves to uneven ground.

Hitch is adjustable to suit any team without affecting height of Pole.

Wheels have heavy oval-shaped Spokes of High Carbon Steel, Malleable Hubs, Removable Bushings with Screw Oil Plugs. Oil Chamber, and Dust-proof Sand Caps at inner end with oil hole.

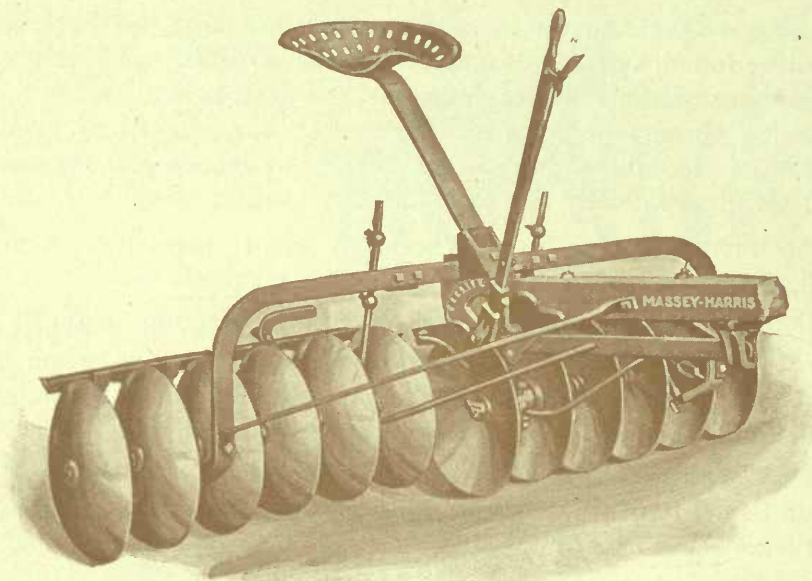
These Wheels will run further with less oil than any other.

Can be used with or without Pole. When Pole is used it can be moved from the centre to one side by simply loosening a set screw.





Nos. 1 AND 2 IN-THROW DISC HARROWS



When an In-Throw Disc Harrow is preferred, the No. 1 or 2 will be found to admirably meet the requirements. The No. 1 has 12 16-inch Discs and the No. 2 has 14 16-inch Discs; in other respects they are the same. The angle of the Gangs can be readily changed by means of a convenient Hand Lever.

Simple but effective Cleaner Scrapers enable the operator to clean the Discs and so always do good work in any soil.

Can be furnished with or without Weight Box; the Weight Box is easily attached and removed.

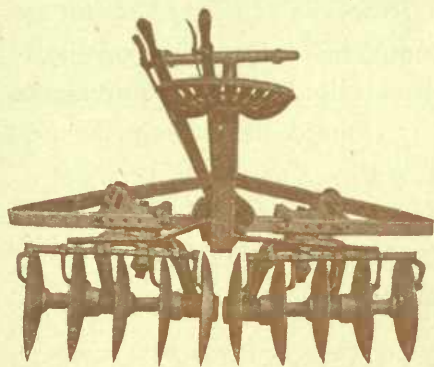
Light draft is secured by means of the easy-running Bearings which are as near dust-proof as it is possible to make them.

The Discs are made in our own factory and we know they are the best Discs it is possible to make. An automatic oil furnace heats every Disc to just the right temperature, ensuring a uniform hardness, the shape is correct and the edges keen.

Forecarriage can be supplied when ordered; see page 43 for full description.



ORCHARD DISC HARROW



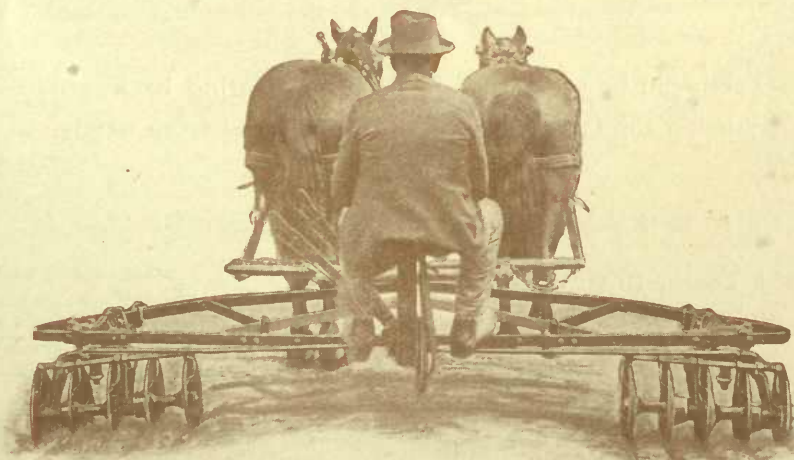
It is reversible—covers the roots or not, as you wish. The Gangs are interchangeable in their position on the Frame so as to throw the soil to or from the trees and vines.

It is adjustable to any depth, in the middle or at the ends, by means of Gang Hinges. Levers adjust each Gang separately to any angle, regulating the amount of dirt thrown.

In grape cultivation the Massey-Harris cultivates all of the ground. A Plow cannot do this. It is a good side-hill Harrow. The Steel Frame is in one piece. Strong Arches or Yokes support the Gangs; separate Bearing-Boxes take up the friction. We furnish as an extra attachment, a Steel Extension Frame. With it the operator can cultivate under the trees, close to the trunks, and the horses do not interfere with branches or injure the fruit. The Extension will save many times its price.

This Disc Harrow has ten 16-inch Discs. Extra Discs and Spools can be supplied for converting it into a Twelve-Disc size.

The Harrow with ten Discs cuts 5 ft. 6 in., and when the Long Extension Frame is used, the machine measures 10 ft. 1 in. in width.





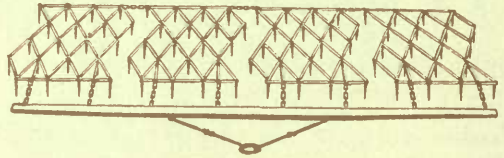
MASSEY-HARRIS DRAG HARROWS

ON every farm, one or more Drag Harrows can be used to advantage. The Massey-Harris line is so complete as to enable anyone to select the Harrow or Harrows best suited to his requirements, and by selecting the Massey-Harris he is assured of getting the best Harrows that money can buy.

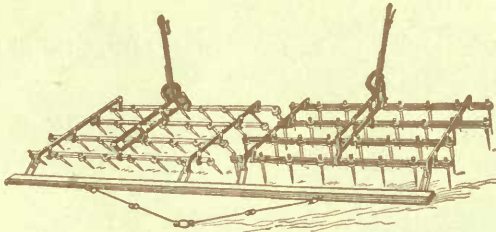
No. 6 SPIKE-TOOTH DRAG HARROW—5 Sizes.

Made of Steel in Sections of 20 Teeth.

- 2 Sec., 40 Teeth, 6 ft. 6 in. wide.
- 3 Sec., 60 Teeth, 10 ft. wide.
- 4 Sec., 80 Teeth, 13 ft. 6 in. wide.
- 5 Sec., 100 Teeth, 17 ft. wide.
- 6 Sec., 120 Teeth, 20 ft. 6 in. wide.



No. 8 SPIKE-TOOTH LEVER HARROW—3 Sizes.



- 2 Sec., 64 Teeth, 9 ft. 8 in. wide.
- 3 Sec., 96 Teeth, 14 ft. 6 in. wide.
- 4 Sec., 128 Teeth, 19 ft. 4 in. wide.

The Teeth can be set perpendicularly or slanting backwards or forwards. By using the Lever the Teeth can be freed from weeds.

No. 10 SPIKE-TOOTH FLEXIBLE HARROW—3 Sizes

- 9 Sec., 54 Teeth, 10 ft. 9 in. wide.
- 11 Sec., 66 Teeth, 13 ft. wide.
- 13 Sec., 78 Teeth, 15 ft. 3 in. wide.



This Harrow excels on rough ground or land with furrows or ridges. It is flexible but very strongly built.



MASSEY-HARRIS DRAG HARROWS

SPRING-TOOTH HARROWS—3 Sizes.

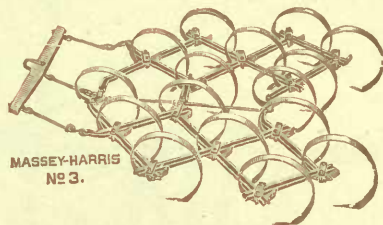
Made with either Steel or Wood Frames. The Steel Teeth are made by our own special process.

No. 1 Steel Frame has 12 Teeth.

No. 3 Steel Frame has 16 Teeth.

No. 4 Steel Frame has 18 Teeth.

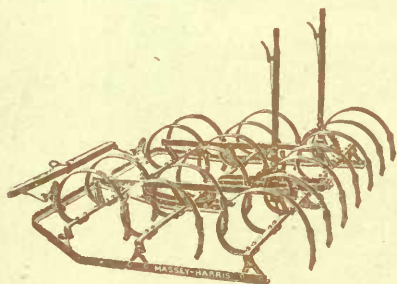
Wood Frame Spring-Tooth Harrows are made in two sizes; 16 and 18 Teeth.



No. 14 SPRING-TOOTH LEVER HARROW.

Three Sizes—10, 15 or 17 Teeth.

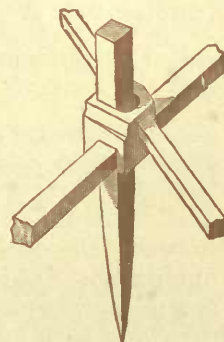
The 10-Tooth size is in one Section and can be furnished with Handles for Vineyard work when so ordered.



No. 15 SPIKE-TOOTH HARROW.

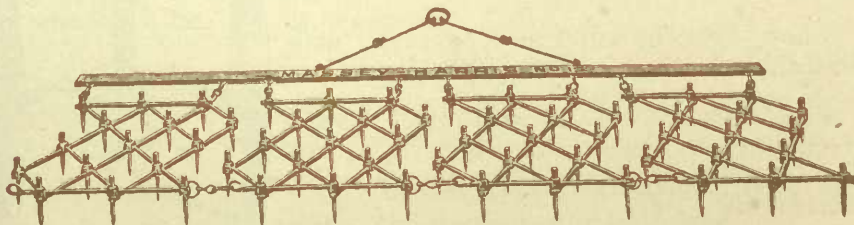
Bulls are $\frac{3}{8}$ in. Square Steel—Cross Bars are $\frac{1}{2}$ in. Square Steel.

The Square Tapered Steel Teeth are driven through the Malleable Clips, as shown herewith, thus retaining the full strength of Bulls and Cross Bars—the simplest, strongest and most reliable form of fastening possible.



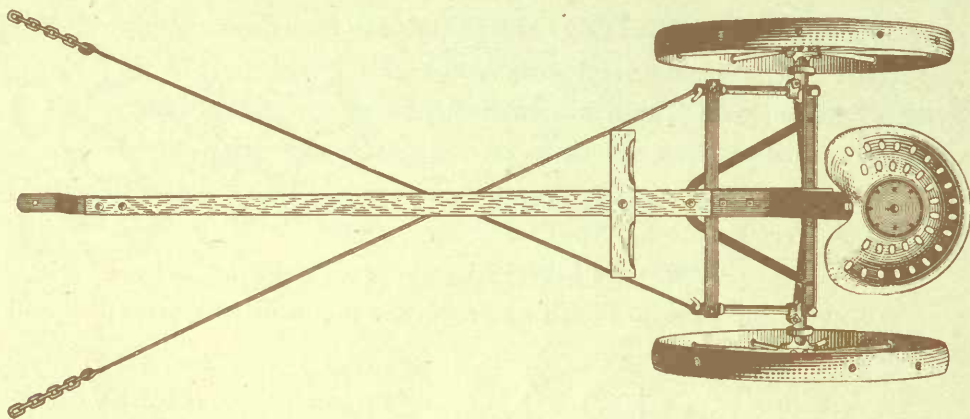
Furnished complete with Draw Bar and with Connecting Chains between the Sections in the following sizes:

30 Teeth, 2 Sections—cuts 6 ft.	60 Teeth, 4 Sections—cuts 12 ft.
45 Teeth, 3 Sections—cuts 9 ft.	75 Teeth, 5 Sections—cuts 15 ft.
90 Teeth, 6 Sections—cuts 18 ft.	





MASSEY-HARRIS HARROW CART



THE use of this Harrow Cart enables the driver to ride while harrowing and adds but little to the draft, as the Wheels are high and broad-faced.

It is the simplest and most substantial Harrow Cart on the market.

The Frame is practically all Steel and has been proved to be amply strong.

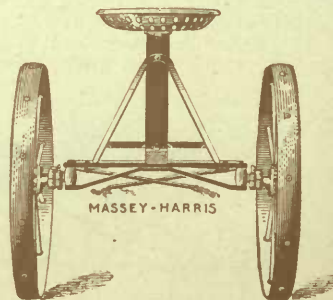
The Steel Axles are of good size and can be depended on not to bend or break.

The Spring Seat will be appreciated by the driver and is so placed that the Cart always balances perfectly.

Wheels are high and have Wide Tires—they run easily in soft ground and keep you up above the dust. They are the strongest Wheels ever put on an Attachment of this kind—each has twelve large oval Spokes riveted into the Tire, and the inner end firmly clamped between the two parts of the Malleable Hub, the Hub extending well out on the Spokes. Wheels have Removable Sleeves. Outer end of Sleeve has Screw Oil Plug and the inner end is provided with a Collar which turns in a Dust-Proof Sand Cap with oil hole.

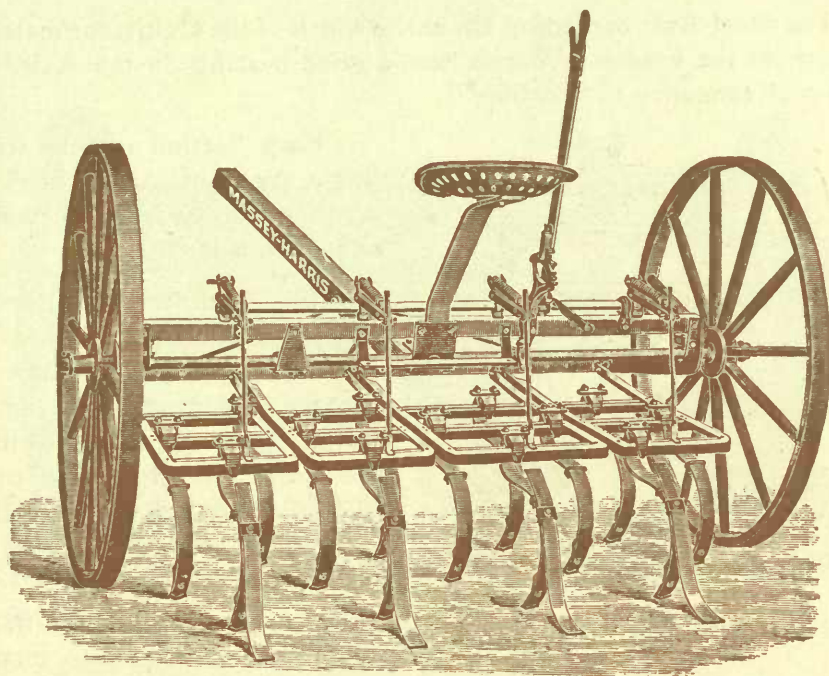
These Wheels will run longer and with less oil than any other style of Wheel.

The Cross Rods control the Wheels perfectly at all times. No Foot Trip to operate—absolutely automatic control under all conditions.





MASSEY-HARRIS No. 7 CULTIVATOR



A GREAT weed killer, and it is much more than that, it thoroughly pulverizes the soil, making it an easy matter for the hair-like roots to get through and increasing the amount of surface on which the plant can feed, at the same time giving the soil a greater capacity for holding moisture and reducing the loss by evaporation. It also aerates the soil, making the mineral matter more soluble and assisting in the decomposition of organic matter.

Much of the success of this Cultivator is due to the method of applying the Spring Pressure—the pressure remaining the same when passing knolls or furrows and ensuring uniformity in the depth of cultivation, whether it be deep or shallow.

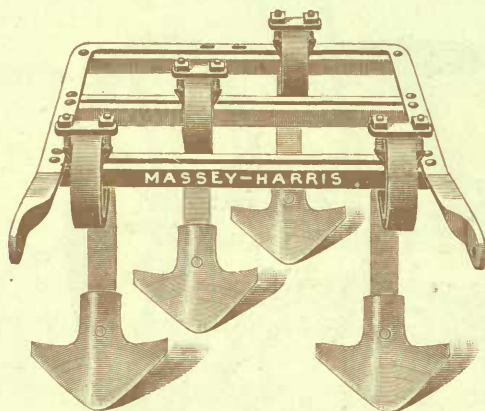
The Cultivator is nearly all Steel, high carbon Angle Steel forming the greater part of the Frame, and the Gangs are strongly braced as can be seen by referring to the illustration.

The Wheels are extra strong, are of large diameter and have broad face, contributing greatly to the easy running of the machine.



MASSEY-HARRIS No. 7 CULTIVATOR

The Steel Axle extending the entire width of the Cultivator materially strengthens the Frame. Wheels have a good bearing on the Axle, overcoming all tendency to "wobble."



Wide Points can be furnished for Shallow Cultivation.

Each Section is bent from a single piece of Angle Steel with Angle Steel Cross Bars securely riveted in place.

The Tempered Spring Steel Teeth are attached to the Cross Bars by a simple, adjustable connection, which makes it an easy matter to change angle or pitch of the Teeth with reference to the surface of the ground, and they can also be moved sideways and set at any point on the Cross Bars.

The Teeth are oil-tempered, making them very strong and flexible, and each Tooth is re-inforced by a Spring Steel Helper which increases the flexibility and prevents breakage when striking a stone or root.

The regular Points are reversible, giving double wear.

For certain kinds of weeds the Wide Points will be found advisable. These can be supplied in three different widths: 4 in., 6 in. and 7½ in.

The Pole is adjustable for different sized horses and can be quickly removed for storing, or changed from the centre to one side for using three horses.

An Adjustable Clevis with four height adjustments is provided, enabling the operator to hitch the team in such manner as to entirely overcome neck weight, also allowing for different sized horses.

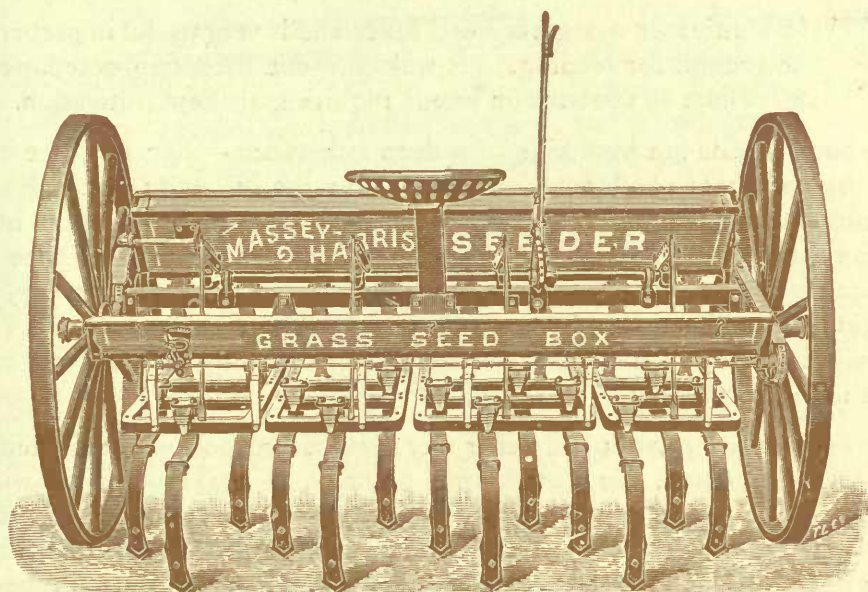
Either a Two-Horse or a combined Two and Three-Horse Double-tree can be supplied.

The Seat is re-inforced Pressed Steel on a tempered Steel Seat Spring which fits into a Steel Holder or Socket—can be removed in an instant.

Made in three sizes: 10 Teeth, 4 ft. wide; 13 Teeth, 5 ft. 4 in. wide; and 17 Teeth, 7 ft. wide.



SEEDER ATTACHMENT, No. 7 CULTIVATOR



While the sowing of grain by means of Drills has largely supplanted the broadcast method, there is still considerable seed sown in this way, and for those who wish to sow their seed in this manner, and to supply the demand for an inexpensive means of broadcast sowing, we manufacture a Broadcast Seeder Attachment for use with the No. 7 Spring-Tooth Cultivator described on preceding pages.

The Attachment consists of a Grain Box which can be readily attached and removed. It is fitted with Massey-Harris Feed Runs which are famous for uniformity of sowing without crushing or bruising the seed and has Pressed Steel Scattering Tubes.

A Grass Seed Attachment can also be supplied.

An Index Plate on each Box enables the operator to adjust the Feed Runs to any desired quantity. Raising the Teeth out of the ground stops the feed ; lowering them starts the seeding.

Note that the Teeth are in three rows, giving good clearance. The Teeth are carefully tempered and are very strong.



No. 10 STIFF-TOOTH CULTIVATOR

THIS Cultivator is a great weed killer and is very useful in preparing the ground for seeding. It will take out the deep-rooted weeds and is just as effective on weeds requiring shallow cultivation.

Some weeds are best killed by deep cultivation—they must be torn out by the roots and left to be dried out by the sun and wind. By determined and persistent action with this Cultivator, quack grass and other deep-rooted weed pests may be gotten rid of, and at the same time the ground is put in first-class shape for seeding. By adjusting the angle or suction of the Teeth and by applying pressure through the medium of the Pressure Springs, the Teeth may be caused to enter hard soil and cultivate it thoroughly.

For cutting thistles and other weed which are best exterminated by shallow cultivation, we can supply points 5, 7 or 11 inches in width. These can be set to skim just under the surface, and by keeping the tops cut down, the weeds are soon smothered out. The Wide Points have just the right set to work with the minimum of draft and to leave the ground level.

This Cultivator holds the Wide Points rigidly to their work unless an obstruction is met with which might cause damage, when the Safety Spring Trip operates and prevents breakage.

In a Cultivator of this kind, strength is a very important factor and the Massey-Harris will be found to meet every requirement in this line. The Main Frame is formed of a single piece of heavy Angle Steel with diagonal braces running from each side

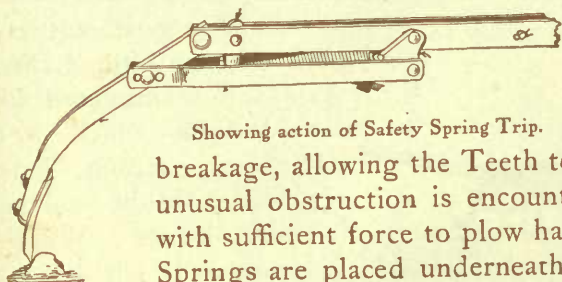
forward to the centre, thus distributing the draft evenly and preventing any tendency to spring away under a heavy pull.



The heavy Steel Axle extends the full width of the Cultivator and a Truss Rod still further adds strength to the Frame.



No. 10 STIFF-TOOTH CULTIVATOR



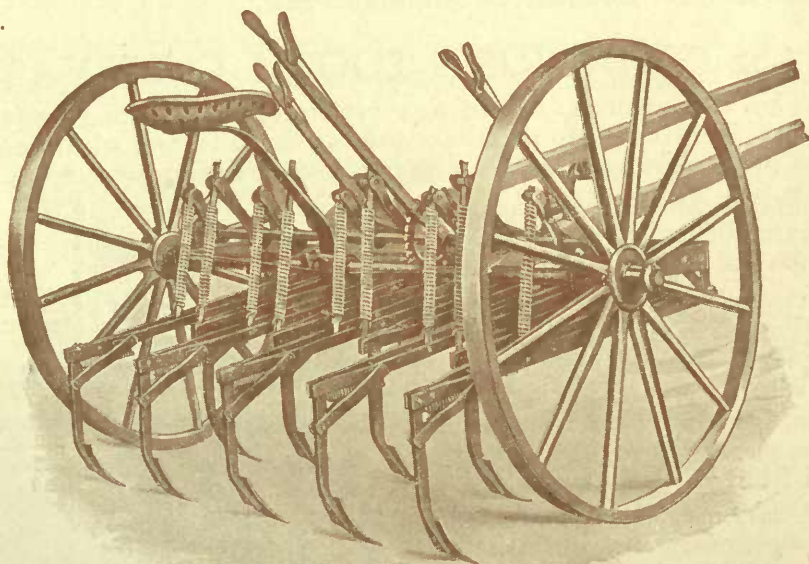
Showing action of Safety Spring Trip.

Double Drag Bars give a firm support to the Teeth. Spring Trips are provided as a safeguard against

breakage, allowing the Teeth to move backward in case any unusual obstruction is encountered, but holding the Teeth with sufficient force to plow hard soil to a good depth. The Springs are placed underneath the Drag Bars and are protected by the double braces running to the Teeth.

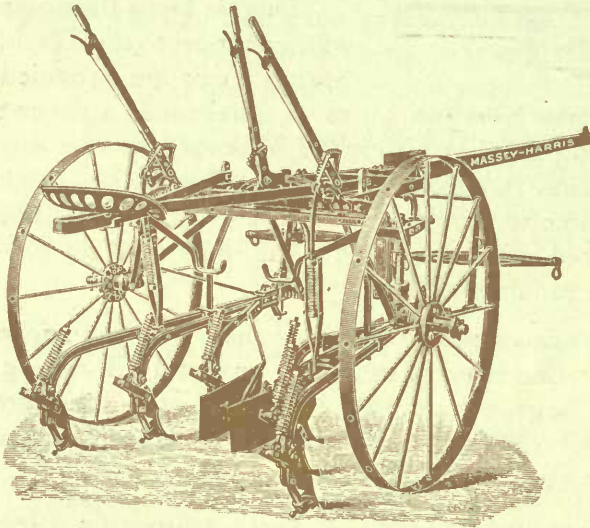
One Lever controls the raising and lowering of the Teeth and applying of pressure, and its operation is made easy by a powerful Lift Spring. This Lever is mounted on a large, square Steel Shaft, and Steel Arms are used to connect the Pressure Springs. The Pressure Springs ensure uniform depth of cultivation regardless of uneven ground.

This Cultivator is made in one size only—9 Teeth, cultivating 5 feet wide. It is equipped with two Poles and Three-Horse Hitch. The Poles have Lever adjustment to allow levelling the machine with any-sized horses.





NEW No. 5 CORN CULTIVATOR



Built almost entirely of Steel; has high arched Axle and is mounted on low Wheels which are exceedingly strong, have re-inforced Hubs and removable Boxes. Wheels are mounted on Pivot Axles which are connected to Foot Levers enabling the driver to swing the Wheels to either side. Gangs are of I-Beam Steel and have a simple, adjustable connection to Frame. Teeth are double pointed

and reversible; each has a Safety Spring Trip. Side Levers apply pressure and raise Gangs; Centre Lever adjusts distance between Gangs. Adjustable Steel Doubletrees, Adjustable Seat.

MASSEY-HARRIS 9-TOOTH CULTIVATOR

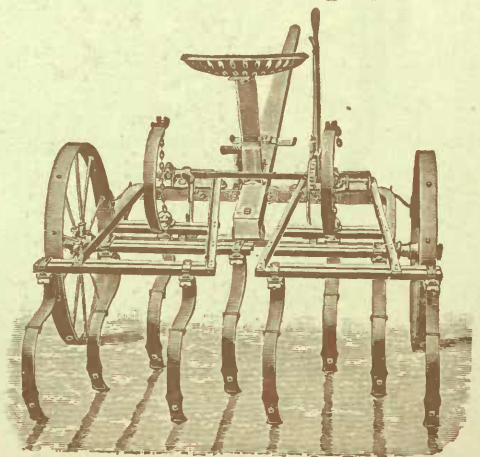
This Cultivator is adapted to a variety of work, being useful as an ordinary Field Cultivator and for use in vineyards, and with the Attachments that can be supplied, can be used for furrowing or ridging.

Teeth can be set so as to cultivate behind the Wheels. Frame and Sections are Angle Steel. Teeth are of Steel with reversible Steel Points and attached so as to be readily adjustable.

Wheels are 29 in. high with $2\frac{1}{2}$ in. face and are on Extension Axles, permitting of change in the tread from 4 ft. to 4 ft. 10 in.

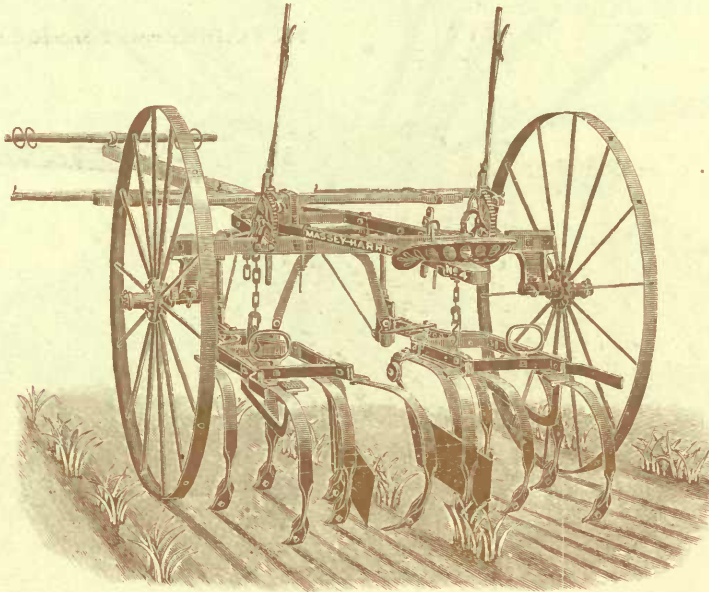
One Lever raises and lowers both Sections. Its operation is made easy by a heavy Coil Spring.

Extension Frame can be furnished for Orchard Cultivation.





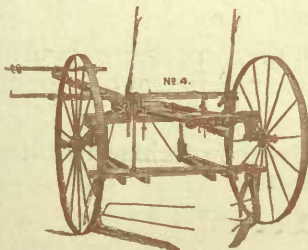
MASSEY-HARRIS No. 4 CORN CULTIVATOR



This is not only a first-class Corn Cultivator, but can be furnished with Attachments for converting it into a Field Cultivator or a Bean Harvester.

It has a strong Steel Frame, Extension Axles to allow the tread to be changed to different width rows and can be equipped with Steel or Wood Wheels to suit the purchaser.

The Sections work independently of each other and are guided by the feet of the operator. The Sections can be raised either by the Hand Levers or Foot Levers, the Foot Lift being especially convenient when turning at the end of the row.

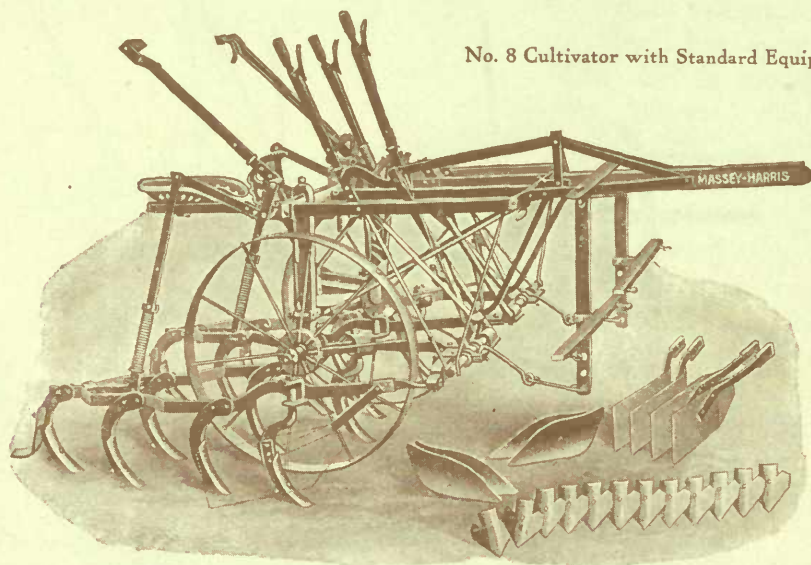


As a Bean Harvester.

The Teeth are of Spring Steel with Reversible Steel Points. When cultivating small corn, Shields or Fenders protect the plants. The Seat is adjustable forward and back to balance the Cultivator with a heavy or light driver.



No. 8 TWO-ROW CORN CULTIVATOR



No. 8 Cultivator with Standard Equipment.

THIS Cultivator is a great time and labor saver, for it successfully cultivates two rows at a time, thus reducing labor one-half, and expense in the same proportion.

It is easily guided in crooked rows by the feet of the operator, and either gang may be easily adjusted for widening or narrowing rows by a convenient Hand Lever. By simply moving this Lever, the Gang is adjusted for rows from 28 to 44 inches apart. Nothing could be simpler or more effective than this adjustment for rows of irregular width.

The Cultivator is built almost entirely of Steel, making a strong but light machine. The Steel Wheels have Malleable Hubs fitted with Removable Bushings or Sleeves.

The width of tread is adjustable—the Wheels may be adjusted from 32 to 52 inches apart.

The Gangs are easily raised and any required pressure readily applied by the improved Hand Levers which have reverse motion—pull back to raise the Gangs.

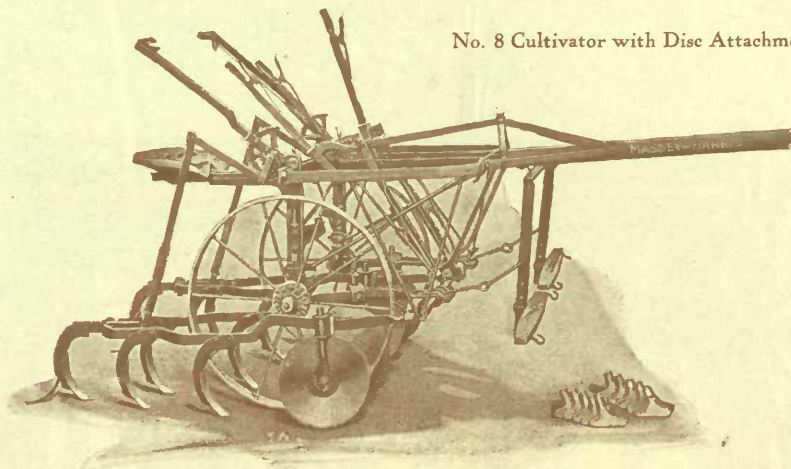
The Centre Lever enables the operator to level the machine or tilt it forward and cause the front Teeth to penetrate deeper.

The high Arch gives plenty of clearance in tall corn.

Low Hitch takes weight from horses' necks.



No. 8 TWO-ROW CORN CULTIVATOR



No. 8 Cultivator with Disc Attachment.

The Seat is adjustable, both up and down and forward and back, enabling the driver to balance the machine and also to arrange the Seat in the most convenient and comfortable position.

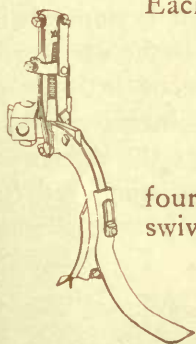
Each Cultivator is furnished with the following equipment:

14 Reversible Steel Points.

14 5-in. Thistle Cutters.

2 Pairs Hillers.

2 Pairs Shields or Fenders.



Spring Trip.

Furnished on Special Orders.

All the Standards for Teeth have Break Pins, and the four front ones may be adjusted up and down and may be swiveled as desired by simply loosening a Set Screw. Shields are adjustable in height and are pivoted so that they may pass over clods and other obstructions.

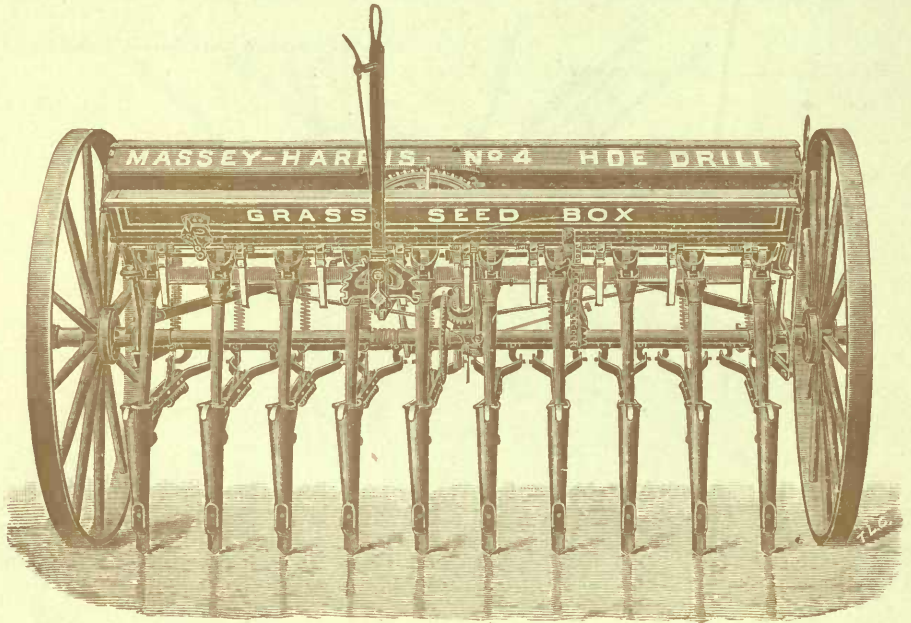
DISC ATTACHMENT

This Attachment will be found very useful in the cultivation of corn and other row crops with the No. 8 Corn Cultivator. It consists of 4 Discs which replace the forward Shovel Standards and the Fenders.

These Discs are a great advantage in cultivating small corn and other crops in rows, as they can be set to run very close to the plant, and yet do not penetrate deep enough to disturb the roots, thus doing as effective work as can be done with a Hoe, and with a great saving of time and labor.



MASSEY-HARRIS No. 4 HOE DRILL

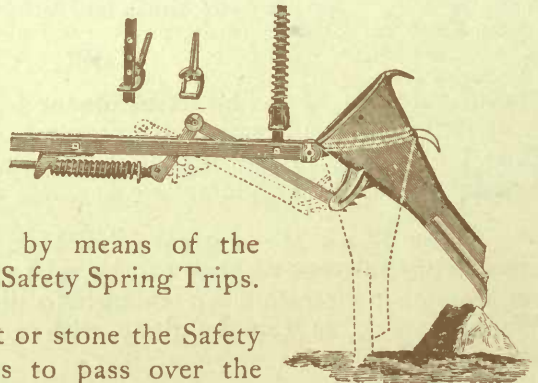


SOWING the seed is a very important matter, as on it depends in great measure the success or failure of the crop. If the seeding is not properly done, perfect weather conditions are of little help, while on the other hand, right sowing means a largely increased yield under favorable conditions, and, in a bad year may mean the difference between success and failure. Massey-Harris Drills have been used for many years by thousands of progressive farmers and have proven beyond question that they have no equal in Canada.

The Massey-Harris Hoe Drill has a strong Steel Frame which holds all working parts in proper relation, ensuring uniformly satisfactory working at all times.

Seed furrows are opened by means of the Hoes which are equipped with Safety Spring Trips.

When a Hoe strikes a root or stone the Safety Spring allows it to yield so as to pass over the



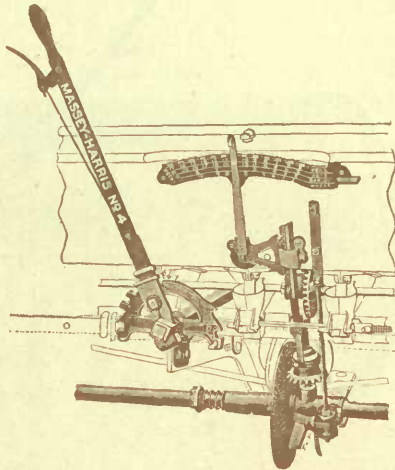


MASSEY-HARRIS No. 4 HOE DRILL

obstacle without breakage, and forces its return to working position as soon as the obstruction is passed.

Hoes can be set zig-zag by means of a Lever at end of Hopper.

The Massey-Harris Force Feed Run sows fine or coarse grain uniformly, positively and continuously, without injuring the seed. The top is wide and does not clog; there are two passages, one for fine grain and one for coarse; a revolving Disc carries the grain down through the Run into the Conductor, the quantity being governed by the speed of the Disc. A Spring Index Lever controls the Multiple Gear Drive, giving thirteen changes of feed with each side of the Feed Run.



One Lever controls the raising and lowering of the Hoes, applies the pressure, and starts and stops the feed. This Lever is conveniently located at the rear of the Drill and is of good length, making it an easy matter to raise the Hoes or to apply any required pressure.

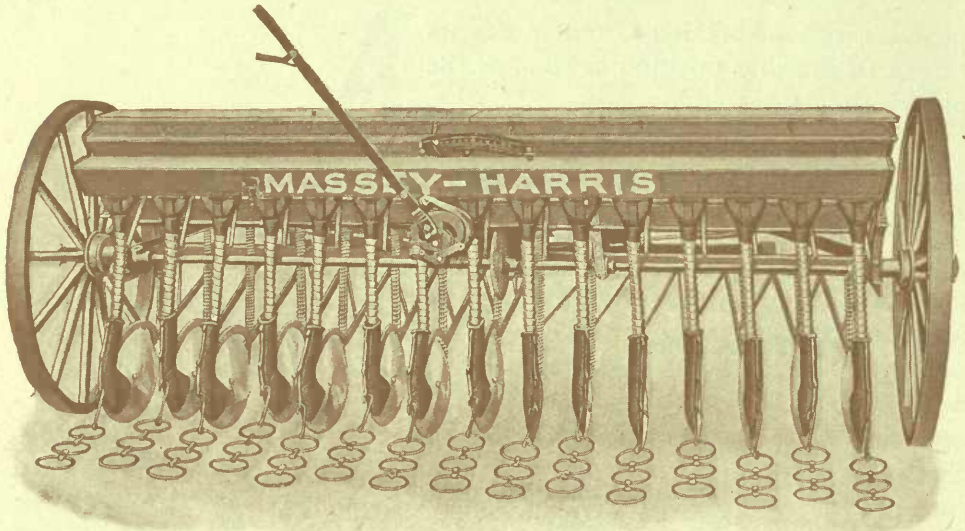
Extra pressure can be secured by raising the buckles on which the Pressure Springs rest.

This Drill is made in four sizes: 10, 11, 13 or 15 Hoes. Any size can be equipped with Grass Seed Box which broadcasts in rear of the machine.

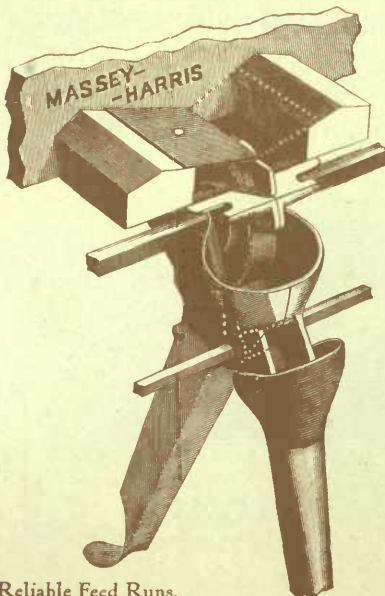




MASSEY-HARRIS No. 5 DISC DRILL



THE Massey-Harris No. 5 Disc Drill will be found a most efficient implement in weedy or trashy ground, as the Discs roll over or cut through weeds, roots, etc., without catching or dragging trash, and are not liable to clog.



Reliable Feed Runs.

In general construction it is very similar to the No. 4 Hoe Drill, having the same thoroughly-braced, strongly-trussed, Angle Steel Frame, the Positive Multiple Gear Disc Drive with thirteen changes of speed, and the Massey-Harris Force Feed Runs which give universal satisfaction with any and all kinds of grain.

One Lever at the rear of the Drill controls the raising and lowering of the Discs and applies pressure through the medium of the Pressure Springs.

Raising the Discs stops the feed,—lowering them starts the seeding automatically.



MASSEY-HARRIS No. 5 DISC DRILL

IMPROVED PRESSED STEEL BOOT.

The Disc Boot is made of Pressed Steel, lighter and stronger than the usual Cast-Iron Boot, and has the lower part separate so that if it becomes worn from long use in hard or gritty soil it can be replaced at small expense. Owing to the shape of the Drag Bars and Steel Boot, there is good clearance between the Discs, which is a great advantage in trashy land.

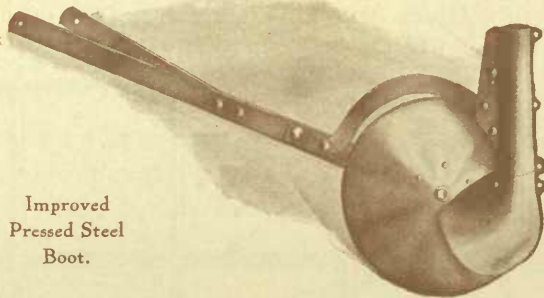
The New Boot has a low down opening which distributes the seed evenly on the bottom of the wide furrow opened by the Discs. The seeds are all planted at a uniform depth and will all germinate at the same time, ensuring a uniform crop.

The Disc Bearings are constructed so as to give a maximum of wearing surface and are chilled. Particular attention has been given to make these Bearings dust-proof, being provided with patented Steel Dust Ring. This is beyond question the most satisfactory Disc Bearing made.

The Boot acts as a scraper on the convex side of the Disc. The Scraper on concave side has a Spring Shank or Arm, and, when not required, it can be quickly swung clear of the Discs.

The Grain Tubes are made of Spring Ribbon Steel in the form of a spiral. They are strong, very flexible and will give lasting satisfaction.

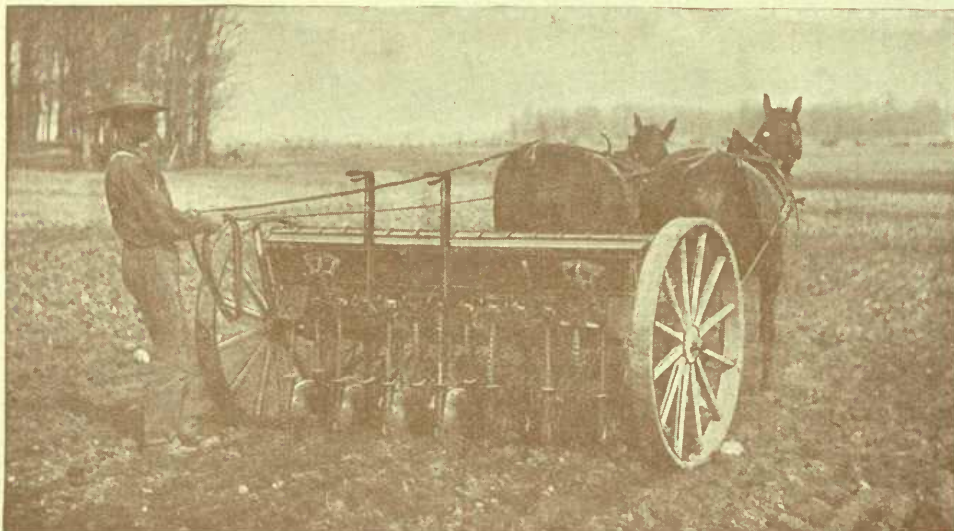
This Drill is made in three sizes:—11, 13 or 15 Discs, any of which can be fitted with Grass Seed Box.



Improved
Pressed Steel
Boot.



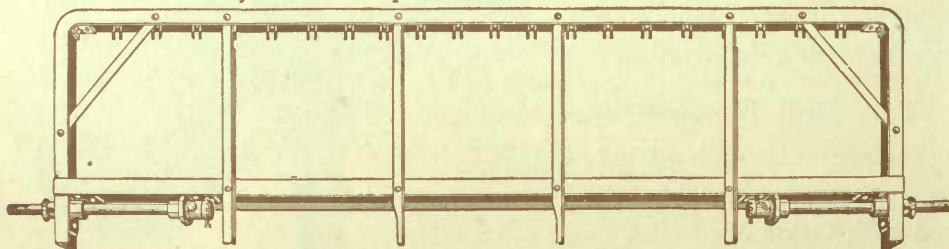
MASSEY-HARRIS NEW No. 11 DRILLS SINGLE DISCS OR SHOES.



FOR those preferring a Drill with 6 in. spacing between the rows, we can supply the Massey-Harris No. 11 Drill which can be fitted with Single Discs or with Shoes, the two styles of Furrow Openers being interchangeable.

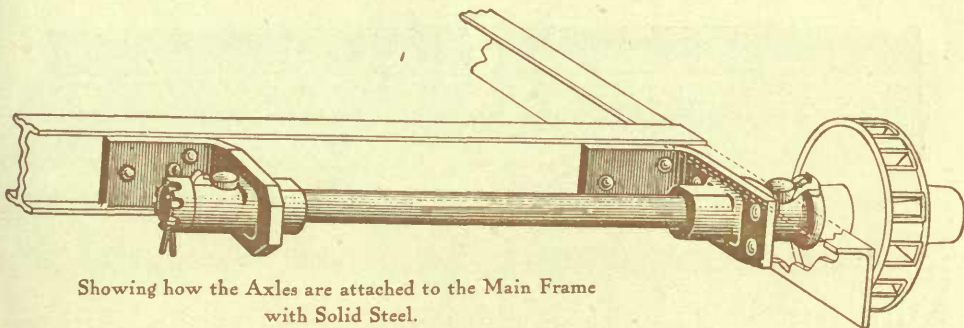
One of the most essential parts of a Grain Drill is the Frame or Foundation upon which the working parts of the grain distribution are built. The best principle of feeding the grain to the Distributors might easily be rendered very imperfect and unsatisfactory by a carelessly built or unmechanical foundation.

The Frame of the Massey-Harris Drill will be found equal to any test that may be put upon it. The illustration shows the general construction of this important part of the machine as well as some of the details. A special heavy I-Beam of great strength and made from special rolls runs the entire width of the Drill. To this is attached a Frame of High Carbon Angle Steel which is trussed and braced wherever necessary so that it will always remain square and true.





MASSEY-HARRIS NEW No. 11 DRILLS



Showing how the Axles are attached to the Main Frame
with Solid Steel.

The Axles are attached by means of Steel Brackets and turn in Self-Aligning Bearings. They are set at an angle so as to give the Wheels just the right "pitch" and "gather" to run as light as possible.

The Wheels are 46 inches in diameter, and are built with extra heavy Spokes. Wide Hubs with long bearing on the Axle give great steadiness. The Tires are of Steel, 4 inches wide, which keeps the Wheels from sinking, even in soft ground. Both Wheels are drivers.

The Feed Shaft is divided in the middle, thus enabling the operator to shut off one-half the Drill when desired. Two Levers are provided, each controlling one-half the Drill.

The Hand Piece of the Levers is made of Solid Steel pressed into the proper shape to make them easy of operation.

Reliable Feed Runs enable the operator to sow fine or coarse grain in any desired quantity. The Feed Shaft is ample in size and is driven direct from the Axle by Gears.

The quantity of grain sown is easily regulated by moving a Lever on an Index Plate which shows the exact amount sown per acre.



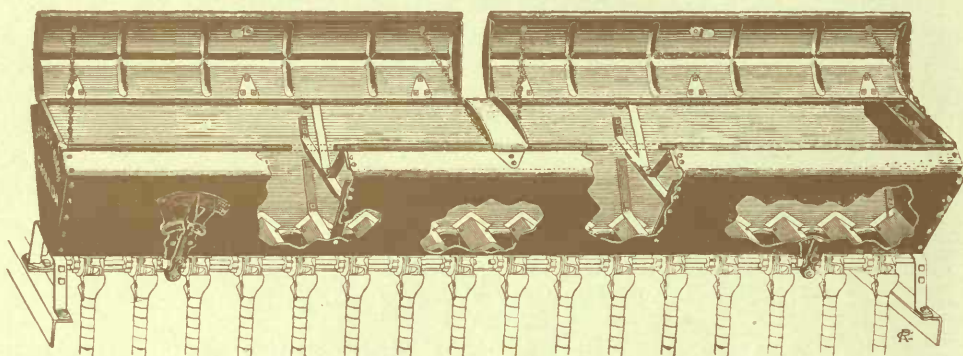
Pressed Steel
Hand Grip
on Lever.

After the grain has been accurately passed through the Feed Runs it is carried to the Furrow Openers by Steel Ribbon Spiral Grain Tubes.

The Discs and Boots are of improved shape and especially adapted to sowing in early spring, and in trashy land. Double Drag Bars hold the Discs securely in line and Pressure Springs hold them to their work



MASSEY-HARRIS NEW No. 11 DRILLS



The Re-inforced Steel Grain Box.

The greatest improvement in Grain Drills in many years is the STEEL GRAIN BOX which places this already popular Drill in a class by itself.

Every detail in the Design and Construction of this Box has been worked out with the greatest care, and has made necessary a large outlay for Punches, Jigs, Dies, etc., for cutting and punching the immense sheets of Steel and forming them into shape.

The Bottom, Sides and Hips are formed from a single piece of heavy Sheet Steel. The Pressed Steel Ends are securely riveted in place, then the edges are rolled around a Steel Bar extending entirely around the top edge of the Box. Angle and Flat Steel Truss Braces inside the Box, brace the Sides and give a solid mounting for the Raising Levers. The 14 and 16 Run Drills have two of the Braces as shown in cut—the larger sizes have four of these Braces, making an exceptionally rigid construction, so necessary to the proper working of the Drill.

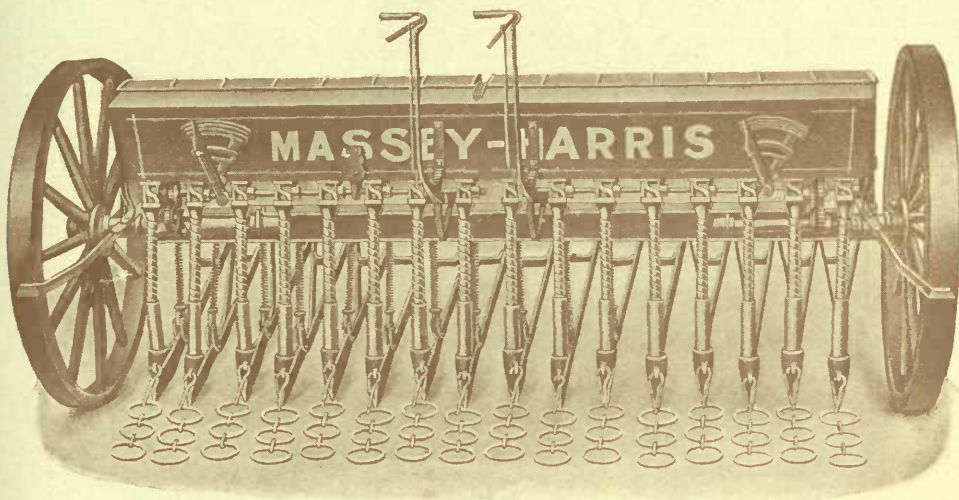
The Cover of the Box is in two parts, each of which is pressed out of a single piece of Steel, ribbed so as to give the necessary stiffness. As the Lids fit down over a raised edge on the Grain Box there is no chance for rain to leak in.

At one end, inside of the Grain Box is a convenient Tool Box.

This is the largest Grain Box on any Drill, thus avoiding the necessity of re-filling
so frequently



MASSEY-HARRIS NEW No. 11 DRILLS

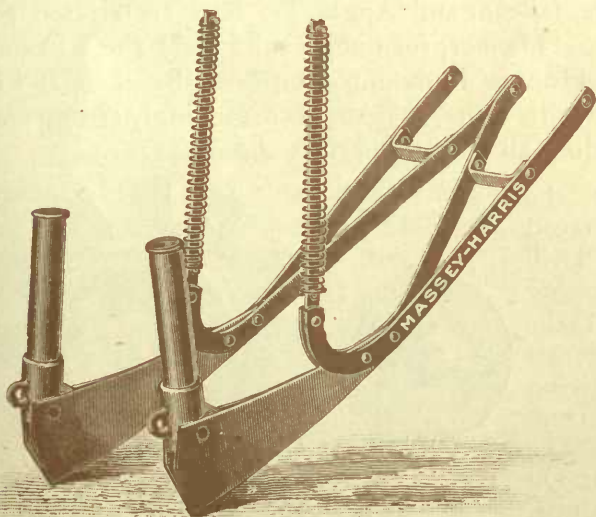


SHOE FURROW OPENERS.

Shoe Drills are preferred by many for use in well-cultivated, sandy or loamy soil.

Massey-Harris Shoes as used on the No. 11 Drill are of high-grade Steel and of proper shape to do perfect work. The Double Drag Bars prevent them sagging to either side and hold the cutting edge firm in the ground, making a clean-cut seed furrow in which the grain is deposited. A new feature is the method of attaching the Pressure Spring

Rod, as shown in illustration, applying the pressure at a point well back on the Shoes, holding them to their work under all conditions, while at the same time giving ample flexibility to allow each one to conform independently to uneven surfaces.



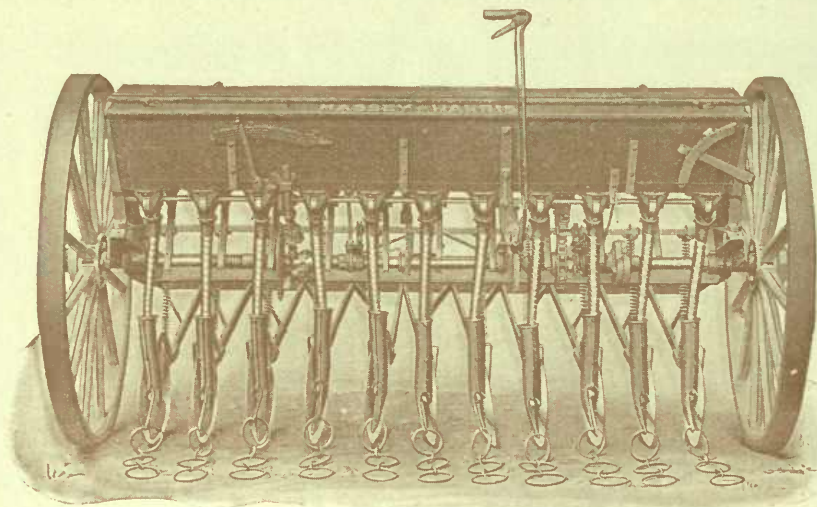
Made in three sizes :

12, 14 or 16 Runs,

any of which can be supplied with Grass Attachment when ordered.



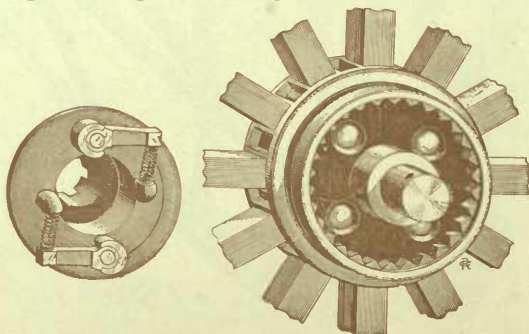
NEW GRAIN AND FERTILIZER DRILLS



No. 12 Disc Drill.

THE substitution of Steel for Cast and Malleable Iron has resulted in a machine which is much lighter than other Drills of this type, and, at the same time stronger. The Frame is made of high-grade Angle Steel and has a centre Cross Bar of high carbon I-Beam. The angle is one continuous piece riveted to the I-Beam, and two Angle Steel Bars tie the Frame to the I-Beam and support the continuous Steel Axle as well. The Frame, I-Beam and Angle Tie Bars are riveted together in the most substantial manner, forming a solid Steel Truss Frame for the foundation. The Hopper is mounted on Steel Brackets and is fastened to the Frame by two tie-bolts, making an exceedingly strong and rigid construction and holding all parts in perfect alignment.

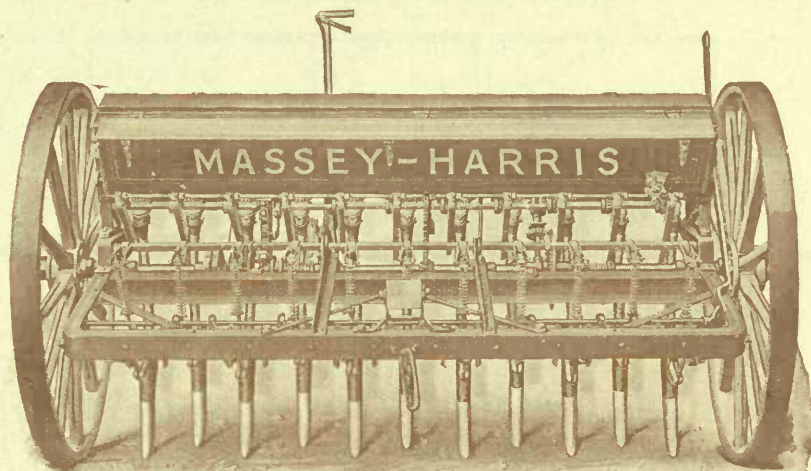
The light weight of the Drill, the high, broad-faced Wheels, the fact that the Drill is perfectly balanced, carrying the Hopper directly over the Axle, the Bearings being machined out, the Tie Rods giving perfect alignment—these combine to ensure light draft. The Axle Bearings have large Oil Chambers with Spring Oil Cups.



Positive Drive from both Wheels.



NEW GRAIN AND FERTILIZER DRILLS



No. 14 Hoe Drill.

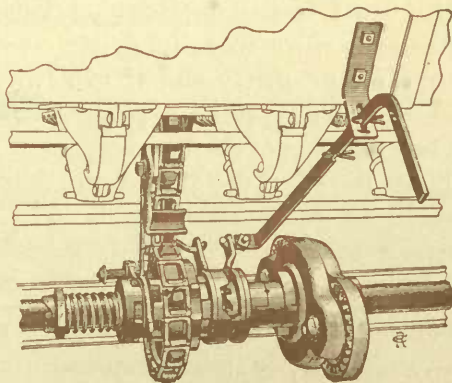
Both Wheels are drivers, transmitting power to the Axle by means of Ratchets outside the Wheels, giving ample traction under all conditions.

Easy change of feed—no extra parts required—this is a feature which will be greatly appreciated by the operator.

The drive for Grain Runs is the same as used for years on several of our Grain Drills, consisting of a Multiple Gear Disc on the Main Axle and a sliding Pinion which, by means of an Index Lever, can be instantly put in mesh with any of the thirteen rows of Teeth in the Gear Disc.

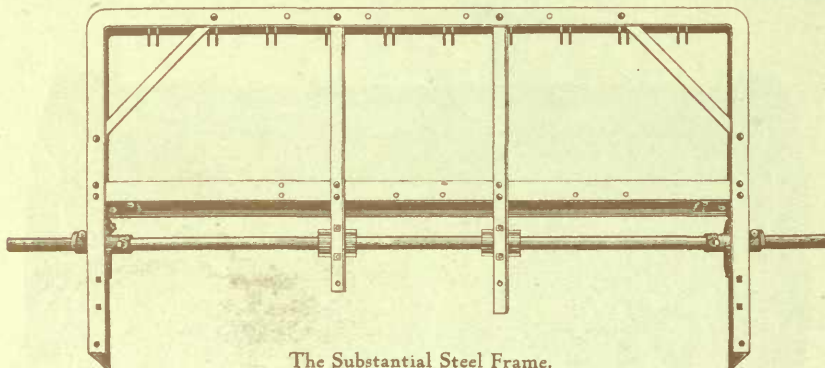
The Fertilizer Feed Run is our well-known Star type Force Feed, consisting of Star Wheels revolving in the bottom of the Fertilizer Box.

Each feed opening has an Adjustable Gate, and by means of an Index Lever on the outside of the Hopper the operator can *instantly change the feed openings* and regulate the amount of fertilizer through a range of sixteen different quantities while the machine is in operation; and not only is the operator enabled to adjust the quantity while at work but can also stop and start the





NEW GRAIN AND FERTILIZER DRILLS



The Substantial Steel Frame.

Fertilizer Feed independent of the Grain Runs by means of a convenient Hand Lever.

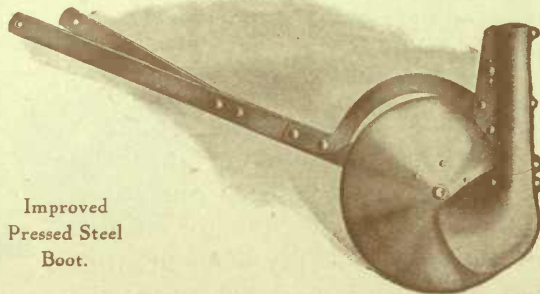
When a greater range of quantity is desired than can be secured by this Index Lever, four changes of speed may be secured by means of the Adjustable Drive, making 64 changes of feed. These changes are quickly made and there are no extra parts required. Special Star Wheels can be supplied when it is desired to sow an unusually large amount per acre.

The raising and lowering of the Hoes or Discs throws the entire machine out and in gear.

The purchaser of this Drill has the choice of Hoes or Discs.

IMPROVED STEEL BOOT FOR DISCS ON No. 12 DRILL.

The Disc Boot is made of Pressed Steel, lighter and stronger than the usual Cast-Iron Boot, and has the lower part separate so that if it becomes worn from long use in sand or gritty soil it can be replaced at small expense. Owing to the shape of the Drag Bars and the Steel Boot there is good clearance between the Discs, which is a great advantage in trashy land. This Boot is an exclusive Massey-Harris Feature



Improved
Pressed Steel
Boot.



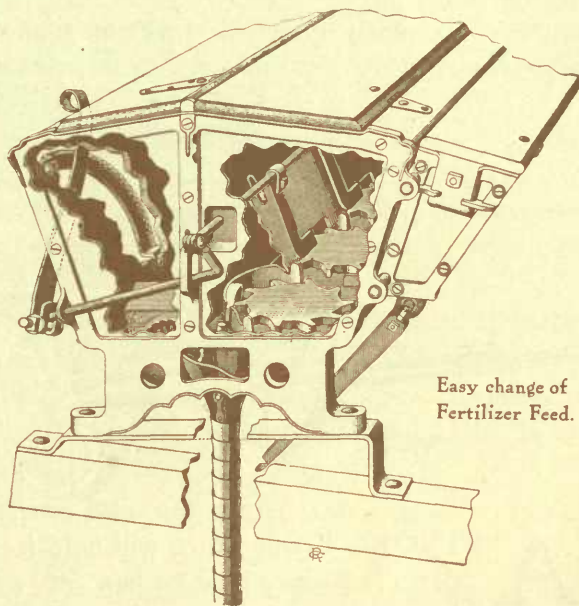
NEW GRAIN AND FERTILIZER DRILLS

and adds much to the value of the Drill.

A Spring-actuated Scraper keeps the Disc clean and can be swung clear of the Disc in an instant if not required.

The No. 14 has Hoes which are equipped with Double Drag Bars and are provided with Safety Spring Trip which permits a Hoe to spring back and pass an obstruction and return to working position as soon as the obstruction is passed.

The Hoes can be set in line or zig-zag by means of a Lever.



Practically all the parts of the Lifting and Pressure Device are Steel, combining great strength with lightness. The Pressure Arms are of an improved type and any one of them can be removed or replaced by simply taking out one bolt. One Lever applies pressure, raises and lowers the Furrow Openers and starts and stops the feed.

The Grain Tubes are made of Spring Steel in the form of a spiral, the most satisfactory type of Tube and the most durable. They have Steel Tops—a New Feature.

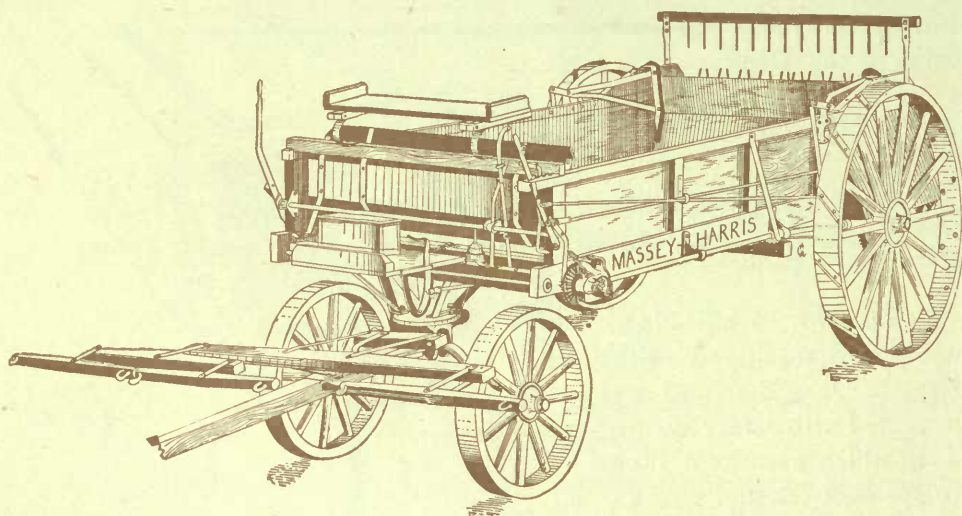
Made in two sizes: 11 Runs and 13 Runs.

GRASS SEED ATTACHMENT.

When it is desired to sow Grass Seed with the grain, a light, effective Grass Seed Attachment can be easily attached. It is driven by Sprocket Chain, and the amount sown is readily regulated by means of an Index Lever. All kinds of Grass Seed are readily handled by this Attachment.



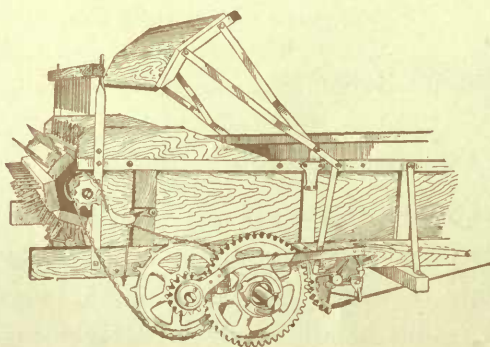
MASSEY-HARRIS No. 3 MANURE SPREADER



A STRONG Frame which will hold its shape and keep all working parts in proper relation is a very necessary feature in a Manure Spreader. The accompanying illustration gives a good idea of the strength of the Massey-Harris Frame. Selected hardwood is the material; the Cross Bars are carefully mortised into the Side Rails and securely bound together by heavy Truss Rods.

Sills and Cross Bars are riveted at the ends to prevent splitting, and bolts are freely used as can be seen by referring to the illustration, the numerous bolt heads giving a good idea of the thoroughness of construction.

Enclosed Gearing.—The Gears are made extra strong and are protected by Shields which prevent stalks and trash interfering with their free action.



Heavy Wheels with Wide Tires—will not sink in soft ground.

Low Front Wheels.—Front Wheels turn under the Box, allowing the machine to be turned in close quarters.



MASSEY-HARRIS No. 3 MANURE SPREADER

Short Front Axle.—Pole does not whip on rough ground. Axle is so pivoted that machine passes over rough land without straining the Frame.

One movement of a convenient Lever begins the spreading, the Beater starting before the Safety Board rises. When the load is off, the machine is thrown out of gear automatically, and, by pulling the Reverse Lever, a clutch on the Main Axle operates and returns the Apron to position for another load.

The Feed Gauge at left of driver permits of change of feed instantly while team is in motion.

A Foot Pedal is provided for stopping the Feed when turning, or if it is desired to pass over certain portions of the field. This is an exclusive Massey-Harris Feature.

Apron runs on Rollers at the side and centre; as a result it works easily and without binding.

Tight Box.—The Safety Board makes the Box "material tight," prevents waste of manure and is handy for drawing in roots. The roots can be unloaded by raising the Safety Board and running the Apron back, a few turns of the Crank accomplishing this.

The Beater is made with heavy Bars bolted to iron ends. The Teeth are large, firmly set in the Bars and arranged in spiral form, so as to work the manure evenly over the entire width of the machine. Beater Bearings are self-aligning—the Beater always works freely.

Adjustable Rake levels the load as it approaches the Beater and assists in pulverizing the manure.

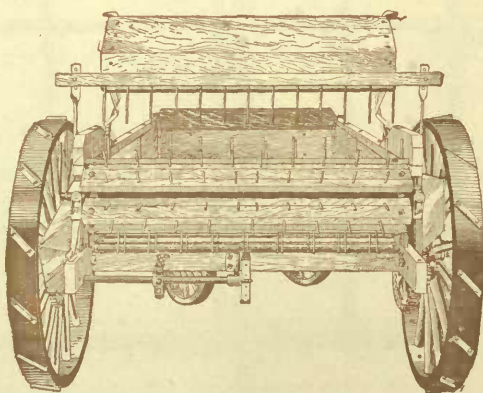
Safety Board is entirely automatic. It ensures even spreading at the start and prevents breakages.

Seat is Hinged and turns over out of the way when loading.

Made in two sizes:

A—Small.

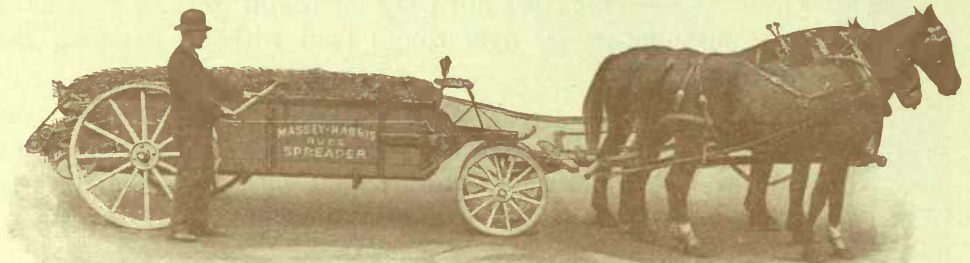
B—Medium.



Spiral Beater ensures even spreading.

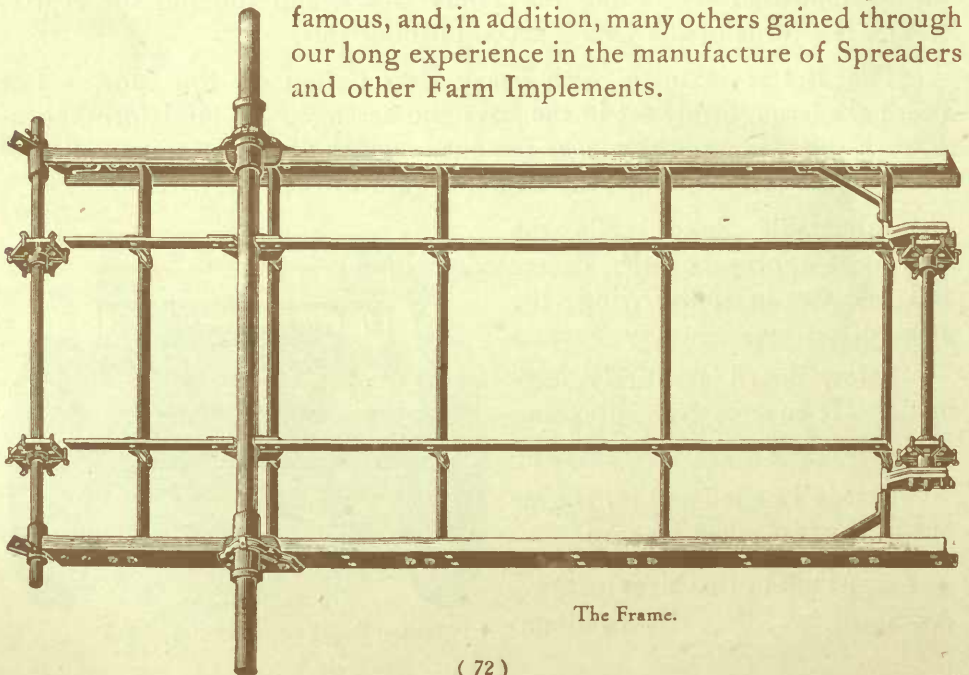


MASSEY-HARRIS LOW-DOWN SPREADER



THE Massey-Harris No. 4 Low-Down Spreader spreads the manure evenly over a width of 7 feet, although the Bed measures only $3\frac{1}{2}$ feet. This Wide-Spread Feature, and the ease of loading on account of its being low down, together with the simplicity and durability of construction and its light draft, combine to make this the most satisfactory and reliable Spreader yet produced.

As we have the exclusive Canadian Rights under the Rude Patents, this Spreader embodies features which have made the Rude Spreader famous, and, in addition, many others gained through our long experience in the manufacture of Spreaders and other Farm Implements.



The Frame.



MASSEY-HARRIS LOW-DOWN SPREADER



Being a Wide-Spread Machine this Spreader has advantages over the ordinary type of Spreader. It spreads its load in about half the time, which not only means more loads can be spread per day, but it greatly reduces the distance travelled in spreading, thus making it easy for the team. On account of spreading outside of the Wheels, the Wheels do not run over the manure already spread, which is an advantage in top dressing, as it lessens the liability of slipping of the Wheels.

Heavy 4-inch Channel Side Sills with Steel Cross Sills form the strongest Frame ever put on a Spreader. The Standards are of Steel, offset to make a taper to the sides, the box being wider at the rear end, thus reducing the draft.

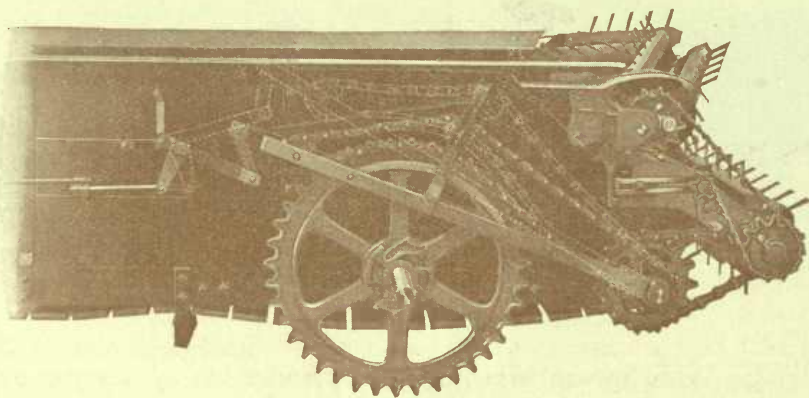
We use large Rear Wheels, 47 inches diameter with 6-inch Tires on the two larger sizes and 44 inches diameter with 5-inch Tires on the small machine. They are liberally supplied with Traction Lugs arranged zig-zag to give effective traction, and at the same time avoid jar on hard ground. The Front Wheels have Tires 4 inches wide. All the Wheels have Removable Boxes.

We are prepared to furnish either a Two or Three-Horse Hitch for this Spreader, although the Two-Horse Hitch is seldom used except on the small size. The Three-Horse Hitch is shown in the cut at top of page. It is a perfect equalizer, avoids crowding of the horses and overcomes side draft.

Two Levers control the entire Mechanism of the Spreader and these are conveniently located so as to give the operator easy control of the spreading.



MASSEY-HARRIS LOW-DOWN SPREADER

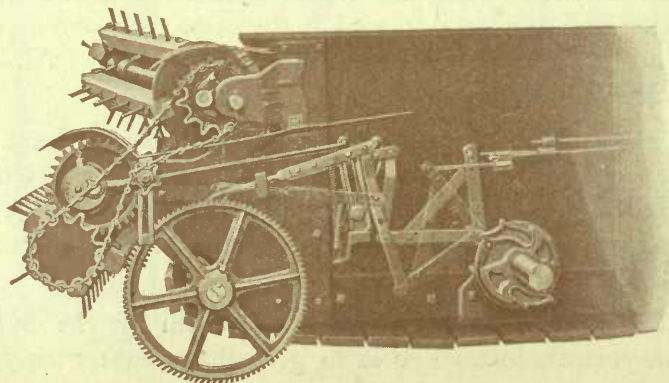


The Beater Drive.

The Chain Drive is very simple in construction and thoroughly practical. It eliminates all Cogs, Clutches and Springs, for the heavy Pin Link Drive Chain engages the upper part of the large Sprocket Wheel when in gear, and by simply raising the Guide Arm the Chain is raised off the Sprocket Wheel, thus throwing the machine out of gear.

When in gear, the Chain engages enough Teeth so there is no tendency for it to jump Cogs, and the Guide Arm is held firmly so the Drive is absolutely positive in every way.

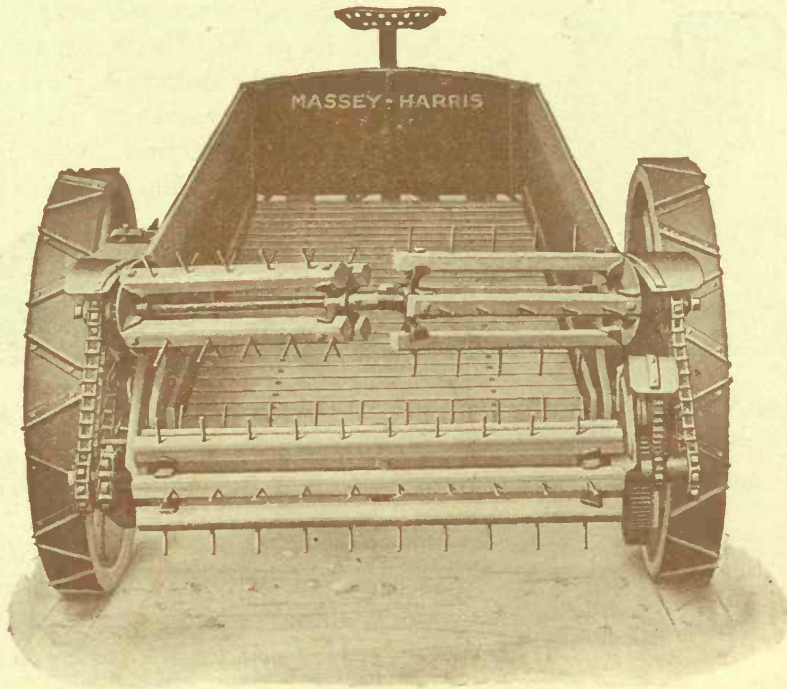
This is the most improved type of Drive made, for it not only saves the draft over the ordinary Cog Gear, but when out of gear no parts of the machine are running to cause wear.



The Apron Drive.



MASSEY-HARRIS LOW-DOWN SPREADER

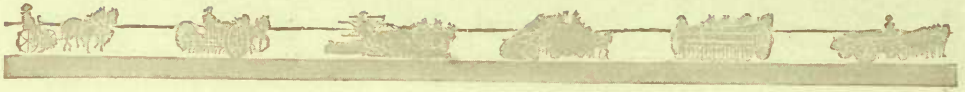


Rear View Showing Beaters.

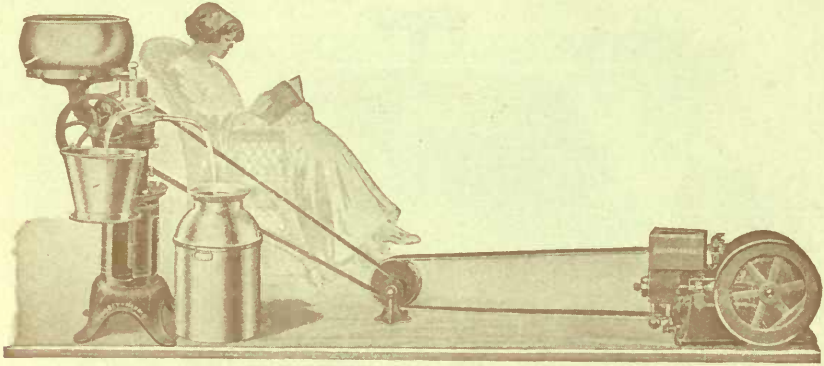
The Double Ratchet Apron Drive is positive in its action and has a wide range of adjustment.

This Spreader has an effective Spreading Device, thoroughly pulverizing and spreading the manure evenly. The Upper Beater is in two sections which stand at an angle to each other with the centre higher than the ends, thus spreading the top portion of the load away from the centre, out beyond the Wheels, and does its work before the lower part of the load reaches the Lower Beater which spreads its part of the load directly behind the machine. As this Beater is partially below the level of the Apron and is of small diameter, it takes very little power to spread the lower portion of the load.

Made in three sizes: small, capacity 35 to 40 bus.; medium, capacity 55 to 60 bus.; large, capacity 65 to 70 bus.



MASSEY-HARRIS No. 4 CREAM SEPARATOR



THE Massey-Harris is the ideal Separator for the Dairy, combining as it does, many features which make for efficiency, ease of handling and durability, among which may be noted the following :

The Bowl has larger skimming surface than any other Separator claiming the same capacity, and as the improved Split Wing distributes the milk evenly to the Skimmer Discs, all of the skimming surface is utilized. The Split Wing also provides channels for the cream to pass to the outlet.

Both the skim milk and cream have clearly defined courses and there is consequently no struggle or conflict between the two—no re-mixing after once being separated, which would require additional effort to again separate them, and would result in loss of butter fat. The separation takes place quickly and surely.

Another advantage of the Split Wing is that the milk is speeded up at the centre of the Bowl before it is delivered to the Skimming Discs, requiring much less power than if speeded at the outer edge of Bowl.

The Main Frame is cast in a single piece, machined and bored with the utmost care by means of special forms and jigs, thus bringing all Bearings in exactly the right relation one to another.

The Gears are cut by special automatic machines and run smooth and quietly. They are all covered to ensure safety in operation.



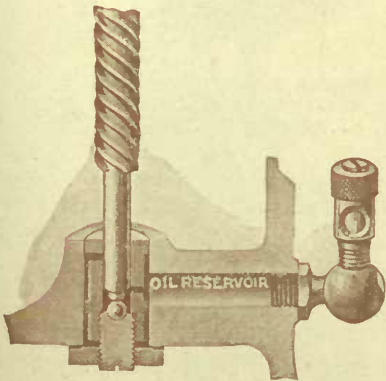
MASSEY-HARRIS No. 4 CREAM SEPARATOR

No Cream Separator can do good work unless the Bowl runs smoothly and steadily; every vibration when skimming is taking place interferes with the flow of milk and cream through the Bowl and prevents their thorough separation.

Vibration is also very destructive to the machine. There is no trouble with the Massey-Harris New No. 4 Separator in this respect, for the Bowl is *Self-Balancing*. It spins like a top on a Ball Bearing at its own centre of gravity, finding its own balance just as a top does. The centre of gravity is the correct scientific point for the carrying of the Bowl—much superior to either a suspended Bowl or one supported from the lower end of Spindle.



Oiling a Separator is a very important matter. The Massey-Harris is provided with Improved Oil Cups, as shown herewith, and the Worm Gear runs in oil, giving an *Efficient Splash System of Oiling*. Please note that we provide Oil Cups also—thus providing a Double System, whereas many Separators have but the one system.

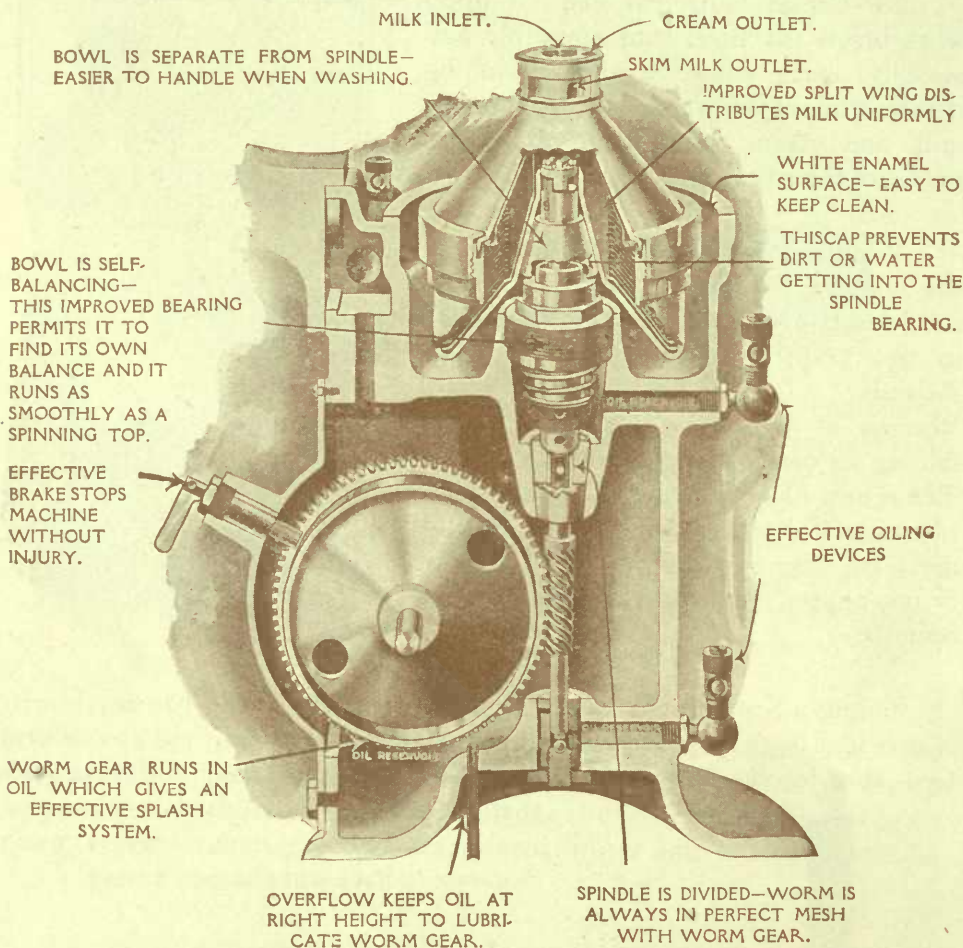


All Working Parts are kept well supplied with oil by Oil Cups and our Effective Splash System.

The Lower Spindle Bearing has an Oil Chamber fed from an Oil Cup on outside of Frame, ensuring a continuous supply of *clean oil*. We don't depend on the drip from other Bearings to oil this important Bearing. Dirt and grit can't settle here and cut out the Spindle or Bearing. A Drip Cup below the Lower Bearing catches any surplus of oil.



MASSEY-HARRIS No. 4 CREAM SEPARATOR



The Bowl is separate from the Spindle, making it much easier to handle when washing, and preventing injury to Spindle or Gears, as it is not necessary to remove Spindle unless to adjust it up or down.

An improvement which will be appreciated by all users of this Separator is the NICKEL-PLATED BOWL. The Bowl and all its parts are first given a heavy coating of Copper and then Nickel-Plated, preventing rust and making it an easy matter to keep them clean.



MASSEY-HARRIS No. 4 CREAM SEPARATOR

A simple and reliable Speed Indicator is furnished free with each Massey-Harris Cream Separator, enabling the operator to maintain an absolutely uniform speed and thus get the very best results from the Separator. No Dial or Pointer to watch—the Bell rings if the Separator drops below the proper speed.

The Spindle is divided—lower half is always in line and meshes properly with Worm Gear.

The Ball Clutch operates the instant you begin to turn the handle—there is no lost motion. These Balls also prevent wear when the Clutch is not in action.

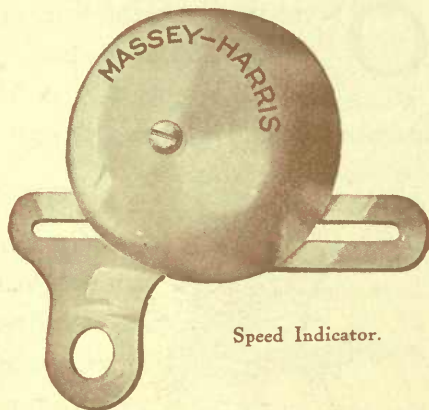
The Brake Attachment stops Separator quickly and without danger of injuring the parts, as is often done by using a stick for a brake.

The low, non-splashing Supply Can is easy to fill and does not slop over as does a high, straight-sided Can.

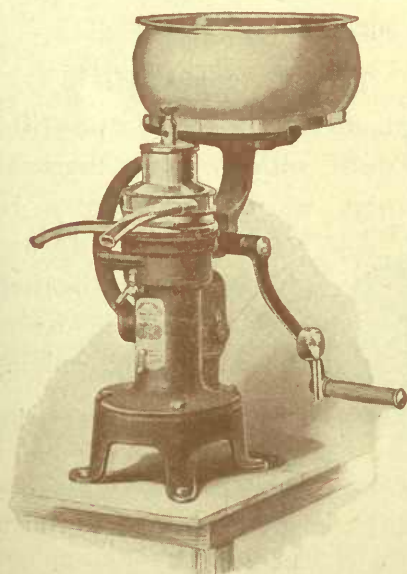
Furnished with Base for floor or table and in six sizes:—200 lbs., 300 lbs., 400 lbs., 500 lbs., 700 lbs. and 1000 lbs. capacity.

When it is desired to run this Separator with an Engine, a Pulley is substituted for the Crank, and we also recommend the use of our Governor Pulley which brings the Separator up to speed slowly, and maintains a constant speed regardless of variations in speed of the Engine.

Illustrated Booklet giving full description can be had from any Massey-Harris Agent or by writing us direct.



Speed Indicator.



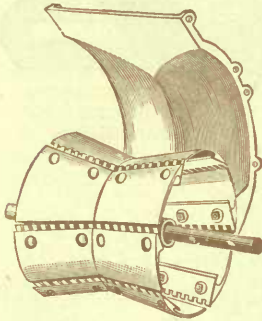


ROOT CUTTERS AND PULPERS

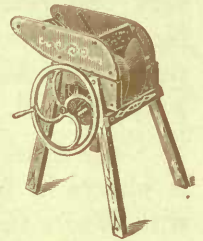
ON many farms, the root crop is of considerable importance, and the preparation of the roots for feed is a subject that should receive careful attention. A Massey-Harris Root Pulper is a profitable investment, and will amply repay the small expenditure necessary.

THE No. 1 MACHINE

has Concave Cylinder as shown in cut. It has a combined Fly Wheel and Pulley so as to be run by power when desired, but can be readily turned by hand.



Section View of No. 1 Pulper.



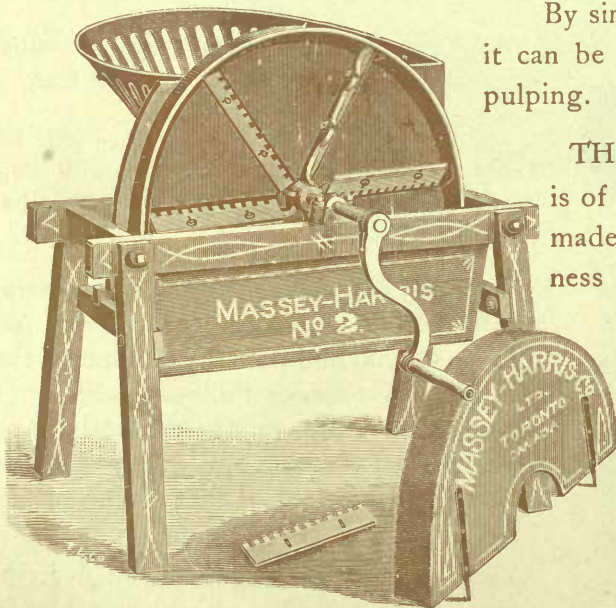
No. 1 Root Cutter and Pulper.

It is substantially built, the Hardwood Frame being firmly bolted together. Being fitted with Roller Bearings, it runs very easily.

By simply reversing the Knives, it can be used for either slicing or pulping.

THE No. 2 MACHINE

is of the side-wheel type. It is made with the same thoroughness which characterizes the No. 1 — Hardwood Frame, Roller Bearings and Reversible Knives for cutting and pulping.



No. 2 Root Cutter and Pulper.

A Crank is furnished on this machine but a Pulley can be substituted if it is desired to run by power.



MASSEY-HARRIS STRAW CUTTERS

CUMMINGS' CUTTER

This is a combination Hand and Power Machine. Can be fitted with Knuckle or Pulley as desired.

It has a substantial Hardwood Frame, Roller Bearings, a heavy Fly Wheel, and four Spiral Knives which are mounted in such manner as to be readily adjusted or removed for sharpening.

Gear-driven Feed Rolls, which automatically conform to varying amounts of straw or other material,

give positive feed at all times. The cut can be changed by means of different Gears to various lengths as follows:— $\frac{3}{8}$, $\frac{5}{8}$, $\frac{7}{8}$, $1\frac{1}{4}$, $1\frac{3}{4}$ or $2\frac{1}{4}$ in.

When operating this Cutter by power, our $1\frac{1}{2}$ H.P. Engine affords a most satisfactory source of power.

THE MASSEY-HARRIS No. 9 CUTTER

is a convenient, substantial Cutter for hand use. Has well-braced, Hardwood Frame so constructed that a box or basket may be placed so as to catch the feed.

Has two easily adjusted Knives mounted on the heavy Fly Wheel. The Knives have shear cut and the machine runs easily and smoothly, cutting the feed at a uniform length.

Can be turned by Crank at the side or the Handle can be bolted to the Fly Wheel.

Feed Rolls have Spring Tension.

A Guard prevents injury from coming in contact with the Knives.

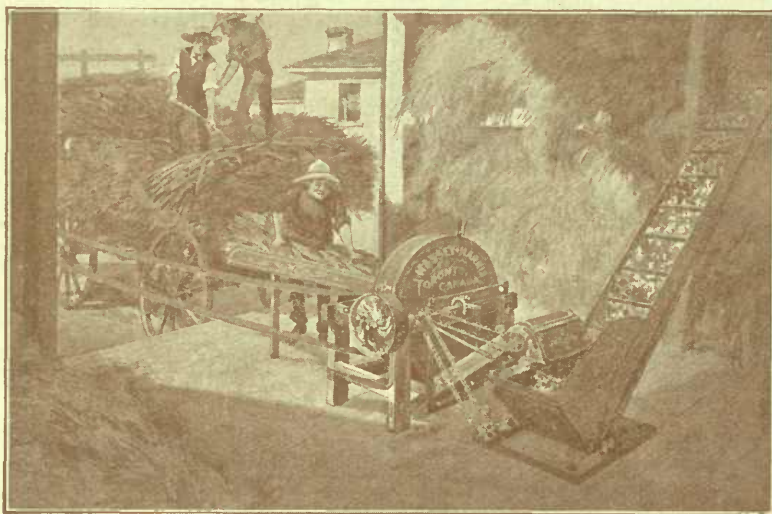


Massey-Harris No. 9 Cutter.

Massey-Harris
Cummings' Cutter.

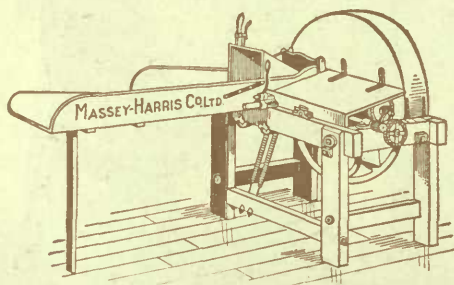


No. 2 STRAW AND ENSILAGE CUTTER



For the large Farm this Cutter will be found a profitable investment as it is especially suited for cutting straw in large quantities and is also intended for cutting Ensilage. It is furnished with Elevating Carrier as shown above, or as a simple machine without Carrier which can be operated by a Crank when only a small quantity of straw is to be cut.

It has a substantial Hardwood Frame and is fitted with Roller Bearings. Feed Rollers have Tension Springs which cause them to grip the stalks or straw in a way to give positive feed and allowing them to yield to anything which might cause breakage. A convenient Lever gives the operator perfect control of the Feed Rolls, permitting of their instant stopping or reversing, thus making it a safe machine to operate.

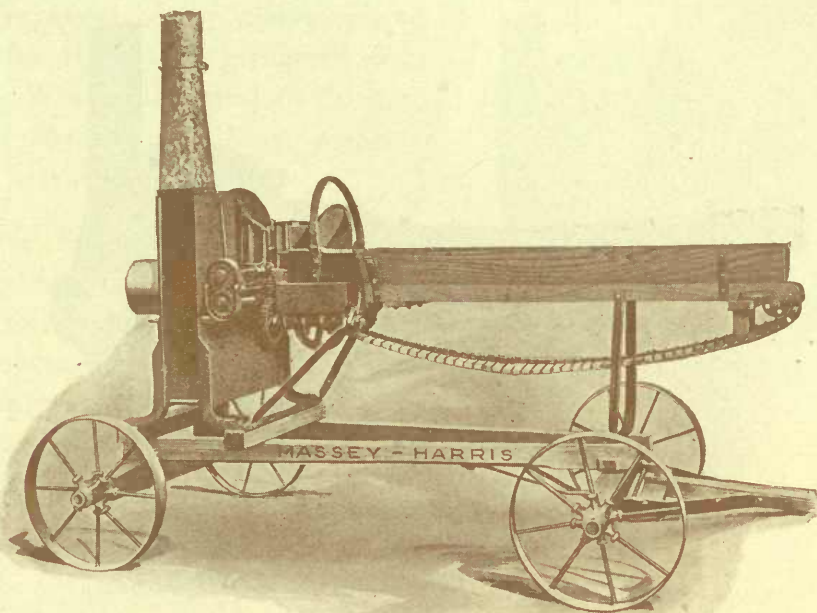


Will cut in six different lengths, as follows:— $\frac{1}{8}$, $\frac{5}{8}$, $\frac{7}{8}$, $1\frac{1}{2}$, $2\frac{1}{8}$ or 3 inches, changes from one to the other being easily made.

A Massey-Harris 3 H. P. Engine will operate this Cutter without Carrier; a $4\frac{1}{2}$ H. P. Engine when Carrier not exceeding 24 ft. is used. For longer Carrier a 6 H. P. Engine or even an 8 H. P. would be advisable if much corn is to be cut.



MASSEY-HARRIS No. 5 ENSILAGE CUTTER



This Cutter is intended for the individual farmer who has an Engine from 6 to 10 H.P. It has a capacity for cutting from three to eight tons per hour, depending on the length of cut and amount of power used.

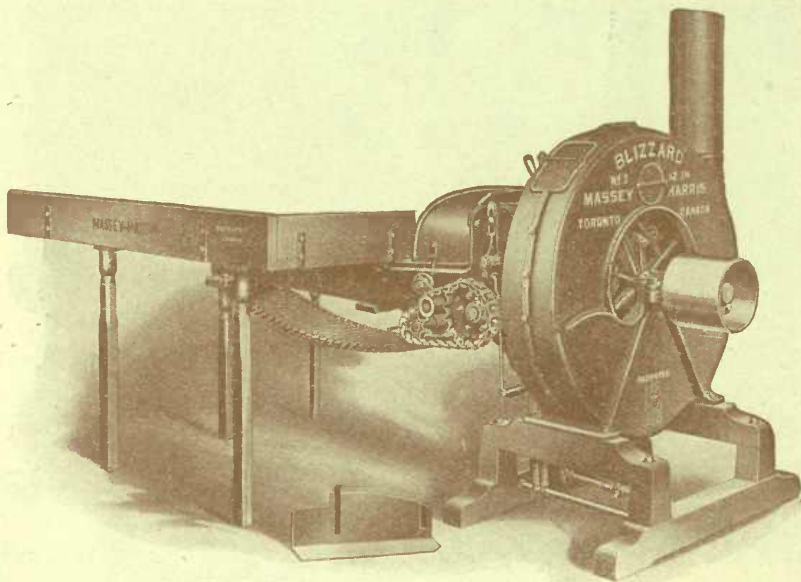
It is nearly all Steel, having Steel Casing and Steel Legs, making a very substantial construction. Either two or four Knives may be used and the length of cut may be easily regulated to cut $\frac{1}{4}$ in, $\frac{1}{2}$ in., $\frac{3}{4}$ in., or $1\frac{1}{2}$ in. Half the top of the casing is hinged and the other half can be removed by taking out four bolts, giving easy access to the Head. The Main Bearings are adjustable to move the Head to or from the Reversible Steel Shear Plate, and the Knives are also adjustable. Bearings are well babbitted. The Cutter Head is heavy enough to act as a Fly Wheel and is carefully balanced. Silo Filler can be supplied if desired.

The Safety Yoke above the Throat makes it possible for the operator to stop or reverse the Feed Rolls by a slight pressure of his arm or body—we have considered "Safety First."

Furnished with or without Transport Truck.



“BLIZZARD” ENSILAGE CUTTER



THE Main Frame or Blower Case is of an improved type, and is made extra heavy and strong so as to provide a solid mounting for the various parts, holding them in proper relation one with another. This is largely responsible for the smooth running and durability of this Cutter.

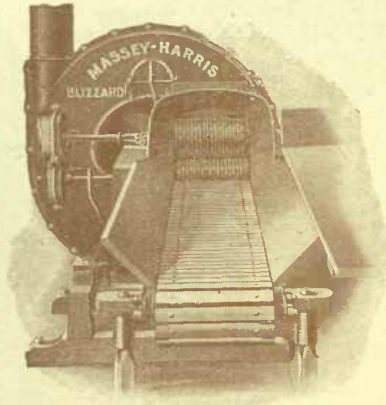
Power is applied by means of a Pulley on the Main Shaft, and this Shaft should run 800 to 1000 revolutions per minute. The Pulley has 8-in. leather-covered face and can be supplied in either of two diameters, viz , 10 or 12 inches. Under ordinary conditions an Engine of from 12 to 15 Horse-Power is required to properly operate this Cutter, although in very heavy work 20 Horse-Power will be found advisable. It will cut from 6 to 12 tons per hour, depending on the size and condition of the corn, length of cut, etc. This is a very conservative estimate as we have reports from many farmers who state that they are cutting greatly in excess of these figures.



"BLIZZARD" ENSILAGE CUTTER

The Head is very heavy, giving great strength and also giving the effect of a Fly Wheel. It is carefully balanced and the Shaft runs in long, well-babbitted Bearings.

The Feed Rolls have Tension Springs adjusting themselves automatically to handle light or heavy stalks, also preventing breakage. A Feed Table is provided on which the stalks are thrown, and from where they can be easily placed on the Endless Carrier which delivers them to the Feed Rolls.



The Massey-Harris Ensilage Cutter can be adjusted to cut four different lengths:— $\frac{1}{4}$ in., $\frac{1}{2}$ in., $\frac{3}{4}$ in. or $1\frac{1}{2}$ in.

The Knives may be adjusted independently, and are easily removed for sharpening. If it is desired to shred dry fodder, Shredding Knives can be furnished, and, if desired, both Cutting and Shredding Knives may be used, making a combination Cutting and Shredding Head.

The Blower has great power and capacity, and the improved form of Deflector Hood delivers the ensilage in any direction and works without clogging.

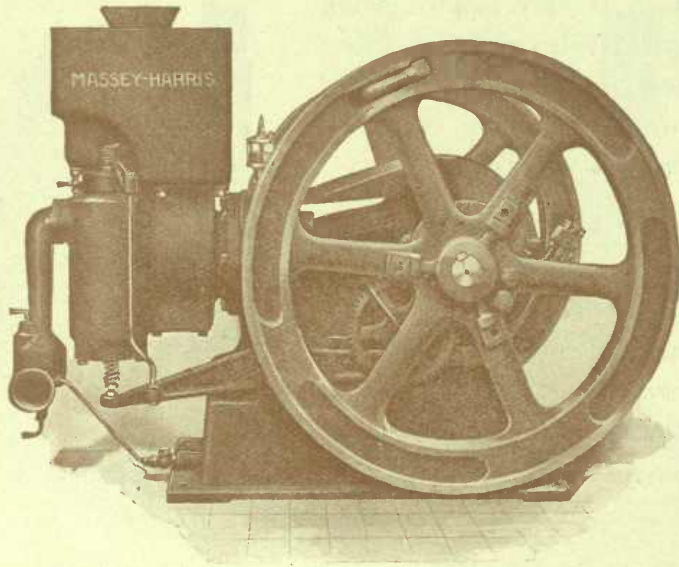
When desired, the Blower Pipe can be furnished with a Silo Filler consisting of several lengths of Pipe flexibly connected and hanging down into the Silo in such a manner as to make it an easy matter to distribute the ensilage evenly to all parts of the Silo.

The Feed Rolls can be instantly stopped or reversed, and as the Rolls, Knives and Gears are covered, it is the safest Cutter you can buy.

Transport Truck supplied when wanted.



MASSEY-HARRIS GASOLINE ENGINES



Stationary Engine, Hopper Jacket, 1½, 3, 4½, 6, 8, 12, 15 or 20 Horse-Power.
Closed Cooling Jacket can be furnished if wanted.

THE high efficiency of Massey-Harris Engines, coupled with their economy of operation and durability, combine to make them without exception, the most reliable and satisfactory on the market to-day.

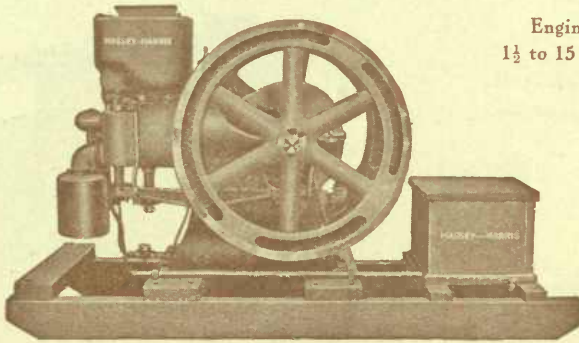
They are built in our own Engine Factory by expert machinists who have at their command the best possible facilities for making and assembling the parts, and with competent supervision and rigid inspection constantly exercised, the purchaser is assured of getting an Engine worthy in every respect to bear the name "Massey-Harris."

The Cylinder, Cylinder Head and Water Jacket are cast in one piece—no gaskets or packed joints about the Cylinder or Water Jacket to leak.

The Cylinder and Piston are machined with the utmost care on machines specially built for the purpose, ensuring absolutely perfect fit, and, with the carefully fitted Rings, giving good compression.

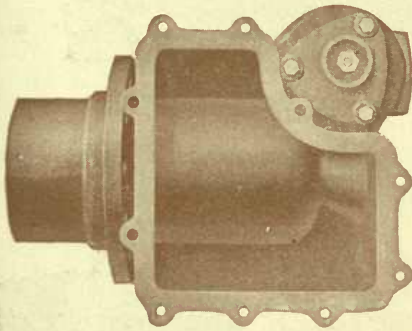


MASSEY-HARRIS GASOLINE ENGINES



Engine on Skids,
1½ to 15 Horse-Power.

The horizontal type of Engine ensures perfect lubrication and long wear of the Piston and Cylinder.



Top View of Cylinder and Water Jacket.

Main Bearings are extra large and set on an angle of 30°.

Connecting Rod is extra heavy and of I-Beam Section. The Bearings at both ends of Rod are provided with suitable means for taking up the wear and keeping these important Bearings always tight.

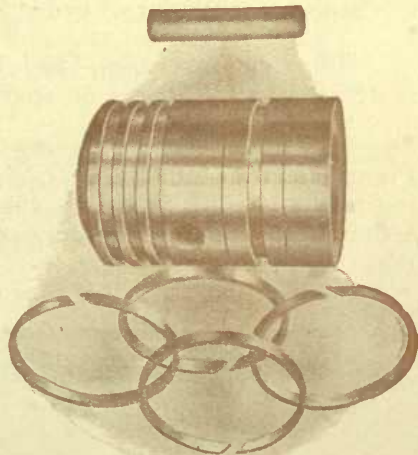
Jump Spark Ignition with Spark Plug in the end of the Cylinder, ensures perfect and rapid combustion.

The Inlet and Exhaust Valves are of the vertical type, of large size. The Inlet Valve is mounted in a Removable

Gasoline Storage is in the hollow, Cast-Iron Base, which is a part of the Main Frame and is absolutely tight—no danger from leakage.

The large water space around Cylinder and Valves prevent overheating.

The Crank Shaft is forged from a solid billet of Open-Hearth Steel.

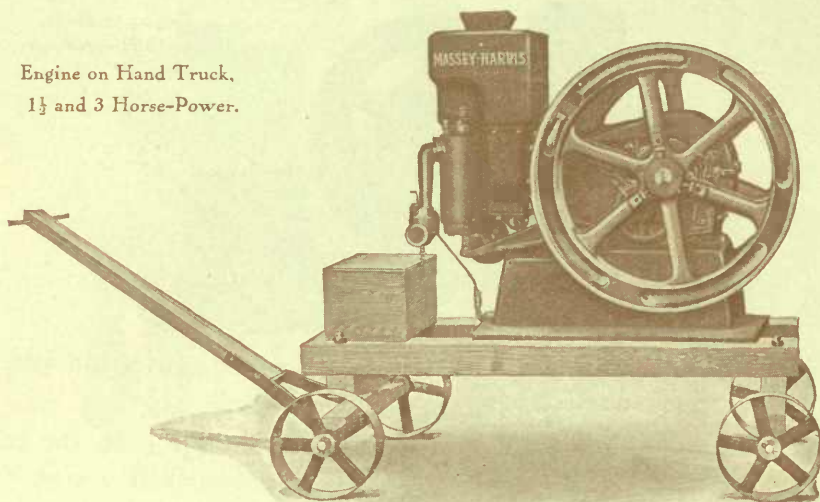


Piston and Rings.



MASSEY-HARRIS GASOLINE ENGINES

Engine on Hand Truck,
1½ and 3 Horse-Power.

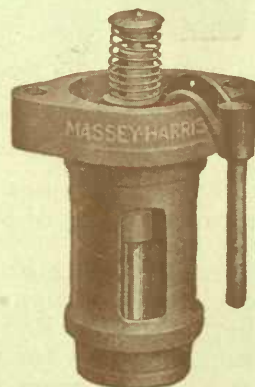


Valve Cage, held in place by two screws, on the removal of which the Valves may be taken out without affecting any adjustment whatever, and can be easily replaced.

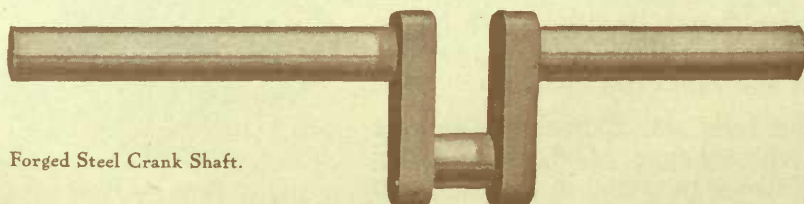
The Exhaust Valve is positively operated by a Single Lever. The Inlet Valve is automatically locked to its seat on idle stroke—no complicated mechanism to get out of order.

Effective Governor—On idle stroke no charge is drawn in and there is no spark.

The Mixer has no moving parts and Gasoline Pump is eliminated, the suction of the Piston drawing in the charge. This is the most efficient and economical Mixer in its consumption of gasoline that it is possible to make.



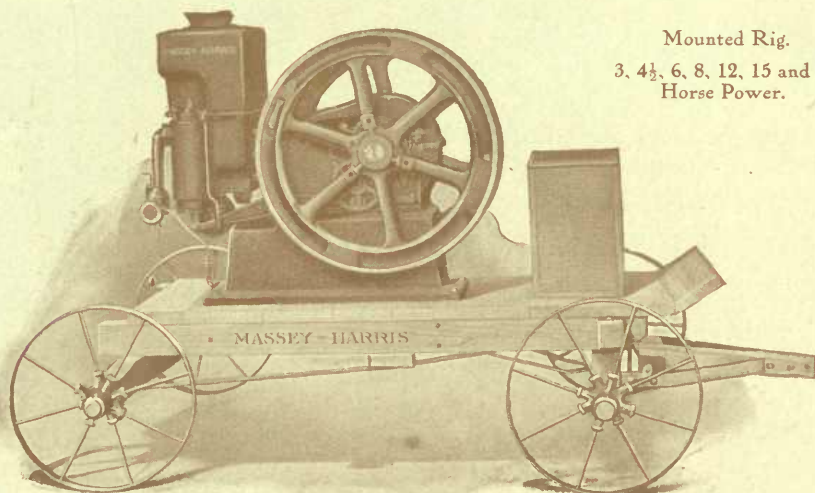
Valve and Cage.



Forged Steel Crank Shaft.

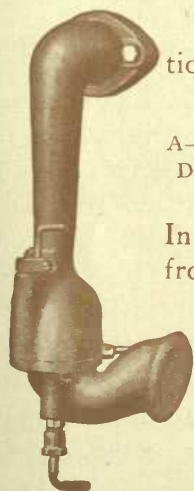


MASSEY-HARRIS GASOLINE ENGINES



Mounted Rig.

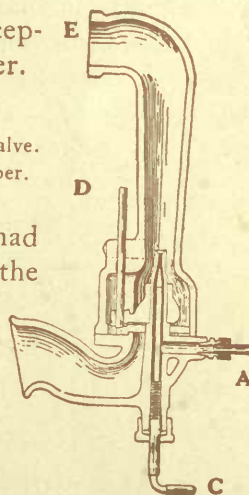
3, 4½, 6, 8, 12, 15 and 20
Horse Power.



Air Throttle makes the Engine exceptionally easy to start, even in cold weather.

Section of Carburetor.

A—Gasoline Inlet. B—Air Inlet. C—Needle Valve.
D—Air Throttle E—Passage to Combustion Chamber.



In our Engine Catalogue, which may be had from any of our Agents, we also show the following:—

Wood Sawing Outfits, Contractor's Hoists, Contractor's Diaphragm Pumps, Governor Pulleys for operating Cream Separators, Pump Jacks, Etc.



Heavy Connecting Rod of I-Beam Section.



MASSEY-HARRIS GRINDERS

MASSEY-HARRIS Grinders embody all that is newest and best in Grinders, including several Exclusive Features covered by our own Patents; of extra strong construction; each and every Grinder carefully inspected and given an actual running test before shipping.

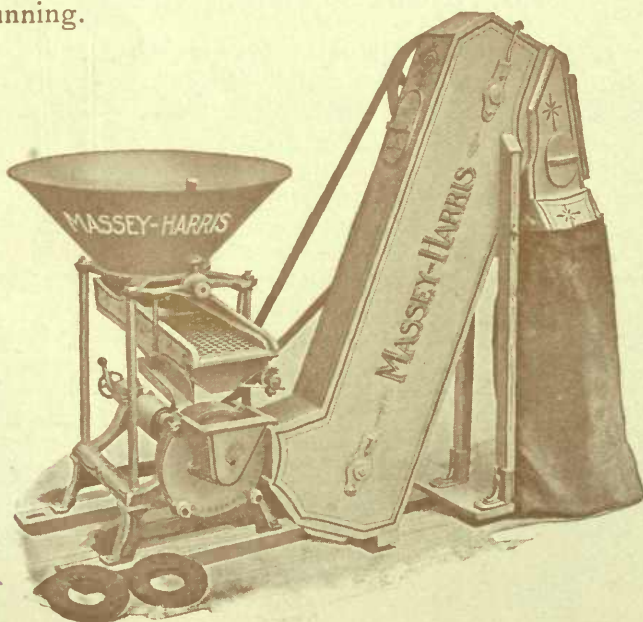
The Burrs are made of an especially hard mixture and are reversible, being cut and dressed both sides by special machinery—always in perfect tram.

The Stationary Burr is bolted to the Cover of the Housing by four bolts, each of which has two Spiral Springs, one within the other, to give flexibility.

Burrs, Head and Pulley are perfectly balanced to ensure smooth running.



No. 1 Grinder without Bagger.
6½, 8 and 9-in. Burrs.



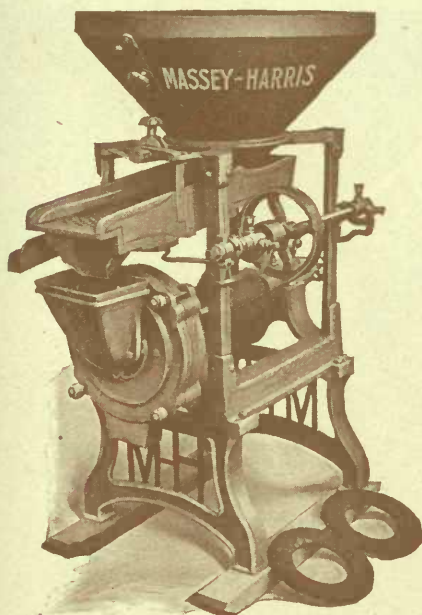
No. 1 Grinder with Bagger Attachment.

A quick and positive Adjustment is provided for setting the Plates to grind fine or coarse, and Patent Quick-Relief Lever enables the operator to instantly stop or start the grinding without affecting the Adjustment—ONCE SET ALWAYS SET.

A Safety Break Pin automatically relieves the Burrs if any hard substance gets in.



MASSEY-HARRIS GRINDERS



No. 2 Grinder without Bagger.
9½ and 10½-in. Burrs.

It is easy to regulate and does not require the services of an experienced miller to run it. It can be run from above, below, or from either side.

An entirely New Feature, found only on the Massey-Harris is the Patented, Automatic Grain Governor. This regulates the flow of grain according to the power applied, thus making it especially suitable where the power is unsteady.

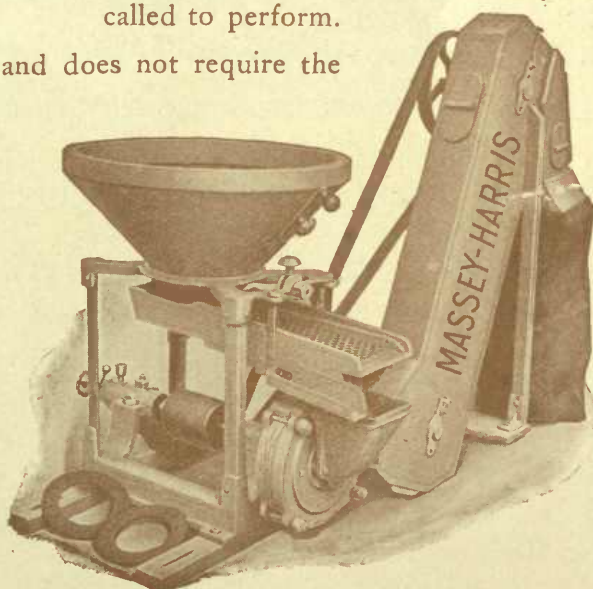
The Main Shaft Bearings are of ample size and well babbitted, and an improved Friction Block takes the end thrust.

The Patent Raising and Lowering Device for Feed Spout is a great improvement. Feed Spout has two Sieves, one for carrying off straws, stones, etc., the other for removing sand and dirt.

THE No. 3 GRINDER FOR MILL USE.

In addition to what has been said regarding the Nos. 1, 2 and 3 Grinders, the following applies to the No. 3 only:

It is a very simple and neat appearing machine and especially substantial and rigid, being heavy, compact and made to withstand the heavy duty it is called to perform.



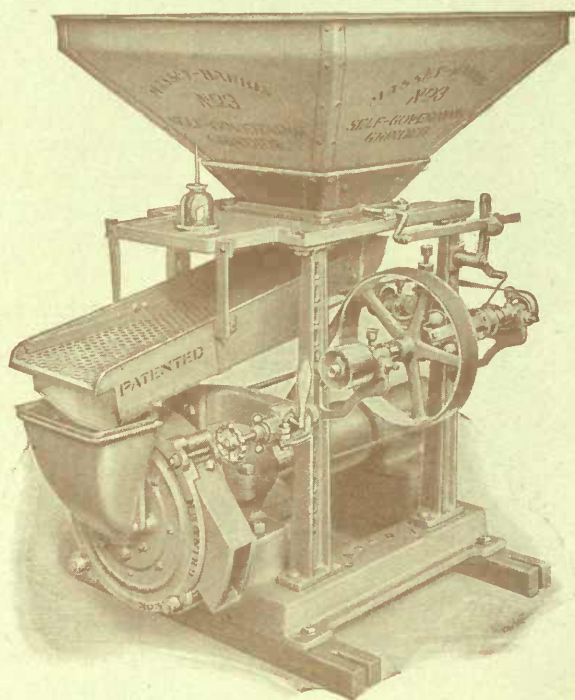
No. 2 Grinder with Bagger Attachment.



MASSEY-HARRIS GRINDERS

The Vertical Grain Dial in connection with the Governor Device is used for fixing the limit that the Damper can open. The higher the Lever is set, the wider the Grain Port Holes. The Governor does the opening (more or less according to speed), and the Dial sets the maximum limit to suit the various kinds of grain.

Made of Steel, suspended by four flat Steel Springs and with an end shake in place of the usual side shake, the Feed Spout is practically indestructible.



No. 3 Self-Governing Grinder without Bagger.
13 and 15-in. Burrs.

The Hopper is all Steel with Steel Angles re-inforcing the corners.

Special attention is called to the Revolving Head which is made of Cast Steel, strongly ribbed, balanced and trued. No danger of bursting under high speed

The Pressure Screw and Quick-Relief Lever are conveniently located at the front of the machine.

An improved Roller Bearing with Automatic Oiler takes the end thrust of the Main Shaft and removes all chance of overheating.

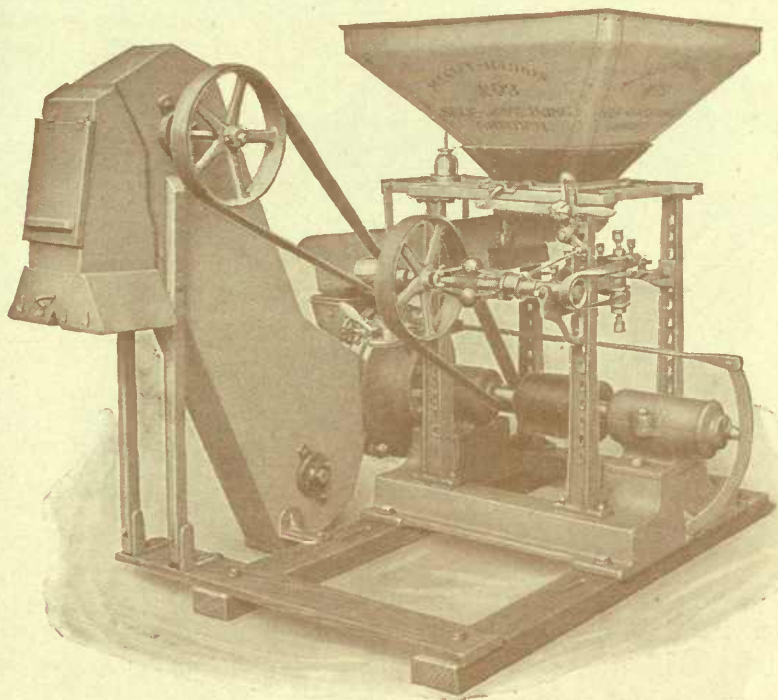
Shipped as illustrated—with or without Elevator as ordered—with 1 pair Extra Plates and Wrench.

The No. 3 also has a Babbitting Outfit and Yoke to pull the Revolving Head off Shaft.

— See next page for Table of Dimensions. —



MASSEY-HARRIS GRINDERS



No. 3 Self-Governing Grinder with Bagger Attachment—13 and 15-in. Burrs.

TABLE OF DIMENSIONS OF MASSEY-HARRIS GRINDERS.

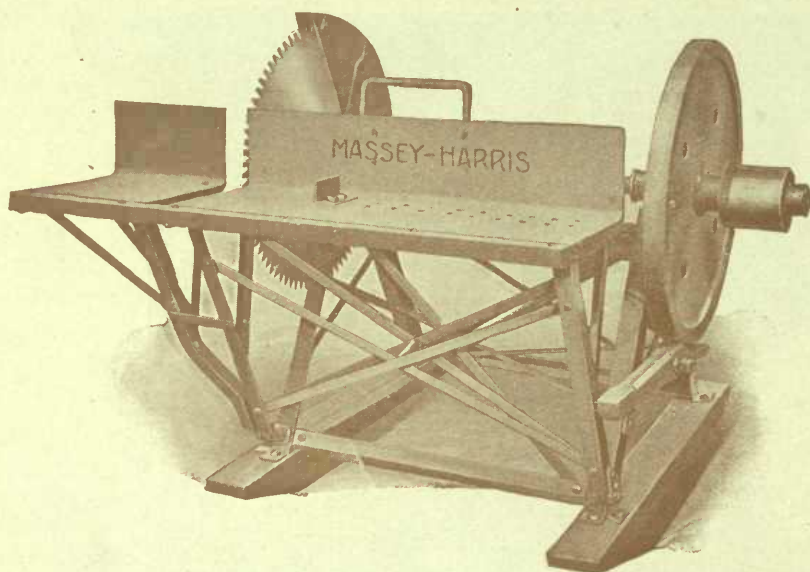
Style of Mill	Size of Mill	Dia. of Grinding Plates.	Weight without Bagger.	Pulley Dia. and Width	Speed	Horse Power	Floor Space	Height of Mach.	Size of Pulley on Engine
					Revolutions per Minute				
No. 1	6½	6½	195	4 x 5	2000 to 2500	2 to 3	3 ft. x 2½ ft.	3 3	20
No. 1	8	8	208	4 x 5	2000 to 2500	3 to 6	3 ft. x 2½ ft.	3 3	20
No. 1	9	9	236	4 x 5	2300 to 2500	4 to 6	3 ft. x 2½ ft.	3 3	20
No. 2	9¼	9¼	380	5½ x 6½	2300 to 3000	6 to 8	3 ft. 6 in. x 2 ft. 8 in.	3 4	16
No. 2	10½	10½	400	5½ x 6½	2300 to 3000	6 to 10	3 ft. 6 in. x 2 ft. 8 in.	3 4	16
No. 3	13	13	1204	7 x 8	3300 to 3500	15 to 25	5 ft. x 4 ft.	4 6	
No. 3	15	15	1427	8 x 9	3300 to 3500	25 to 40	5½ ft. x 4 ft. 5 in.	5 0	

The Capacity of the Grinding Mills depends on Speed, Power, fineness of grinding and the kind of Grain ground.

NOTE.—Speeding Jack for No. 2 Grinder has 6 in. and 14 in. Pulley.



MASSEY-HARRIS SAW OUTFITS



No. 1 Wood Saw on Skids.

MASSEY-HARRIS Circular Wood Saws are made of the very best materials, and constructed in a manner to give ample strength and rigidity, as well as safety.

The All-Steel Riveted Frame is made of heavy Angle Steel, properly braced with flat Steel Bars all riveted up solid and with no danger of anything working loose as when bolts are used.

New Stop-Gauge on Table, adjustable to any length of cut, is a useful improvement.

The Saw Collars are large and are provided with two Pins to prevent any danger of the Saw slipping.

Blades, 20, 22, 24, 26, 28 or 30 inches in diameter can be supplied as ordered. They are of the best quality, accurately ground and set.

Improved Saw Guard, very handy and safe; completely encloses half the Saw; all that is necessary to remove it is simply to loosen the nut at top and throw the Guard back on the hinge at the bottom.

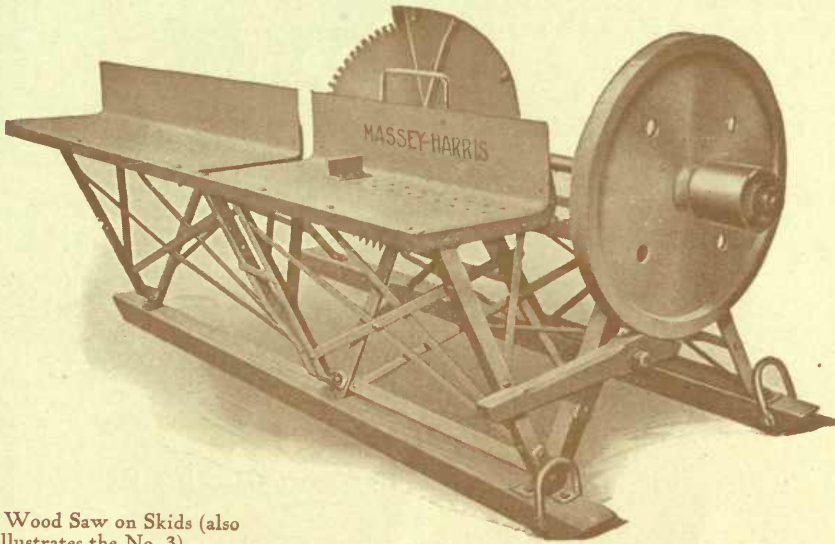
Heavy Balance Wheel ensures steady running.

A Brake, operated by the foot, is provided for the Balance Wheel on Nos. 1, 2 and 3.

Pulley has Double Ratchet, giving positive drive and adapting it for use with tread power.

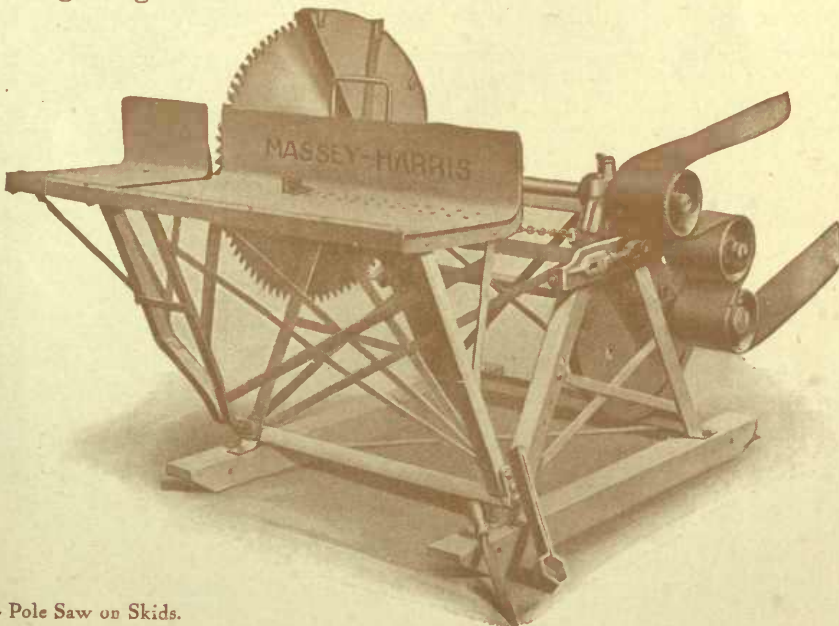


MASSEY-HARRIS SAW OUTFITS



No. 2 Wood Saw on Skids (also illustrates the No. 3).

Heavy Shaft of Cold Rolled Steel. Boxings for Shaft are self-aligning and properly babbitted. They are fitted with Lock Washers to prevent getting loose.

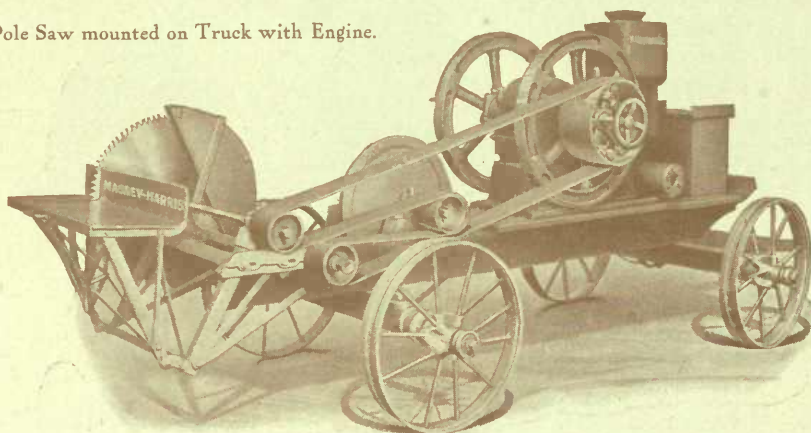


No. 4 Pole Saw on Skids.



MASSEY-HARRIS SAW OUTFITS

No. 5 Pole Saw mounted on Truck with Engine.



Skids are chamfered at the ends and fitted with Clevises for easy transportation.

Massey-Harris Saw Rigs are made in 5 styles as follows:—

- No. 1, Steel Frame, Short Tilting Table Wood Saw on Skids.
- No. 2, Steel Frame, Long Tilting Table Wood Saw on Skids.
- No. 3, Steel Frame, Long Tilting Table Pulp and Cordwood Saw on Skids.
- No. 4, Steel Frame, Tilting Table Pole Saw with Fly Wheel below Table, on Skids.
- No. 5, Steel Frame, Tilting Table Pole Saw with Fly Wheel below Table, for mounting on Truck with Engine.

Style of Machine.	No. of Machine	Speed Required	Power Required	Size of Pulley Required on Massey Harris Engine	Size of Pulley on Saw	Distance between Bal. Wheel and Saw Blade.	Approximate Shipping Weight
		R. P. M.		In. in.	In. In.		Lbs.
Wood Saw	No. 1	1000 to 1500	3 to 4½ H.P.	14 or 16	6 x 6	3 ft. 3 in.	415
Wood Saw	No. 2	1000 to 1500	3 to 4½ H.P.	14 or 16	6 x 6	3 ft. 3 in.	529
Pulp and Cordwood Saw	No. 3	1000 to 1500	3 to 4½ H.P.	14 or 16	6 x 6	4 ft. 3 in.	560
Pole Saw	No. 4	1200 to 1500	4½ to 6 H.P.	18 or 20	6 x 6		431
Pole Saw	No. 5	1200 to 1500	4½ to 6 H.P.	18 or 20	6 x 6		388

Each Outfit is supplied with a large Wrench, and a special Round-Edged File for filing the Saw.

Special Truck for mounting No. 5 Saw is similar to our No. 2 Truck with the Sills lengthened out 3 ft. to permit attaching the Saw Frame. Weight 750 lbs.

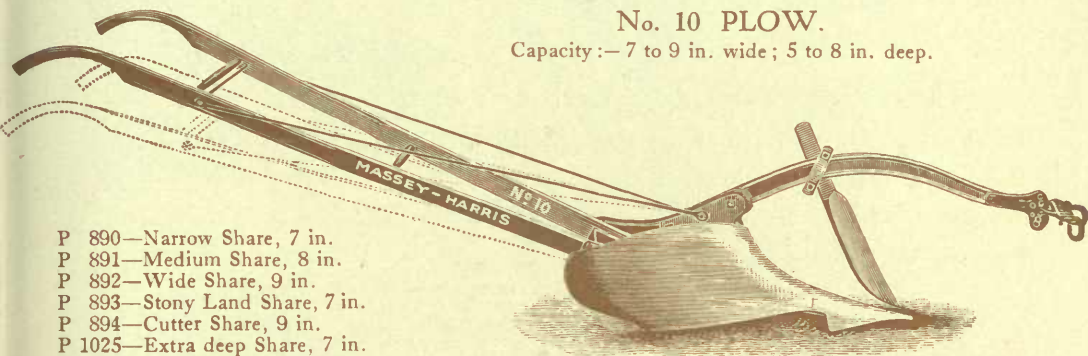


MASSEY-HARRIS PLOWS

We show below two of our popular models in Walking Plows. Our Plow Catalogue shows many other styles.

No. 10 PLOW.

Capacity :— 7 to 9 in. wide ; 5 to 8 in. deep.

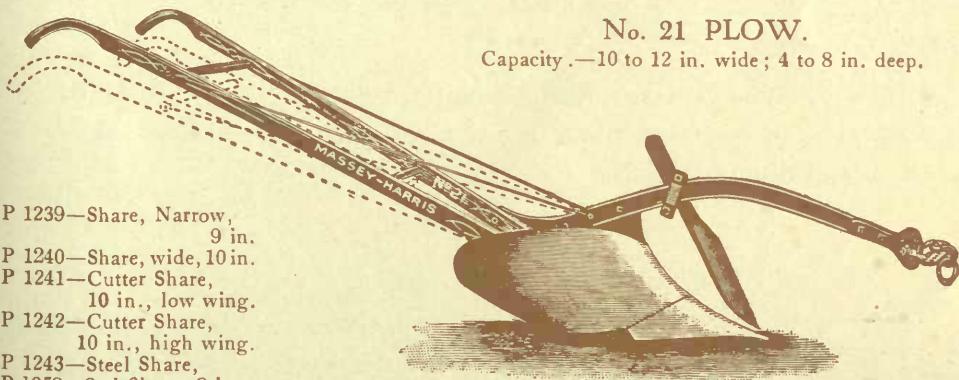


- P 890—Narrow Share, 7 in.
- P 891—Medium Share, 8 in.
- P 892—Wide Share, 9 in.
- P 893—Stony Land Share, 7 in.
- P 894—Cutter Share, 9 in.
- P 1025—Extra deep Share, 7 in.
- P 1775—Steel Share.

A splendid general purpose Plow, of medium weight, fitted with a beam which admits of good clearance for deep plowing. Shipped with Coulter, extra Share and Wrench, unless otherwise ordered. Fitted with Patent Adjustable Handles and Patent Clevis.

No. 21 PLOW.

Capacity .—10 to 12 in. wide ; 4 to 8 in. deep.



- P 1239—Share, Narrow,
9 in.
- P 1240—Share, wide, 10 in.
- P 1241—Cutter Share,
10 in., low wing.
- P 1242—Cutter Share,
10 in., high wing.
- P 1243—Steel Share,
- P 1258—Sod Share, 8 in.

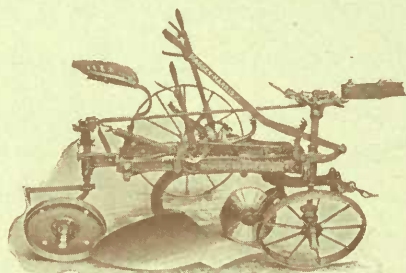
A light draft Plow with wide cut, very suitable for jointer work and plowing in manure and stubble. It is also very popular as a general purpose Plow, and is fitted with Patent Adjustable Handles and Patent Clevis. Shipped with Knife Coulter, extra Share and Wrench, unless otherwise ordered. Skimmer and Wheel supplied when ordered.



"FARMER'S FRIEND" PLOWS

These are Foot-Lift Plows. The Bottoms enter the ground with a slight push of Foot-Trip, and they stay there until raised by the Foot-Lift.

The Frame is of High Carbon Channel Steel, made in two parts, with the Land Wheel Bracket running clean across the front from Land Wheel to Furrow Wheel.

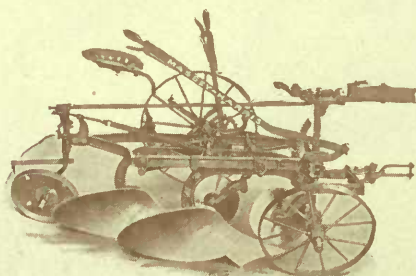


"Farmer's Friend" Sulky Plow.
Capacity.—8½ to 12 in. wide.

This is something new in Riding Plow construction, and gives us the strongest Frame to date, for the reason that the front left corner where weakness was wont to develop in other Plows has been strengthened 100% by the Land Wheel Bracket running right around the corner instead of stopping at the corner.

Both Sulky and Gang have handy Landing Lever for setting the Front Wheel in line with the horses while in motion. This is another Special Massey-Harris Feature.

Both Sulky and Gang can be equipped with either No. 11 or 21 Bottoms, Steel or Cast Shares, Swivel Rolling Coulters or Straight Coulters and Skimmers.



"Farmer's Friend" Gang Plow.
Capacity:—20 to 22 in. wide.

Shares

No. 11

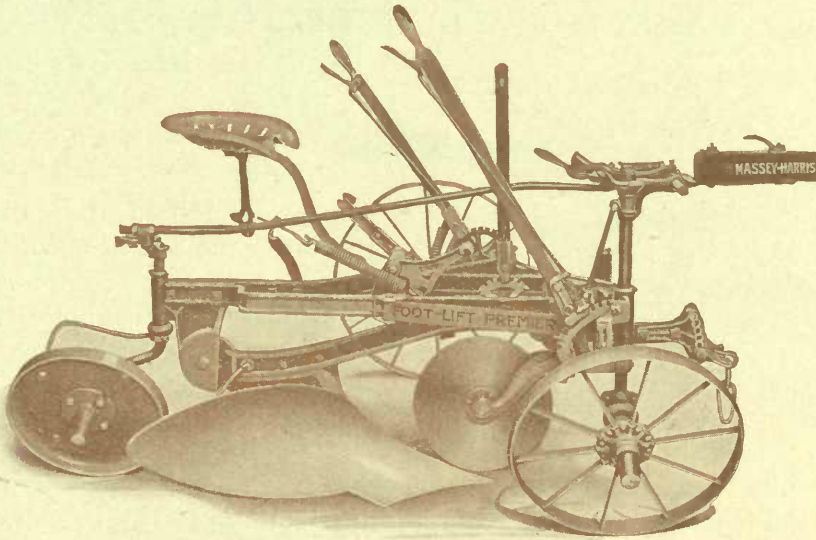
No. 21

P 1067—6 in., plain.	P 4674—8 in., plain.
P 1068—7 in., "	P 4675—9 in., "
P 1069—8 in., "	P 4676—10 in., "
P 1069A—9 in., "	P 4677—9½ in. Cutter.
P 1070—8 in., Cutter.	P 6426—8 in., Steel.
P 1071—7 in. High Cut.	P 6430—12 in., Cast.
P 1072—Steel.	P 6435—12 in. Steel.
P 7954—7 in., Stony Land	

Shipped with Rolling Coulters unless otherwise ordered.



PREMIER FOOT-LIFT SULKY PLOW



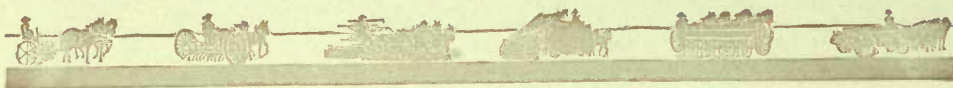
A first-class Sulky Plow, on the same general lines as the New Premier, but with many improvements, chief of these being the Foot-Lift, which makes it an easy matter to get the Plow in and out of the ground. To operate it, the Foot Trip is pushed forward till it breaks over centre, locking the Plow into the ground; pressure of the left foot raises the Plow point first. A well-placed powerful Lift Spring assists in the lifting.

A handy Landing Lever on top of Front Furrow Axle is another improvement, while another Lever makes it possible to straighten up a furrow, or to set the Plow for any width of furrow from 7 to 12 inches, a Swing Brace holding the Axle firmly at any width.

All three Wheels are Steel, the rear one being of the solid type which does not gather trash. All are of good size and have Removable Boxes and dust-proof Oil-Retaining Caps.

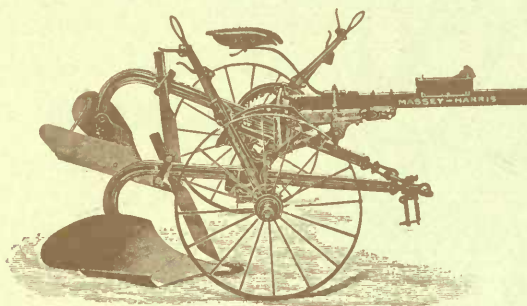
The Front and Rear Wheels castor and are connected by a Rod with double joint at the rear, and working in a slot at the front, allowing of a short turn in either direction, but holding the Plow in line regardless of slight movement of the Pole.

Can be fitted with No. 5B, No. 11 or 21 Bottoms which are well-known to the farmers of Ontario and the other Eastern Provinces. The regular equipment consists of Coulter, Extra Chilled Share, Pole, Neck-yoke and Wrench. Rolling Coulter, Skimmer, and Evener can be supplied on special orders.



MASSEY-HARRIS PLOWS

MASSEY-HARRIS REVERSIBLE SULKY PLOWS



With our Famous No. 11, No. 12B or
No. 21 Bottoms.

Capacity.—3 to 9 in. deep ;
11 to 14 in. wide.

If desired, this Plow will throw the soil all one way, leaving no dead or open furrows or ridges, thus enabling the farmer to commence harrowing and seeding much sooner. Each Bottom is entirely independent of the other, having its own Depth Lever and Lifting Device.

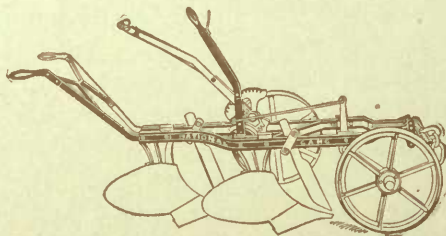
The Pole is automatically adjustable, enabling the operator to regulate the landing of the Plow, the width of furrow, as also to plow around curves, and to relieve the horses from side strain. It also makes good work possible on hillside, because it is easy to maintain the full width of the furrows.

When equipped with Right Hand Bottom only, it makes a Single Sulky Plow which can at any time be converted into a Reversible Plow by adding the other Bottom. By the operation of a Foot Trip the Plow raises out of the ground—the horses do the lifting. Can be supplied with Rolling Coulters if desired.

All necessary working equipment is shipped with these Plows.

NATIONAL GANG PLOW.

This Plow has a world-wide reputation for lightness of draft and splendid turning qualities in trash and stubble. Furrow Wheel is adjusted to any width instantly, while New Patent Lever ensures change of depth $\frac{1}{2}$ in. at a time. Shipped with Straight Coulters unless otherwise ordered.

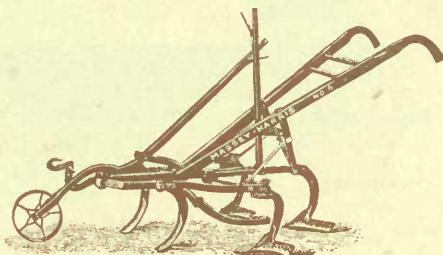




SCUFFLERS, LAND ROLLERS, SOWERS, ETC.

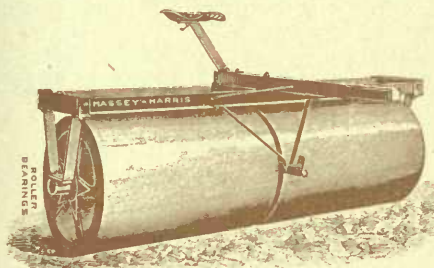
MASSEY-HARRIS SCUFFLERS

Suitable for the market garden or small truck farms. A wide range to choose from, with Shovel equipment to meet every requirement.



MASSEY-HARRIS LAND ROLLER.

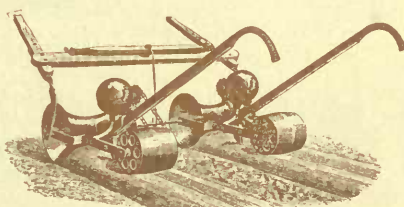
These Rollers are very strong, as will be seen from the illustration below. Axle is $1\frac{5}{8}$ in. cold Rolled Steel Shaft running through the Roller and keyed at ends to prevent any spreading of the End Braces. Made in various sizes: 6, 8, 9 and 10 ft., 27 in. in diameter. A special 1-Horse Lawn Roller, 4 ft. wide with one 27-in. Drum can be supplied on short notice. The 10-ft. Roller has a 2-in. Shaft and 3 Drums.



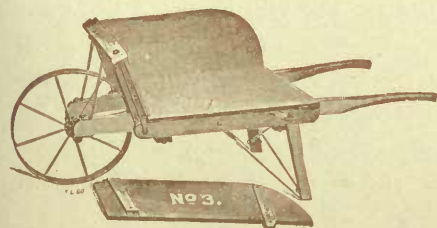
MASSEY-HARRIS SEED SOWER

Sows a double row of seed, being especially popular for sowing Turnip Seed. The Rollers pack the seed in the drill and properly shape the soil so that the moisture runs to the seed.

Can be equipped with flat Front Roller, if so ordered.



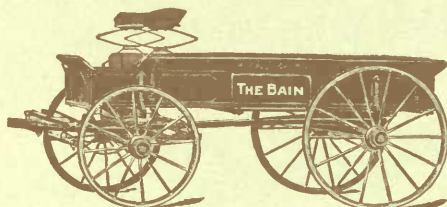
MASSEY-HARRIS BARROWS



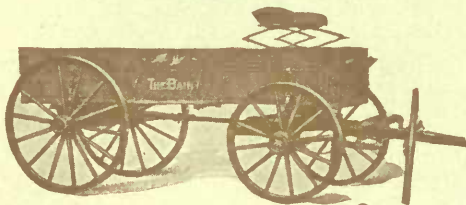
Nothing but well-seasoned lumber is put into these Barrows, and they will not warp. The Wheels are of Steel, with shouldered Spokes—diameter, 20 inches, 2 in. face. Legs are thoroughly ironed to protect them from wear.



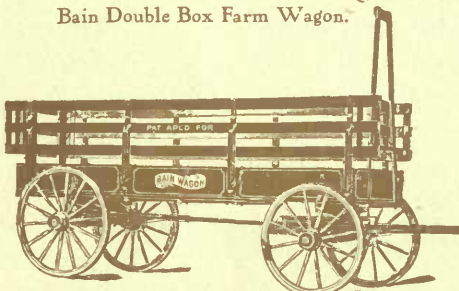
BAIN WAGONS AND SLEIGHS



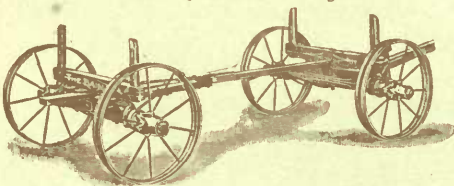
Bain Shelving Box Farm Wagon.



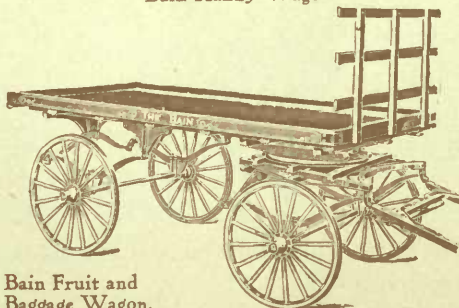
Bain Double Box Farm Wagon.



Bain Hay or Stock Wagon.



Bain Handy Wagon.



Bain Fruit and Baggage Wagon.

BAIN Wagons are made to carry all kinds of loads on all kinds of roads, and they do it. They have stood the test of time and the most severe usage—in heavy teaming, in logging camps, with the army in the field, on farms all over the Dominion, in brick yards and coal yards, in fact, wherever wagons are used. Though, of necessity, somewhat higher in price than some others, they are the cheapest in the long run. Three things are absolutely essential to the making of a good Wagon—good material, experience and proper facilities.

Only one way can a manufacturer be sure of a reliable supply of good, dry material—by having it cut at the proper time and then caring for it until it is seasoned. It is impossible to buy so-called “dry” lumber and depend upon it being fit for the purpose. Lumber must be carried for from two to four years—or dried by artificial means, which always injures hardwood. All hardwood in seasoning forms a hard shell or skin on the outside, and every time this is dressed off, the timber will shrink a little and form another shell; therefore, we prepare every part of the Gear ready to put together and iron, then give it a good coat of boiled oil and store from three to six months before ironing.



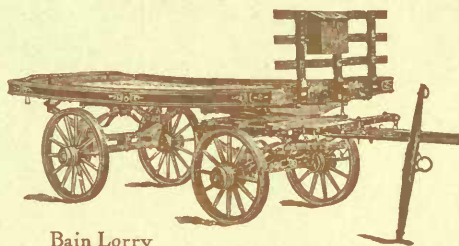
BAIN WAGONS AND SLEIGHS

Wagon building is an art, and to enable the manufacturer to do good work, a thorough knowledge of the art in all its branches is necessary, much of which can only be gained by experience. Unless material is thoroughly seasoned and scientifically put together there will be constant complaints of checked Hubs, loose Spokes, loose Tire and Hub Bands, loose Skeins, etc. Unless he understands the proper taper for the Spindle, the way to set the Axle, how much "gather" to give the Spindle, and how much to dish the Wheels, he will produce a hard-running Wagon, because the Wheels will grind on collar or nut instead of playing easily between them and not grinding on either.

The founders of the Bain Wagon Co.. have devoted their entire time for over thirty years to the building of Wagons, and during the past twenty years have had control of one of the largest and best equipped factories in the country, and an abundance of capital, and it has been their ambition to produce the best Wagon made. The result is a line of Wagons and Sleighs that are recognized all over the Dominion as the most perfect of their class. No other concern in the Dominion has an equal record.

Bain Wagons, sleighs, Dump Wagons, Dump Carts, Lorries, Boxes, etc., are described in the Bain Catalogue, free on request.

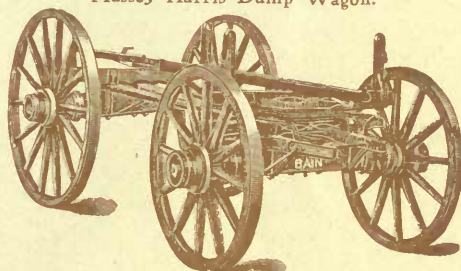
Bain Goods are sold by
Massey-Harris Agents Everywhere.



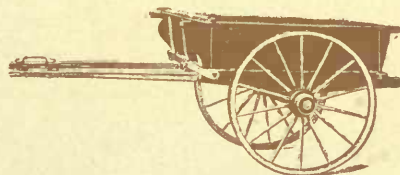
Bain Lorry



Massey-Harris Dump Wagon.



Bain Heavy Teaming Gear.



Bain Dump Cart.



Bain Improved Ontario Two-Kneed Sleigh.



Bain North Shore Sloop Sleigh.

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To find any machine, look for the square in margin which comes opposite the name. This can be easily done by doubling the Catalogue so that the edge of each square appears as shown below

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