

SUPERIOR GRAIN DRILLS



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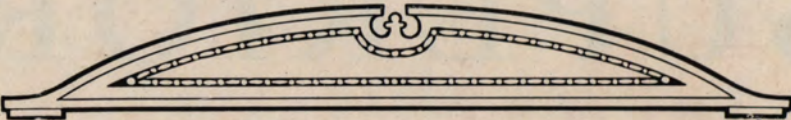
SUPERIOR

GRAIN DRILLS



CATALOG Adv. S-296

THE AMERICAN SEEDING-MACHINE COMPANY
(INCORPORATED)
SPRINGFIELD, OHIO, U. S. A.



FOR more than half a century we have been making Superior Grain Drills. Always keeping pace with the improvements which necessity from time to time demanded, we have supplied them to the entire satisfaction of an ever increasing number of enthusiastic customers in all parts of the civilized world.

Superior Drills are the most perfect seeding machines known to the farming industry, and our experience in their manufacture is a guaranty of their satisfactory work.

Anticipating the demands of tractor farming, we have designed a special tractor grain drill with power lifting device and adjustable tractor hitch for use with any tractor, illustration and description of which will be found in this catalogue.

All Superior Drills are sold under the strong Superior warranty that they are as represented and will do the work claimed for them when operated according to directions.

THE AMERICAN SEEDING-MACHINE
COMPANY
INCORPORATED



Superior Disc Drills



Rear View 10 x 7 Single Disc Plain Drill.

Superior Disc Drills are made both in Plain Grain and Combined Grain and Fertilizer Styles, in a large variety of sizes suitable for the seeding requirements of every section where grain is grown.

Note the following Superior features:

Double Run Positive Force Grain Feeds. Sow all known seeds, both large and small.

All Single Disc Boots adjustable, to take up wear.

Both right and left-hand Ground Wheels drive all the Feeds.

Grass Seed Attachment with great range of quantity.

Steel Seat or Foot Board furnished at small extra charge.

Conductor Tube Tops permit connection of Grass Seed Spouts so grass seed can be sown in rows.

Reducing Plates for Alfalfa, Millet, Flax, etc.

Hoppers of large carrying capacity.

Oscillating Drag Bar Heads (single disc only) give greatest clearance for trash.

Disk Wheel and Sliding Pinion for change of quantity.

Land Measure or Surveyor.

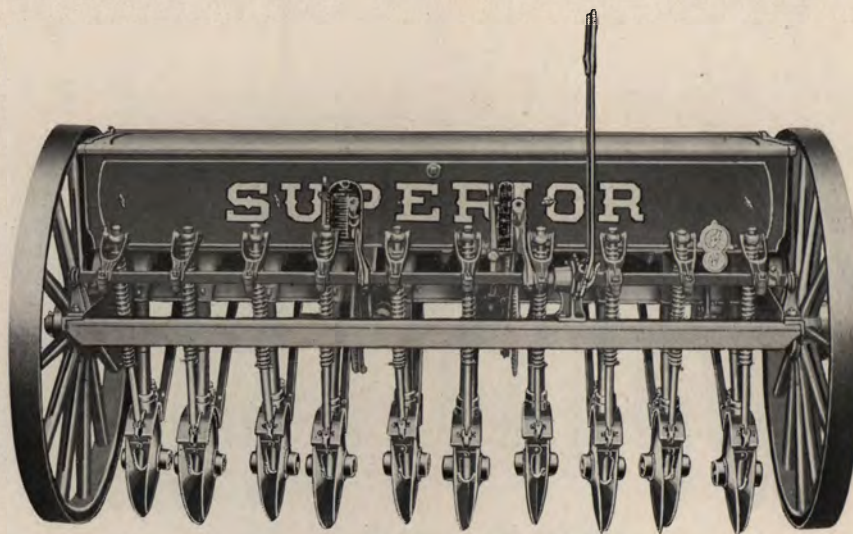
Folding Lifting Levers take up least room in storing.

Divided Hopper Lids are furnished on all Superior Drills having 14 or more furrow openers.

All Superior Drills having 12 or more discs or shoes are supplied with **two Folding Lifting Levers.**

Superior Drills with 14 or more discs or shoes have **two Grain Drives.**

Superior Disc Drills



Rear View 10 x 7 Double Disc Fertilizer Drill.

Superior Combined Grain and Fertilizer Disc Drills have all the features enumerated on previous page, and, in addition to these, are equipped with the celebrated Superior Finger Fertilizer Force Feed.

The ease with which the fertilizer hoppers and feeds can be thoroughly cleaned will appeal with favor to the user.

The quantity range for fertilizers is sufficient to meet all requirements.

The illustration above shows Superior Fertilizer Drill equipped with Double Disc Furrow Openers, which are interchangeable with Single Discs.

The Double Disc Furrow Opener is especially adapted to light, loose or sandy soils, also for work on hillsides. The Double Disc opens a V-shaped furrow similar to the work of a shoe and is of very light draft.

Telescoping Steel Grain Tubes are furnished on both Single and Double Disc Drills.

Standard Sizes

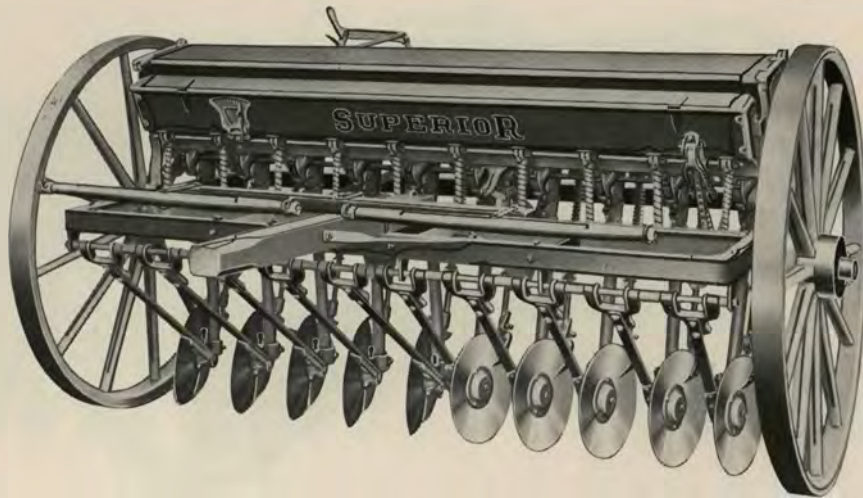
Plain Disc Drills

12, 16, 20, 22 and 24 Discs	6 Inch
10, 11, 12, 14 and 18 Discs	7 Inch
8, 12 and 16 Discs	8 Inch

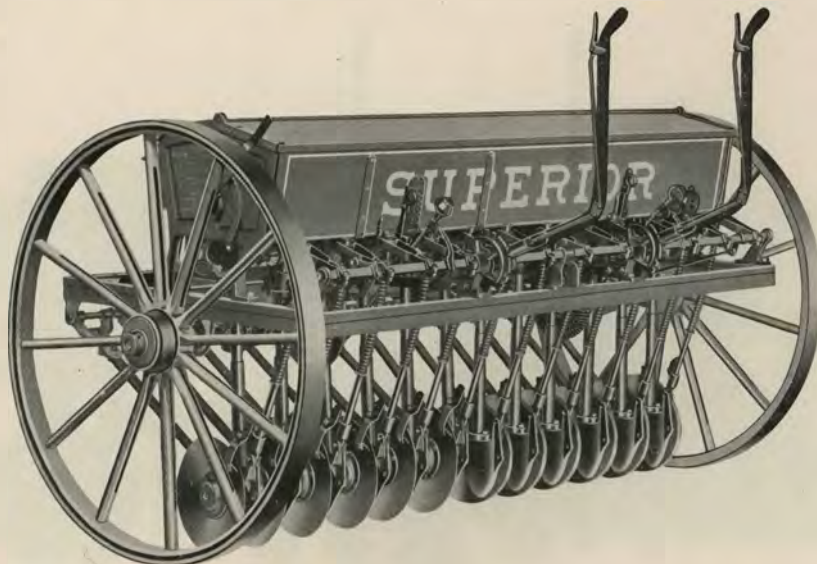
Fertilizer Disc Drills

9, 10, 11 and 12 Discs	7 Inch
6 and 8 Discs	8 Inch

Superior Disc Drills

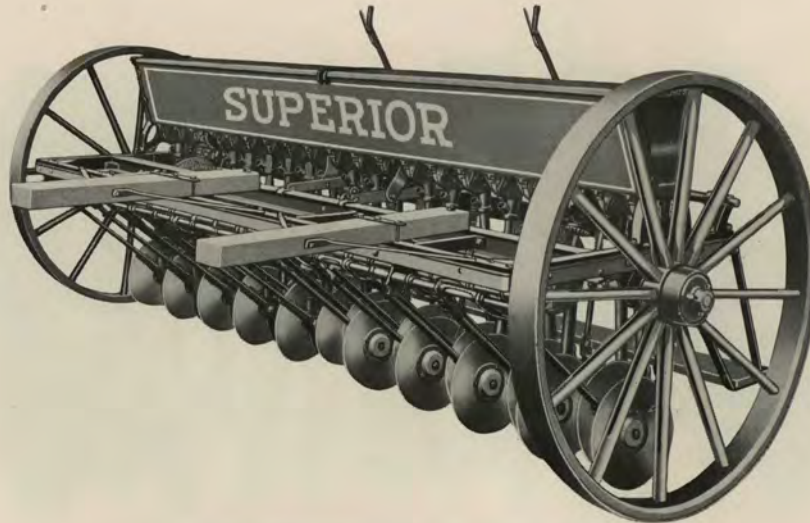


Front View 10 x 7 Single Disc Fertilizer Drill.

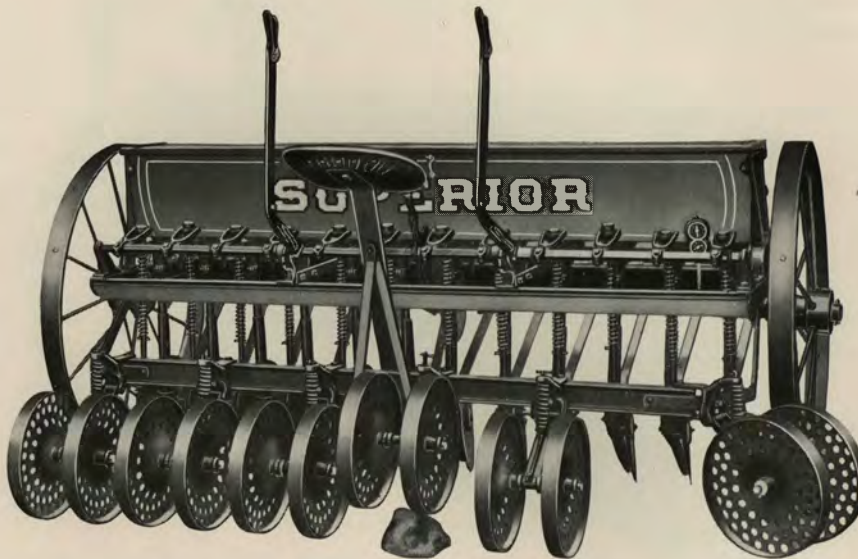


Rear View 12 x 7 Single Disc Fertilizer Drill.

Superior Disc Drills

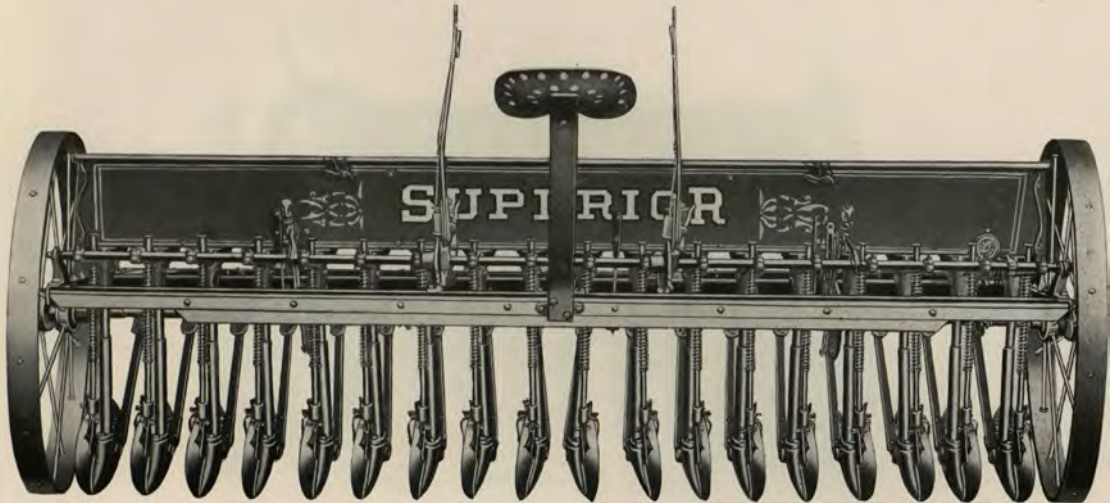


Front View 22 x 6 Single Disc Plain Drill With Discs Set Zigzag.

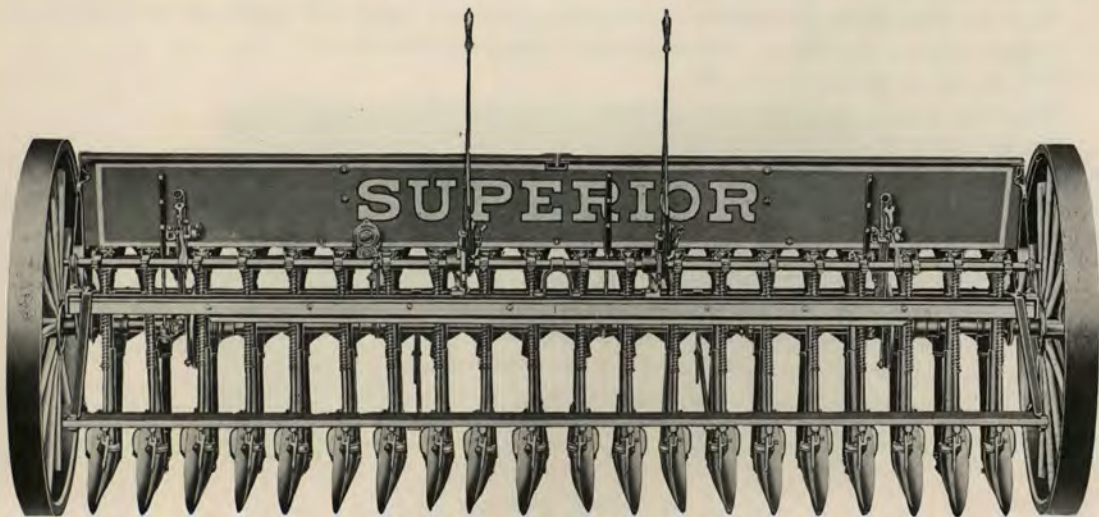


Rear View 10 x 7 Single Disc Plain Drill With Gang Press Wheel Attachment.

Superior Disc Drills

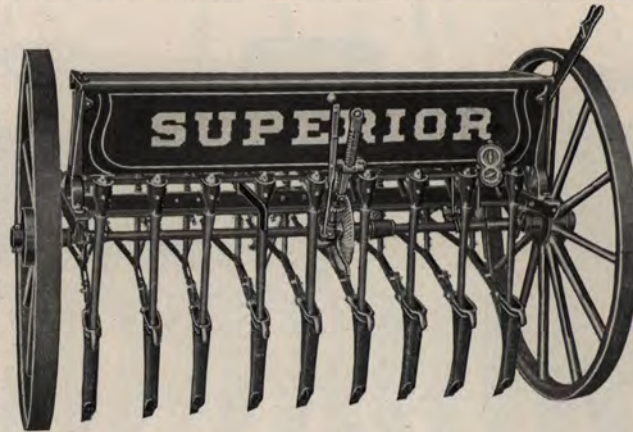


Rear View 18 x 7 Single Disc Plain Drill—Steel Wheels and Seat.



Rear View 20 x 6 Single Disc Plain Drill—Wood Wheels and Foot Board.

Superior Hoe Drills



Superior 9 x 7 Pin Hoe Plain Drill.

Superior Hoe Drills have every feature of the Disc Drills illustrated and described on the preceding pages, except the conductor tubes and furrow openers.

The seed is conducted to the deepest part of the furrow and deposited on the bottom of the seed trench in the firm, moist soil, where germination takes place readily.

Superior Hoe Drills are made in both plain grain and combined grain and fertilizer styles.

Ample Zigzag for Hoes. Gives greatest clearance for trash.

Pin-Break or Spring-Break Hoes.

Superior Finger Fertilizer Force Feed.

Double Run Positive Force Grain Feed.

Double Drive Ground Wheels with outside pawl flange. Both wheels are drivers.

Strongest Frame ever placed on a grain drill. Angle Steel; reinforced with I-Beam Steel Bed Rail.

Disk Wheels and Sliding Pinions for changing quantity of both grain and fertilizer.

Grass Seed Attachment on special orders.

Double Pointed Hoe Points. Equivalent to two sets of single pointed hoes.

Self-aligning Boxing in each Axle Plate prevents binding.

Hoppers of large capacity. Rubber or Ribbon Steel conductor tubes. Land Measure, or Surveyor.

Standard Sizes

Plain Hoe Drills

8, 12 and 16 Hoes.....	8 Inch
10, 11, 12, 14 and 18 Hoes.....	7 Inch
12 and 16 Hoes.....	6 Inch

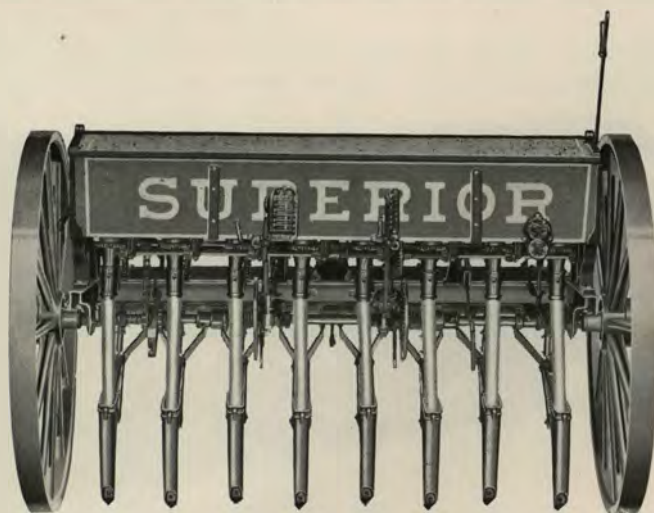
Fertilizer Hoe Drills

6 and 8 Hoes.....	8 Inch
9, 10, 11 and 12 Hoes.....	7 Inch

Superior Hoe Drills



Superior 9 x 7 Spring Hoe Fertilizer Drill With Steel Ribbon Tubes.



Superior 8 x 8 Spring Hoe Fertilizer Drill With Rubber Tubes.

Superior Tractor Drills

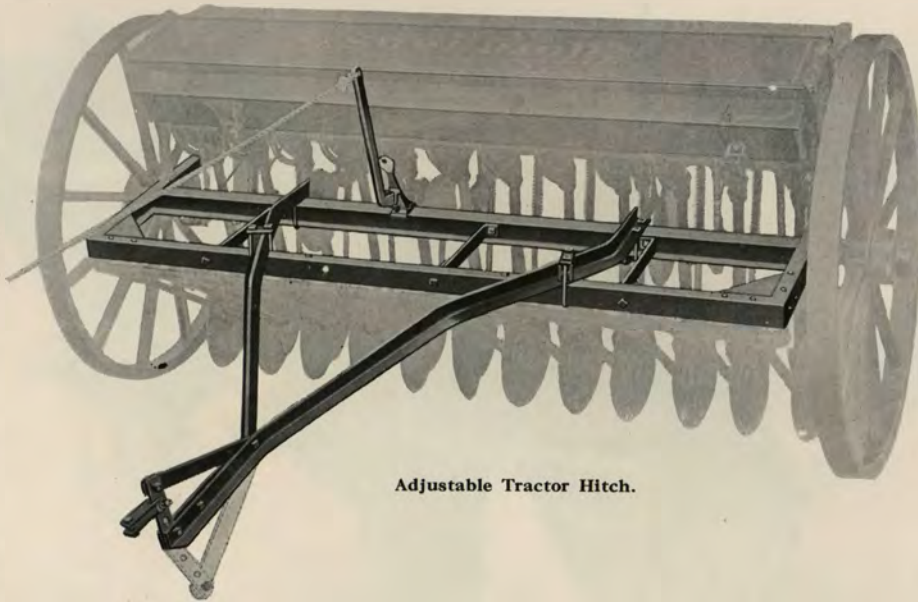


Front View Tractor Drill With Steel Wheels.



Front View Tractor Drill With Wood Wheels.

Superior Tractor Drills

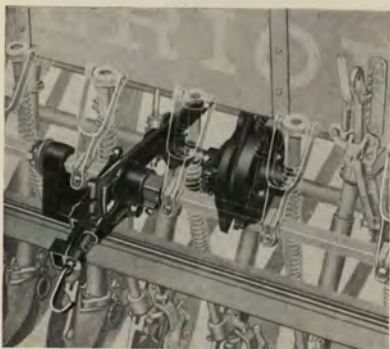


Adjustable Tractor Hitch.

Superior Tractor Drills are equipped with special Power Lift and Adjustable Tractor Hitch and can be used with any Tractor.

The Power Lift automatically raises or lowers the furrow openers and is operated by means of a small rope from the seat of the tractor. It is not necessary to stop the machine at the end of the field, as the furrow openers can be raised out of the ground while the machine is in motion and can be lowered in the same manner ready to start seeding again.

When the furrow openers are raised the flow of grain stops instantly, but commences again as soon as they are lowered into the ground. The action of the Power Lift is quick and positive.



Power Lift.

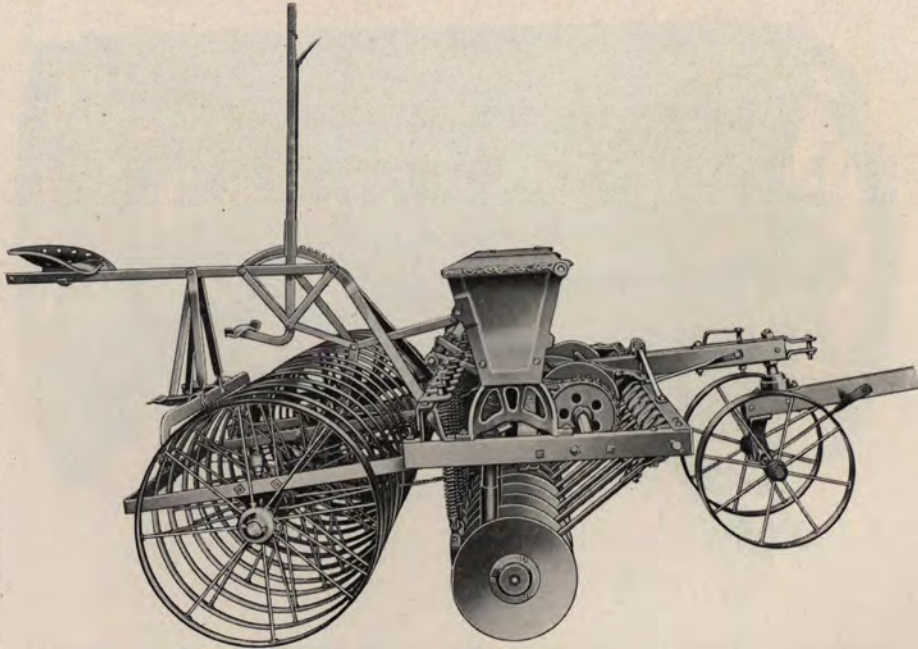
Superior Tractor Drills also have all the special features of other Superior Drills and can be furnished with either Single or Double Disc Furrow Openers, Wood or Steel Wheels, in both plain grain and combined grain and fertilizer styles.

Extension Hoppers can be furnished on Superior Plain Tractor Drills (at extra cost), which doubles the capacity.

Standard Sizes

Plain Grain Drills	Fertilizer Drills
12, 14 and 18 Discs.....7 inch	12 Discs.....7 inch
16 and 20 Discs.....6 inch	
12 and 16 Discs.....8 inch	

Superior Press Drills



The vital principles that have made Superior Grain Drills famous in all the grain-growing world go to make up the construction of the Superior Press Drill. It has many points of proven merit: Solid Steel Frame, Large Roomy Seed Hopper, Double Run Force Feed, Disk Wheel Speed Device for change of quantity without change of parts, High Carbon Dragbars, Perfect Direct Pressure. The seat is adjustable and can be moved to conform with the weight of the driver to keep the machine in perfect balance and relieve all neck-weight, either when the drill is in operation or being transported to or from the field.

It is made in plain style only and can be equipped with single disc, double disc or shoe furrow openers.

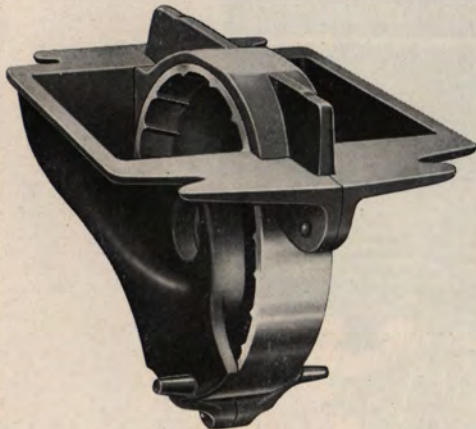
The action of the press wheels, which are placed directly behind the furrow openers, is such that they press the soil over the seed gently yet firmly enough to conserve the moisture in the ground, thereby assisting the germination of the seed as well as enabling the plants to better withstand the dry weather. The well-defined and packed furrows also prevent the wind from blowing out the seed and are a great protection to the plants in winter when filled with snow.

The Superior Press Drill is furnished with a two-wheel pole truck, the advantages of which are that it supports the front frame, insuring more uniform depth of planting and permitting shallower seeding in light, loose soils.

Furnished in the following sizes:

20 Furrow Openers.....	6 inch
12 and 16 Furrow Openers.....	7 inch

Superior Grain Feed



Double Run
Force Grain
Feed.



Reducing Plate
for Alfalfa and Millet.

The Superior Double Run Force Grain Feed is in reality two feeds in one, one side being adapted to small grains and the other to large seed. There is one size of channel, or throat, best adapted for sowing small grain such as wheat, and another for sowing the coarser seeds like oats, peas, beans, etc. The throat should be of correct area to handle certain size grains. Having provided this, quantity is changed by change of speed. In the center of this cup there is a feed wheel having ribs cast on the inside rim. A continuous square steel feed rod passes through each one of these feed wheels, which insures each and every feed wheel turning at the same rate of speed. One revolution of this feed wheel carries out a given amount of seed; two revolutions twice as much, and so on. The Superior Feed Wheel gets under its load and carries it out; it does not get on top of the load and kick it out. The feed is the most vital part of a grain drill, because upon it depends the accurate sowing of the grain. Extraordinary care is used in manufacturing the Superior Grain Feed, each being thoroughly tested for the slightest variation in quantity sown and discarded if not accurate.

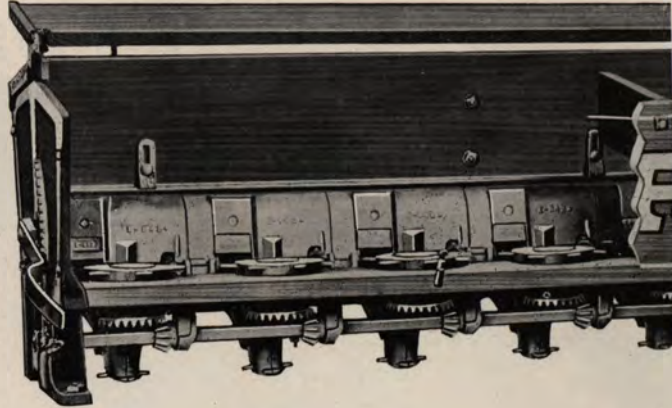


Booster Pin
Feed.

By the use of the reducer shown above it is possible to convert the grain feed into a grass-seed feed that will successfully sow alfalfa, millet and other small seeds in quantities ranging from 5 to 17 pounds per acre. This is done by inserting the reducer into the wheat side of the distributor, thereby reducing the measuring channel.

The illustration to the left shows the Superior Booster Pin Feed, which is exactly like the Regular Double Run Feed shown above, with the exception that the distributor wheel has pins cast upon it on the oats or large side of the distributor. These pins act as agitators and prevent coarse bearded oats from clogging in the distributor and insure an even flow of seed. This distributor is used principally in the Southwest and those sections where rust-proof or bearded oats are sown.

Superior Finger Fertilizer Feed



Commercial fertilizers vary greatly in consistency. Some brands are absolutely dry; another wet or damp; then there is the lumpy variety. The feed to be a success must be able to sow with reasonable accuracy fertilizer of such types. The Superior Fertilizer Finger Feed successfully handles all known standard brands of commercial fertilizers.

The fertilizer boxes are large and have ample capacity.

The revolving prongs, or fingers, cut off the under side of the body of the fertilizer and carry the desired quantity through the cut-off gate to the large discharge opening.

The discharge of the fertilizer is made certain by the timely and positive action of hinged cleaners or knockers, which act in unison with each movement of the revolving prongs through the large discharge opening. Thus the fertilizing material must be carried to these discharge openings and forced downward to the conductor tubes, through which it passes to the furrow.

The quantity of fertilizer sown is regulated by the opening in the back plates and different speeds of feed shaft obtained by speed disk on axle. The opening in back plates is made smaller or larger by means of lever on left end of hopper. Indicator on rear of hopper (right side) provides means for changing speed of shaft by use of speed disk on axle.

Quantities obtained by regular feeders are as follows:

7-Inch Drills

Feeder E-751, 75 to 710 pounds per acre.

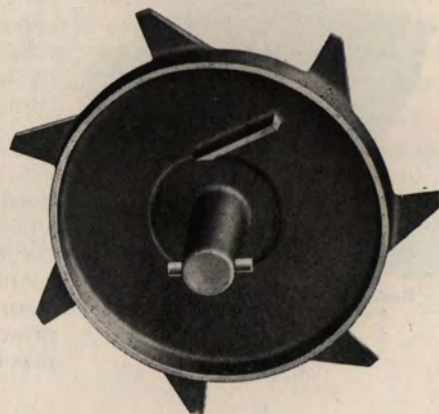
Feeder E-712, 125 to 1180 pounds per acre.

8-Inch Drills

Feeder E-751, 65 to 620 pounds per acre.

Feeder E-712, 110 to 1030 pounds per acre.

A special feeder E-579 that sows a minimum of 10 pounds per acre can be furnished for those desiring to sow a very small quantity.



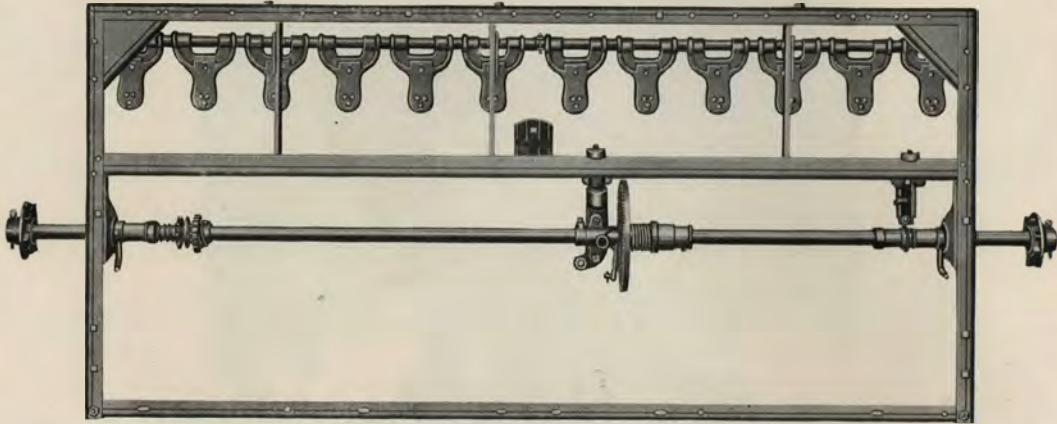
Superior Disk Wheel Speed Device



The quantities of both grain and fertilizer are obtained by means of our Superior Disk Wheel and the Sliding Pinion, which meshes in the various rows of cogs on the Disk Wheel, changing the speed of the feeds. The speed of the team has no effect on quantity sown. There are no loose gear wheels to get lost or cause annoyance. Everything is in its proper place ready for instant use. By means of the Grain Disk Wheel, which is in reality a number of cog wheels of different sizes cast upon a solid plate, different quantities can be sown from each side of the Superior Double Run Force Grain Feed. In other words, the smallest and largest quantities of every kind of grain can be sown. A Shifting Lever is used to throw the Disk Wheel and Sliding Pinion out of gear, and by means of this Shifting Lever the furrow openers may remain in the ground and change of quantity be made or the feeds stopped or started without raising the furrow openers. All the feeds are also thrown out of gear by raising the furrow openers. The illustration on this page shows the Grain Disk Wheel, Sliding Pinion, Bevel Gear, Shifting Lever, Two-Part Axle Hanger and Cold Rolled Steel Axle. The Shifting Levers also permit the operator to sow either grain or fertilizer separately. At the top of this illustration will be seen the Bevel Pinion, which transmits the driving power to a bevel gear located on the square steel feed shaft that drives the feed wheels in the Superior Double Run Grain Feeds. There is no lost motion and the drive is positive.

Everything In Its Place When Needed. No Change of Parts. Nothing to Get Lost. Change of Quantity Instantly Made.

Superior Frame and Wheels



The Superior Grain Drill Frame—Strongest Foundation Ever Placed Under a Grain Drill.

Superior Frames are made of one piece of high-carbon angle steel reinforced at the corners with heavy steel corner plates. A heavy steel I-beam bed rail is built into the center of the frame. This construction makes a Frame of great strength, and yet it does not add an ounce of surplus weight.

Axles are of large diameter, made from the choicest cold-rolled steel. These axles run true, and perform a very important part in the work.

Wheels.—Best grade Wood or Staggered Spoke Steel Wheels 4 feet in diameter. Both right and left hand wheels drive the feeds. If one wheel stops or slips the other will do the work. The hubs have extra long bearings and are provided with outside Pawl Flanges. (Scrapers for use in muddy seeding are furnished for the wheels at slight extra cost.)



Superior
Wood Wheel.

Strongest Four-Foot Wheels
On Any Grain Drill.



Superior
Steel Wheel.

Superior Single Discs



Open Delivery.



Closed Delivery.

The illustrations above show the Superior Single Disc Boots both Open and Closed Delivery. They are adjustable to and from the disc to take up all wear, so that weeds, crab grass, corn-blades, etc., cannot wedge between the disc and boot.

In devices of this character it is very important to have adequate means for adjustment to or from the back of the disc, for the reason that the efficiency of the work done depends upon these parts being held in close proximity to each other.

After a disc furrow opener has been in use for a season, the wear, caused mostly by the passing of grit or trash between the boot and disc, renders the parts inefficient for the purpose intended. The "Superior Way" provides for adjustment of boots relative to discs. The greatest efficiency of the working parts in Superior Single Discs is insured.

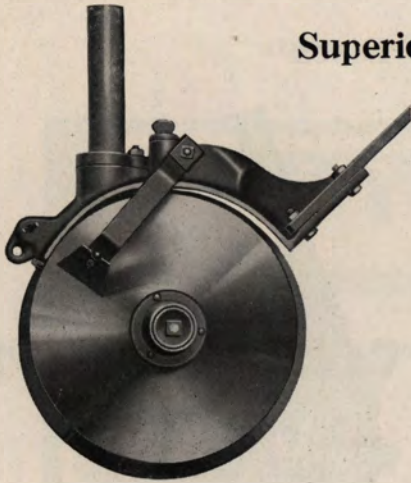
In this construction a fulcrum is provided between the boot and disc hanger at figure 3 for regulating the position of the boot related to the disc. By loosening nut at figure 1 and tightening nut at figure 2 the boot can be drawn towards the disc to compensate for any possible wear.

On the Superior Single Disc furrow openers the spindle is of parallel form and chilled. This feature is unquestionably a substantial adjunct in the make-up of Superior bearings, as moderate end-play is secured without the possibility of looseness and consequent wobbling of the disc. An examination of this Superior feature will convince any prospective customer of its great value.

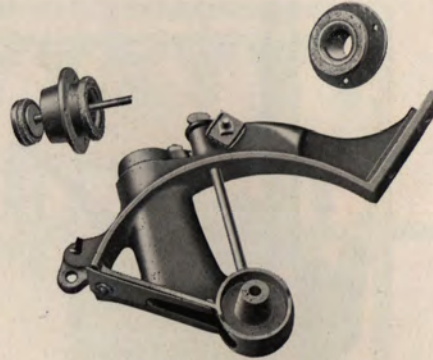
Superior Single Disc Bearings are guaranteed for the life of the Drill. If they wear out, they will be replaced free.



Superior Double Discs



Superior Regular Double Disc.



Superior Double Disc Trunnion Tube and Parts.

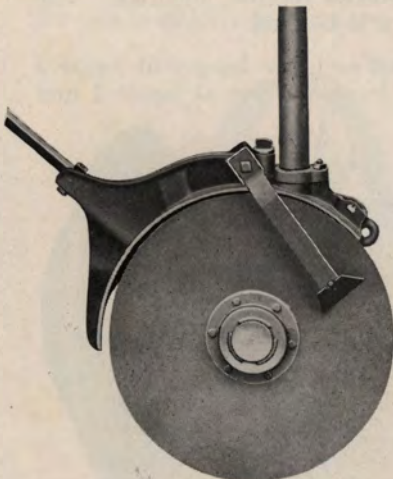
The upper left-hand illustration shows the Superior Regular Double Disc Furrow Opener, which is interchangeable on either a Superior Single Disc or Shoe Drill. In other words, an owner of a Superior Disc Drill can change style of furrow openers at any time by purchasing the furrow openers, drag bars and grain conduits. The Double Discs open V-shaped furrows, similar to a shoe, and do most excellent work on hillsides and in loose, sandy soils. They are not recommended for extremely hard ground. But for soils adapted to the double disc there is no furrow opener ever invented that will do as good work. The double disc also works well in trash or foul ground. The bearings are of correct design, smooth and hard. They are perfectly lubricated and dust-proof.

The illustration to the right shows the Superior Double Disc Trunnion Tube and parts. Note the screw for holding the adjustable inside scrapers up to the discs in muddy seeding.

See the long slot on bottom of spindle through which the oil flows to lubricate bearings; also the gas-pipe oil tube with its screw-cap oiler, which permits of oiling both hubs from a position on top of the drag bar. Felt washers are at both ends of the spindles, making the bearings dust-proof, oil-tight and noiseless.

Provision is made for the easy oiling of the Disc Bearings, as will be seen from the Screw Plug Oiler. The oil conduit carries the oil direct to the Bearings. Easy to get at. Bearings virtually swim in oil.

The Superior Saw-Blade Discs are exactly what the name implies—saw-blades without the teeth. There are no protruding hubs on this furrow opener. The Superior Saw-Blade Double Disc Furrow Opener works to perfection in mud, back-setting, sod, trash, loose, light soils, etc.



Superior Saw-Blade Double Disc.

Superior Shoes and Hoes



The Superior
Steel Shoe
Furrow Opener.



The Superior
Spring Hoe
Furrow Opener.

The left-hand engraving gives a good idea of the Superior Shoe Furrow Opener. This shoe is roomy at the heel, making a good seed trench, yet not so wide as to cause extra draft. Very popular where this style furrow opener is used. Opens a roomy V-shaped trench. This shoe is interchangeable with Superior Single and Double Discs. All Superior Furrow Openers have independent spring pressure.

The cut to the right shows the Superior Spring Hoe passing over a stump. The spring hoe is a positive stump jumper, and after the obstruction has been passed the action of the spring is such that the hoe immediately resumes its proper position. Pin Hoes are not supplied with springs, but have wooden pins to hold them in working position. Should a solid obstruction be encountered, the only damage sustained is the breaking of a small wooden pin. Both styles of hoes have Reversible Hoe Points, the equivalent of two sets of points. Superior hoes are narrow enough to avoid unnecessary friction in opening the trench and do away with extra draft, and the opening in the hoe is large enough to allow the grain and fertilizer a free and unobstructed passage to the seed bed.



Superior Split Press
Wheel used on Hoe Drills
by beet growers.



Complete Beet Seed Fur-
rowing Attachment for
Superior Disc Drills.

It has a split gauge or
press wheel similar to the
one shown on the illus-
tration to the left.

Superior Tubes and Pressure Bars



Telescoping
Steel Tube.



Ribbon Steel Tube.

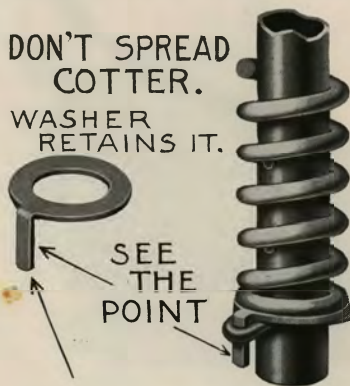


Tubular Steel
Pressure Bar
and Spring.

Superior Conductor Tubes are furnished in three different styles—Telescoping Steel Tubes for Single Disc and Double Disc Drills; Ribbon Steel and Best Grade Rubber Tubes for Hoe and Shoe Drills.

The Superior Telescoping Steel Conductor Tube, shown by the upper left-hand engraving, always provides a direct, positive drop for the seed. No buckling, kinking, bending or collapsing.

The Superior Ribbon Steel Grain Tubes are swiveled into the tube tops and cannot kink or buckle. The wear is also evenly distributed by this construction. Therefore they give better and longer service than similar tubes that do not have this feature. Purchaser of Hoe and Shoe Drills has the option of Ribbon Steel or best grade Rubber Tubes.

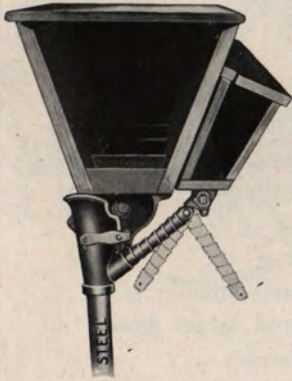


The Superior Tubular Steel Pressure Bar and Lifter Arm, shown above, is used on all Superior Drills—Disc, Hoe and Shoe. This Pressure Bar cannot bend or break. The Pressure Springs will not buckle or kink, and they always retain their proper shape.

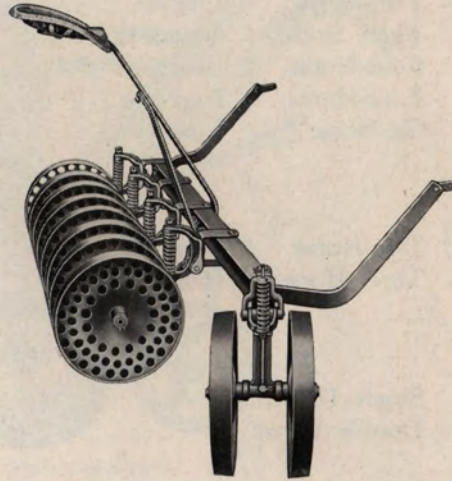
The cut to the left shows the Superior Retaining Washer and Spring Support to go underneath the pressure springs. Gives a solid support for the spring and always keeps the cotter pin in place.

Buffer Springs to be placed on Pressure Rods above Lifter Arms can be furnished on all Superior Drills to prevent the discs from running too deep in light, loose, sandy soil.

Superior Attachments



**Superior Plain Hopper
and Grass Seed
Attachment.**



**Superior Gang Press Wheel
Attachment.**

Superior Grass Seeder can be attached to any Superior Grain Drill. The Grass Seeder Spouts are hinged, and the seed can be sown either in front or rear of furrow openers by the use of flexible Ribbon Steel Grass Seed Tubes, or the seed may be conducted through the grain tubes direct to the furrows. Extra long Grass Seed Conductor Spouts for sowing at rear of furrow openers will be furnished if specified in order. The range of quantity is from two to sixteen quarts to the acre.

All Superior Drills are equipped regularly with Covering Chains. The Covering Chains are heavy and strong and are shipped with all Superior Disc Drills, except Press Drills or drills ordered with Press Wheel Attachments. All Superior Drills having an even number of furrow openers can be readily fitted with the Superior Gang Press Wheel Attachment. The Press Wheels are in pairs and attached to steel frame as shown. Pressure Springs are provided for each pair and insure flexibility and evenness of pressure. A comfortable seat is mounted on the frame. The benefit of the drivers' weight is placed where most needed. Short turns can be made without breaking wheels or castings. See illustration. These press wheels track in the furrow in a satisfactory manner. This is an extra attachment and is only furnished on special order and at an additional but reasonable price.

The hoppers are large and of ample capacity; nothing but the best lumber obtainable is used in their construction. The hopper on fertilizer drills is made double—one side being used for fertilizer and the other for grain.

Standard Equipment

Hitches—Plain Drills

Two-Horse, 1 Tongue.....	12x6, 11x7 and smaller sizes.
Three-Horse, 1 Tongue.....	12x7 and 12x8.
Four-Horse, 1 Tongue.....	14x7.
Four-Horse, 2 Tongues.....	16x6, 16x8, 18x7 and 20x6.
Six-Horse, 2 Tongues.....	24x6.

Hitches—Fertilizer Drills

Two-Horse, 1 Tongue.....	11x7 and smaller sizes.
Three-Horse, 1 Tongue..	12x7.

Feed Drive

Single Drive.....	12 and smaller sizes.
Double Drive.....	14 and larger sizes.

Lift Levers

One Lever.....	11 and smaller sizes.
Two Levers.....	12 and larger sizes.

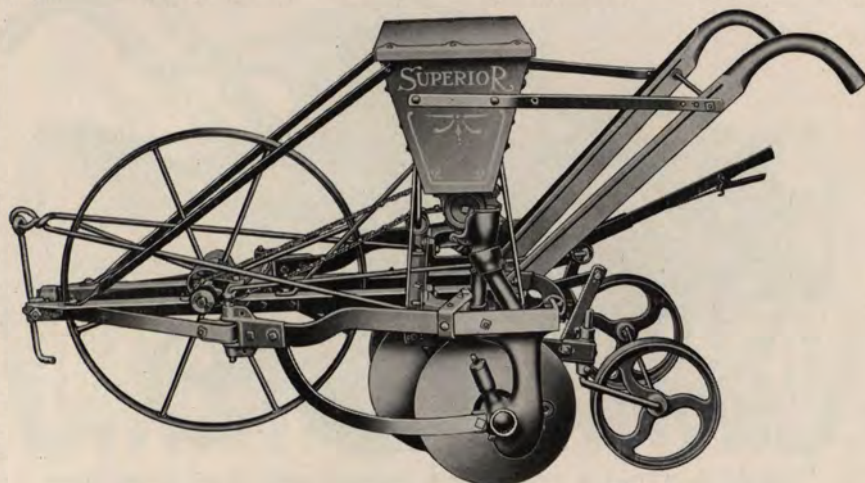
Wheels

48-inch Wood or Steel	
3-inch Tire.....	14 and smaller sizes.
4-inch Tire.....	16 and larger sizes.
4-inch Tire.....	All Tractor Drills.

Extra Equipment

Hitches other than Standard Equipment.
Chain Lift Attachment for Hoe Drills.
Grain Agitator.
Fertilizer Agitator.
Enameled Bottom Plates for Fertilizer Drills.
Seat.
Foot Board.
Gang Press Wheel Attachments.
Power Lift for Horse-Drawn Drills.
Grass Seed Attachment.

Superior One-Horse Five-Disc Drills



Superior No. 9 Five-Disc Plain Grain Drill.

The Superior No. 9 One-Horse Five-Disc Drills are used principally for drilling wheat and other small grain in standing corn. Many farmers who sow small fields of wheat, oats, peas, etc., also find them very useful.

They are furnished in both plain grain and combined grain and fertilizer styles. Of very light weight, yet the design is such that they work perfectly in any conditions of soil.

The construction embodies well-known Superior features—angle steel frame, light but strong; hoppers of extra large capacity. The new Superior adjustable internal force grain feed, which for ease of quantity change and accuracy, has no equal.

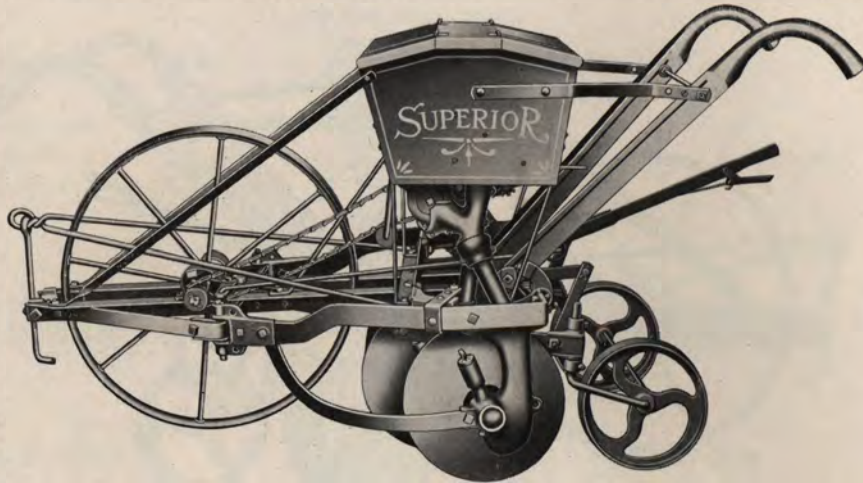
Plain grain and combined grain and fertilizer hoppers are interchangeable. Either can be fitted to the drill at any time if it is desired to change from one method to the other. The fertilizer feed is the celebrated "Finger" type. The five feeds, working in a single bottom unit, absolutely insures a rigidity and strength above other methods as now practiced. This feed sows all brands of commercial fertilizer in wide range of quantities.

Grass seeder attachment can be supplied.

The drill is fitted with a wheel truck, adjustable for gauging the depths of the furrows, and the openers can also be lifted clear of the ground for transporting or turning at the ends.

The center opener is provided with a vertical adjustment, allowing for proper working whether the soil has been cultivated to or from the center between the rows. The outside and intermediate openers are adjustable for width, the outside bearings also having automatic means for closing in, to take care of possible inaccuracies in the rows.

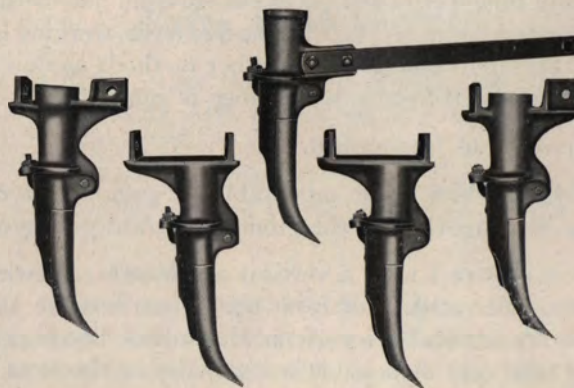
Superior One-Horse Five-Disc Drills



Superior No. 9 Five-Disc Fertilizer Drill, Showing "Caster Type" Gauge Wheels.

The disc furrow openers are of the same type and have the same bearings as those used on larger Superior Drills. This is the "Time-Tried Parrallel Bearing." Provides means for adjusting the shield to the disc should it become worn. It is important to have means for this adjustment, since the efficiency of the work is increased by the shield being held closely to the disc. The wool-felt washer keeps the dirt out of the bearings and also effectually holds the lubricant, which should be a thick, heavy oil. The oil cups should first be filled with oil to thoroughly saturate this felt washer. Future oilings will then give sufficient lubrication for several days' work. Do not use axle grease or hard oils of a gummy nature. The tightly-capped outer end of the bearings prevent the escape of the oil.

Hoe furrow opener attachments can be furnished which are absolutely interchangeable with the discs. This enables the owner at small extra cost to provide the most efficient opener for any condition of his soil.



Superior Alfalfa and Grass Seed Drills



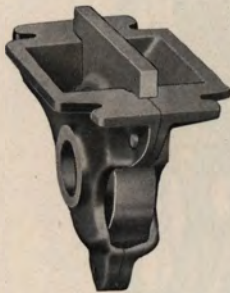
One Size Only. 20 Discs 4 Inches Apart.

The Superior Alfalfa and Grass Seed Drill has twenty discs, spaced four inches apart. This is generally accepted as the correct distance between the rows for sowing all small seeds such as clover, alfalfa, millet, timothy, red-top fancy, Kentucky blue grass, flax-seed, hemp, wheat, etc.

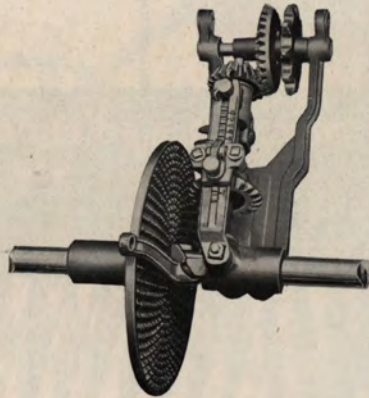
All kinds of seed should be sown *IN*, not on top of, the ground. When seed is sown in the ground a less quantity can be used and a large yield obtained, as the many uncertainties of broadcasting are eliminated. Progressive farmers have long realized that to broadcast these tiny seeds meant a waste of seed; that broadcasting was uncertain because heavy rains would wash the seed in patches, the wind would blow part of the seed away, and the birds would feed upon it.

In the quantities usually sown in broadcasting of clovers an average of 66 clover seeds are deposited upon each square foot of ground, this being many times the amount necessary to procure a satisfactory stand, provided the correct method of seeding is pursued, and indicates the enormous loss of seed wasted by broadcasting. With the Superior Alfalfa and Grass Seed Drill all the seed is sown in furrows of any depth desired, these furrows being spaced four inches apart. The angle of the discs can be easily changed to suit any ground condition. Seed sown *IN* the ground produces a stronger and better root and is more able to withstand the hot sun and drought.

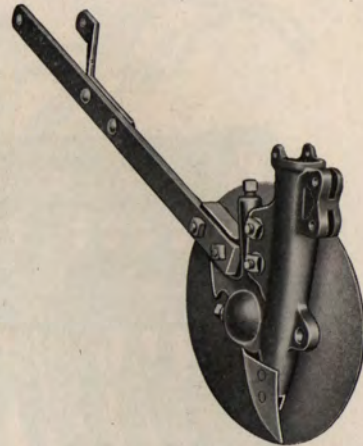
Superior Alfalfa and Grass Seed Drills



The Feed.



Change Speed Gear



Rear View Superior Alfalfa and Grass Seed Drill Single Disc and Shielded Closed Delivery Boot.

The Superior Special Double Run Grass Seed Force Feed (designed especially to sow any quantity of the above seeds that a farmer wishes to sow) is used on these Drills. This feed has a range of 35 different quantities without the change of a single part.

The Single Disc Furrow Opener shown above is specially designed to prepare proper seed trenches of correct depth and width for all Grass and Clover Seeds. The angle of the discs can be easily changed. The discs will not injure the wheat plants when drilling clover in winter wheat.

Alfalfa, grass and clover seeds can be drilled at any time, wind or no wind. Not necessary to wait for a still day.

The Superior Alfalfa and Grass Seed Drill sows clover seed and cultivates winter wheat at one operation.

Drill your clover seed in winter wheat. The drill will cultivate the wheat, increasing the yield from 4 to 8 bushels per acre, save half the clover seed and secure a better stand than when broadcasted.

Renew your old alfalfa fields, pastures and meadows with the Superior. Increase your forage and hay tonnage.

Saves its cost in seed alone, to say nothing of the increase in yield.

The best machine manufactured for sowing Hemp. Positively will not crack the seed.

On special orders and at reasonable price, we are prepared to furnish this Drill with Independent Press Wheels. Each Press Wheel is attached independently to each furrow opener and has independent Spring Pressure and "tracks" with the disc.

With these special Superior Press Wheels the operator is enabled to gauge the depth, thus insuring even planting.

Superior Four-Row Beet and Bean Drills



The Superior No. 7 Four-Row Shoe Beet and Bean Drill, Fertilizer Style.

The Superior No. 7 Beet and Bean Drills are made in both plain and fertilizer styles and in three adjustable sizes. They are four-row machines having a wide range of adjustments for widths between rows. The small size will sow 16, 18 and 20 inches between rows; the medium 20, 22 and 24 inches, and the large size will sow 22, 24, 26 and 28 inches between rows.

The Frame is of angle steel, bent cold at corners, reinforced with steel plates and braced with T-rail. Very strong and durable.

Furrow Openers.—Either shoe or double-disc furrow openers can be furnished at option of purchaser.

The hoppers are made of well-seasoned lumber, nicely finished and well-painted.

The Feed.—The Double Run Force Feed is especially adapted for sowing Beans, Beet Seed or Peas. A large or small quantity may be sown to exactly suit the productive strength of the land. The quantity change gear is driven by a sprocket chain direct from the axle. Change of quantity is regulated by an indicator located in front of the hopper, which can be set for any desired amount by simply shifting the lever. Agitators are furnished with all drills, which effectively prevent the seed from bridging over the feeds.

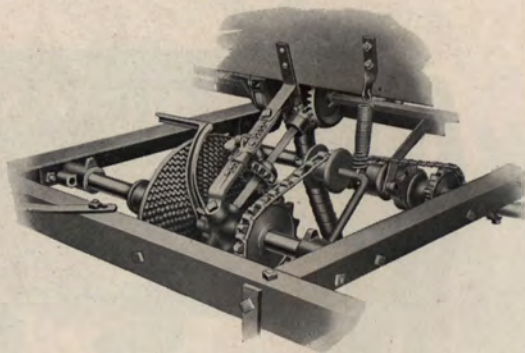
Marker.—The marker is so arranged that it can be operated from the rear of the machine and can be easily changed for the proper spacing of the different width rows. Pressure for the furrow openers is obtained by the use of springs, and depth of planting is regulated by gauge or press wheels, adjustable to any desired depth. The press wheels are clamped rigidly when used as gauge wheels. See description of Press Wheels on next page.

Lifting Device.—The lifting lever is very conveniently arranged in rear of the hopper. This lifting device automatically throws the feeds in or out of gear when used for raising or lowering the furrow openers.

Superior Four-Row Beet and Bean Drills



Rear View Double Disc
Furrow Opener.



The Quantity Change Gear.

Steel Wheels.—The Wheels have broad-faced oval tires, with twelve spokes staggered. This construction gives a very strong wheel.

Axles.—The axles are of cold-rolled steel shafting.

Press Wheels.—The wheels may be clamped **RIGIDLY** to the furrow openers, and act as **GAUGE WHEELS** when so arranged, holding the furrow openers to any depth desired. When used as **PRESS WHEELS** the pressure on the furrow openers and press wheels can be **VARIED** to suit any soil condition, since both have independent pressure springs, which can be adjusted to suit the operator. The Wheels are in two sections and may be quickly converted into either open or closed wheels. Provided with short and long hubs. When the short hubs are placed together, the rims will be closed. For open wheels, reverse the hubs. Adaptable to either wet or dry soils.

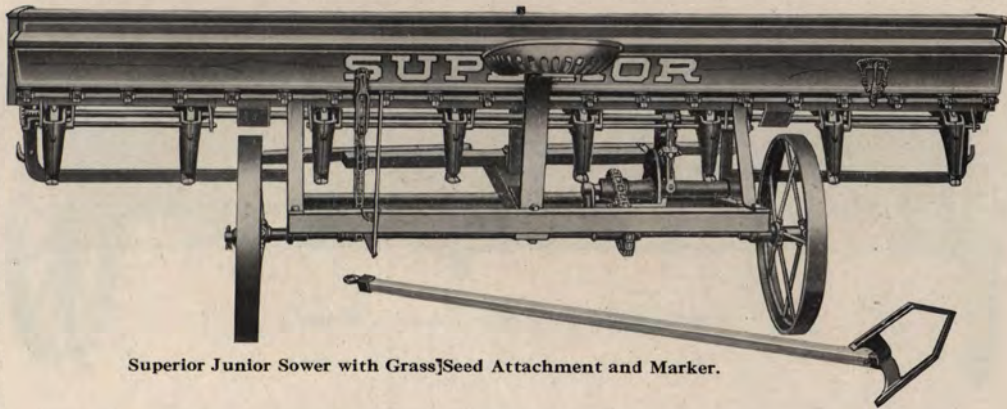
Irrigation Shovels.—When ordered, this drill can be fitted with irrigation shovels between the outside furrow openers, any depth of trench being possible by means of the adjustable spring pressure.

Seat Attachment.—On order, seat attachment can be furnished which is mounted on frame.

Graduated Pressure.—The notches in the arc or ratchet which governs the range or position of the furrow openers and press wheels are so closely arranged and of such number that any degree of pressure can be applied, graduated in such a manner as to secure any depth desired.

Spacing.—Furrow Openers are held accurately to their places and can be spaced as desired, by means of spacing bars, which are furnished regularly. All rows are an exact distance apart, insuring easy cultivation.

Superior Junior Sowers



Superior Junior Sower with Grass Seed Attachment and Marker.

The Superior Junior Sower is a narrow-track machine. It is without doubt the most popular Sower of this type on the market.

The frame is of angle steel, well braced, very strong, and will withstand the pitching and rocking to which a narrow-track sower is subjected in going over rough and uneven ground, dead furrows, etc.

The best well-seasoned lumber is used for the hopper and special high grade steel and malleables for all metal parts.

Hopper moved farther forward, providing plenty of leg room.

Also gives more clearance between hopper and ground wheels.

Scattering tubes are at correct distance from ground, insuring even distribution of seed.

The outer scattering tubes are well protected by front rails, which break down corn-stalks and prevent injury to these parts.

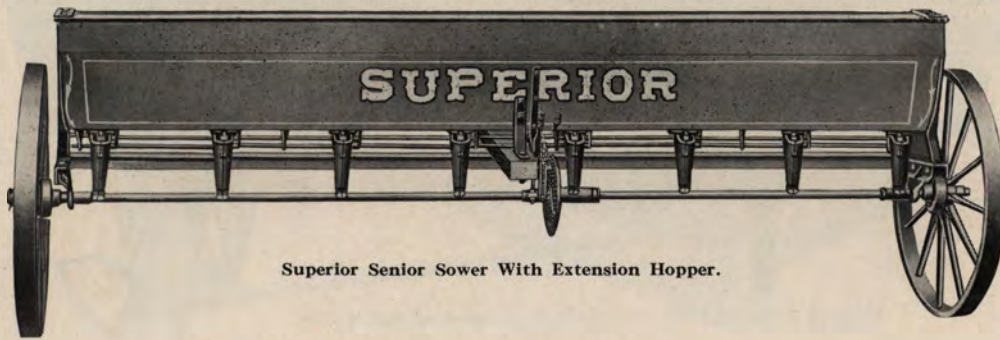
The Superior Junior is equipped with staggered-spoke steel wheels.

The famous Superior "Booster Pin" Double Force Feed is furnished with this Sower, description of which will be found on page 13.

The Junior has a carrying capacity of $5\frac{1}{2}$ bushels, and will be found an ideal sower for any farmer who desires to use a machine of this class. Where an extremely large capacity is desired an extension for the top of hopper, which increases the capacity to $8\frac{1}{2}$ bushels, can be furnished at a small additional cost.

Grass Seeder has fluted feeds and is attached to rear of hopper, the feeds being in plain view of operator.

Superior Senior Sowers



Superior Senior Sower With Extension Hopper.

The Superior Senior Eleven-Foot Sower has been on the market so long that it has proven its merits times without number.

Its construction is very similar to the Superior Junior Sower, described on the preceding page, excepting the frame, which is wider, extending the full length of the hopper. It is equipped with Steel Wheels, the Superior "Booster Pin" Double Run Force Feed and the famous Superior Disc Wheel Device for changing quantity without changes of parts. This Sower has a continuous cold-rolled Solid Steel Axle.

The hopper of the Superior Senior Sower has a capacity of $5\frac{1}{2}$ bushels, and an extension can be furnished at a small additional cost which will increase the capacity to $8\frac{1}{2}$ bushels.

The Superior Senior Sower can be supplied either with or without Grass Seed Attachment. Grass Seeder is equipped with adjustable fluted feeds and attached to rear of hopper, permitting the operator to see the seed as it passes through the seed cup.

Both the Junior and Senior Sowers thoroughly reliable and are fully guaranteed.

Extension Hoppers and Grass Seed Attachments for Junior and Senior Sowers are interchangeable.

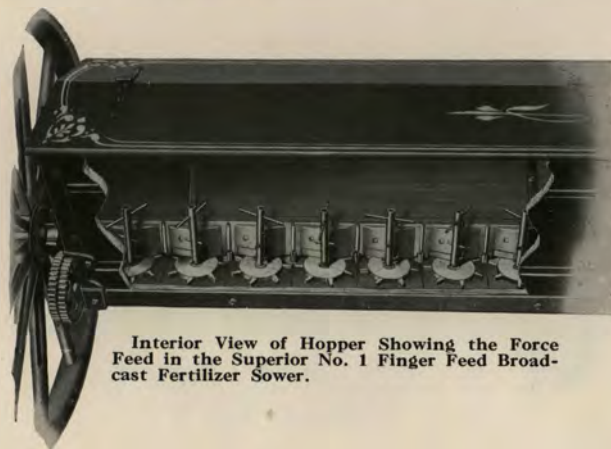
Superior No. 1 Finger Feed Broadcast Fertilizer Sowers



The Superior No. 1 Broadcast Fertilizer Sower will handle all kinds of commercial fertilizers, nitrate of soda, granular lime, land plaster, etc., in a great range of quantities. It is equipped with the finger-type feed, which gathers and carries out the fertilizer in regular quantities, the quantities being regulated by raising or lowering the gates which affect the amounts discharged from the feeders throughout the series and by changing the speed of the feeders. Various size feeders are provided for special quantities that the regular feeders do not reach. The machine can be easily taken apart and cleaned, which is advisable to do at the end of each season to prevent the fertilizer from cementing the working parts of the machine.

The hopper has a carrying capacity of 12 bushels, and the machine sows a strip 8 feet wide. It is mounted on large wheels, making easy draft; at the same time the arrangement of the hopper relative to the ground is such as to deposit the fertilizer just where it is wanted without danger of the wind blowing it from one side to the other.

As regularly equipped, this sower will sow prepared or granular lime, nitrate of soda, land plaster, dry wood ashes and any standard commercial fertilizer in quantities ranging from 100 to 2700 pounds per acre. Large feeders, if specified on order, can be supplied which will sow approximately double these quantities.



Interior View of Hopper Showing the Force Feed in the Superior No. 1 Finger Feed Broadcast Fertilizer Sower.

Superior No. 16 Agitator Feed Broadcast Fertilizer and Lime Sowers



Superior No. 16 Broadcast Fertilizer and Lime Sowers are admirably adapted to sowing Land Plaster, Granulated Calcium Chloride, Marl, Dry Wood Ashes, etc., also all Standard Commercial Fertilizers in quantities over 300 pounds. These machines are very simple and durable, have great range of quantity and distribute the materials sown very evenly and uniformly. The hoppers have large carrying capacity and can be quickly and thoroughly cleaned whenever desired.

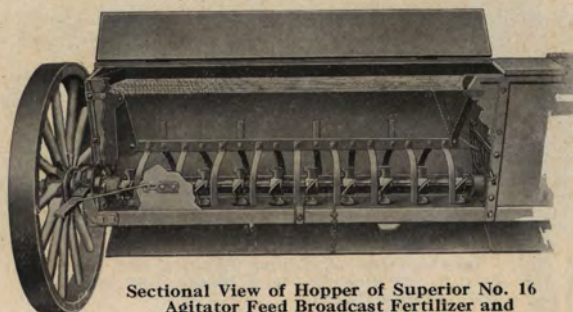
Screens can be furnished for the hopper at small additional cost.

The width of the Two-Horse Sower is 8 feet, has a hopper capacity of 10 bushels, and a range of quantity of 75 to 3000 quarts per acre.

The One-Horse Sower is 5 feet wide and has hopper capacity of 6 bushels.

They are mounted on strongest wood wheels having broad tires, which prevent them from sinking into the ground. The scattering board is so close to the ground that it insures even distribution without interference from winds.

Also constructed with an independent throw-out device, so that the machine can be thrown out of drive, no matter whether the feed holes are open or closed. By this means the agitator feeders can be started or stopped at the will of the operator. A New and a Superior device of great value.



Sectional View of Hopper of Superior No. 16
Agitator Feed Broadcast Fertilizer and
Lime Sower, showing Feeders and
Working Parts.