

ESTABLISHED IN 1853

DAVID BRADLEY MFG. CO.

Manufacturers of

Steel, Chilled and Combination Walking

PLOWS

Wood and Steel Beam Double and Single Shovel
Plows, Vineyard Plows, Walking and Sulky
Listing Plows and Middlebreakers,

**SULKY AND GANG PLOWS,
DISK PLOWS,**

Cotton and Combined Cotton and Corn Planters,

CHECK-ROW CORN PLANTERS

WITH OR WITHOUT DRILL ATTACHMENT.

STEEL HAY PRESSES,

Cotton and Corn-Stalk Cutters, Sulky Rakes,

RIDING AND WALKING CULTIVATORS

LEVER AND DISK HARROWS,

Hand Carts, Potato Diggers, Etc.

MAIN OFFICE AND FACTORIES:

BRADLEY, ILL., U. S. A.

CHICAGO OFFICE: 63 N. DESPLAINES STREET.

BRANCH HOUSES:

DAVID BRADLEY & CO., - COUNCIL BLUFFS, IA.
BRADLEY, CLARK & CO., - MINNEAPOLIS, MINN.
BRADLEY, ALDERSON & CO., - KANSAS CITY, MO.

AGENCIES:

KEATING IMPL. & MACHINE CO., - DALLAS, TEX.
GEO. A. LOWE, - - - - - OGDEN, UTAH.
E. P. BOSBYSELL, - - - - - LOS ANGELES, CALIF.
THE J. McCRAKEN CO., - - - - - PORTLAND, ORE.
W. W. REDHEAD, - - - - - SPOKANE, WY.

PREFACE.



A GAIN we make our annual salutation. For twenty-eight years this little book has been issued as a means whereby we might give to our farmer friends information concerning our implements. We have been making farm tools for over half a century and most of them are thoroughly well-known and appreciated throughout this country and many parts of the old world. Every year, however, we bring out some new ideas, either as improvements on goods already making, or as entirely new implements. For 1902 we show changes in some of our implements, such as Disk Plows, Cultivators, Planters, Disk Harrows and Seeders, which will be more particularly mentioned in the descriptions which accompany the illustrations. We are showing some new implements also, among which are our Poleza Sulky Plow with Middlebreaker Attachment and "Northern" two-furrow Wheel Walking Gang.

The reputation of our products has grown to a point which places them in the very front ranks—a natural result of our painstaking, both as to the selection of material and the making and finishing of them. Our careful testing of all implements that we manufacture on our own experimental grounds has much to do with the success which invariably results from their use.

During the last year we have again added to our buildings and other facilities for manufacturing, because of the ever increasing demand for Bradley goods, which is indisputable evidence of their popularity and worth.

Indications for business are splendid; in fact, the orders already received for 1902 trade are evidence that we shall be taxed to our utmost to fill orders, notwithstanding our increased facilities that have been lately installed.

This Annual will be a reminder to you of the various kinds and styles of farm tools made by us. It will also be found useful because of the many blank pages for memoranda, the various tables and the Calendar.

Wishing you another prosperous year along with the many that seem lately to have come to you, we are, as ever,

Very truly yours,

DAVID BRADLEY MFG. CO.

THE ORIGINAL
"GARDEN CITY CLIPPER" STEEL PLOWS
 MADE FOR OVER HALF A CENTURY.

A WAY back of the middle of the last century the "Garden City Clipper" Plow had its birth. Crude as they were, compared with present production, they were so honestly and substantially constructed as to create, at that early date, a reputation for superior work and lasting qualities. With added experience and with careful and constant oversight in the selection of stock and in the various processes and stages of manufacture which have always been given them, their reputation has extended throughout this and into other countries. Preference for a tool or implement is not a mere sentiment but grows out of an appreciation of its greater value in one way or another.

Two things have stood out prominently in our favor, whenever our plows have been brought into competition with other makes, viz.: *correctly shaped curves* in the construction of the moldboards and shares and a *uniformity* in the hardening or tempering of the steel wearing surfaces. These are two points of paramount importance—in fact are absolutely necessary and are so vital to the *perfect* working of a plow that if the *two* are not *combined*, quick wearing or heavy draft must be the result. A plow turns the soil by "wedging" itself into and through the ground, and lifting and turning a portion of it. Friction is created of course, but that plow which does the lifting and turning with the *least* friction draws the lightest when doing the same work.

In our experimenting, many years ago along this line, we found that most makes of plows were faulty—that is, their curves were not on correct mechanical principles; the result of such construction is too much friction and consequently more rapid wearing of the metal surface in certain places, while on other portions of the mold there is *not enough* to properly shed the dirt and keep the surface bright. Secondly, there are some soils in which no plow will shed the dirt except the mold and share be highly tempered *all over*—that is, there must be no untempered or soft spots on it; if there are, the dirt will either stick to those soft spots, or, wear away the softer metal faster than elsewhere and make depressions which very quickly spoil the mold and share. So you see a spotted or unevenly tempered mold would be just as fatal to the perfect working of a plow as a poorly shaped one.

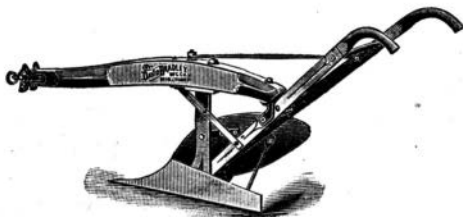
We double shin our molds *on top*, thereby gaining the wear of the entire shin piece in addition to what is usually got when the shin is put underneath. We are also now *welding* instead of bolting the inner landside to the wrought frog underneath the moldboard and share, which gives additional strength to the plow bottom.

Most of our wood beam plows are now made with "index beam" by which they can be quickly set to take more or less land.

Our "Garden City Southern Clipper" Plows are shown herein and fully described. We also make Steel Disk Plows, Listing Plows, Railroad, Double Diamond, Subsoil, New Ground, and Corn Plows, and Middlebreakers.

OLD GROUND OR STUBBLE PLOWS.

Slip Shares—See page 3.



WOOD BEAM.—Sizes, 10 to 18 inches.

This illustration gives a landside view of our wood beam Stubble Plow, with taper landside, and shows the way we attach handles, which prevents clogging. We make Plows with same shape moldboard (moldboard view shown at bottom of page), but with low landside, etc., (see our remarks on page 3). All of our wood beam Stubble Plows above 11 inch cut, as well as wood beam Stubble and Sod Plows, shown on page 6, have index beams which are adjustable at the rear end, to vary width of furrow; and when so ordered will have straps under beam as shown on page 6. We make these plows either right or left hand, except the 10 and 11 inch, which are made right hand only.



STEEL BEAM.—Sizes 12 to 13 Inches.

This is a moldboard view of Steel beam Stubble, or Old Ground Plow, which is identical in quality, shape of moldboard and construction, with plow shown above, except the beam, standard and brace rod. We make them right or left hand. Steel beam plows with this shape mold are made with either the steel tapering landside as shown at top of page, or with low landside or long bar share—not shown in this book. Chilled shares of the steel slip share pattern, can be furnished for steel plows up to and including 16 inch cut. We do not make chilled shares of the *long-bar* steel share pattern.

PRAIRIE BREAKING PLOWS.

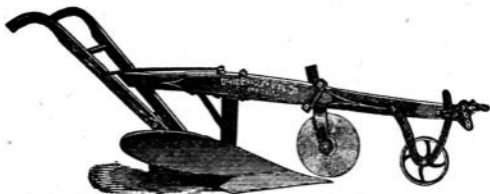
Cast Steel Moldboards and Shares.



COMMON RIGGED PRAIRIE BREAKER.

Sizes, 12 to 20 Inches.

All of our Breakers are now made with *slip share* having the landside part of the share *welded on*, instead of turned down, as made by us some years ago. They have a broad share lying nearly flat, which position improves its cutting qualities. The molds are not as bold as some, and consequently the plows draw much easier. The moldboard is beautifully shaped, and lays the furrow slice perfectly flat, with the least friction possible. It is intended for breaking up original prairie at a depth of two to three inches for which it is amply strong, the timber being the best quality and the standard thoroughly braced. The cut above shows a breaker "common rigged," as we call it, except an extra share, which always goes with it. With a gauge wheel on and a rolling colter, instead of the one shown, it would be an "extra rigged" Breaker, as shown below.



EXTRA RIGGED PRAIRIE BREAKER.

Sizes, 12 to 16 Inches.

This cut shows our "Bradley" Breaker "extra rigged." The difference between this and the "common rigged" shown at top of page, consists in the addition of a gauge wheel, and substituting a rolling for a standing colter. They are identical with the "common rigged," except as to attachments.

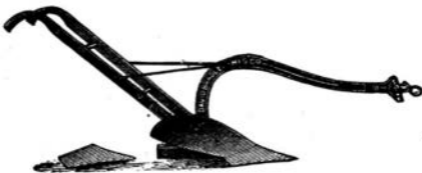
"GARDEN CITY SOUTHERN CLIPPER" STEEL PLOWS.



SANDY LAND SERIES.

Hardened Moldboards.—Sizes 7 to 11 Inches.

The above cut represents the shape and style of our Nos. 79, X80, X82, X84 and X86, Garden City Southern Clippers. They are adapted for plowing and cultivating in all kinds of soil in Texas and Southern States, but more especially for loamy and sandy ground. The moldboards and shares are made of cast steel. The beams are adjustable. An extra share or point goes with each plow. We make a sandy land series of plows, with steel beam and tapering steel landside, called the VX series, sizes, 7 to 12 inches, and numbered VX75, VX85, VX95, VX105, VX115 and VX125. We also make what is called the "O" series of sandy land steel plows, which are very popular in the Southern States.



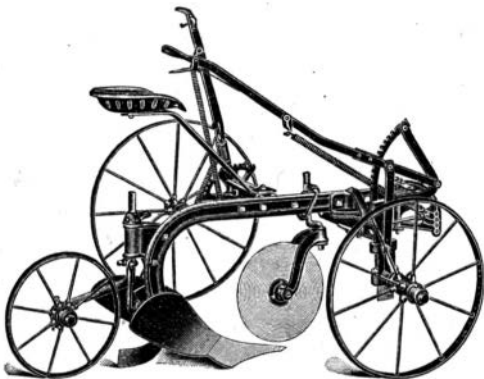
BLACK LAND SERIES.

Hardened Moldboards.—Sizes, 7 to 12 Inches.

This cut represents our Nos. TX75, TX85, TX95, TX105, TX115, TX125 and TX145 Garden City Southern Clipper Plows. They are especially made and adapted for the blacklands of Texas, with sharp cutting angles, and formed in the best possible shape for shedding the dirt. We attach plows of the same shape to our gang and sulky plows, for use in the black lands of Texas and other Southern States. They have cast-steel moldboards and shares, and tapering steel landsides. An extra share goes with each plow.

POLEZA SULKY PLOW.

With Middlebreaker Attachment.



THE above illustration shows our Poleza Sulky Plow with Middlebreaker Attachment. The attachment consists of a double moldboard, a special furrow axle and bars for same and a special rear axle and axle box. This implement can be bought as a Sulky Middlebreaker only as shown in cut, or, as a Poleza Sulky Plow with regular stubble or stubble and sod bottom, with a middlebreaker attachment. Equipped with these a farmer can,—with one frame and the two kinds of bottoms—do both kinds of plowing without having to buy two kinds of plows.

Changing one bottom for the other is a matter of a few minutes only and is easily done. As a middlebreaker it is used for plowing corn ground, bursting cotton ridges, making drains, etc.

We also make a Middlebreaker Attachment for our X Rays Sulky Plow, but do not show cut of it in this book.

NEW STYLE
"BRADLEY" CHILLED PLOWS.

Wood and Steel Beams.



WE show here our new style wood beam "Bradley" Chilled Plow. Its shape is one which has become very popular throughout the country and embodies all the desirable features which conduce to light draft and perfect work, including the complete pulverization of the soil, ease and rapidity with which it can be adjusted, and the perfection of hardness to which its wearing parts have been brought.

We will repeat here what we have heretofore said about steel plows, which is, that two things are absolutely necessary to make a good plow, viz.: correct shape and extreme hardness of the wearing parts. However well shaped a plow may be, it must also be *chilled hard* or it will not shed the dirt in sticky soils, nor will it scour if ever so hard tempered, unless it is properly shaped.

As to shape we have had an experience of over half a century in manufacturing steel plows, during which time we have made many experimental and practical tests to prove which are the very best models for light draft and good scouring qualities. The result of those trials was the adoption of our present shape for moldboards. That our experiments and tests were not in vain is shown by the fact that our plows stand to-day in advance of all others, in their scouring qualities, perfect temper, and ease of draft.

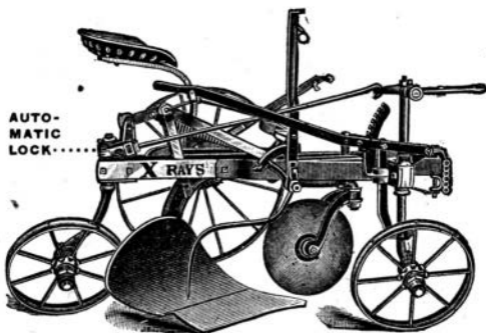
In this Chilled Plow the two great essentials of correct shape and extreme hardness of the wearing parts, are most effectually combined, and satisfactory service can be relied upon by those who purchase them.

The share and shin—the parts which receive the brunt of the wear—are in one piece, so that the renewing of one renews the other.

The material from which they are cast consists of such brands of iron as will produce, when used in correct proportions, a mixture susceptible of being chilled to the very extreme of hardness, at the same time retaining uncommon toughness and strength. Points made of this material will stand double the wear and strain that common "pot metal" points will endure. The beams are of first-class material, nicely finished and covered with two coats of good paint and one of varnish.

We make both wood and steel beam, and a great variety of sizes, all of which are given in our chilled plow Price List.

X RAYS SULKY and XX RAYS GANG PLOWS.



X RAYS SULKY PLOW.

Each succeeding year adds to the appreciation of their fine qualities by those who use them. The Automatic Lock adopted two years ago gives perfect satisfaction. Evidences of their popularity reach as constantly in the way of voluntary testimonials to their superior work. The mechanical principles on which they were first constructed remain as they were, but a few new features were added two years ago which are valuable. They are as follows:

NEW FEATURES.

Automatic Locking and Unlocking of the Rear Wheel by the turning of the team, instead of by a foot treadle as heretofore.

A Malleable Frog on Gang Plows, underneath the plow bottoms, which holds the moldboard, share and landside with unusual firmness, and which permits leaving the beams full size at the lower end, where they attach to the frog with extra heavy bolts, thus securing great strength at that point.

No Landside on Gang Bottoms, which increases clearing space between front and rear bottoms to more than twice what it would be if landsides were used.

Spring Clevis. Patented. It greatly eases the jar which usually results from the plow striking a rock, root or other obstruction and avoids breakage.—It also saves the horses' shoulders from becoming sore because of sudden jerks, and is a good indicator of the draft of the plow.

High Lift which is now generally demanded, and which is considered **one** of the essentials to a **good**

(CONTINUED ON NEXT PAGE)

X Rays Sulky & XX Rays Gang Plows—Cont'd.

Sulky or Gang Plow. Some manufacturers have gone **too far**, and have sacrificed desirable features to the one idea of high lifting, until they have a plow which lifts higher than it should and higher than is at all necessary and at a cost of a **weakened** plow because of the extra length of the connections between frame and plow. We have avoided the overdoing of it by making ours raise **high enough for all conditions** that are ordinarily met with, yet **without** too long cranks and braces. They have

A Lifting Spring which helps to raise them and which is attached in such a way as to exert great power when brought into action. This is why they

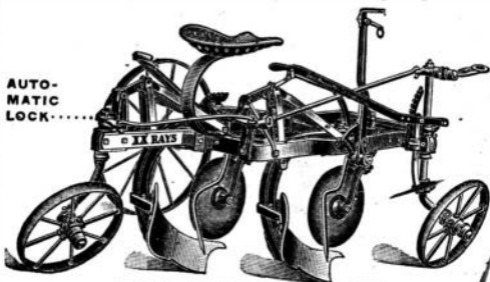
Handle Very Easily.—A twelve-year old boy of average weight and strength can easily raise the Sulky out of the ground with a man standing upon the wing of the moldboard. The Bottoms used are the well-known

"Garden City Clipper" Shapes which have won the reputation of having the most **uniformly hard tempered** and **perfectly shaped** moldboards and shares.

A Patented Stop holds the beam solidly to the frame when the lever is latched; and also carries the plow on the wheels, avoiding bottom friction. Besides, when the beam is so locked down upon the patented stop, the frame becomes, practically, an extension of the beam, and gives therefore all the advantages of a **beam hitch**; at the same time it possesses the good features of a frame hitch, in that the operator does not have to lift the doubletree or equalizer nor pull against the draft of the team when raising the plow out of the ground. Carrying the plow and thus relieving bottom friction secures

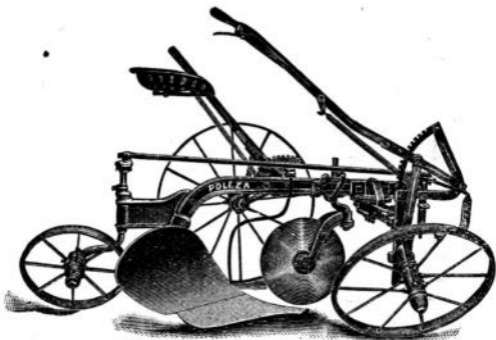
Very Light Draft.—Nowhere, in all that pertains to farming is true economy more noticeable or more quickly appreciated than in the **saving of horse power**. Quick results follow. Less team; less to keep them; more work done, and done much more satisfactorily to man and beast.

A Large Comfortable Seat set on a steel seat-spring makes it very easy riding for the largest persons.



XX RAYS GANG PLOW.

POLEZA SULKY PLOW.



THIS is a three-wheel plow made almost entirely of steel and is therefore very strong, yet not heavy. In construction it is simple and not at all liable to get out of order, yet capable of doing the most difficult work.

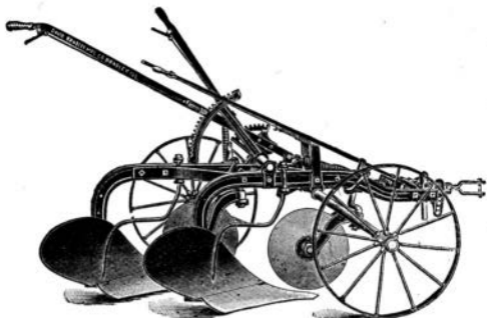
The course or tracking of the wheels is governed by the draft **clevis**, which is controlled of course, by the draft of the team. When the clevis is drawn sideways at corners or elsewhere it sets the rear wheel in correct position for turning and the front furrow-wheel is set to track in line with the draft. When pulling straight ahead the rear and front wheels are held in position to properly guide the plow so it will take a furrow of desired width.

Having no landside, the friction common to landside plows is avoided, and as we use the celebrated "Garden City Clipper" bottoms, whose curves are shaped on mechanically correct principles, the draft of the plow is exceedingly light.

We make it with 14 or 16 inch stubble and sod, or 14, 16, or 18 inch stubble bottoms; also blackland bottoms.

It is furnished with or without pole, as desired.

“NORTHERN” TWO-FURROW WHEEL WALKING GANG PLOW.



THIS Plow is built for use in the Northwest and is made from extra heavy material in all parts subject to strain. It gives great satisfaction to all users because of the excellent work it does and the ease with which it can be operated.

When out of the ground it practically balances on the wheels and can be easily moved from place to place in that condition.

A single lever lets it into the ground which it takes readily, no matter how hard it may be. Another lever which operates the land wheel, at once levels the plow. A landing lever is within easy reach of the operator, so that without stopping the team a change can be instantly made in the width or depth of furrow.

It turns a square corner without cramping the wheels, either in or out of the ground.

The plow is fitted with the celebrated “Garden City Clipper” bottoms, which makes sure of good work and light draft.

We furnish a Riding Attachment, when ordered which changes the plow to a rider, thus meeting the fancy of those who prefer to ride.

Fourteen inch bottoms with either steel or malleable frog are used.

EQUALIZERS can be furnished for either three horses abreast, four horses abreast, four horses strung out; or for five horses arranged three abreast in the rear and two in the lead.

They are made almost entirely of steel and iron which gives ample strength, and they are nicely painted and finished.

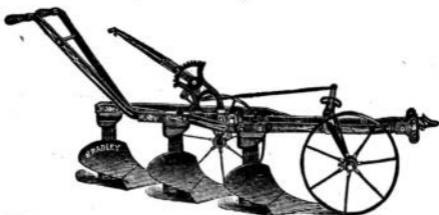
POTATO DIGGER.



We are making a Potato Digger, such as is illustrated above.

The depth is regulated by the gauge-wheel which should be set to let the shoe go beneath the potatoes. The fingers separate them from the dirt, leaving them on top, and allow the earth to fall through and fill the trench made by the shoe, which leaves the ground level. It has a steel beam and a steel shoe; is substantially made and will do the work of several men with hoes.

BRADLEY VINEYARD PLOW.



Its uses:—To cultivate in Vineyards, Hopyards and Orchards—in short to plow between and close up to trees or vines without injuring them or their roots; also for plowing stubble fields, corn fields and summer fallow, and for putting in small grain, etc., etc.

Size and Capacity:—Each bottom cuts a furrow eight inches wide. It is intended for plowing from two to four inches deep.

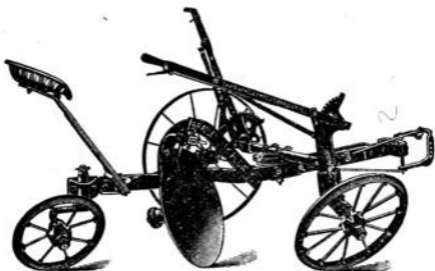
Two or Three Furrow:—The rear bottom and that part of the frame which holds it, can be removed, leaving a two-furrow plow, which does not in any way interfere with the handles or other mechanism by which the plow is operated.

Material and Construction:—It is made entirely of steel and iron. The frame is light, yet is amply strong. The BOTTOMS are the celebrated "Garden City Clipper" shapes.

One lever only operates the gang. The clevis is sufficiently wide to give any side adjustment necessary for the landing of the plow.

BRADLEY DISK PLOWS.

SINGLE and DOUBLE.



Bradley Single Disk Plow.

THIS plow does remarkable work. We have testimonials showing that it will cover weeds taller than a man's head completely out of sight. The following description will convince anyone that it is the finest disk plow made.

By means of connecting-rods between axle and clevis the **set or tracking** of the furrow and land wheels on these plows is **controlled by the clevis**, the position of which is in turn governed by the *draft of the team*. When turning corners, either to the right or left, the draft sideways moves the clevis over to one side, which at once **puts the wheels in position to turn without dragging**; in other words they track *in line with the draft*.

Are light yet strong.—Having no dragging strain or leverage on the wheels and axles to guard against, we can make them much lighter than on other disk plows while retaining ample strength for work in hardest ground.

By adjusting the connections between the clevis and axle, the *course* of the wheels can be varied and made to *incline* away from land thus counteracting the side pressure of the soil against the disk, and overcoming crowding to land.

BRADLEY DISK PLOWS—Continued.

Disk has a long hub which turns upon ball-bearings, practically overcoming friction and wear. This secures correct position of the Disk at all times and unusually light draft. The disks are correctly *shaped* and *set* so

They enter the hardest ground without having to be **forced in**, and they work equally well in light or soft soil.

They are fine-looking Implements.—Symmetrical in shape throughout, with none of the unwieldy weight and stiff, awkward construction which is apparent in other disk plows.

The Scraper is Adjustable, and can be set to throw the dirt in any direction desired.

In Quantity and Quality of Work they *excel* any other disk plow yet produced.

For Beet Culture the Bradley Disk Plows are the finest implements known. They not only plow the soil but the disks thoroughly pulverize it, yet without bringing the subsoil to the surface as is the case with other deep plowing. This leaves a bed of loose earth twelve to fifteen inches deep, in which beets have unlimited room to grow. Without this depth of loose soil the beets would be forced to grow partially up and out of the ground and to that extent be injured.

Width of Furrows is as follows: The Single Disk cuts a furrow 14 inches wide and from three inches to any desired depth.

Although not shown we make a double disk plow, constructed on the same principles as the single plow, which cuts 20 inches wide, and same depth as the single plow.

BRADLEY LISTING PLOWS.

(See cuts on following page.)

THIS series embraces a wood beam and a steel beam Single Lister and a Combined Lister and Drill. The Combined Lister and Drill is made by adding a Drill Attachment to a steel beam Single Lister. This attachment may be put on or taken off at pleasure, therefore one could buy a Single Lister at first and add the Drill Attachment later if he so preferred. The Drill Attachment can, by attaching it to a beam, gauge wheel and handles furnished for that purpose, be made into a very neat and effective One Horse Drill.

The drill shaft is driven by two wheels (one on each side of the box), having toothed edges which catch in the ground and turn the drive-shaft when the Lister is moving.

Our dropping device consists of rotary plates driven by a geared connection with the drive-shaft which secures a positive, steady motion and a uniform drop. Three plates go with each drill. One drops 18 inches, one 14 inches, and another 12 inches apart. A blank plate is also furnished which can be drilled for sorghum or other seed. Extra plates can be furnished on order, to drop 16 and 22 inches apart.

The corn passes through the seed spout into loosened and pulverized earth which the subsoiler has prepared for it, and is covered by the rear shovels.

It will not break the seed. Our cut-off is so constructed as to entirely prevent the breaking of the seed, and secures a uniformity of dropping which has never been reached before.

It is very compact. Owing to the manner of its construction, we are able to get our Drill Attachment close to the moldboard, which adds to the ease of handling and makes the draft lighter.

The Subsoiler and Drill Frame are adjustable up and down, for deep or shallow planting. We furnish either the common or the wing subsoiler as preferred.

Another very important feature is the tempered steel moldboard, the peculiar shape of which insures light draft, fine scouring qualities, and perfect turning and pulverization of soil.

LISTING PLOWS.

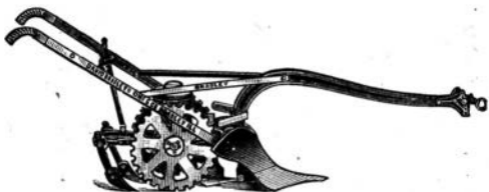
(See preceding page for full description.)

Wood Beam cut not shown.



STEEL BEAM SINGLE LISTER.

With Subsoil Attachment.



COMBINED LISTER AND DRILL.



ONE HORSE DRILL.

BRADLEY SULKY LISTER.



Pole can be set over to use with three or four horses.

A Spring Clevis reduces liability to break plow point, doubletree or harness, saves the operator from a chance of being thrown from the plow when suddenly stopped, and makes it much easier for the team; besides it is a good indicator of the power which is required, and shows whether, in the varying kinds and conditions of the soil, three or four horses should be used.

It has our X Rays Spring Lift, which is continuous and even from the very beginning to the ending of the lift.

Subsoiler and Seed Spout can be raised or lowered independently of each other.

A pair of Covering Shovels adjustable up and down and sideways, enables the operator to plant the seed at the bottom of the furrow, or at any desired distance above it.

The Dropping Mechanism is driven by a gear, which is automatically thrown out of mesh when plow is raised.

Distance between drops is regulated by using different plates as is understood by all farmers:—An 8-hole plate drops 12 inches apart. A 7-hole plate drops 16 inches apart. A 6-hole plate drops 20 inches apart.

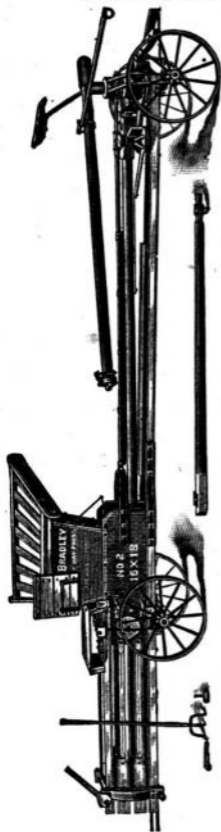
Seed Box and Plates are the same as used on our Combined Lister and Force Drop Planter.

The Plow Bottoms are made with "lap" moldboards put together with wrought steel frog and strongly bolted.

Strongly made, and on the latest plan that up-to-date experience and newest methods of listing have suggested.

**BRADLEY
DOUBLE CAM STEEL HAY PRESS.**

The Simplest Press in Existence.



THE working parts are a plunger, a double cam and a plunger draw; nothing to get out of order, and therefore no break-downs and waiting for repairs. Not a **chain** nor **cog** about it; but has power to put **Full Weight** into a box car. No spring required to bring plunger back, therefore no power required to overcome the tension of the spring while plunger is being forced in. It has an automatic plunger draw which is operated by the cam as soon as the plunger is released. The plunger rebounds quickly and comes up so slowly there is no danger of catching the fork. Does first-class work. Has an automatic folder which makes a nice looking bale, smooth on top, and heavy or light. It is a full-circle press, taking two feeds at each round. Easy to operate. One good horse can operate it, while for two it is very easy work. Ten tons in a day of ten hours is an every day job. Easy to move from place to place. It weighs but a trifle over 1½ tons, tracks with a wagon, and can be drawn on ordinary roads by two horses. It has chilled friction rollers in cam arm; hardened steel plate on pitman face, hinged plunger

top, automatic bell which rings when follower should be dropped. It also has spring tension on bale chamber. An automatic lifting jack is furnished with all presses; also two bridges, etc.

Double Cam Steel Hay Press—Continued.

Made of Steel and Iron and nicely painted. The workmanship and material are first-class, so that the press will stand all the strain that can be put upon it.

To set the Press it is only necessary to dig four narrow holes of sufficient depth to take in the wheels up to the axles, or, with the lifting jack the wheels can be quickly taken off. It is not necessary to drive any stakes.

A Whipping Attachment is furnished with each press. Send for special hay press pamphlet.

OCTOBER.

1

2

3

4

5

6

7

8

9

10

11

12

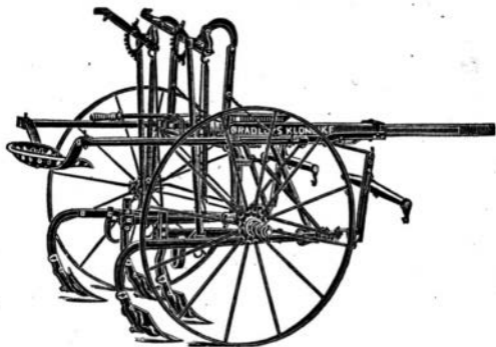
13

14

15

THE KLONDIKE PIVOTAL POLE CULTIVATOR.

IMPROVED



With Levers for varying depth of cultivation.

WILL dodge quickly any corn or cotton growing out of line with the row which is being cultivated and when working on side hill wheels can be set to prevent cultivator working down hill. This is accomplished by pivoting the pole, about three feet from its rear end, to the front end of the frame and also by pivoting the arch to the pole. The rear end of the pole is then moved sideways at the will of the operator, by means of a hand lever, the effect of which is to immediately change the course of the wheels to the right or to the left, and also moves the arch and attached gangs and shovels to the right or left in their relation to the frame, the effect of which is to give an additional side movement to the shovels, carrying them quickly to one side or the other and with the greatest ease.

The same result can be obtained with the feet by pressing down upon the right or left hand gang, the frame quickly turning to that side on which is the gang pressed down upon.

Crooked rows can be easily tended with this and without injuring the crop.

The rear end of the pole can be locked fast, so that a stiff pole cultivator can be had, if desired.

The entire implement is made of iron and steel, except the pole and whiffletrees, and is thoroughly braced, which makes it strong and durable.

It has a Hammock Seat from which the gangs can be easily moved sideways or raised out of the ground with the feet. The seat can be raised or lowered and, by means of movable side-bars can be set forward or

THE KLONDIKE CULTIVATOR—Continued.

backward, so that the weight of the driver can be made to balance the cultivator and prevent pressure on the horses' necks.

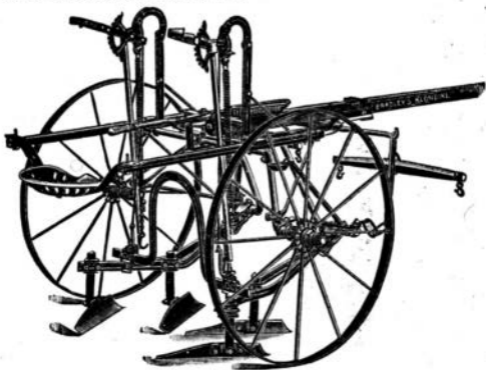
The **Lifting Springs** are so adjusted as to hold the gangs when raised, until again pressed down by the hands or feet beyond the balancing or turning point, when their own weight carries them the rest of the way.

Levers for Varying Depth of Cultivation.—We have attached lever and rack to top of pipe standard, within easy reach of operator, by which the depth of cultivation can be quickly varied. Have also added braces between main and front arches which give strength and solidity to the frame.

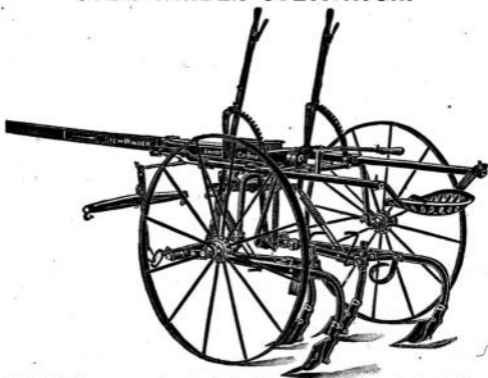
Seven styles of gangs are furnished for use on the Klondike, viz: Four shovel pin-break; same, spring trip; six shovel pin-break; same spring-trip; spring-tooth eagle claw and Gopher Attachment. An adjustment in the "goose-neck" provides for handling gangs of different weights.

The Gopher Attachment is a gem. The perfect ease with which the blades can be handled enables the operator to catch all weeds and to thoroughly cultivate the surface of the ground without injuring the roots of the corn. The shanks which carry the blades are adjustable up and down, and the blades can be slanted to adapt them to flat cultivation or to hilling up. Distance between gangs can be changed by moving coupling heads on the sleeves. Below we show a cut of the "Klondike" with Gopher Attachment. These gangs can be purchased at any time, so that anyone having a Klondike originally purchased with another style of gangs can buy these, and thus have practically two cultivators.

For surface cultivation and for cutting up morning glories and other weed pests they are splendid. You can dodge more quickly and further to one side than with other cultivators of this kind.



STEM WINDER CULTIVATOR.



THIS is so constructed that it can be made to dodge hills out of line, and also to keep from inclining downward on side hill.

Among its many valuable features are the following:

Gangs can be raised either with hands or feet and can be locked up by means of the hand levers, which regulate depth of cultivation. Springs in the connections between the gangs and the hand raising levers allow the gangs to be pressed down so the shovels will cultivate in dead furrows. When riding on the cultivator the gangs are raised by foot levers.

Can be made into a stiff pole Cultivator by locking the rear end of the pole.

The Dodging Device is constructed and operated as follows: The pole is pivoted to the frame, and also to the arch to which gangs attach. The rear end of the pole is moved sideways by means of a hand lever. By pressing down upon either of the gangs with the foot, you get an immediate effect same as with the lever so as to dodge any hill out of check.

Dodges more quickly than other Cultivators whose wheels *only* are turned, because the arch and the rear ends of the beams are also further moved the same way, giving a double side movement to shovels.

Width between gangs can be varied by moving them on the sleeves to which they attach.

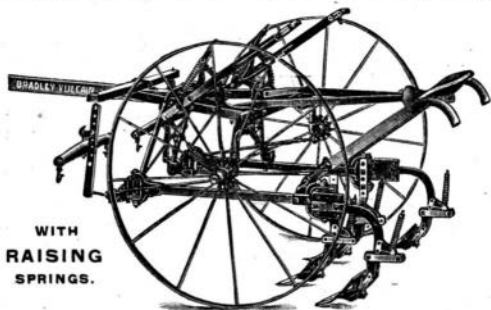
Distance between wheels can be changed on spindle.

Raising Springs help to lift the gangs, making it easy work even for a boy.

Four styles of gangs can be furnished. Cut shows two-shovel pin-break gangs with front adjustable standard, but we can also furnish two-shovel and three-shovel regular gangs. Can also furnish the two-shovel gang with spring-break and front adjustable standard.

Adjustable inner shovel-standards (shown in cut) which we furnish on the two-shovel gangs only, can be raised or lowered to adapt them for cultivating listed corn.

BRADLEY VULCAN COMBINED CULTIVATOR



WITH
RAISING
SPRINGS.

THE Bradley Vulcan embodies the best features of the Vulcan Jr. heretofore made by us and some few ones lately devised which, taken together make the most serviceable and easily operated cultivator of its kind yet made.

The frame is all steel and iron, thoroughly braced, making it strong yet light and durable. The axles are of wrought steel, therefore practically unbreakable. It is adjustable, so that distance between wheels and between gangs can be changed, to adapt it to the cultivation of various crops. The coupling jaws to which the gangs attach can also be moved sideways on the sleeves, which gives additional variation. These jaws have been improved for 1902 by making them so they clamp to the sleeves. The removal of a nut opens the clamp and permits removal of gang without having to slip the jaw off the end of the sleeve.

Foot Lifts and Lever Lifts for raising the gangs out of the ground. Foot treadles are generally used when on the cultivator, but for going to and from work the hand levers raise the gangs and hold them up; and they also help to regulate the depth of cultivation.

Lifting Springs are so applied as to make it easy work to raise the gangs. The leverage of the springs can be changed to suit gangs of different weights. A spiral spring in the connections between the hand levers of the gangs permits forcing the shovels down with the feet, into dead furrows, etc., the recoil of the springs bringing them back to position again when the foot is removed.

A Center or Fifth Shovel is furnished when wanted, by using which the entire surface of the ground can be cultivated. When used as a Walking Cultivator the whiffletrees are put at lowest point of hitch to take the weight of pole off the horses' necks. With this adjustment it can be perfectly balanced.

It has an adjustable seat which can be moved forward or backward to suit the operator.

We use long beams which run steadier and handle easier than shorter ones. They are attached well forward

Bradley Vulcan Combined Cultivator—Cont.

on the frame which enables us to use the longer beams without carrying the shovels too far to the rear.

Several styles of gangs are made by us which can be used on the Bradley Vulcan, viz: two shovel pin-break; same, spring-trip; three shovel pin-break; gaspipe beam with spring-trip; same, with friction trip; parallel beam with pin-break; same, with spring-trip; spring tooth; eagle claw; and gopher attachment.

For cultivating listed corn and on ridges we have added to our parallel beam gangs a device whereby the outer and inner shovels can be raised or lowered at will, to adapt them to the shape of the ground to be cultivated, whether it be trench or ridge.

DECEMBER.

1

2

$$24 + 34 = 24$$

3

4

$$16 + 24 = 12$$

5

6

$$\text{Row-ck } 42 = 7$$

7

8

9

10

11

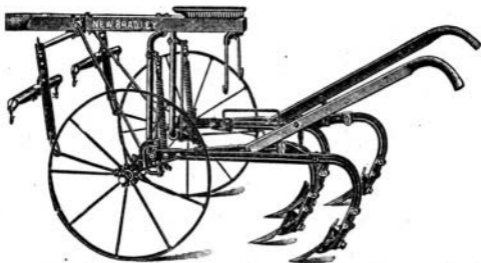
12

13

14

15

NEW BRADLEY WALKING CULTIVATOR.



This Cultivator is made with a *Continuous Solid Wrought Arch* the ends of which form the axles. The arch is clipped and braced to the pole which makes a strong substantial frame. We make, for use on this, cultivator, two-shovel and three-shovel pin-break and spring-trip, eagle claw, spring tooth and combination gangs, thus suiting it to a wide range of work.

Compound Lifting Springs—The best invention yet for the purpose intended. They are adjustable to suit the weight of any gang. The tension can be quickly increased or lessened at the top of the spring, while at the bottom its leverage can be graded to suit the kind of gangs used. Their action is simply perfect—no spasmodic jerking of an over stretched spiral spring whose lifting force gets gradually less and less until finally the operator has to do all the lifting, but an easy, continuous lift that makes it pleasant work for even a boy to handle the gangs.

Depth of Cultivation can be nicely regulated by the adjustment of the springs, by raising or lowering the front ends of the beams on the coupling sleeve and by the setting of the shovels. It has

The Old Reliable Bradley Coupling, the malleable jaw of which is adjustable side-ways upon a long sleeve which gives a long bearing on the frame, and prevents wabbling.

This jaw has been improved for 1902 by making it with a clamp around sleeve which is quickly detachable by removing a nut, instead of having to slip it off sideways.

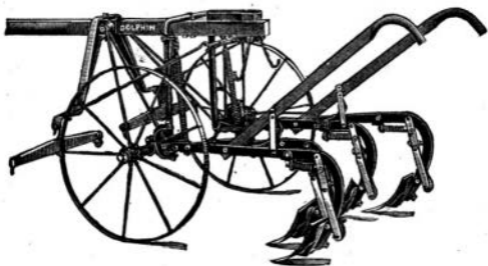
Steel Wheels with straight spokes are used. They have a renewable boxing which can be easily replaced at slight cost, thus repairing any wear that may occur in the hub box.

Shovels of Various Shapes and Sizes, Scrapers, Gopher Attachments, and all the attachments usually made for cultivators can be used on the New Bradley.

All Parts are Well Made from first-class material, and, with two coats of good paint and one of varnish they are a durable and fine looking implement.

Shields to prevent the dirt covering the corn when small, go with each cultivator, although not shown in cut.

DOLPHIN WALKING CULTIVATOR.



With Northern Spring-break Gangs.

THE frame and springs on this cultivator are the same as those on the New Bradley shown on another page which please see for description. But it has a sloping double steel evener as cut shows, which some prefer.

It takes the same styles of gangs as the New Bradley and has the same improved Bradley couplings, wheels and shovel shapes—in fact is practically the same with the exception of the evener.

The pole is now put on top of the arch instead of underneath as shown in cut.

As noted in description of New Bradley, the even continuous lift of the springs and the fact that they can be adjusted to handle any style or weight of gang with perfect ease all the way up is the crowning achievement in the adaptation of lifting springs to cultivators.

DOLPHIN JR. WALKING CULTIVATOR.



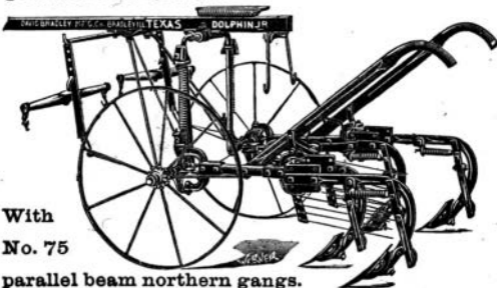
With
regular
2-shovel
northern
gangs.

THIS is identically the same as the "Dolphin" shown and described on preceding pages except the lifting spring (shown in detail on next page) and its adaptation. The spring has the same general characteristics and acts on the same principle as the one used on the Dolphin, but it has a greater range of adjustment for lifting force, and is, therefore, better suited to handle the lighter and the heavier of the gangs used.

By moving the spring-rod holder "A" at the top of the spring up or down on the arch, more or less compression of the spring can be given and thus the lifting force can be perfectly adapted to the weight of whichever gangs are being used. Depth of cultivation is gauged by a set screw "B" shown in cut of spring on next page. Full instructions for its use accompany each cultivator.

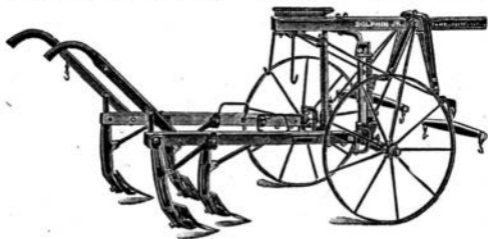
DOLPHIN JR. with ADJUSTABLE ARCH.

By adjustable arch we mean that the arch is in two sections as the cut below shows, and can be expanded or contracted as to width, in addition to variations provided for on coupling sleeve and axle. This extra adjustability adapts them for use where distance between rows is greater or less than usual.

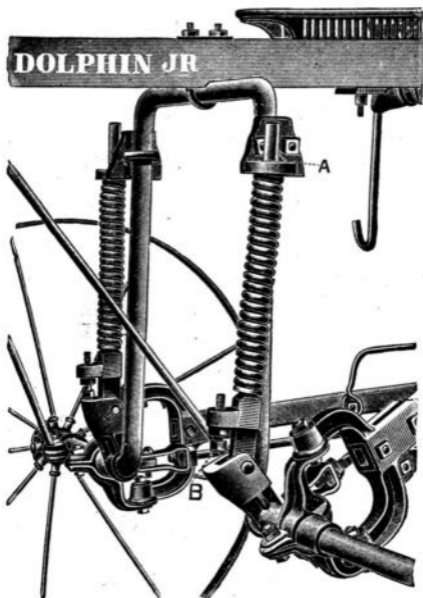


With
No. 75
parallel beam northern gangs.

Dolphin Jr. Walking Cultivator—Continued.



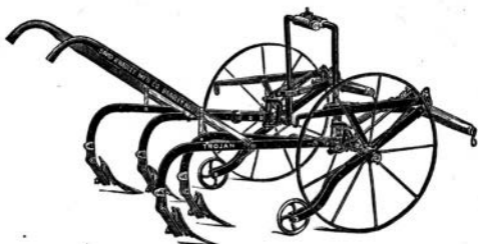
With combination beam northern gangs.



Raising Springs for Dolphin Jr. Cultivator.
(See description on preceding page.)

TROJAN TONGUELESS CULTIVATOR.

With Patent Compound Lifting Springs.



THIS is a Tongueless Cultivator with Lifting Springs which, until lately, have been put only on pole cultivators. These are our patented compound springs, the same as are put on our Dolphin cultivator and give a continuous steady lift which makes the handling and lifting of the gangs so easy that a boy can use them without trouble. On the foot of the trussed gang support we put either a wheel, as shown in cut, or a shoe, as customers may prefer. By hooking whiffletrees at proper height the draft of the horses overcomes the pressure of the wheel or shoe, as the case may be, on the ground, thus doing away with the friction common to the old style drag bar.

The Arch is adjustable so that the wheels and gangs can be spread further apart or worked closer to each other, thus adapting them for cultivating crops planted at different distances apart; it also obliges each horse to do his part of the work, as each section of the arch, with its attached wheel and plow can oscillate forward and backward independently of the other.

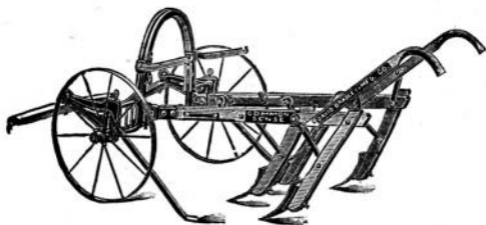
The Bradley Couplings are used on this. They permit great adjustment of the front end of the beams (where they couple to the frame) either sideways or up and down, thus helping to regulate the depth of cultivation by changing the pitch of the shovels, also varying the distance between the plows. The pitch of the shovels can also be changed by changing the position of the malleable shovel sleeves, in the top of which are bolt-holes for that purpose.

The cultivator is shown in cut with our regular two-shovel gangs, but we furnish three-shovel, eagle-claw, spring-tooth and spring-break gangs when wanted.

The shovels, except on spring-break gangs, are attached to malleable sleeves, which are held to their position and work by wooden break-pins. The shovels have side adjustment for throwing the dirt *to* or *from* the crop.

Steel wheels only are used on the Trojan.

COMMON-SENSE TONGUELESS CULTIVATOR



Very simple, very effective and therefore very popular.

Has Double Wrought Steel Arch, wood beams, steel wheels and twisted shovels either mild or hard tempered.

Adjustable Drag Bars keep the arch in position when the Gangs are hung up for going to or from the field, but they can be fastened up out of the way when not in use.

The Gangs draw in line at all times being hinged to the frame. The Draw Arms to which the axles and wheels attach are pivoted to the frame so that the wheels, also, draw in line should one horse travel ahead of the other. On side hill where a cultivator naturally inclines to work down hill a little, the draft of the team would incline the wheels to run up hill somewhat and thus overcome the downward tendency.

Each Horse is Obligated to do his Share of the Work.

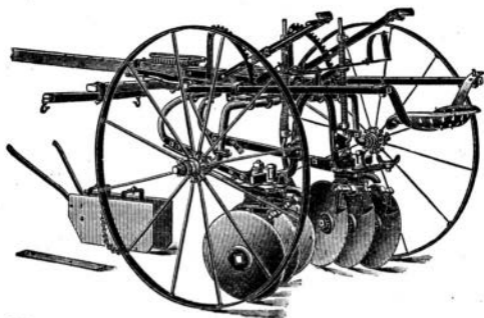
It is Easy to Handle and Very Light Draft.

The shovel standards on the wood beam gangs are held in position by wrought braces in which a series of holes permit the pitch of the shovels to be varied to suit the work being done.

Wooden Safety Pins prevent the breakage of shovels. The dirt can be thrown to or from the crop by transposing the shovels from one gang to the other.

Depth of Cultivation can be varied by inverting the coupling head; also by changing the pitch of the shovels.

BRADLEY DISK CULTIVATOR.



OUR "Bradley" here shown is the outcome of several years experience with disk cultivators. It embodies lightness, strength, simplicity, ease of handling and easy adjustment. Can be set for any class of corn cultivation.

Dirt can be thrown either to or from the crop by transferring the disk gangs from one side to the other; or, by taking off the scrapers, they can be simply turned end for end.

The arch is adjustable, so that wheels can be set out or in to vary distance between them; and the disk frame is also adjustable so that distance between disk gangs and closeness to plant can be regulated to meet the conditions existing at time of cultivation.

It has a pivotal pole, similar to the one on our Klondike cultivator, and, by means of a hand lever connected thereto, the course of the wheels can be quickly changed to the right or left, to dodge the plants out of line. This feature can also be made effective to keep cultivators from working down when used on side hill. When turned to dodge corn in crooked rows the disks are not placed in position to prevent cutting full width, neither does the pole crowd the team.

It is easily guided and operated at all times—even though the weight of frame and driver are carried on the disks.

Barring-Off Attachment is furnished when wanted with which the two inside disks can be set forward and adjusted to throw the dirt away from the plant; the soil is then returned to the corn by the rear disks in a thoroughly pulverized condition.

Levelers and Center Disks are furnished when ordered.

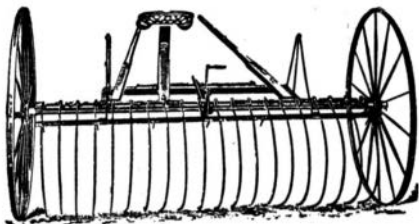
Forcing Springs operate to give more or less downward pressure upon the frame, as the condition of the soil may require.

It has a Hammock Seat which can be set forward or back to balance the cultivator.

Depth of Cultivation is regulated by hand levers.

“QUEEN” ALL STEEL RAKES.

Made 8, 10 and 12 feet wide.



QUEEN HAND DUMP.

Head is of Angle Steel—one of the strongest shapes that can be produced from a given weight of metal. Underneath it is

A Continuous Solid Steel Axle, which supports the head and prevents sagging.

A Lock Lever holds the teeth to the work automatically. A slight upward motion of one hand releases the lock and the load is dumped—the operation being aided by the weight of the driver.

20 Spring-Tempered Steel Teeth are furnished with 8 ft. Rakes; 26 with 10 ft. and 32 with 12 ft. Rakes. The lower ends of the teeth are flattened on the sides, which makes the rake draw lighter, prevents injury to the meadows and raises less dust.

Combination Pole and Shafts go with 8 and 10 ft. Rakes, fitting them for use with one or with two horses. The 12 ft. has pole only.

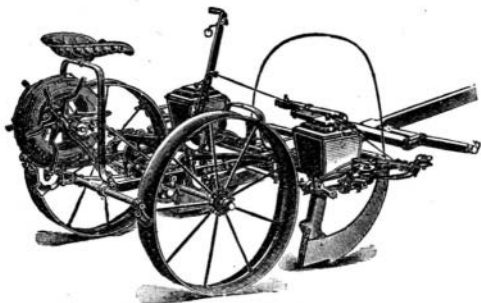
A Large, Comfortable Seat is held by a double steel spring, which insures easy riding.



QUEEN SELF-DUMP.

BRADLEY FORCE-DROP CORN PLANTER

With DRILL and CHECK ROWER Combined.



**Makes an Exact Check, so that Cross-Rows
are as Straight as Others.**

It is the *only* planter that has a **Plunger in the feed tube, which** (with a quick motion) **forces** the corn out of the tube (see cuts on next two pages) so that failure to drop correctly is impossible.

It can be quickly and easily adjusted to do any of the following named work:

It will Plant in Drill, either 10, 14 or 18 inches apart.

It will Plant in Check by *drilling* the corn into the seed-tube, where it is held until the seed valve is opened by the action of the check rower; or it will deposit the corn in the seed-tube from a plate with larger holes, each hole in which will hold the required number of kernels for a hill, where it is held as in the first instance, until the seed valve drops it. All of these operations are illustrated by cuts and more fully explained on next page.

Wire, Foot or Hand Drop.—These corn planters are sent out arranged as a check-rower with foot-drop attachment, but when so ordered can be sent with hand-drop attachment.

Different Widths.—It can be adjusted to plant 3 ft. 8 in., 3 ft. 6 in., or 3 ft. 4 in. On special orders we make them to plant 4 ft. and 3 ft. 10 in.

Has an Automatic Reel, absolutely perfect in its operation.

Wheels.—We furnish 30 inch wheels either flat, concave or open, and 38 inch wheels either concave or flat.

It is Light, Strong and Durable.—The frame is made of square wrought pipe and the other parts, except pole and evener, are of iron and steel so that its lasting qualities, as well as its strength and lightness, are exceptional.

See next two pages for detailed description of its various operations.

BRADLEY FORCE-DROP PLANTER.

Arranged for Planting in Check.



Cut No. 1.

This method consists in using a drilling plate and checking with the Seed-Valve (Fig. 2) as shown by cut No. 1. The plate is, of course, when this method is used, continually drilling into the seed-tube, but the kernels are held by the valve until forced out by the plunger, (Fig. 1) which is operated by the check row attachment.

The Plunger is a new and patented feature brought out by us with this Planter. See description on preceding page.

Three plates go with this, each differing in number of holes to vary the number of kernels in a hill.

Arranged for "HILL DROP."

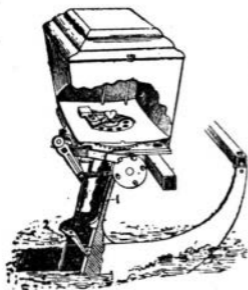
Cuts Nos. 2 and 3 show another method for hill dropping than the one shown by Cut 1 and described on preceding page. A plate is used with holes large enough to hold the required number of kernels for a hill, which are, of course, dropped into the seed-tube at *one time*, and forced out just the same as when drilled in, concerning which read description accompanying Cut 1.

Cut No. 2 shows the plunger (Fig. 1) down—its lower end having forced the kernels for one hill past the seed-valve (Fig. 2) while kernels for another hill are dropping. Cut No. 3 shows the plunger raised to permit the corn to pass under it and lodge on the valve until the downward movement of the plunger shall force it out, as before.



Cut No. 2.

BRADLEY FORCE-DROP PLANTER—Cont'd.



Cut No. 3.

back by a cotter inserted through a hole in the top of the valve chamber.

With valve so fastened back and the checking device detached, there is a free passage left through the seed tube for the kernels as they drop singly from the rotating plate.

Three drilling plates are furnished with each planter, CP111 drops 18 inches, CP112 drops 14 inches, and CP113 10 inches apart.

This method of hill dropping is not found combined with the others in any planter except ours.

Three plates are furnished for this method of planting, varying in size of hole, so that some one of them will suit the size of corn to be used.

ARRANGED FOR CONTINUOUS DRILLING.

This shows the operation of continuous drilling. The seed valve (Fig. 2) is held



Cut No. 4.

BRADLEY No. 2 FORCE-DROP CHECK-ROW PLANTER.

Drill Attachment furnished when wanted.

(Cut not shown.)

THIS is made somewhat lighter than our No. 1 Planter and lists at a lower price. It is, however, an excellent machine, having the same force-dropping device as our No. 1, which feature is fully described on previous pages.

The Frame is all steel and iron and consequently has strength, durability and lightness.

Has a Plunger and Automatic Reel same as on the No. 1. Reel can be quickly detached or put on.

Wire or Foot Drop can be used.

Wheels—The No. 2 Planter has 28-inch Concave Wheels.

Distance between rows is the same as on No. 1 Planter, viz.: 3 ft. 8 in.; 3 ft. 6 in. or 3 ft. 4 in. apart.

Corn Boxes are Hinged, so they can be turned down far enough to change the seed plates, should the operator so desire, without removing the seed from the boxes.

BRADLEY No. 3 FORCE-DROP PLANTER.

With Drill and Check-Rower Combined
and with Fertilizer Attachment.

(Cut not shown.)

It has all the features of the No. 1 described on preceding page, with Fertilizer added. This involves a slight change in the construction of the frame.

The Fertilizer Attachment can be removed or corn planting can be done without removing it, but in sections where fertilizer is not used, it is of course better to buy a No. 1 or No. 2 Planter. An independent lever throws this attachment out of gear when it is desired to stop using it.

The Corn Boxes are Hinged on this as well as on No. 2, description of which please see.

The Seat can be set back on the seat-bar to counter-balance added weight of Fertilizer Attachment on front frame, when same is used.

THE NEW BRADLEY STALK CUTTER.

With Lever Rack.



Clearing Capacity.—The diameter of the cylinder heads is greater than usual; and, as there is no center shaft running through the cylinder its clearing capacity prevents clogging in heaviest work.

The rebound or blow which cuts the stalks is accelerated by two spiral springs, one on each side of the frame, which can be compressed, more or less, by means of adjustable collars with set screws, to give a hard or light blow, as the nature of the work to be done may require. When the handle or lever which operates the crank is pushed back it turns the crank downward and forces down the rods around which the springs are coiled and to which the collars referred to are fastened by the set screws. When the lever is thrown forward the frame and cylinder are raised from the ground.

A Lever Rack with notches into which the lever-dog engages, holds the lever above referred to in any desired position, thus giving suitable downward pressure to the cylinder-frame, or, holding it up from the ground when going to or from the field.

Automatic Drag Hooks.—These are automatically raised whenever the cylinder is lifted, but they can be raised by hand without raising the cylinder head should it be found necessary to do so.

A steel seat spring and a good comfortable seat make it easy for the rider.

Steel Wheels, with 2-inch face and strongly built are used on these implements.

A covered Cylinder prevents accidentally falling upon the knives. The cylinder is now covered with a steel deck as shown in cut

The Frame and arch are of wrought iron, and the construction generally such as to make it a long lasting implement.

The Knives are of good material and of sufficient thickness to stand the work. The bolts used are of a size that will not break nor cut off.

Cylinder Axles are wrought steel and are removable. In case of wear can be replaced quickly and cheaply.

"BRADLEY" CHAMPION FORCE-FEED COTTON PLANTER.

With Corn Planter Attachment.



Also made with short standards
and pin-break braces.

THE "Champion" is durable, simple and perfect in its operation. You can change it in an instant to plant from one peck to two bushels per acre without the usual trouble of changing plates, unbolting, bolting up, etc. It has a positive force-feed which cannot clog nor injure the seed. It plants the seed as it comes from the gin, without any previous preparation, distributing it evenly in the drill. Owing to the peculiar construction of the cut off plates, bunching is entirely obviated. One man with one horse will plant from seven to eight acres per day, finishing his work as he goes, thus saving the work of at least two hands and one horse in the matter of planting alone over the ordinary way. The seed is deposited directly in the rear of the opening shovel and is at once covered with moist soil, thus insuring its immediate sprouting. When the seed comes up it is in perfect drill, no stalk standing more than one inch out of the furrow line, so that any implement can be worked close up to the plant. Any one growing cotton will readily appreciate the labor saved in getting cotton to a stand planted in this manner, as "chopping out" is one of the most tedious jobs of raising the crop. Fully one-half the work is saved by the use of this machine, which alone would cover its cost on a crop not exceeding fifteen acres. A Corn Planting Attachment, which is shown above, can be furnished when wanted. We also make an iron frame combined machine for planting corn or cotton seed from the same hopper, shown on following page. Although not shown by cut we now attach to the rear standards of both wood and steel frame planters, a steel gauge which prevents shovels going too deep in light or loose soils. They are adjustable for more or less depth. Cast iron presser wheels with connections are furnished on special orders.

BRADLEY CHAMPION COMBINED COTTON AND CORN PLANTER.



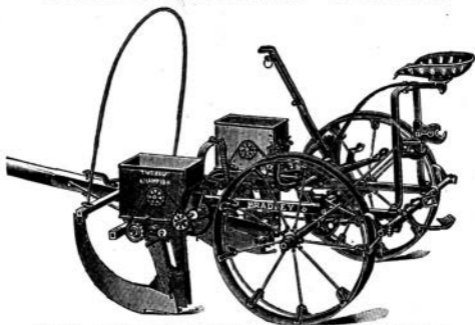
Drops corn 12, 16 or 20 inches apart.

THIS is a combined machine, embodying all the features of the Champion described on foregoing page.

It drops both Cotton Seed and Corn from the same hopper, thereby saving the cost of an extra attachment for corn planting. The cut shows it with the chain adjusted for planting cotton seed. To plant corn, remove the chain from the two upper right hand chain wheels. Then put upon the shaft marked "A" which drives the corn dropper plate, whichever chain wheel will give the desired distance between kernels in dropping. Shorten the chain to fit, and after adjusting the tightener, go ahead.

Full directions will be found pasted inside the hopper of each planter. We also make this with gear drive, and with gauge shoes when so wanted.

BRADLEY FORCE-DROP PLANTER.



With 2-Row "Champion" Cotton Planter Attachment.

Plants two rows at a time. Attachment can be removed and regular corn boxes used. See Force-Drop Planter.

BRADLEY GASPIPE LEVER HARROW.



By Lever Harrows we mean those whose tooth-bars can be turned by a lever, without stopping the team, to set the teeth perpendicularly or to slant them at any angle desired, either to clean them of trash or for putting in grain, or for other work.

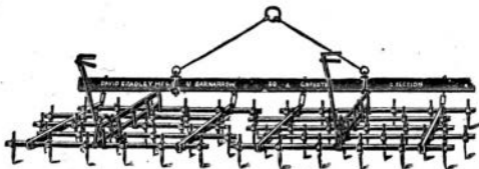
This cut shows our latest improved gaspipe harrow with top adjusting-bar at center of each section. It represents our 2-section 4-bar 64 tooth gaspipe lever harrow. We also make one with 5 bars holding 60 teeth and another with 5 bars holding 70 teeth. The gaspipe tooth-bars are held in place by passing through a channel-steel connecting bar at each end of the section.

These **Connecting-Bars Act as Runners** upon which the harrow can be drawn to and from the field, when the teeth are turned backward. Three or four sections can be used by getting eveners suited to their use.

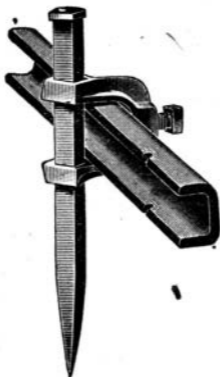
Eveners for two and for three sections of the style first mentioned above are kept regularly in stock. Longer ones can be made for those who wish to use four or more sections at one time. The three section evener can be changed to use, with two sections only, when so desired. Sections are braced by two angling bars as cut shows. Teeth are $\frac{1}{2}$ -inch steel, held by nuts on ~~one~~. The teeth are strengthened by a washer underneath the bar which projects downward upon the full square of the tooth and is a support to it. When the points of the teeth are worn to a backward slant on the front side, the teeth can be reversed and a sharp cutting point again presented. In addition to the above we are now making a 4-section gaspipe harrow, each section having 5 bars with 5 teeth to the bar, making 25 teeth to the section. By changing evener it can be used as a 2, 3 or 4-section harrow. Cut not shown.

Width of Cut:—Five-bar sixty-tooth Harrow cuts ten feet, five-bar seventy-tooth cuts twelve feet, and a four-bar sixty-four tooth cuts ten feet eight inches.

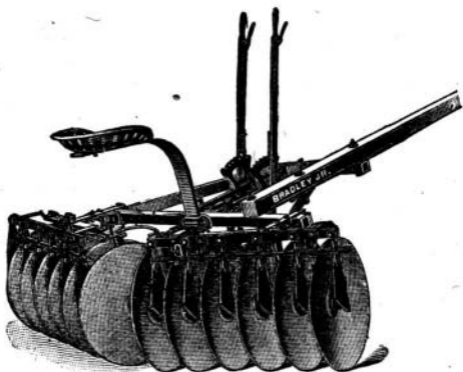
BRADLEY U-BAR LEVER HARROW.



THIS is built on the same principle as the gaspipe harrow illustrated on preceding page. The description there given applies also to the above. The difference consists in the shape of the material from which the tooth-bars are made, which is gaspipe in one, and in the other (see cut below) of a U-shaped wrought bar, against the notched edges of which the teeth are held by a malleable clamp and set-screw. These harrows are made in the same sizes as the gaspipe, and the width is the same. Below is a section of the bar, showing how the teeth are attached.



BRADLEY JR. DISK HARROW.



THE embodiment of the best features in disk harrows that experience has suggested, together with new ideas never before brought out. Some of its good points are as follows:

It has a Lever for each gang of disks. This is fully appreciated when working on side hill, as you can set the gangs so they will overcome the tendency to work down hill.

The Bearings of the disk gangs and the boxes in which they work are **thoroughly chilled and perfectly fitted**, so that the wearing away of these parts, (which is one of the greatest defects in disk harrows as usually made,) is almost wholly overcome.

The Boxes are made separate so they can be very quickly and cheaply replaced should they wear out. Each gang bearing is supplied with a gas pipe oil tube, which extends above the top of the disks. A wooden stopper keeps out the dust, and the height makes it convenient for oiling.

The weight of the main frame and the driver rests on the *outer* end of the disk gangs, while the *inner* ends are held down by the lever connection-bar, which is in turn held by a toggle-bar which prevents the disks raising above the desired height, yet permits them to lower into and cultivate dead furrows and other low places, making it the most flexible and effective tool of its kind.

The Disk Gangs attach to, yet **work independently of the main frame**, thus enabling us to **attach seeders** directly to the disk gang frames, which is very necessary in order to get *good work* out of a seeder.

We make broadcast Half-Seeder Attachments for all sizes of Bradley Jr. Disk Harrows; also

BRADLEY JR. DISK HARROW—Continued.

make a combined Drill and Broadcast Half-Seeder Attachment for our Nos. 2, 2½ and 12 Harrows. The combined Attachment can be changed from drilling to broadcast sowing by attaching scatterers instead of drill tubes. We sell the Harrow fitted with either right or left hand attachment, or both, as purchaser may desire. These boxes are entirely of metal therefore very durable.

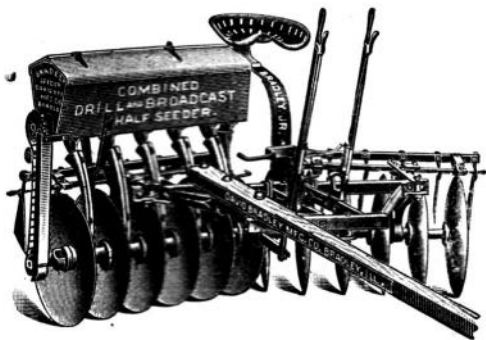
The pole can be set over to one side of the frame for use with three horses, or can be put in the center for four. Whether used with three or with four horses the **draft is always from the center of the frame**, consequently there is practically no side draft.

Leveling the Gangs is now a very *simple matter*. Let the pole carry at whatever height the neckyoke is usually hitched; then adjust the toggle-bars to run the disk level.

Spring Scrapers.—A single movement of the feet applies the scrapers, which are made of high carbon steel. Each one is held to its work by a spiral spring. On removal of the feet the scrapers again move away from the disks. They can however be locked to their work, or away from the disks whenever the operator desires.

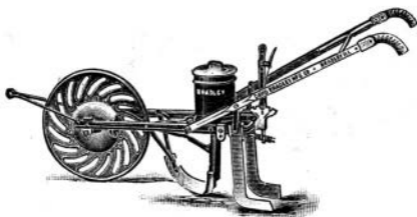
A Double Steel Seat Spring and a large comfortable seat add to the ease and comfort of the operator.

A three-horse equalizer which can be changed to a two-horse evener, or, a four-horse abreast equalizer is furnished with each harrow; also a neckyoke.



BRADLEY No. 1 ONE-HORSE CORN DRILL.

With both Metal and Brush Cut-off.



The Strongest, Simplest, Most Durable and Accurate, and the Most Easily Operated Drill Made.

IT IS made entirely of metal, which combines strength with lightness, and makes a long lasting implement as there is no wood to rot out.

The gearing is completely covered, therefore no weeds nor trash can clog and break it.

Has both pin break and shoe, both or either of which can be used, as the work to be done or the fancy of the operator may suggest.

It has a metal and a brush cut-off in the same hopper. By simply shifting the lever either can be used, and the change can be made while the drill is in motion, which is impossible with any other. The same lever can also be set to throw the machine out of gear and stop drilling.

The coverers are adjustable, and so shaped that the seed can be covered shallow or deep, as needed.

Distance between kernels is got by selecting from the plates sent with the Drill, the one having the right number of holes to give the desired distance. Four plates go with each drill. The 6-hole plate drops 12 inches, the 5-hole plate 14 inches, and the 4-hole plate 18 inches apart. The fourth or blank plate can be used for cane seed, Kaffir corn, beans, peas, etc., by drilling it to suit the seed used.

The Dropping Device is the same as we have used on our Force Drop Planter and Combined Listers for years, and is therefore **no experiment**, but the most perfect and exact drilling apparatus extant.

BRADLEY PRESSER-WHEEL ONE-HORSE CORN DRILL.

With or without Fertilizer Attachment.



No. 2 is Without Fertilizer Attachment.

No. 3 has Fertilizer Attachment.

THE distinction above made between No. 2 and No. 3 consists in having or *not* having the Fertilizer Attachment. This attachment can be quickly and easily taken off or put on, without in any way interfering with the seed planting mechanism, so that a No. 2 can be changed to a No. 3 or *vice versa*. We give them these numbers to prevent mistakes in ordering.

They have an opening Runner same style as those used on our two-row planter. It opens a furrow into which the corn and fertilizer are deposited and then covered by a presser-wheel similar to the ones used on the large two-horse machine.

Four seed-plates are furnished—One drops the corn 11 inches, another 14 inches and a third one 17 inches apart. The fourth plate is a blank which can be drilled to plant peas, beans, Kaffir corn, cane seed, etc.

Corn can be drilled with the No. 3 without removing fertilizer box, but it is better to take it off if any great amount of corn is to be put in without fertilizer.

The Fertilizer box can be thrown out of gear by an independent lever not shown in cut whenever it is desired to plant without using fertilizer.

LAND MEASURE.

144 square inches	1 square foot.
9 square feet	1 square yard.
30¼ square yards	1 square rod.
40 square rods	1 square rod.
4 square rods	1 acre.
640 acres	1 square mile.

LONG MEASURE.

12 inches	1 foot.
3 feet	1 yard.
5½ yards or 16½ feet	1 rod.
320 rods, or 1,760 yards, or 5,280 feet	1 mile.
3 miles (measuring at sea)	1 league.
6 feet (depth of water)	1 fathom.
4 inches (horse measure)	1 hand.

LIQUID MEASURE.

4 gills	1 pint.
2 pints	1 quart.
4 quarts	1 gallon.
■¼ gallons	1 barrel.
63 gallons	1 hogshead.

COMMERCIAL WEIGHTS.

16 drams	1 ounce.
16 ounces	1 pound.
25 pounds	1 quarter.
4 quarters	1 hundred weight.
20 hundred weight	1 ton.

MISCELLANEOUS TABLE.

12 units or things	1 dozen.
12 dozen	1 gross.
20 things	1 score.
196 pounds	1 barrel of flour.
200 pounds	1 barrel of pork.
56 pounds	1 firkin of butter.
24 sheets of paper	1 quire.
20 quires of paper	1 ream.
4 feet wide, 4 feet high, and 8 feet long	1 cord of wood.

INDEX.

Bradley Champion Cotton Planter.....	74,	76
Bradley Chilled Plows..		18
Bradley Disk Cultivator.....		62
Bradley Disk Plow.....	30,	32
Bradley One Horse Drill No. 1.....		84
Bradley One Horse Drill No. 2 and 3.....		86
Bradley Force-Drop Corn Planters.....	66 67,	68
Bradley Force-Drop Corn Planter No. 2.....		70
Bradley Hay Press.....		40
Bradley Jr. Disk Harrow.....	82,	83
Bradley Listing Plows.....	34, 36,	38
Bradley Stalk Cutter, single row.....		72
Bradley Sulky Lister.....		38
Bradley Vulcan Cultivator.....		48
Breaking Plows.....		8
Champion Cotton Planter.....	74,	76
Chilled Plows.....		18
Common Sense Tongueless Cultivator.....		60
Cotton Planter, Champion.....	74,	76

Cultivators:

Bradley Vulcan.....		48
Bradley Disk.....		62
Common Sense Tongueless.....		60
Dolphin.....		52
Dolphin Jr.....	54,	56
Five-Tooth.....		92
Klondike.....	42,	44
Stem Winder.....		46
Trojan.....		58
Disk Cultivator, Bradley.....		62
Disk Harrow, Bradley Jr.....	82,	83
Disk Plow, Bradley.....	30,	32
Dolphin Walking Cultivator.....		52
Dolphin Jr. " ".....	54,	56
Double Shovel Plows.....		90
Drill, Bradley One-Horse No. 1.....		84
Drill, Bradley One-Horse Nos. 2 and 3.....		86
Five Tooth Cultivators.....		92

Gang Plows:

Vineyard.....		28
XX Rays.....	20,	22
"Garden City Clipper" Plows.....	3, 4,	6
"Garden City Southern Clipper" Plows.....		10
Gaspipe Lever Harrow.....		78

Harrows:

Disk, Bradley Jr.....	82,	83
Lever.....	78,	80
Hay Press, Bradley.....		40
Klondike Pivotal Pole Cultivator.....	42,	44
Lever Harrows.....	78,	80
Listing Plows.....	34, 36,	38
Middlebreaker.....		12
Middlebreaker with Drill Attachment.....		14
Middlebreaker, Sulky.....		38

INDEX—CONTINUED.

Miscellaneous Tables.....	93
New Ground Plow.....	12
"Northern" 2-furrow Wheel Walking Gang Plow.....	26
One-Horse Drill, Bradley.....	84, 86
New Bradley Stalk Cutter.....	72
New Bradley Walking Cultivator.....	50

Planters:

Bradley Force-drop Check-row and Drill.....	66, 67, 68
Bradley Force-drop No. 2.....	70
Champion Cotton.....	74
Champion Cotton and Corn.....	76

Plows:

Bradley Disk.....	30, 32
Breaking.....	8
Chilled.....	18
Description of.....	3
Double Shovel.....	90
"Garden City Clipper".....	3, 4, 6
"Garden City Southern Clipper".....	10
Gang.....	22, 26, 28
Listing.....	34, 36, 38
Middlebreaker.....	12
New Ground.....	12
Single Shovel.....	88
Sulky.....	20, 22, 24
Poleza Sulky Plow.....	24
Poleza Sulky Plow with Middlebreaker Attachment... ..	16
Prairie Breaking Plows.....	8
Potato Digger.....	28
Queen Sulky Rake, Hand and Self-Dump.....	64

Rakes:

Queen Hand and Self Dump.....	64
Shovel Plows, double.....	90
Shovel Plows, single.....	88
Spring on Dolphin Jr. Cultivator.....	56
Stalk Cutter, New Bradley.....	72
Stem Winder Cultivator.....	46
Sulky Lister.....	38

Sulky Plows:

X Rays.....	20, 22
Poleza.....	24
Sulky Rakes, see "Rakes".....	
Tables.....	93
Trojan Tongueless Cultivator.....	58
U-Bar Lever Harrow.....	80
Vineyard Gang Plow.....	28
X Rays Sulky Plow.....	20, 22
XX Rays Gang Plow.....	20, 22

1902

	S	M	T	W	T	F	S		S	M	T	W	T	F	S
January	...	...	...	1	2	3	4	July	...	...	1	2	3	4	5
	5	6	7	8	9	10	11		6	7	8	9	10	11	12
	12	13	14	15	16	17	18		13	14	15	16	17	18	19
	19	20	21	22	23	24	25		20	21	22	23	24	25	26
	26	27	28	29	30	31	...		27	28	29	30	31	...	...
...
February	...	...	...	...	...	...	1	August	...	...	...	...	...	1	2
	2	3	4	5	6	7	8		3	4	5	6	7	8	9
	9	10	11	12	13	14	15		10	11	12	13	14	15	16
	16	17	18	19	20	21	22		17	18	19	20	21	22	23
	23	24	25	26	27	28	...		24	25	26	27	28	29	30
...	...	...	...	...	...	...	...	31	...	...	...	...	...	...
March	...	...	...	...	...	...	1	September	...	1	2	3	4	5	6
	2	3	4	5	6	7	8		7	8	9	10	11	12	13
	9	10	11	12	13	14	15		14	15	16	17	18	19	20
	16	17	18	19	20	21	22		21	22	23	24	25	26	27
	23	24	25	26	27	28	29		28	29	30	...	...	...	...
30	31	...	...	...	...	...	...	...	...	...	...	...	...	...
April	...	...	1	2	3	4	5	October	...	...	...	1	2	3	4
	6	7	8	9	10	11	12		5	6	7	8	9	10	11
	13	14	15	16	17	18	19		12	13	14	15	16	17	18
	20	21	22	23	24	25	26		19	20	21	22	23	24	25
	27	28	29	30	...	...	...		26	27	28	29	30	31	...
...	
May	...	...	...	...	1	2	3	November	...	...	...	...	...	...	1
	4	5	6	7	8	9	10		2	3	4	5	6	7	8
	11	12	13	14	15	16	17		9	10	11	12	13	14	15
	18	19	20	21	22	23	24		16	17	18	19	20	21	22
	25	26	27	28	29	30	31		23	24	25	26	27	28	29
...	...	...	...	...	...	...	...	30	...	...	...	...	...	...
June	1	2	3	4	5	6	7	December	...	1	2	3	4	5	6
	8	9	10	11	12	13	14		7	8	9	10	11	12	13
	15	16	17	18	19	20	21		14	15	16	17	18	19	20
	22	23	24	25	26	27	28		21	22	23	24	25	26	27
	29	30	...	...	...	...	...		28	29	30	31	...	...	...
...	