

JOHNSTON





JOHNSTON





JOHNSTON FARM MACHINERY

WE believe that one of the strongest features of the Johnston machines and the one that appeals to practically every farmer and user of agricultural machines, is the fact that there is not a radical, freakish or experimental part to any of our machines and we particularly ask you to note on the proceeding pages the extraordinarily pleasing appearance of Johnston machines, and note their good, clean-cut, trim, simple and permanent construction.

And we find that it does not cost any more to make a good looking machine than any other kind. It is simply a matter of designing and building ability. All Johnston machines are particularly well finished and will stand the elements better than the majority of farm implements.

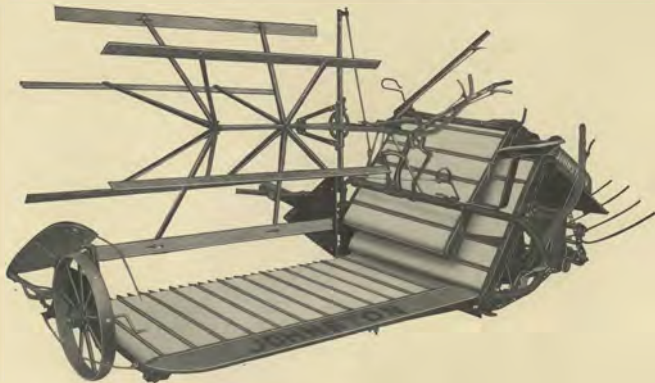
Our machines appeal to all farmers and, particularly, to those who do not let price dominate but who measure their purchases by results, and these results have been the means of procuring for us one of our strongest assets—that of the confidence of the farmers of two hemispheres. This has come about through more than half a century of straightforward business dealing and by the satisfactory performance of our machines in the field in all kinds of grain and soil conditions.

Of course, it is hardly necessary for us to mention the fact that we have no trust, combine or monopoly connections, as the name Johnston, when applied to farm machinery, is known the world over as the Independent Johnston Line—our independence is unquestioned. We have always believed in and maintained a competitive market for the farmer in which to buy his farm machinery.

The Johnston Harvester Co.

Batavia, N. Y., U. S. A.

Johnston "Continental" Binder



It costs no more to construct a good looking binder than the other kind. It requires only mechanical and designing ability.
The Johnston looks good and works good. Made in several sizes.



Johnston "Continental" Binder

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Main Frame and Elevator Frames. Raising Apparatus. Main Frame. Grain Wheel and Divider. Main Wheel. Roller Bearings. Torsion Pipe. Platform and Connections.

The Johnston "Continental" Binder



THE Johnston Binder is built right—built to give service—satisfaction. There are many features that contribute towards making the Johnston the great success it is. The main frame is steel, in one piece,

well braced with all necessary gearing and shafting, compactly and securely fitted to it. Shafting always in line and gearings in perfect mesh. Roller bearings on all main frame shafting and at rear end of crank shaft.

The elevators are just the right height to give sufficient clearance for the wheel, but not too high to require great power for elevating. The elevator frames are securely held in position by steel braces.

The main or master wheel is large and gives great driving power. It is constructed after the suspension pattern with hairpin spokes attached to the hub and steel rim, made heaviest at the edges. The spokes are strengthened at the outer ends and held by angle steel calks. These are placed diagonally to the edge of the rim but at right angles to each other, and give the greatest traction in all kinds of

soil. The hub is fitted with steel roller bearings in cages, made dust-proof by a series of steel and flange washers.

The driving power is by chain, Locke Steel Belt. The links are strong, have the right pitch, and work freely. We use an easily adjusted spring tightener with a sprocket to carry the chain.

The drive wheel end of the machine is raised and lowered by gear, worm and shaft; a brace supporting the worm-housing, which takes the strain off raising shaft; works smoothly and is well shielded.

Our one-piece steel platform is of extra strength, well braced and supported to withstand long, hard usage. It is supported on underside by steel angle ribs. An extra-strong angle carries the inner end, and a steel torsion pipe braces the rear. Both are securely bolted to joint casting and frame. The joint casting supports the platform roller, but a separate box is used as a bearing.

We use steel angle cutting bar and guards fitted with steel plates. The guards are set flush with the bottom of the platform and allow very close cutting. We make our own knives.

We use a wood pitman without metal bearings. The pitman slips on easily and has direct action.



Johnston "Continental" Binder



Reel Standard and Gearing. Convenient Levers. Canvas Tighteners. Seventh Roller. Elevator showing Rollers. Elevator Canvas Tightener. Reel set for tall and short grain.

The Johnston "Continental" Binder

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THE Johnston reel is gear-driven, has two heads or supports for the steel pipe axle and six beaters. It is light, yet strong, compactly built, works smoothly, and there is no lost motion.

The gears mesh perfectly and wear well.

The standard bracket slides on small rollers, up and down the pipe. This prevents binding. The standard is steel trussed and can be adjusted so as to keep the beaters level and parallel with the platform. The reel joint swings out and back easily on a large bearing. The reel standard is jointed and permits the standard to swing out and back very easily. The reel drive rod is of the ball and socket construction and follows the standard without difficulty.

All levers are within easy reach of the operator.

The reel can be tilted or shifted quickly, for grain that is tall, short or medium, standing or down, straight or tangled, heavy or light.

We show the reel set for tall grain ;

also set low and far out to catch tangled grain. When tangled grain leans toward the machine the tendency is for the grain to lop over, to be cut too far from the ground, and to be shoved on to the platform instead of falling naturally. The reel can be set with the beaters just clearing the points of the guards, and so force the grain to stand while being cut, and to fall where it should on the canvas.

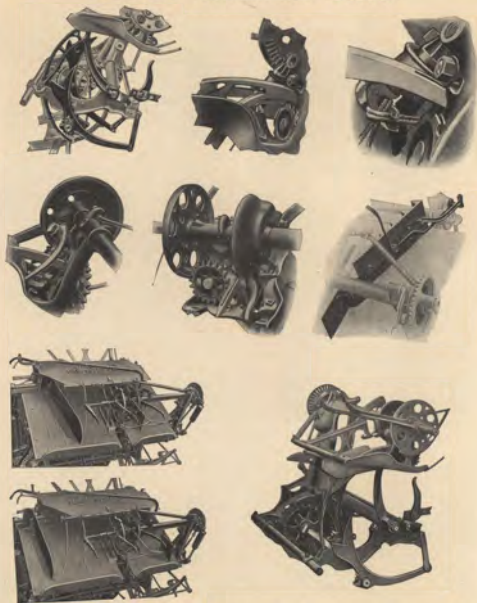
The seventh roller prevents loss of grain between elevators and decks. The deck cap is fastened close to the seventh roller, below its center, and no grain can get through there.

A 5¼-inch roller is used at the lower end of the upper elevator. This roller pulls all tangled or short grain into the throat of the elevator, instead of pushing it out between the lower rollers. The canvases are held taught for light grain, but here again the large roller helps by providing room for the canvases to give when carrying heavy bunches. We show an end of the large roller, which is the built-up kind and will not warp.

The canvases are well made of the best grade of materials throughout. An eccentric lever, operated from the outside, tightens or releases each canvas. A cam, slide and lever are the only parts used.



Johnston "Continental" Binder



Packers. Knotter Cam, hook closed. Knot being tied. Knife Arm Cam, Twine being cut.
Twine Holder Cam. Butter Connections. Adjustments for short and long
grain. Binder Attachment and Gearing.

Johnston "Continental" Binder



ALTHOUGH the tying of the bundle is almost the last function of a binder to perform, yet it is of first importance in making a binder an entire success. The Johnston tying mechanism is very

simple and always works perfectly.

The Johnston binder attachment is driven by gear. There is positive action, no lost motion. Saves wear, saves weight. The construction is simple and compact. The frame is cast in one piece and makes, what is very necessary here, a perfect bearing for the shafting and gearing used in making the bundle.

We show cuts of cam for knotting hook, with the twine over the hook just ready to begin tying; the hook, after three-fourths of the turn and knot nearly tied; the cam for twine-holder gear. Each cog on this gear means a bundle tied. Every knotter is carefully fitted and they are thoroughly tested before leaving the factory.

We use a spring-trip binder-lock that always works. The trip never repeats or causes the making of small bundles.

The trip and compressor springs are adjusted independently, but one nut takes up the wear.

Packers and driving-dog are always in perfect time with the needle. The packers keep just ahead of the needle, doing the heavy work. Packers and packer crank run in detachable boxes, which are self-oiling, reduce friction and are cheaply replaced when worn. The needle is carefully fitted.

A third discharge arm is provided with each machine. It can be adjusted ahead of the others, to part the heads in heavy tangled grain.

The Johnston butter helps to make a nice bundle by keeping the butts of grain even. A sheet steel extension holds the bundle while it is being bound. The butter gears mesh perfectly. A separate roller box is provided for bearing at this point.

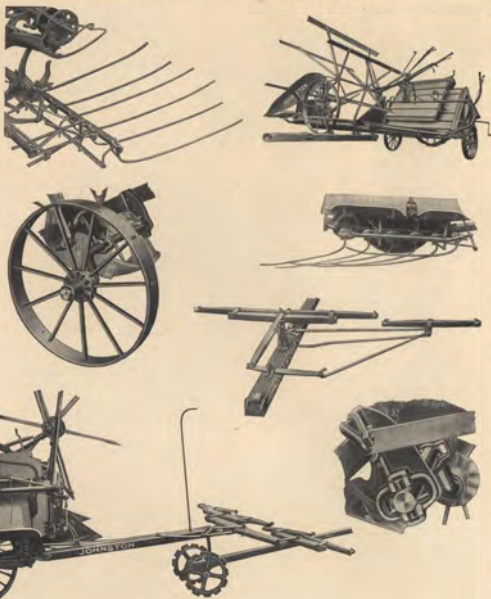
Shifting the binder attachment and adjustment of the butter controls the placing of the twine around the bundle. Can bind long grain 24 inches from the butts and short grain 8 inches from the butts. Binds in the right place every time.

The deck dump-boards have spring trip. A ratchet nut takes up the wear.

The flange on twine can cover keeps the can in shape and the tension plate steady.



Johnston "Continental" Binder



Bundle Carrier extended. Binder on Truck. Outside Truck Axle Fastening. Bundle Carrier folded. Three-Horse Equalizer. Tongue Truck for 7-foot and 8-foot Machines. Inside Truck Axle Fastening.

Johnston "Continental" Binder



THE Johnston steel bundle carrier folds to the rear, out of the way. Has six fingers that are held in place or tripped by the foot, from the seat. It is easily attached to the machine and perfectly supported. Is built for strength and carries its load easily. Is well balanced and dumps and returns to place quickly.

Our transporting trucks are the stub axle kind. The binder can be mounted in five minutes. The truck consists simply of two steel axles, a pair of special steel wheels and four malleable supports that are always bolted in position on the main frame of the machine.

The wheels, complete with their axles, are slipped through both brackets, given a quarter turn so that pins will fit in back of inside bracket, and are locked with small latches. After raising both wheels out of the way, hook pole iron in casting on under-side of platform and slip forward casting, which is always bolted to top of pole, into socket on end of platform. It

is locked there automatically—not one bolt or nut to be touched in the entire operation. Pick up your lines and go ahead, through fields, narrow lanes and over bridges. Dismounting the binder can be accomplished just as quickly. The Johnston steel three-horse rig is fifty per cent. lighter, yet will wear longer and work better than the old style. There isn't a better rig on the market.

The 8-foot binder, which has come into such favor with the farmers who have large farms and who require fast work, has the same general construction and features as the other Johnston Binders, being, of course, heavier and stronger in places. With the 8-foot binder the Johnston Tongue Truck and four-horse equipment are furnished. The truck wheels have a large radius of action and a vertical flange prevents slipping or sliding. Large, strong axle. With the truck the machine runs easily and steadily—no jerking or jarring, also prevents side draft and neck weight. The truck works perfectly in all kinds of soil and the turning or backing of the machine is easily accomplished. We furnish the truck for 7-foot binders when ordered.



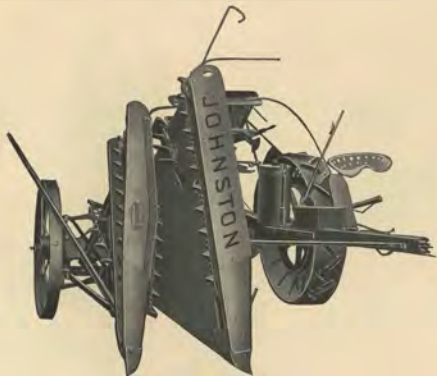
Johnston Corn Binder



A strong, durable, satisfactory machine. Large Main Wheel—plenty of power—light, direct draft. Inclined Elevation, which is the natural way. Perfect Balance. Works well on all kinds of soil—on side hills or level land.

Johnston Corn Binder

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A practical, common-sense, well constructed Corn Binder—one that looks good and always works well.



Johnston Corn Binder



Showing Frame, Wheels and location of Pole and Seat. Forty-inch Wheel, Roller and Brass Bush Bearings. Main Drive Gears. Cutting Apparatus. Conveyor Fingers. Separate Idler Sprocket Box. Adjustable Chain Tighteners. Binder Attachment. Automatic Gates. Set for Short Corn.

Johnston Corn Binder



It is recognized even by competitors that the Johnston Corn Binder stands without a peer. Johnston Corn Binders cut and tie corn where other binders are unable to even start.

This is accounted for by its advanced and perfect mechanical construction.

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 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 elevator and gears on the other, with the binder attachment directly in the line of draft. Always in perfect balance. No side draft.

Our drive wheel is larger than on any other machine. Is 40 inches in diameter, with a wide rim and angle steel calks—giving great power. Dust-proof roller bearings on hub of wheel decrease wear and draft.

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. There is no clogging by this method.

The gathering chains with stationary fingers pick up the row knocked down in opening the field. They handle tangled corn perfectly.

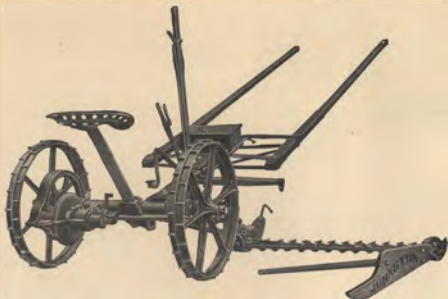
The conveyor chains with folding fingers carry the corn to the binder attachment. Just before the needle passes around the bundle, automatic gates (found only on the Johnston) release the fingers. These fold and keep the incoming corn from crowding. There are no packers. The Johnston knocks off fewer ears than any other binder.

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 knoter lowered. The stalk channel has a 4-inch adjustment. All levers convenient to the operator. The Johnston steel carrier takes five bundles and trips from the seat.

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



Johnston No. 11 Mower



THE Johnston No. 11 Mower is admirably adapted for use on small farms, orchards, parks and lawns, golf courses, and on village and city streets, or wherever a large machine cannot be operated conveniently or economically.

The Mower, while small, light, and compact, is in every way a most perfect and satisfactory machine and will give years of hard work, being built of the best material in every instance.

It is constructed along the same general lines as our other mowers. We use on the No. 11 a new combination pole and thills, which are easily and quickly arranged for either one or two horses. As on our other mowers, the features include gearings placed at the rear of the main axle, horizontal crank shaft with separate

boxes (brass, in front), wood pitman, roller bearings for main axle and bevel wheel shaft, three pawls in each wheel and convenient levers. The lower bevel-gear shield is detachable, as is also the crank-wheel shield. They are easily removed and cheaply replaced in case of accident.

The singletree or whiffletree draws from underside of stub tongue. This machine is very light in draft, evenly balanced and possesses sufficient weight, strength and capacity. It is especially constructed for close cutting.



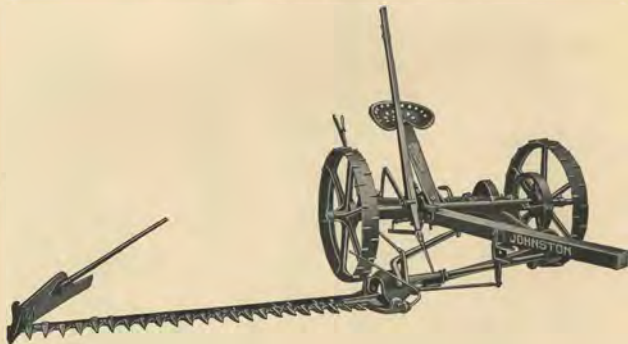


Johnston (No. 10) Lever-Fold Mower



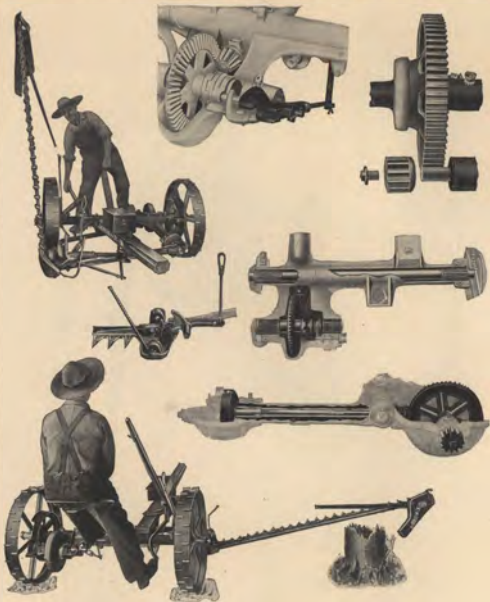
The Johnston Lever-Fold Mower enables the operator to lift the cutting bar to a vertical position and lower again without leaving his seat. It is thrown in and out of gear automatically; also, independently by foot lever. Every part works easily and perfectly.

Johnston (No. 10) Lever-Fold Mower



A strong, well-built Mower. Notice total absence of all complicated parts—few parts and every part for a purpose—wide frame—high wheels—light draft—a good cutter.

Johnston (No. 10) Lever-Fold Mower



Automatic Throw-out. Gag Lever Connections. Gearing. Roller Bearings. Horizontal Crank Shaft. Putting Bar in vertical position. Using Foot Lever to clear field obstructions.

Johnston (No. 10) Lever-Fold Mower



HERE is no mower on the market that excels the "Lever-Fold." Examination will prove the truth of this statement, as the superior workmanship, the high grade material used and the correctness of its mechanical construction make the Lever-Fold all that is desirable and essential in a mower.

By the use of a foot lever the operator can raise the cutting bar sufficiently high to clear stumps, stubble, stones and other field obstructions, and if the bar is desired in a direct vertical position for going to or from the field, the raising lever is used in connection with the foot lever, thereby bringing the bar to a vertical position. The bar remains rigid while in the vertical position, and always returns to position easily and evenly without jerking or jarring. By a very simple, yet positive arrangement, the mower is thrown in and out of gear, either by the operator at will or automatically as the bar is raised or lowered. The bar, unless otherwise de-

sired, is always in or out of gear when at an angle of about thirty degrees, thereby eliminating all possibilities of straining or binding the knives. The use of a gag gear on the Johnston Lever-Fold permits the cutting bar to always hug the ground.

A large gear and a small pinion are used that mesh perfectly. The pinion can be easily removed if it should become worn. Gearing is well shielded.

The driving wheels are high and broad faced with lugs which give plenty of traction in grasses.

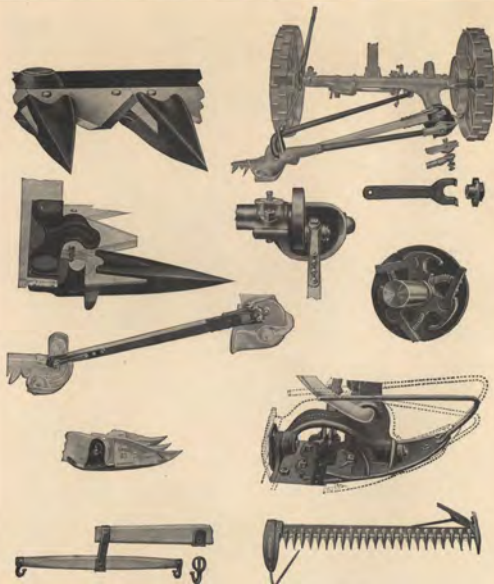
The main frame is a solid casting and just heavy enough to make a firm bearing, keeping all shafting in line and all gearing running smoothly. Two sets of roller bearings each for main axle and intermediate shaft at the rear, reduce the draft. The bearings are steel and dust-proof.

The heavy crank shaft runs in horizontal position under the main axle and retains oil on the bearings. Separate boxes at each end hold the shaft in line, and are easily replaced when worn.

The gearing is back of the main axle, giving balance to the machine.



Johnston (No. 10) Lever-Fold Mower



Serrated Guard Plate. Push Bar Raising Gag and Wide Main Frame. Showing Guard, Wear Plate and Oval Head Rivets. Pitman Connection. Ratchet Nut. Pitman. Pawl. Outer Shoe Sole Plate. Range of Tilt of Inner Shoe and Bar. Whiffletree Hooks and Chafing Plates. Underside of Cutting Bar.

Johnston (No. 10) Lever-Fold Mower



IN the making of the Lever - Fold the idea has been for simplicity and service — the simpler a mower is, the more easily it is going to work. The

Lever-Fold will cut any grass that grows on any kind of land, for it is made to perform that duty.

We use a long, wood pitman with heavy malleable connections and a bab-bitted cast-iron box that makes a good bearing and does not heat if kept properly adjusted and oiled. The box has a separate oil-chamber. A malleable flange-washer keeps out the dirt. The bolts at each end have a ratchet nut held in place by steel lock springs. Makes an easy, secure adjustment. Pitman has direct action.

The cutting bar is made of steel and is always rigid. The guards are fitted with serrated steel plates. These with the knife, give a perfect, shear cut. The bar is smooth on the underside. Sections have oval head rivets, top and bottom.

They take out the grass through the openings between the guards. The sections extend over the knife back and bear on adjustable, hardened steel wear plates that keep the knife in line. The outer shoe has an adjustable steel sub-sole.

The steel push-bar is in one piece, works free in the joint casting, and is attached to the frame in practically parallel points, so that there is no binding when the bar is raised. Note ball and socket joint in front. The connecting bar joint is wide and attached to the inner shoe by steel pins at two points.

Each wheel has three pawls, which insure even and positive motion as soon as the wheels start.

Whiffletrees draw from the underside of the pole where the draft rod is attached. This brings the pull in a direct line from the push-bar. The whiffletrees' hooks are driven into the ends and will not pull out. Steel chafing plates make evener and whiffletrees work easily and prevent wear.

A hand lever permits the operator to have easy control of the cutting angle of the bar at all times.



Johnston "Continental" Reaper



Rake Standard. Automatic Trip. Reaper folded. Rake parallel with bar. Reaper Gearing.

Johnston "Continental" Reaper



ANY farmer who desires to harvest his crops so as to leave them in gavels or bunches unbound will find that this reaper fulfills his every want. It is a reaper that has been on the market for over 34 years and to-day stands, as it always has, without a rival.

It is strongly and rigidly constructed, has a wide range of adjustment and is easy to operate. The main frame is strong, making a rigid support for bearings, gearing and platform. The boxes are separate from the frame, but securely fastened to it. The gearing is always in mesh. Shields keep away the dirt and straw. The main drive wheel is cast iron with a wide rim and deep lugs, giving sufficient driving power. Dust-proof roller bearings are used in the hub of the wheel. The platform can be raised or lowered independently at either end, thereby permitting the thickest or most tangled grain to be easily cut.

The platform is steel trussed, which

prevents sagging. Steel pipe supports the frame and also serves as an axle for grain wheel when platform is folded for transporting. Steel braces hold the platform in position when raised, and a U-shaped steel support keeps the machine upright while wheel is being put on.

The Rake Standard is high and perfectly shielded. The rakes are parallel with the finger bar its entire length, and so discharge the gavel squarely, in the best condition for binding. The rake blades are solid, thus avoiding winding of straw about them.

The cam is adjustable for long or short grain, and with our automatic (or AA) trip the operator can set to rake off every second, third, fourth, fifth or sixth rake. This is a very important and convenient feature, especially where a certain size gavel is desired in light or heavy grain. By the same trip you can also prevent the delivery of a gavel at any time in turning corners, etc.

All levers are within easy and convenient reach of the operator, and this machine is under perfect control at all times.

The Johnston is simple to operate and always does good clean work.



Johnston Orchard Disc Harrow



CAN be used in any kind of orchard, orange grove, vineyard, preparing for cotton or for general discing work on small farms — two tools in one.

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 John-

ston 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. This extension will save many times its price.

The harrow is furnished with solid or cut-out discs. With the extension frame the machine measures 10 feet 1 inch in width.



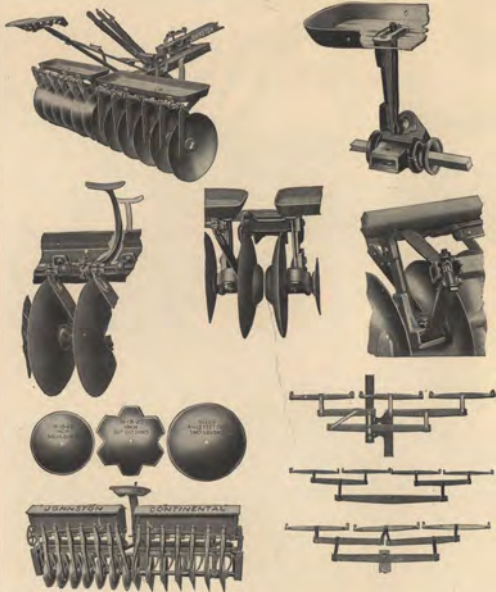
Johnston "Continental" Harrow

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Continental Harrow with Tongue Truck. Continental Harrow with Straight Pole.

Johnston "Continental" Harrow



Continental Harrow with Set-over Pole for 3 horses. Wood Bearing Draft Standard. Scraper Lever. Convex Center Bumpers. Cross Bar Thimbles. Discs. Seeder Attachment. Showing Special Equipment for 3 horses with Set-over Pole, and 4- and 3-horse Equipments as used with Tongue Truck.

Johnston "Continental" Harrow



THE Disc Harrow, and we mean the Johnstone, is becoming indispensable—and the most used implement for all kinds of soil conditioning on the modern farm. The Johnstone is easy to handle—easy to draw—strong—durable.

Tubular steel cross bar and steel frames are the only sort of frame used. Small thimbles prevent bar bolts from cutting out. The discs used are of the very best steel, being very tough and hard to nick. The standards are not in one piece but five, any one of which can be removed without taking the gangs apart.

End pressure is taken care of by convex center bumpers for each gang. They simply roll against each other, revolving in the direction in which the soil is turned. No other method will relieve the end pressure effectively. The Continental has wood block bearings for the draft standards. They take all the pressure from the standard thimbles and reduce the draft to a minimum. The block is adjustable to take up the wear and the bearing is dust-

proof. Rose steel blade scrapers, operated by automatic foot levers in front, and pressed steel weight boxes are used on the Continental. Each gang has a shifter lever to control cutting angle.

An ordinary pole is furnished for two or four horses, but for three horses we use a stub or set-over pole with the middle horse directly in line of draft.

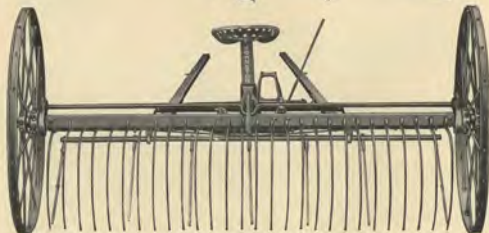
We also furnish the Johnstone Tongue Truck when ordered. It is simple, practical and durable. The truck has solid axle $1\frac{1}{4}$ inches in diameter, which gives great strength and a clearance for stubble and stalks. The wheels are 14 inches in diameter and have dust-proof boxes and chambers which permit bearings to run in oil.

The truck is attached to the stub pole by a large king bolt, which provides for the rise and fall of the harrow and also allows a large radius of independent action of the wheel in all kinds and conditions of soil. With the Johnstone Harrow and Johnstone Tongue Truck there is no jarring, jerking or whipping about on rough, uneven ground.

Disc Drill and Seeder Attachment are furnished when ordered. Separate seeder boxes are fitted to each gang, and they can be set up to sow in rows or broadcast.



Johnston Steel Hay Rake



Rake arranged for two horses. Frame Hinge. Wheel Axle, Axle Support, Dump Rod Catch. Levers on right side. Rake arranged for one horse.

Johnston Steel Hay Rake

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On the Johnston All-Steel Rake there are very few parts. In a word, it is simple, strong and durable—the real, important points in a Hay Rake. It is convenient and easy to operate. Always handles the lightest or heaviest of crops in a good, clean, satisfactory manner.

The construction is all steel except the combination thills and pole, which are furnished with each rake.

The main frame and the rake-head are of steel angle, steel trussed and securely hinged, and will not sag with any necessary weight. The rake-head is perfectly balanced, so that the weight of the driver assists in working the machine.

The steel wheels are light, high and very strong, having double hubs, staggered spokes, channel-steel tires with the concave side out to give better traction. The wheels on this rake will stand up under all conditions. The axle is strong and securely fastened to rake-head.

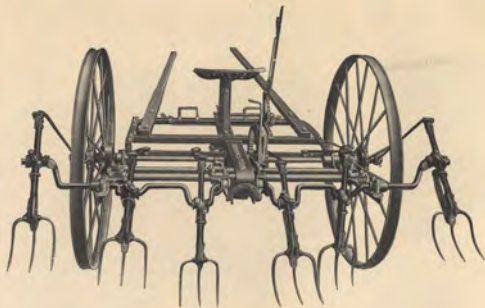
The steel teeth are long, flat-pointed, oil-tempered and interchangeable. They have free action, hang low, cleaning the ground without digging and lift high when dumping. They are fastened to the rake-head by detachable tooth-holders. There is no hole through the rake-head to weaken this part, as there is on so many rakes. The natural weight of the cleaners packs the hay as the teeth fill up, thus keeping the hay from rolling. A slight pressure on the cleaner lever permits larger windrows when desired.

A very simple one-piece dump rod, working from both wheels at once, is used, which makes the rake draw evenly. A hand lever is used in connection with a small lock latch which holds the teeth up when going to and from the field. All levers are on the right-hand side, except the foot lever for the cleaners. An adjustable ratchet plate regulates the tripping for slow or fast walking horses. This permits the regulating of the capacity of the windrows.

The Johnston Steel Rake is a light, durable, self-dumping machine, light of draft, easy to handle and of great capacity. Made in several sizes.



Johnston Steel Hay Tedder



Three-Tine Tedder. Fork Spring Trip. Wheel Hub, Section of Frame with Pivot, Roller Bearings. Tilting Spring. Steel Locke Belt Chain, Pipe Brackets and Caps.

Johnston Steel Hay Tedder



O farmer, who gives the quality of his hay, clover or alfalfa any consideration whatever, is without a Hay Tedder. This important implement has stepped in and reduced the chances of poor hay to a minimum. The Johnston is the original "hurry-up" "quality-maker" of hay for the farmer. Handles any kind of hay, wet or dry, heavy or light—it always does the work right.

Careful consideration has been given on the Johnston to the main frame, as here is the secret of the Tedder. It consists of two sections which are securely hinged and pivoted at the axle. The front section is steel angle—the rear section steel angle and steel pipe, which, together with brackets, makes a very rigid and strong support for the forks and gearing. The eight-fork frame has steel truss and cushion springs at each side to save frame and operator.

The wheels on the Johnston are extraordinarily strong and will last the life of the Tedder. The steel wheels have double hubs, staggered spokes and wide,

channel-steel tires, concave side out. Three sets of roller bearings are provided for main axle. This reduces draft.

Our method of driving is from the center by steel Locke Belt Chain. Power applied from both wheels at once gives even draft. A steel shield protects the chain.

The forks have three tines in one piece of steel, spring-tempered. A properly constructed spring trip enables the forks to meet obstructions without breaking. No two forks strike the ground at the same time. The motion of the forks is so rapid that none of the hay is left untiddered. Outside forks stir the hay that the wheels pass over. The fork crank boxes are made in two parts, securely fastened to the frame. They hold the cranks in perfect line. The tilting lever controls the height at which the forks work. A spring in front carries the weight.

Either one or two horses can be used with the Johnston, as each Tedder is furnished with combination pole and thills, and changes can be made easily and quickly.

The Johnston Tedder will save you time—money—labor, and give your hay a better market value. You will never be disappointed with this Tedder.



"Easy Loader" Spreader



MOST farmers are too well informed on the real value of farmyard manure to be enlightened. Still there are many farmers who continue to employ the antique, wasteful, and unsatisfactory pitchfork method. The manure produced on farms is too valuable to be wasted and there is only one really good method to get all the good out of it, and it is with frequent applications to the land by a good, reliable, easily handled, perfect-working spreader.

The "Easy-Loader" Spreader has the distinction by its demonstrations of being one of the most reliable, serviceable and easily handled spreaders on the market. There are very few parts; no complicated parts. Its construction is of steel and the best of seasoned and well painted woods. As either side lets down and as it is low, it is easy to load—no back-breaking as with most spreaders. Care-

fully put together, therefore no binding or hitching.

The foundation of a Spreader is the frame, so on our Spreader we have a main frame that will not sag or twist. The side sills are of channel steel, cross sills of 3 x 5 oak, all anchored to the side sills. In the center there is a T-steel bar which forms a track for the center chain, and also, gives strength to frame. Steel rods, well braced, run diagonally and give additional re-enforcement. The Easy Loader will stand up under severe strain and hard usage and give good work under all conditions.

This Spreader has *two floor chains*, one at either side of the apron, which draws the floor toward the beater surely and evenly. Uneven loading does not affect the floor. The floor runs over two sets of large sized rollers, set close together, and so placed that they cannot become clogged, and each lag of the floor is constantly supported at three distinct points—the sides and the middle, thus the load runs back squarely and evenly.





"Easy Loader Spreader"

THE floor feed is certain — the Spreader has to distribute the right amount of manure the operator directs by the lever at his side. The worm feed, as used on the Easy Loader, cannot overhaul—the bottom cannot race, regardless of the lay of the land.

By means of our simplex beater drive, one chain runs over beater shaft and over sprocket on main axle—thus all gearing and stud shafting are done away with.

The floor is automatic and as soon as the load is completely spread and the head-board is next the beater, the feed stops and the apron is returned to its original position automatically. This method does away with the many objectionable features of the endless apron type of Spreaders.

Another strong feature is, as the tail-board is always down except when spreading, there is nothing in the way of loading an Easy Loader over the rear end. There is no high pulverizing rake to pitch manure over, and consequently the Easy Loader is from ten to fourteen

inches lower to load at the rear than any other Spreader.

The head-board, by following the manure, as it does, not only cleans the spreader out perfectly, but insures good work in the field, as the manure cannot kick back into the empty apron, as it does on the endless apron variety.

Both front and rear wheels are furnished in either wood or steel. In both instances the rear wheels are larger and set farther apart than the front wheels.

As both rear wheels turn with the axle, roller bearings are incased in heavy roller boxes which are attached to the side sills.

The Spreader can be equipped either with single pole, two or three horse hitch or the double pole combination two or three horse hitch.

A special lime hood for ashes or light manure; also a dropper attachment for drills when ordered.

For further detailed information ask or send for special catalog.

The Gearless Hay Loader

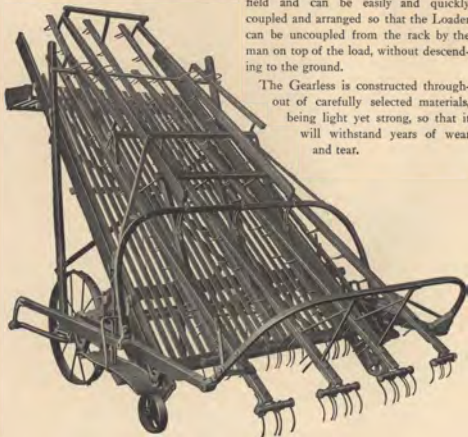
IN a few words, the great success of the Gearless Hay Loader has been on account of its great simplicity of construction. If you have ever owned a Hay Loader, you know the trouble caused by gearing, sprockets, chains, springs, drums, cylinders and webs. There are none of these "contraptions" on the Gearless to cause you trouble during the haying period.

By the fork arms positive loading is

insured; they gently, but firmly, elevate all the hay and do not crumble and break the hay, as is so often the case with the drum loaders. The Gearless has the long, easy stroke of the hand rake — the natural way of handling heavy windrows easily and delivers the hay on the wagon without being chewed and torn. The rear part is carried on wheels instead of being dragged.

The Loader is easily handled in the field and can be easily and quickly coupled and arranged so that the Loader can be uncoupled from the rack by the man on top of the load, without descending to the ground.

The Gearless is constructed throughout of carefully selected materials, being light yet strong, so that it will withstand years of wear and tear.



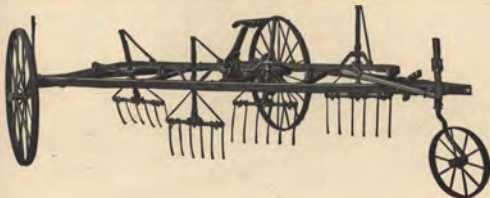


Side Delivery Rake

HERE is a Side Delivery Rake that will please the most discriminating farmer. To begin with, it is of entire steel construction, excepting the pole, and will wear only as steel will. There are no chains or sprockets to get out of working order. The angle steel frame is so constructed that there can be no sag. The wheels are large and strong, giving ample traction. Power is conveyed directly from main drive wheel to the working shaft

by just one straight shaft—a simple and positive drive. This rake has forks instead of a drum or cylinder, therefore, does not roll, or rope, and bunch the hay. There are four six-tine forks of tempered spring steel, provided with a recoil spring. The rear of the Rake is carried on a spring which makes it flexible and a lever enables you to adjust it to any and all conditions.

It can easily and quickly be changed from a rake to a tedder.



Johnston Spike Tooth Harrows



THE Spike Tooth Harrow is in great favor with many farmers and we are able to supply them with all that is best in such harrows. Our Spike Harrows

are constructed throughout of the best of steel and as the construction is very simple and without any complicated parts to get out of order, these harrows have long life and are really indestructible.

Side bars are used which are securely braced. The teeth are diamond shape, forged and tempered, and are upset on the ends to prevent slipping through the end. They are attached to the bars with a forged steel eye bolt-clamp. The position of the teeth is controlled by levers and can easily be adjusted to any angle, forward or backward. Thus the harrow can be instantly cleared of any trash or stubble without stopping the team.

The lever is made of two pieces of steel and a flat spring. The dog is held securely in the channel and works through handle into rocket, bearing against ribs of the channel—a very simple, yet substantial, arrangement.

The steel standards are held in position by the teeth and are placed on each alternating side of the shifting bar. The rounds enter the bar, making a more substantial attachment than if bolted.

Each section is fitted with four runner-teeth which enable the harrow to be easily transported to and from the field.

These harrows are in use by thousands of farmers in all sections of the country and they are always satisfied by their purchase.

They are made in the following sizes:

No. 1, two sections	50 teeth
No. 2, two sections	60 teeth
No. 3, two sections	70 teeth
No. 4, three sections	75 teeth
No. 5, three sections	90 teeth
No. 6, three sections	105 teeth



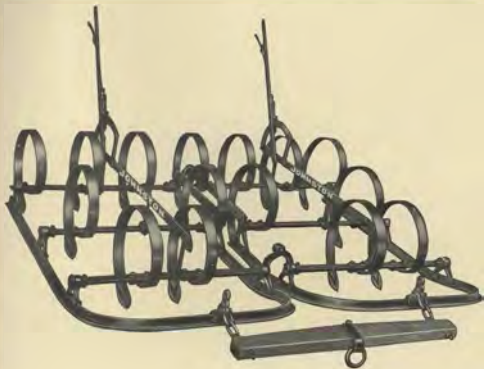
Johnston Spring Tooth Harrows

YOU will never be disappointed with this Spring Tooth Harrow; in fact, we know you would be delighted with such a perfectly constructed and satisfactory Harrow. It is a Harrow that will readily conform to all kinds of land conditions. As with our other Harrows, it is of entire steel and malleable iron construction. The frame is of steel with separate steel runner plates bolted on the underside to take the wear. These plates are easily replaced in case of wear. The teeth are of the best oil tempered spring steel and so arranged

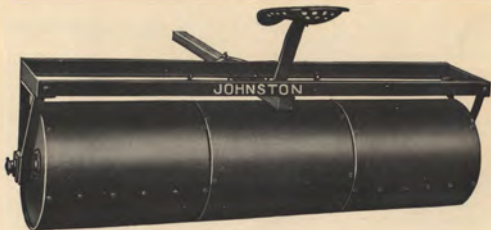
that no two teeth trail and are also adjustable by use of a lever.

We also have a splendid Harrow with a wooden "A" or "butterfly" frame that is very popular with many farmers. They are an inexpensive Harrow with many valuable and popular features. These Harrows are in two sections and hinged at three points, which make them very flexible to the lay of the land. The teeth are of our usual quality and are securely fastened.

Made in three sizes: 16, 18, and 22 teeth.



Johnston Steel Land Roller



A STRONG, solid, substantial and simply constructed Roller; a Roller that will give plenty of good, hard, satisfactory service—in fact, a Roller that will last a lifetime with ordinary care.

The frame is made of $\frac{1}{4}$ inch angle steel, making it strong, rigid and durable. The axle, which is of $1\frac{3}{8}$ inch steel shafting, turns in hard maple boxes carried in steel hangers. This feature is very important as the wood bearings wear longer, work more easily and are more easily replaced if worn than metal bearings.

To prevent wear on the axle, we place a cast sleeve or collar on the hubs at the end of the drums, and the wear, if any,

comes on the collars and not on the axle, as is mostly the case.

The drums are made of high carbon sheet steel (No. 12 gauge). The ends are closed with tight-fitting, solid sheet steel heads, put together with bolts, thus excluding all dirt and trash from the interior of the drums. The drums turn independently of each other on the axle.

This Roller has every advantageous feature and it will fulfill your every want.

Made in Several Sizes

SECTIONS	DRUM	LENGTH	WEIGHT
2	24 inches	7 feet	550 lbs.
3	24 "	7 "	580 "
2	24 "	8 "	595 "
3	24 "	8 "	635 "

REPAIRS: If for some reason repairs are ever needed for Johnston farm machinery, you will find large stocks of repairs for Johnston machines at our numerous Branch Offices, Transfer Points, and at the thousands of Johnston Agencies. We are enabled to make quick delivery of repairs for machines manufactured over thirty years ago. No part of our business has the attention that the Extra Department has.



JOHNSTON





◆(FOR SALE BY)◆
George J. Hoopes,
Embreeville, Pa.
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