



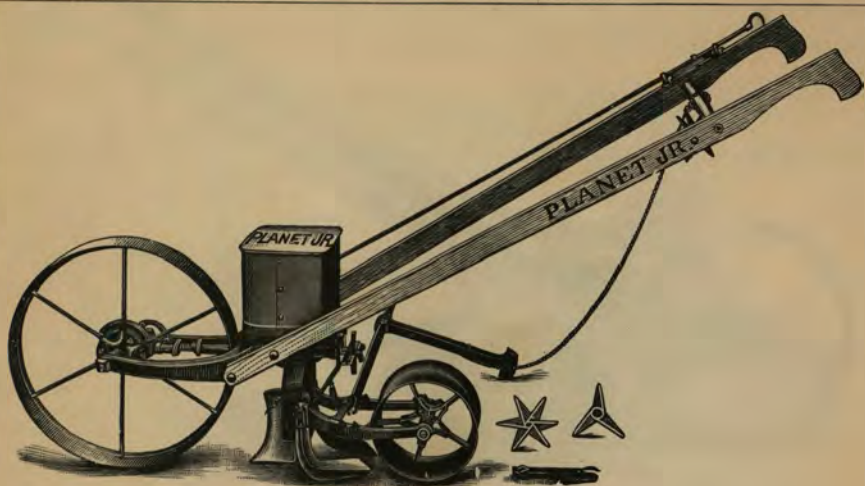
1. The Planet Jr. Bullock Hoe in Foreign Lands.
2. The Planet Jr. Single Wheel Hoe in the family vegetable garden plowing corn.
Easy, rapid and perfect.



- 2
1. Sowing the seed with Planet Jr. No. 4. The marker iron does its duty well.
 2. Planet Jr. Double and Single Wheel Hoes in onions. Twelve acres a day.



HILL AND DRILL SEEDERS



No. 5 PLANET JR. HILL AND DRILL SEEDER. PRICE, \$13.00.
16½ inch steel wheel. Capacity five quarts. Weight packed 48 lbs.

Special size for market gardeners and farmers, for sugar beet and onion set growers, etc. It is the GREAT HAND-POWER PLANTER for both hills and drills. It runs light, and plants equally well with a full hopper or with a paper of seed, and up-hill or down.

PLANTING the seed is perhaps the most important of all the farmer's and gardener's operations in growing crops from seed; for no matter how good the seed may be, if badly sown, he oftentimes loses both seed and labor.

A good seeder is therefore one of the most important farm and garden tools. It "pays at both ends;" it saves labor and seed in planting, it saves work and trouble in hoeing. It also makes a more even and therefore a larger crop. If the drill is a hill-dropper, these advantages are emphasized.

In a word, a good seeder should sow perfectly in drills, and it must be also a satisfactory hill-dropper to be an "up-to-date" labor saver.

For, if the seed is drilled and the plants thinned, it is often hard to find strong plants at regular distances, even with thick sowing: but with hill-planting one saves a great deal of seed and is very sure to find good plants at the exact spot where they are wanted. For thinned crops, therefore, a seeder that will drop in hills leaves all other drills "out of sight." Remember, it makes three important gains: *it saves seed, it saves labor in thinning; it makes an even crop.*

A. C. HILTON, Athens, Me., writes May 19th, 1902, regarding No. 5 Drill: "I find it all you recommended it to be; it is a great labor saving machine."

J. V. HARRIS, M. D., Keyport, Fla., writes Nov. 16th, 1901: "I have on hand five seed drills; yours is the best; it is the only one I have ever been able to get to work in a satisfactory manner. You should change the name and manufacture no other; it should be called the "Perfection Hill Seed Dropper and Drill."



PLANET JR. FARM AND GARDEN TOOLS



No. 3 PLANET JR. HILL AND DRILL SEEDER. PRICE, \$10.50.

15 inch steel driving wheel. Holds 3 quarts. Similar in every way to No. 5. Weight packed 44 lbs.

The description below applies to Nos. 3, 4, 5 and 25 Seeders.

HAVING been farmers and gardeners ourselves for more than twenty-five years, our experience has enabled us to adapt and improve the **Planet Jr. Hill and Drill Seeders** until they are now the best tools of their kind in the world. Every difficulty or drawback, however slight, which experience has revealed, has been remedied wherever found possible, and improvement after improvement has been adopted, until they are now far in advance of all other drills we have ever made.

To illustrate their usefulness, here is a grand list of field, garden and flower seeds, all of which these seeders will sow in hills or drills, in the most admirable manner.

Apple,	Carrot,	Field Peas,	Okra,	Pepper,	Spinach,
Asparagus,	Cauliflower,	Flower Seeds,	Onion for Bulbs,	Radish,	Sugar Beet,
Beans,	Celery,	Kale,	Onion for Sets,	Rice,	Thyme,
Beets,	Chicory,	Leeks,	Parsley,	Ruta Baga,	Tobacco,
Cabbage,	Cucumber,	Lettuce,	Parsnips,	Sage,	Tomato,
Cantelope,	Endive,	Marjoram,	Pear,	Salsify,	Turnip.
		Melon,	Peas,	Savory,	

Nos. 3, 4, 5 and 25 Seeders not only sow evenly in drills, but also drop accurately in hills. They can be thrown out of gear instantly and the flow of seed may be instantly shut off; the tools may thus be turned at the end of the row and started in the next, without pausing, and without wasting seed; they can be quickly set to sow the various kinds of seed accurately, and to sow them the exact thickness and depth desired. They will cover and roll down light or heavy at will, and they mark the next row at any needed distance making a clear, distinct line.

In a word, they sow in drills or drop in hills a great variety of seed any needed depth or thickness, they do it rapidly and perfectly, are simple, strong and easily adjusted and do not get out of order.

J. H. McLOUD, JR., Port Byron, N. Y., writes Jan. 17th, 1902: "I purchased a No. 3 Hill and Drill Seeder last year. I sowed two and one-half acres of sugar beets and several of my neighbors used it for the same purpose. We all agree that it is better than a Four-row Drill Seeder; it saves time and labor; it puts the bunches just where you want them and it is no job to hoe them out."



DETAILED DESCRIPTION

DRIVING WHEELS. These are strong *steel* designs, (except No. 25) with heavy forged steel spokes, not "piano wire;" are proper height, with broad face, making the tool light and easy running, even with the hopper filled to the brim.

The Semi-Force Feed is very fine, working equally well whether sowing with a fraction of an ounce or a hopper full.

The Hill-Dropping is simple, reliable and regular, the distances are 4, 6, 8, 12, and 24 inches, made with three spacing wheels, *two of them reversible* spacing two distances each.

Changes of Distance between hills may be made in a few seconds.

From Hill to Drill.—The change can be made instantly, and back in a second or two

The Index.—The thickness of seed is regulated by an accurate index which contains the names of the most important seeds, and is carefully graduated *both for hill-dropping and drilling.*

The Cut-Off.—The flow of seed is instantly stopped by raising the handles, and started again by lowering them to their natural position. Not a hill need be missed in starting, nor any seed wasted in stopping.

The Opening Plow is malleable and adjustable for depth, and plants in a narrow line making close wheel-hoe cultivation easy and saving handwork.

Wheel Hoeing.—Weeds often come up very thickly, *but promiscuously, so they are almost sure to be on one side or the other* of the straight narrow line of the crop; they are therefore easily killed by the wheel hoe.

A Special Plow four inches wide, for onion seed for sets, with special coverers, fits No. 3 and No. 5 Seeders. Price 80 cents for the set. In ordering state which drill they are for.

The Coverers are adjustable, either rigid or to swing to suit the ground. **The Roller** is broad and hollow-faced. **The Marker-Rod** is steel, and the drag bar makes a clear line any distance from 6 to 20 inches. **The Handles** are adjustable in height, for man or boy. The marker is quickly changed from side to side, *from between the handles.*



ONION SEED PLOW AND COVERERS

GENERAL ADVANTAGES

These drills are conspicuous for their wonderful *convenience*. All adjustments are easily made, some of them instantly; for example, the feed is instantly shut off and it can be changed from hills to drills instantly; it stops sowing when wheeled upon the roller; and it is thrown out of gear automatically when drawn backward.

The Speed with which a large acreage can be planted is remarkable. At 12 or 14 inches apart one seeder in a day will plant in hills or drills from 3 to 4 acres; 16 to 18 inches apart, from 4 to 5 acres, and 20 to 24 inches apart, from 5 to 6 acres. A ten-acre beet-field may thus be planted in two or three days by one man.

The "PLANET JR." Nos. 3 and 5 Seeders have our patented index at the top of the handle, *right under the eye of the operator*, while Nos. 4 and 25 have the improved index and adjustment, both styles accurate and admirable.

WE GUARANTEE THE "PLANET JR." HILL AND DRILL SEEDERS TO BE MORE ACCURATE THAN ANY OTHER MADE, TO GIVE SATISFACTION IN EVERY



PLANTED WITH HILL DROPPER

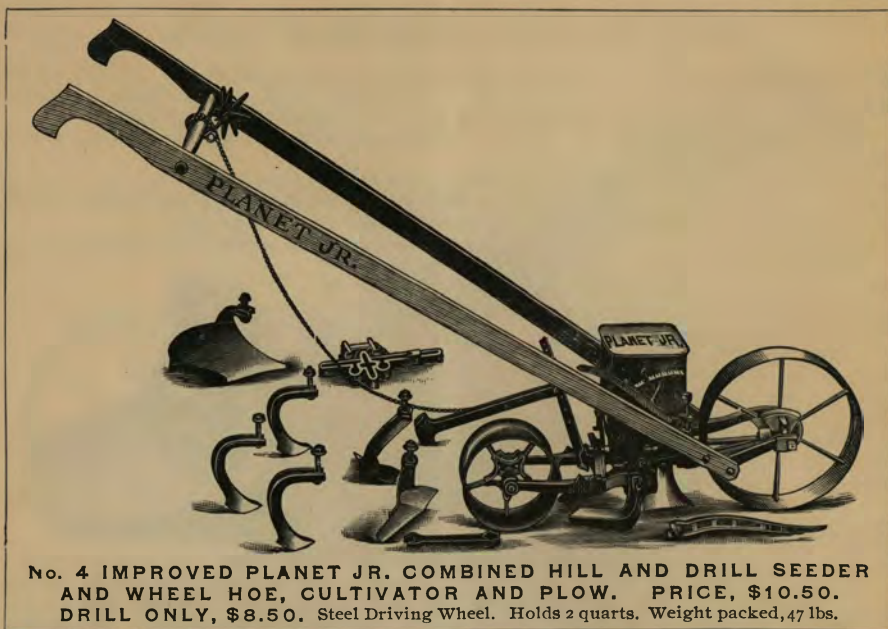
RESPECT, AND TO BE EXACTLY AS REPRESENTED.

B. E. FERNOW, Director New York State College of Forestry, Cornell University, Adirondacks, N. Y., writes May 22d, 1902: "Regarding Drill, in one afternoon we were repaid for the machine three times over; one man covered easily 1,540 square feet per hour, while our hand laborer makes 70 sq. ft."

S. J. MCBRIDE, Rockyford, Colo., writes May 26th, 1902: "I have one of your No. 3 Hill-dropping Drills, and I am sure it is the most perfect machine for the purpose I have ever seen, and I am gardening and truck farming on quite an extensive scale, and am using Planet Jr. goods exclusively, and the work they do is just simply excellent."



PLANET JR. FARM AND GARDEN TOOLS



THIS tool has been greatly improved for 1903 and has been brought to a point of such wide usefulness and such perfection at work that we can hardly recommend it too highly. It combines in a single convenient implement a capital hill-dropping seeder, a continuous row seeder, an admirable single wheel hoe, a cultivator and a plow. Its work as a seeder is marvelous. It sows in continuous rows with the greatest uniformity, and also drops with accuracy in hills, 4, 6, 8, 12 or 24 inches apart. *The feed is automatically stopped, by simply raising the handles.*



IN A GREAT LETTUCE FIELD



A VETERAN MARKET GARDENER

S. H. COLEMAN, Villisca, Ia., writes March 10th, 1902: "I have your Horse Hoe and No. 4 Combined Drill. Have had the Horse Hoe several years and the No. 4 two years, and these tools are the best of all that I know of on the market."

C. R. MONTGOMERY, Burlington, Pa., writes March 19th, 1902: "Your No. 4 Combined Seed Drill and Single Wheel Hoe is the finest thing I have in the line of tools."

JOHN I. BATES, Hopkinsville, Ky., writes May 7th, 1902: "I received my drill and hoe, and it is the finest thing I ever did see; it is more than you said it was; gardening is now a pleasure instead of hard work."



For use as a cultivator, the drill parts are entirely removed and the tool frame substituted, by taking out a single bolt; it is then a perfect single wheel hoe, with an unequaled variety of tools, and a rapid change frame, with side extension as shown in the cut, for hoeing both sides of the row at one passage; all in most convenient form.

DESCRIPTION OF SEEDER

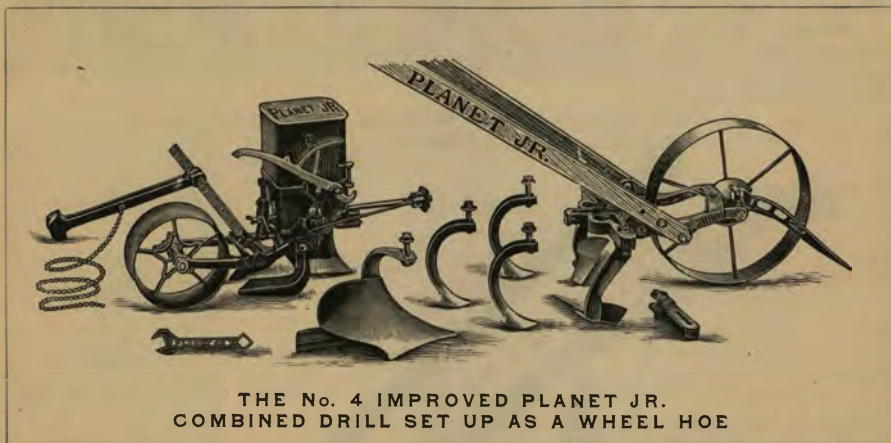
As a Seeder this tool is nearly identical with Nos. 3 and 5, just as accurate, simple and reliable, but smaller in size.

The Index is different, being at the side of the hopper, but directly in view of the operator. It contains the names of the principal seeds, and indicates the proper quantity for either hills or drills; it is quickly regulated with the greatest nicety.

The Cut-off stops the flow of seed instantly, *without interfering with the adjustment by simply raising the handles.*

The Hill-Dropper is substantial, positive and exact. It is changed in a moment from hill-dropping to drill work and back again.

The Handles adjust to suit man or boy, and are of such shape as makes pushing easy. This drill *runs only half as hard as some of the old style agitator patterns.*



THE No. 4 IMPROVED PLANET JR.
COMBINED DRILL SET UP AS A WHEEL HOE

Uses of the Combined Tool. If your garden is small, you may break it up with the turning plow, running twice in a furrow and as deep as possible; if large, a horse-plow should be used or the ground should be well spaded. In seeding, *drop* your beans, parsnips and spinach, carrots, turnips, and onions, beets and okra in *hills*; *sow* your peas and celery, cabbage for plants and onion seed for sets, *in drills*. With a cultivator tooth mark out rows for onion sets and for plants. With the plow draw furrows for manure, potatoes, etc., and cover them.

The small farmers and the gardeners, who feel that they "haven't enough work for a drill to do," will find this combined tool one of the most useful and efficient of all helpers. With this one implement such a farmer can do almost all the work in his small crops. In the small kitchen garden it will quickly pay for itself. It does so many different kinds of work, that it will be found one of the most profitable hand tools that one can own.

E. F. YOUNG, Nauvoo, Ills., writes May 17th, 1902, regarding No. 4 Drill: "We can fully endorse your claims for it, as we accomplish as much work with it in one-half day as formerly took two days, and are not nearly so tired out from the job."

A. A. BROWN, West Bangor, N. Y., writes March 3d, 1902: "We have a No. 4 Drill and Single Wheel Hoe which is satisfactory in every way. For this season we want a Double Wheel Hoe and also a Horse Hoe."

THEO. SCHUMACHER, Jefferson, Wis., writes June 7th, 1902: "Regarding No. 4 Drill, the work three men did last year in one day, I can now do alone in three hours, and at the same time make a better job out of it."



PLANET JR. FARM AND GARDEN TOOLS

AS A SINGLE WHEEL HOE

The Wheel is steel and is very strong and durable ; heavy forged steel spokes not weak wiggly wire.

The Large Garden Plow, for making and covering furrows and plowing to and from the garden crops, is constantly useful from spring till fall.

The Three Hollow Steel Standard Cultivator Teeth, are used for all deep and thorough work, and are also adapted to shallow cultivation, and marking out. Fine models.

The Pair of 4½ inch Hoes, most useful of all for hoeing between rows; use as shown, or exchange sides for late work; for 12 inch rows and upwards, use one cultivator tooth or more, between the hoes.

The Extension Piece, is used for hoeing both sides of the row at one passage, while plants are small.

The Leaf Lifter, is invaluable for cultivation, making it quite easy to work the garden, without additional labor, when otherwise it would be impossible to cultivate the crop at all.

Rakes. We can supply with this machine three rakes, one each with three, five and seven teeth; valuable for fining and leveling the surface and for early cultivation. Price with these rakes, \$11.50



IN THE FAMILY GARDEN

No. 25 PLANET JR. COMBINED HILL AND DRILL SEEDER AND DOUBLE WHEEL HOE, CULTIVATOR AND PLOW. PRICE, \$13.50.

11½ inch Wheels. Holds 2½ quarts. Weight Packed, 59 lbs.

It combines in a most practical way the PLANET JR. No. 4 Drill and No. 12 Double Wheel Hoe.

W. G. CULP, Mansfield, Ohio, writes May 3d, 1902: "I like your No. 4 Combined Drill so much that I would not take twice what it cost."

R. B. HOOTON, Mexico, Mo., writes January 15th, 1902: "I am a market gardener and use your tools exclusively. I have a Planet Jr. Horse Hoe, 12-tooth Harrow, a Drill and two Double Wheel Hoes; the best tools I ever saw."

PLANET JR. FARM AND GARDEN TOOLS



IN A HOLLAND GARDEN

THIS new combined machine is intended for gardeners who have a large enough acreage in crops, for a Double Wheel Hoe to be used to good advantage, and yet prefer not to buy a Seeder and Wheel Hoe separate. The Seeder is large enough for field use, for it holds $2\frac{1}{2}$ quarts, or about 5 lbs. of onion seed.

As a Seeder it is identical with the PLANET JR. No. 4; will sow in drills, or hills, 4, 6, 8, 12 or 24 inches apart and has the same feed, hill dropping mechanism and automatic device for

stopping the feed, and has also the new seed index. It is thoroughly substantial and is accurate in sowing all kinds of garden seeds in either hills or drills.

As a Wheel Hoe it is identical with the admirable PLANET JR. No. 12 Double Wheel Hoe, shown and described on page 14. It has $11\frac{1}{4}$ inch wheels—which are just the right size. See "About Wheels," page 12. The change from Drill to Wheel Hoe and back again is quickly made and the entire combination is one we can heartily recommend and guarantee satisfactory.

The simplicity and perfect working of this tool, both as a seeder and as a wheel hoe, make the combination thoroughly practical. No worrying chains and top lofty weak wire wheels deceive the unwary here. See "About Wheels," page 12.

The accuracy of the seeder in sowing all varieties of garden seeds, whether in hills or drills, and the adaptability of the wheel hoe to various kinds of garden and field work, make a most valuable and perfect combination.



COLD FRAME SALAD



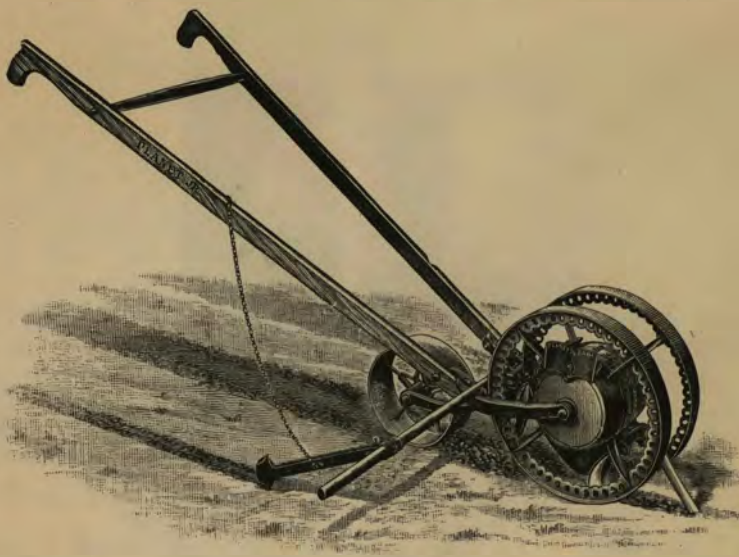
PRACTICAL WORK AT A GIRLS AGRICULTURAL SCHOOL, BELGIUM

PETER J. WALLRAFF, Plymouth, Ia., writes July 14th, 1902: "Regarding No. 25 Drill, it is the finest I have ever used, and would not part with it for \$25.00 if I could not get another."

M. R. DRURY, Rye, N. Y., writes June 9th, 1902: "Regarding No. 25 Drill, I have used the machine and find it will do all that you say it will, in fact I am more than pleased with it."



PLANET JR. FARM AND GARDEN TOOLS



No. 2 PLANET JR. DRILL SEEDER. PRICE, \$7.50
Holds three quarts. Weight packed 38 lbs.

DRILL SEEDERS

THESE older PLANETS are used the world over and except our later pattern hill and drill seeders, are the *most perfect known*; they won the highest and only award at the Chicago Exposition in 1893, for hand seeders.

The Sowing Cylinder is a drum of spring brass, set between the driving wheels, with a sliding brass band, drawn tight around the drum by a cam which joins the ends. In drum and band are corresponding diamond-shaped discharge openings, quickly adjusted to any kind of seed or thickness of sowing. Inside the drum, shields cover the openings, and secure regular sowing whether there is much or little seed in the hopper.

The Index contains the names of the principal seeds, and when the name wanted appears through the index slot, the drill is set right for that seed.

The Change is made by simply opening a cam, sliding the band to the required place, then closing it.

The Opening Plow, being directly between the wheels, follows all irregularities of the ground, can be set to run deep or shallow, and opens the furrows at a uniform depth.

The Covering is done "like a charm" by the carrying wheels, the plow throwing the earth on the rims, which return it exactly on top of the seed.

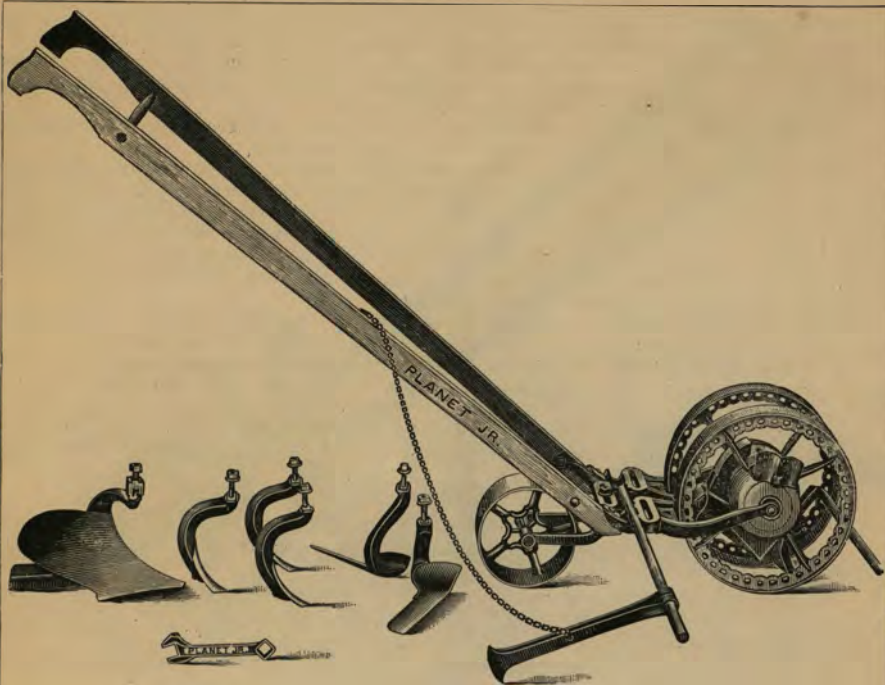
The machine is extremely simple; having no agitators, belts or gearing, the seed cannot be injured, even if sprouted. It is perfectly adjustable, will sow at any depth, in any quantity, will roll light or heavy, and in every respect works to perfection.

S. H. HARRISON, Hutchinson, Kans., writes January 6th, 1902: "I have a Planet Jr. Combined Drill and Wheel Hoe. It has been in use 12 or 14 years, and is as good to-day as ever."

WM. L. FREY, Greenville, Miss., writes January 18th, 1902: "I have been using one of your Fire Fly Plows and No. 2 Drill Seeders for a good many years; they are the finest tools anybody wants."

C. H. CLARK, Sterling, Mass., writes May 3d, 1902: "I have a No. 2 Seed Drill which I would not sell at any price as long as I have a piece of ground a rod square."

PLANET JR. FARM AND GARDEN TOOLS



No. 1 PLANET JR. COMBINED DRILL SEEDER, WHEEL HOE, CULTIVATOR AND PLOW. PRICE, WITH TOOLS AS SHOWN, \$9.50.

Holds three pints. Weight, packed, 45 lbs.

THE No. 1 COMBINED DRILL

THIS favorite machine has been for many years "*the most popular combined garden tool known*," and its friends were gained by substantial merit. As a seed sower it is identical in construction with the No. 2 "Planet Jr." Drill except in size, and has all of its strength, durability, ease of operation and perfection of work.

When used as a Drill, the seed is sown with great regularity, and an opening plow, of special design, puts it in a very straight and narrow line, and at uniform depth, regulated at pleasure.

The Covering is described under No. 2.

The Hopper holds three pints.

The Door, when opened, forms a convenient spout for filling with seed.



AS A PLOW



HOEING BOTH SIDES OF THE ROW

JOSEPH MOREY, Clove Vafley, N. Y., writes February 17th, 1902: "Your goods are all right. I have been using No. 1 Combined Drill Seeder and Cultivator, all attachments, for the last ten years, also horse cultivator."

REV. JOHN H. DAVIES, Nelson, Pa., writes May 30th, 1902: The No. 1 Combined Drill Seeder is a wonder. I cannot imagine how I ever made a garden without it, and if I could not get another I would not sell mine for \$100.00."



PLANET JR. FARM AND GARDEN TOOLS

From a Drill, it is changed to its other uses by unscrewing two bolts and removing the plow, coverer and roller, when hoes, garden plow, etc., may be quickly attached.

The Adjustments, for sowing different seeds, for plowing or cultivating at different depths, for rolling heavier or lighter, for changing the width of rows, and for regulating the height of the handles, are all easily and quickly made.

The Shield Shape, and forward slanting cut of the six inch hoes, and their rounded shape at the bend, enable one to run them very close to the row.

The Hoes may also be changed from side to side, and the plants worked still closer and very delicately and shallow. *Work cannot be done better than this.* It captivates all who see it, and thousands of persons, especially those who work only a small vegetable garden, need a *combined* tool, one with which they can prepare the ground, sow the various seeds, cultivate the different plants half-a-dozen times in the season, at every stage of growth, and finally, perhaps, harvest the crops, all with the self-same outfit; all its operations are *rapid, easy, perfect and delightful.*

With a Single Tooth (usually the broad one) and marker, neat rows may be run out, six to twenty inches apart, suitable for onion sets, small plants, seeds, etc.

A Grand Remedy for Backache. Every purchaser of this machine will find it an excellent seed sower; a first-class double wheel hoe for use while plants are small; a first-class single wheel hoe; an excellent furrower; an admirable wheel cultivator; a rapid and efficient wheel garden plow; and that it is without an equal in variety of tools, easy adjustment, lightness, strength and beauty. It is a practical, everyday, time, labor and money saver.

With a pair of five tooth rakes added, \$10.00.

ABOUT WHEELS

It is a popular belief, in some sections, that wheel hoe wheels should be very large. This is a great mistake, and we have always avoided and intend to avoid the high, flimsy wire wheels, recommended by the misinformed.

At a recent fair we saw the latest absurdity, a hand cultivator with a 30 inch wheel!! As large as you ever see on a two-horse walking cultivator; nearly as large as you see on the best riding cultivators, that weigh 400 pounds and carry a man weighing 200 besides. If a 25 pound hand tool should have a 30 inch wheel, then the horse cultivator should have wheels 12 feet high!

But, ten chances to one, the very man who makes a high wheel hoe for the public, will push his own wheelbarrow around with a 200 pound load, on a 15 inch wheel!!!

A wheel hoe wheel in use hardly carries a weight of ten pounds. It is not for the purpose of carrying weight, but is purely and simply a depth regulator and should not be over ten or eleven inches high.

WHEEL HOES AND ATTACHMENTS

Wheel Hoes are companion implements to the seeder, indispensable to market gardeners, sugar beet growers, nurserymen, and all farmers who grow roots for stock or vegetables for market. By using good wheel hoes, instead of the ordinary hand-hoe, one can plant five times the acreage of small hoed crops, without fear of being caught in their cultivation.

It is a less common mistake now than twenty years ago, to imagine that these finely made tools are fit only for the playthings of fancy farmers, or for the gardens of the rich; or, that they are too handsome, as one person expressed it, for any place but the parlor. Nothing could be farther from the truth. The rich can get along without them, and the fancy farmer can pay for hand labor to take their place. The garden, the field, and the farm are their natural homes, and their utility is their beauty.

In a word, they are built expressly for the *all day work of an able-bodied man*; yet, they are also adapted to the strength of a boy or a woman.

Wheel Hoes should be used *at the speed of a moderate walk*, making a stroke at each step. Much closer work can be done in this way, and the guiding of the tool is far easier. For very delicate work, short strokes may be taken, three or four to a step. Any one can become skillful in a short time; the chief rule is to set the hoes right, and then watch the wheels only, keeping *them* at the proper distance from the row.

E. L. PRIRCE, Freetown, Mass., writes May 26th, 1902: "I have one of your Double Wheel Hoes; have used it several years, and have saved my garden with it when with the time I have, I never could have done it with a hand hoe alone."

J. M. MAIN & SONS, Shippensburg, Pa., write February 26th, 1902: "We have been using your Planet Jr. Double Wheel Hoe for several years, and would not be without one for several times its cost."

E. E. GAGNE, South Hadley, Mass., writes March 5th, 1902: "I use Planet Jr. tools exclusively in my market garden; have been using them for the last seven years, and all the Planet Jr. tools that I own have given me perfect satisfaction as to durability and excellent work."



No. 11 PLANET JR. DOUBLE WHEEL HOE.

PRICE WITH ATTACHMENTS AS IN CUT, \$9.00. Packed weight, 37 lbs.

One pair 6 in. Hoes; one pair 4 in. Hoes; two pairs Hollow Steel Cultivator Teeth; one pair Plows; two 3 Tooth Rakes; two 5 Tooth Rakes; and two Leaf Lifters.

DOUBLE WHEEL HOES NOS. 11, 12, 13

The "Planet Jr." double wheel hoes are the *greatest tools in the world for the onion grower*, and for every grower of crops from drilled seed. They do more work and do it better and easier than can possibly be done in any other way.



WITH RAKES

The Wheels are our patent Star design and can be set 9 or 11 in. apart for wide rows, 7 in. apart for narrow rows, or 4 in. for use as a single wheel hoe.

The Frame is malleable, a quick change pattern, by which change of teeth or position can be made in a few seconds, *without removing the nuts.*

The frame can be set at *three different heights.*

The Steel Arch is extra high, and will work crops until twenty inches or more.

The Handles, being attached to the arch, are not affected by changes in width of wheels or height of frame; and the frame is left entirely clear, so that the wrench can be used conveniently.



FIRST HOEING

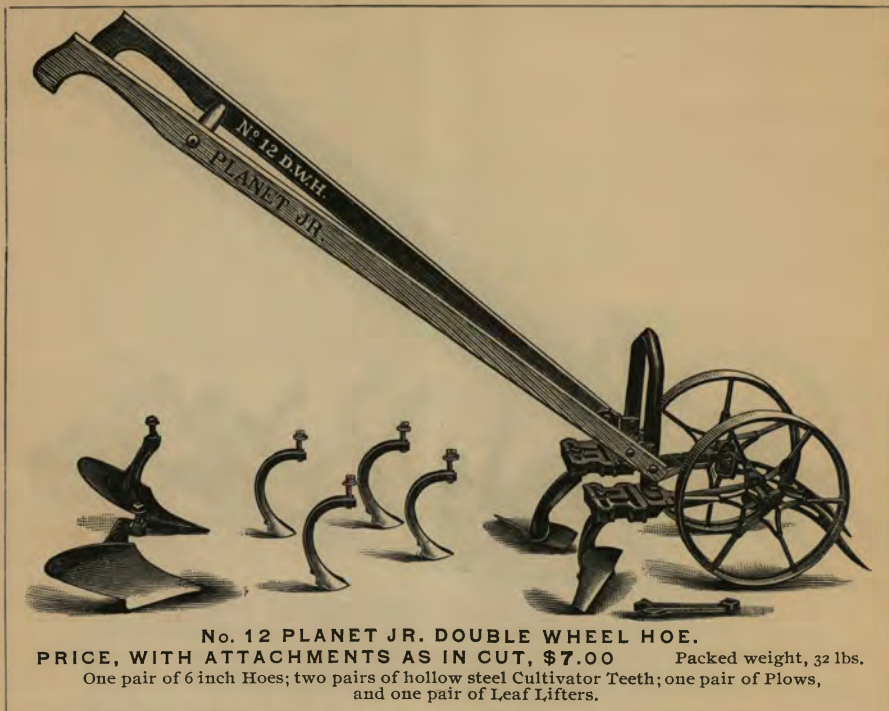


LATE HOEING

FRANK C. BRINKERHOFF, Springfield, Mass., writes May 22d, 1902: "Planet Jr. Wheel Hoe has been invaluable to me, the hoes, cultivators, rakes and plows, having enabled me with a minimum amount of labor to produce a garden which is simply unrivaled. The work that I have expended on this garden has been about one-tenth that my neighbors have used on theirs, using the old style hoe, etc."



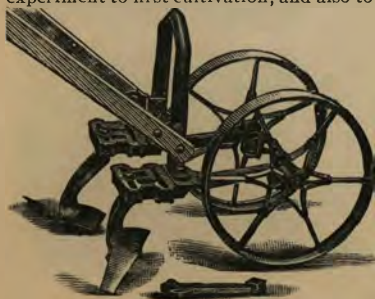
PLANET JR. FARM AND GARDEN TOOLS



No. 12 PLANET JR. DOUBLE WHEEL HOE.
PRICE, WITH ATTACHMENTS AS IN CUT, \$7.00 Packed weight, 32 lbs.
 One pair of 6 inch Hoes; two pairs of hollow steel Cultivator Teeth; one pair of Plows,
 and one pair of Leaf Lifters.

Nos. 11, 12 and 13 all have the same style frame wheels and handles. **The Hoes** are the most valuable of all the attachments. Use the 4 inch for rows up to 10 or 12 inches apart; or hoe two 6 inch rows at one passage; use the 6 inch hoes for rows from 12 inches up. One hoe is set ahead of the other to prevent trash from catching and tearing out the row. The curved shield like front ends protect both the tops and roots of young plants admirably. The hoes leave the ground almost level.

The Rakes are a new pattern, especially adapted by careful experiment to first cultivation, and also to the ordinary uses of a



NO. 13 DOUBLE WHEEL HOE
PRICE, WITH 6 INCH HOES ONLY,
AS IN CUT, \$4.75.

rake. Use the 4 inch to cultivate two rows at once, 6 ins. apart; the 7 inch for two rows 10 inches apart; and for wider rows, two rakes combined on each side to suit any width. For ordinary surface raking, use two or four rakes as needed.

The Plows are invaluable; use them with points together for opening furrows for manure, seeds, etc.; then exchange sides for covering; use them also for plowing away from or to the crops, both sides at once.

The Cultivating Teeth are fine, either for deep or shallow work, and also for marking out.

Leaf Lifters save time and enable fine work to be done close to the row without additional labor, when plants are larger or leaves are flat to the ground.

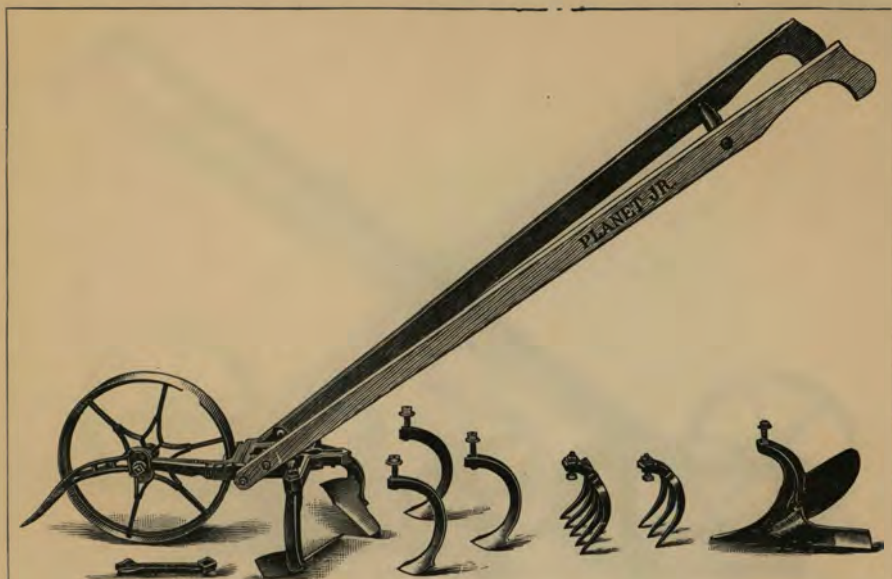
As a Whole, no wheel hoes have ever been made so complete in each detail, while combining such a variety of attachments adapted to so many kinds of work.



CULTIVATING SALAD

F. F. SCHUTTER, Pleasant Valley, Ia., writes February 18th, 1901, regarding our Double Wheel Hoes: "Have had three of these in constant use on a 20-acre onion field for the past seventeen years."

CARSON MARTIN, Brownsville, Ills., writes February 17th, 1902: "My brother has one of your Single Wheel Cultivators, Rakes and Plows No. 16 and he thinks it is worth as much as a horse in his truck patch."



**No. 16 PLANET JR. SINGLE WHEEL HOE, CULTIVATOR, RAKE AND PLOW
AS IN CUT, PRICE, \$5.85**

Two 6 inch Hoes, three Cultivator Teeth, one 7 inch and one 4 inch Rake
a large Garden Plow and Leaf Guard. Packed weight, 26 lbs.

SINGLE WHEEL HOES

SINGLE Wheel Hoes are lighter than the double, but do almost the same variety of work, though in a different way, being used mostly between the rows instead of straddling them. Yet by attaching the wheel to the other side of the arm, No. 16 can be used to hoe both sides of the row at once while the plants are small—the most important time.

For 1903 we offer our latest Single Wheel Hoes, as the highest type of their class, superior to any of the old styles. They have the greatest variety of tools we have ever offered. These adapt the implements to a greater variety of crops, and to work at many different distances apart; there is scarcely any garden culture of which they are not capable.

The Handles are *adjustable in height*. The frame is convenient and strong, with quick change device, which permits the tools to be changed without removing the nuts. This device is used on both our double and single wheel hoe frames. **The Wheel** can readily be changed in height and to the far side of the frame to hoe "both sides at once."



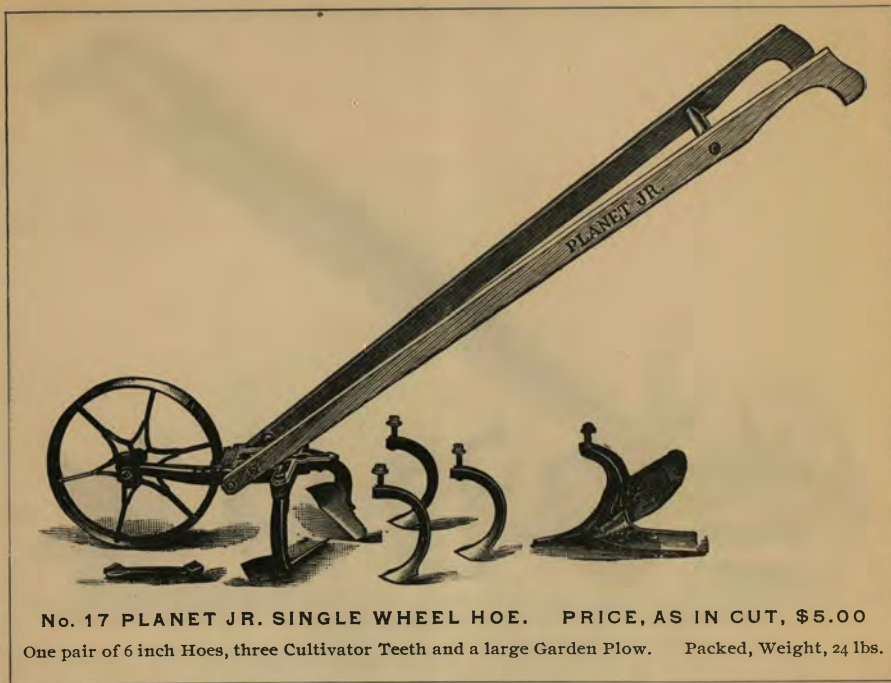
BOTH SIDES AT ONCE

T. S. MEMORY'S SON, Whiteville, N. C., writes May 6th, 1902: "I wrote you some days ago that I had tried the Cultivator teeth, the plow and rakes, but had not tried the hoes. Well, this morning I used them in my garden for half an hour or more, and I do think in that length of time I did as much work as a grown man would have done with an old time weeding hoe in possibly three hours or more. Of the attachments it is hard to determine which I like the better, the hoes or cultivator teeth. I find the whole thing even better than I had anticipated."

B. F. LUTTRELL, Belleville, Ala., writes January 14th, 1902: "Have sold Planet Jrs. for six years and believe there is nothing on the surface of the earth quite so good."



PLANET JR. FARM AND GARDEN TOOLS



No. 17 PLANET JR. SINGLE WHEEL HOE. PRICE, AS IN CUT, \$5.00

One pair of 6 inch Hoes, three Cultivator Teeth and a large Garden Plow. Packed, Weight, 24 lbs.

Nos. 16, 17, 17½ and 18 are all the same model ; the only difference is in the tools sold with each.

Rakes. The different sizes enable the operator to select the proper widths for varying work. They are just the thing for fining and leveling the ground preparatory to seed planting, etc.



6 INCH HOES ONLY, IN LARGE SALAD FIELD, ROWS 12 INCHES.

When the plants just begin to show through the ground, cultivate all six inch rows, with three tooth rake. This makes easy and thorough work. In the same rapid way use the five tooth rake, for 9 and 10 inch rows ; for still wider work use two rakes side by side or overlapping slightly. The work is fine, close and safe, *and very easy.*



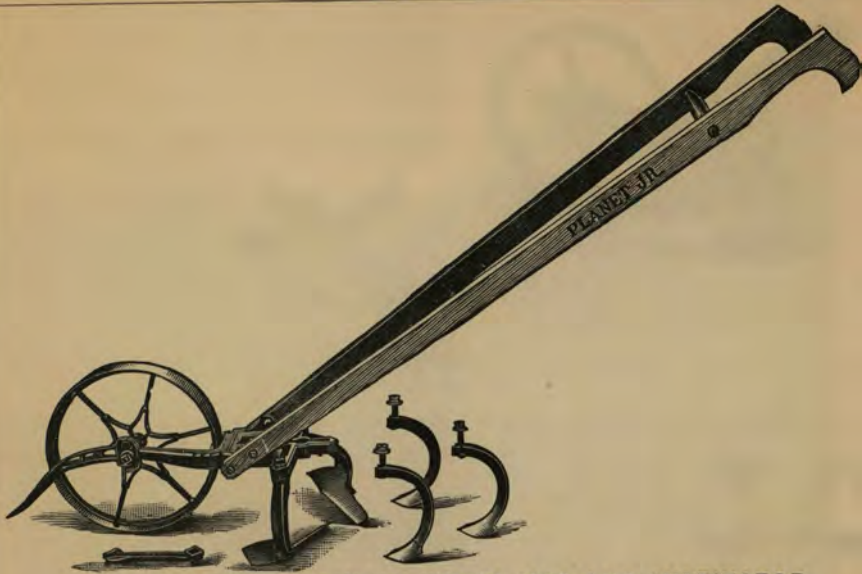
7 INCH CULTIVATING RAKE IN THREE ACRE FIELD OF SALAD 12 INCH ROWS

J. E. ORTH, Box 272, Seaton, Ill. : I have some of your garden tools. Have had them for ten to fifteen years. Your implements are the best that I ever used or saw.

CHAS. D. PRICE, Ruthven, Ia., writes Dec. 17th. 1901 : " Ten years ago I bought one of your Horse Hoes and a Wheel Hoe : both work well and give good satisfaction. During the tilling season these tools are in the field nearly all the time. I find that with a Wheel Hoe one can do more work than six will do with a common hand hoe "

PLANET JR. FARM AND GARDEN TOOLS

17



NO. 17 1/2 PLANET JR. SINGLE WHEEL HOE AND CULTIVATOR.
PRICE, \$4.50 Packed weight, 21 lbs.

All of our Wheel Hoe Tools are of the most approved pattern, carefully tested by practical men; and no others ever offered compare with them. All the steel parts are of special high carbon steel, finely formed, finished and polished, *and work to a charm.*

The Plow is complete with land-side, is large, and capable of heavy work; it is readily changed in depth, and the moldboard is of superior design. It is generally the first attachment to be used in the spring.

Hoes. Next are the shield hoes; the season through, *the most useful of all the tools.* They are a new shape; neat and narrow, and leave the ground level; are just right for nine inch rows, and up to twelve inch. The hoes are not set quite opposite to each other, and thus avoid gathering trash and tearing out the row. Fourteen and sixteen inch rows are hoed at one passage, with the small rake or a cultivator tooth between the hoes.



HOES AND ONE CULTIVATOR
TOOTH IN AN ACRE OF LEEKS,
16 INCH ROWS

Breaking the crust with the rakes is often admirable preliminary work for the hoes.

Cultivator Teeth. A set of three, a new and superior design, and adjustable for pitch, work easily and do invaluable service in deep culture. Use a single tooth for marking out rows.



DEEP CULTIVATION OF SALAD

Leaf Guard. This is capital in late work, *where plants have fallen* or been blown over, as peas, strawberries, potatoes, carrots, etc. It makes perfect work where otherwise impossible to work at all, and *with no increase of labor.*

ANDREW S. MUSSER, market grower, and onions especially, Aaronsburg, Pa., writes, April 4th, 1900: "I have no use for any make of garden drill or cultivator other than the Planet Jr."

CHARLES N. DUNN, Niantic, Conn., writes March 4th, 1902: "Three of your tools are in use on my place, viz.: No 8 Horse Hoe, Harrow and No. 16 Wheel Hoe, all perfect in their particular line."



PLANET JR. FARM AND GARDEN TOOLS



NO. 18 PLANET JR. SINGLE WHEEL HOE
PRICE, WITH 6 INCH HOES AS IN
CUT, \$3.50. Weight, packed, 20 lbs.

removed, when the body alone does excellent work. Price, \$1.25; with connecting bar, fitting all our Double Wheel Hoes, price, \$1.50.

This is the same style as our other single wheel hoes, and the plow, cultivator teeth or rakes, may any of them be added to the equipment, although it is best to select and secure what you need with the original purchase.

DOUBLE MOLDBOARD PLOW



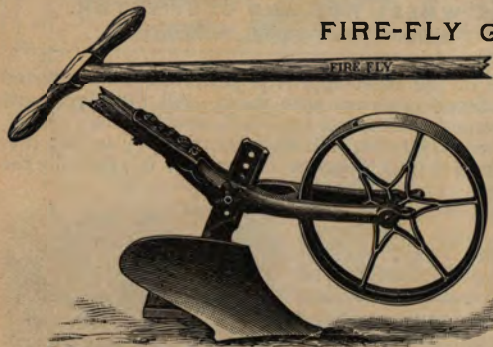
This fits our Single Wheel Hoes, and the Combined Drill. It can be set to make a furrow narrow or wide, or to hill much or little, at pleasure. Width at widest, 14 inches; narrowest 10 inches; or the wings may be entirely

PLANET JR. ONION HARVESTER AND PATH CLEANER



A useful attachment for our Combined Drills and *all* our Wheel Hoes. 8 inch size for onions and onion sets. It leaves the crop in the best condition for easy handling. It can also be used for deep level culture and for hoeing and with special profit for *cutting spinach*. Price, 75c. **As a Path Cleaner**, we furnish a 12 inch size, which does admirable work. Price, \$1.00.

FIRE-FLY GARDEN PLOW



PRICE, \$2.35. Packed weight, 13 lbs.

This Tool is Exceedingly Useful to owners of small gardens. **It will throw** a furrow four to six inches wide and one to three inches deep. Furrows for manure or seeds can be opened and covered. **In cultivating**, plow away, weed and plow back again. This tool will enable a busy man to do in his spare minutes nearly all the work of a family garden. **Chicken Raisers** find it of great advantage in *plowing up their scratching yards*.

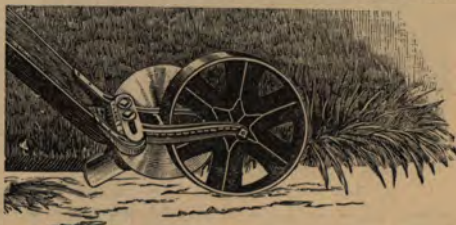
PLANET JR. GRASS EDGER

PRICE, \$6.00.

Packed, weight, 26 lbs.

Extreme Neatness is the great secret of attractiveness in grounds surrounding a house. The Grass Edger assists wonderfully in producing this effect. It will edge either straight or curved work, *paths, drives, open borders or flower beds*, at the speed of a *mile an hour*. It should be the constant companion of the lawn mower.

Strawberry Growers find the Grass Edger, with the hoe removed, a rapid and perfect tool for cutting off surplus runners.



JOHN BAKER, Hampshire, Ills., writes April 15th, 1902: "I am using your Horse Hoe and 12-tooth Cultivator, Grass Edger and Runner Cutter. I would not do without them."

CHR. LORANGE, Norway, Fla., writes April 22nd, 1902: "I have used a Planet Jr. machine ten years and there is simply no give out to it."



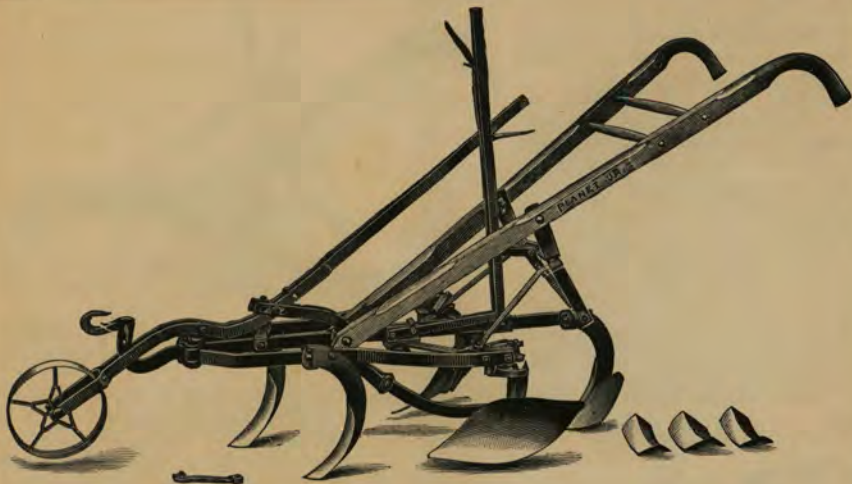
1. Planet Jr. Single Wheel Hoes in onions. Six acres a day. Thorough work.
2. Planet Jr. Double Wheel Hoes in onions from sets about ten inches apart. Rapid and thorough.



1. Fine cultivation among strawberries. Twelve Tooth Harrows, with Pulverizers.
2. The Planet Jr. Horse Hoe in potatoes in New Jersey.



ONE HORSE IMPLEMENTS



NO. 8 PLANET JR. HORSE HOE AND CULTIVATOR
PRICE, WITH ATTACHMENTS AS SHOWN IN CUT, \$8.50

Packed weight, 82 lbs.

IN the following pages practical men will easily detect the impress of the practical mind, in all the tools offered. They are the result of a thorough knowledge of both *farming and manufacturing*; and they have very naturally attracted the attention of careful farmers and gardeners throughout the world.

We were the first to offer the public an iron frame horse hoe, and we were also the first to make a horse hoe of sufficient real value to become a general favorite among practical cultivators. As every one knows who has watched such things, the "PLANET JR." has been the leading Horse Hoe of the world ever since.

Their merit has also been recognized by manufacturers who have made an avalanche of imitations, more or less inferior in design, workmanship and value, the low prices of which are a reliable indication of the real estimate placed on them by their makers and the public.

A. M. THOMPSON, Highpoint, Ala., writes May 19th, 1902: "I have one of your Planet Jr. Horse Hoes, and find that one man and a horse can do as much work with it as two men and two horses can the old way."

S. M. CATHCART, Rehoboth, Ala., writes January 10th, 1902: "You have the best single horse cultivator on earth."

A. E. ROSE, Cyclone, Pa., writes May 2nd, 1902: "Planet Jr. No. 8 Cultivators are the best on the market; I have used several different kinds and I find there is nothing will equal No. 8."



PLANET JR. FARM AND GARDEN TOOLS

DESCRIPTION

OUR Patent Frame is made of stiff steel, is extra long, and one or two inches *higher* than other makes, besides being our patent design, by means of which the standards are interchangeable.

Our Horse Hoe and cultivator frames can all be closed to 9 inches and opened to 25 inches.

The Patent Standards are of hollow steel, of the strongest pattern, mutually stiffening the frame and being stiffened by it. They are round in the throat, they *polish in use*, and the frame being extra high, they can scarcely be clogged. They have no equal.

The Cultivating Teeth are original with us, and though at first ridiculed by competitors, they are now the acknowledged standard, and are imitated by almost every manufacturer, so far as they can be without infringement. When buying repairs see that the trade mark "PLANET JR." is on the back of every tooth.

The Patent Hoes are also *reversible*, and are used either *point* foremost or *rounded edge* foremost. In the first position they work as plows, and may be changed from side to side;

in the latter, arranged as shown in Fig. 2, they are *invaluable for close hoeing*. Notice carefully when buying repairs, that they have "PLANET JR." stamped on the back.

The amount saved by these hoes is something remarkable. The slanting rounded edge may be run so close to the plants as almost to touch them, without danger to the roots, since the cut *rounds away from the row*. The rear shovel returns the earth to the row.

The Patent Side Standards take either cultivator teeth or hoes, and are securely *adjustable sidewise at any angle*.

The Wheel Lever is new in pattern, and carries our *patent Star Wheel*.

Patent Depth Regulator.—Perfect regulation of depth is obtained by a central depth regulator, worked *simultaneously with the wheel*, by the wheel lever. It is also separately adjustable by changing a bolt. With this arrangement *the tool runs more steadily*, and the depth can be gauged instantly and to a nicety, while in motion; the most marked improvement made in horse hoes for some time past.

J. R. WILBER, Vallonia Springs, N. Y., writes January 21st, 1902: "I have one of your Planet Jr. Horse Hoes No. 8, and would not change it for any other I ever saw."

F. H. TAYLOR, West Brattleboro, Vt., writes February 25th, 1902: "I am thoroughly acquainted with the Planet Jr. tools. I am especially pleased with the No. 8 Cultivator; I never saw anything that could do the work that that tool can do."

LLOYD HUTCHINGS, Dryden, N. Y., writes March 24th, 1902: "I have one of your one-horse cultivators which cannot be beat for any work in the corn or potato field."



FIG. 2. SET FOR HOEING



FIG. 3. FOR FURROWING



FIG. 4. AS A CULTIVATOR

The New Patent Expander.—This admirable device combines great *strength and stiffness with simplicity*. Malleable iron parts have been replaced almost entirely by steel, made close fitting and the handles are thoroughly braced. The play of the ordinary lever expanders is *completely remedied*.

The Patent Steel Lock Pin Hook always stands erect.

The Patent Handle Braces are of new design, and rigid, yet do not interfere with opening and closing, nor with the side adjustment of the handles.

The Patent Handle Adjustment is very complete; up or down for height, and a *very important side adjustment*, which can be altered in a few seconds. It holds the handles either exactly central, or to one side, as desired. Thus in covering corn, and making up rows



FIG. 5. THISTLE KILLER AND FOR LEVEL WORK

for plants, the operator need not walk on the finished work ; and in vineyards and among blackberries, raspberries, hops, corn, etc., he may work close without scratching his hands, or having the handles break down the crop.

Fig. 5 shows the "Planet Jr." Sweeps, most useful for surface weeding, thistle-killing and for surface work generally.

They are an extra ; for prices see page 33. Sizes run from 8 inches to 18 inches, and there are two styles, the regular shape and special flat ; the latter leaves the surface nearly level. Three 10 inch or two 10 inch and one 12 inch make a good combination for the Horse Hoe with two cultivator teeth in front.

The wheel and depth regulator promote their running steadily and at a regular depth.

PLANET JR. NINE TOOTH HORSE HOE

This Tool is made by attaching two extra side bars, to our No. 8 Horse Hoe, (each carrying two teeth and a depth regulator), and a middle bar extension and truss expander. The tool leaves *no open furrows next to the row*.

It is Thoroughly Braced. It cultivates nearly four feet in width and runs from one end of the field to the other without touching, doing perfect work.

For Orchards, vineyards, hop-yards and wide cultivation. Excellent for fall-plowed ground and for covering grain.

Complete attachment, fitting any of our horse hoes, Price, \$7.00.



NINE TOOTH HORSE HOE
PRICE, COMPLETE, AS IN CUT, \$15.00
Packed weight, 131 lbs.

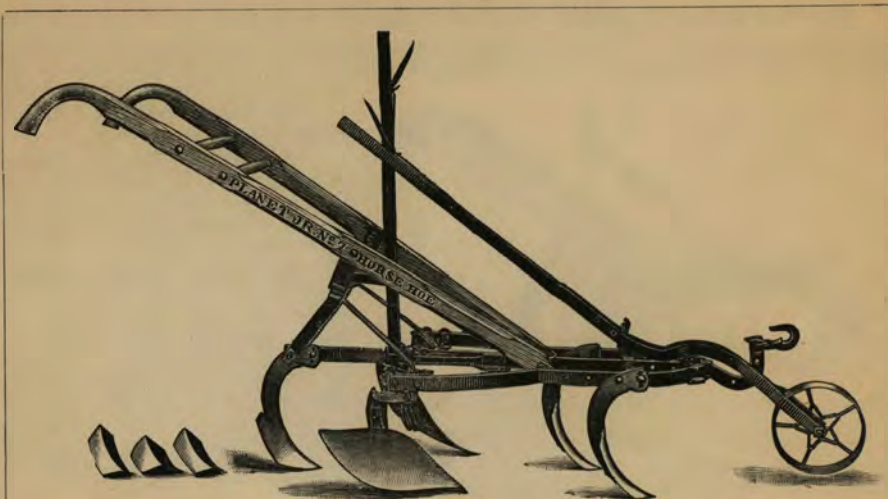
T. R. UNDERHILL, East Bethany, N. Y., writes March 19th, 1902 : "I have one of your Cultivators which I have used for ten years. I am much pleased with it ; can use it for more purposes than any Cultivator I know of."

C. D. WISNE, Hartford, Conn., writes March 13th, 1902 : "I have used your Cultivators and Horse Hoes, and would have no other on a farm of mine."

B. E. STANTON, Fairmount, N. D., writes February 20th, 1902 : "I have used your Horse Hoe Cultivator for 9 years, and there is no better."



PLANET JR. FARM AND GARDEN TOOLS



NO. 7 PLANET JR. HORSE HOE.

PRICE, WITH ATTACHMENTS AS IN CUT, \$8.00.

Packed weight, 77 lbs.

THE cut on page 21 shows the most common and useful of the various forms in which the combined Horse Hoe can be set up. Fig. 2 shows the side hoes reversed, with the rounded edge foremost, when the tool can be used in the most satisfactory manner for *hoeing* a crop closely, saving an immense amount of hand work. It is particularly useful to the market gardener and trucker, and to all who grow crops where hand work must be done. The hoes cut the surface and weeds away close to the row, yet do not endanger the roots of the crop, and the rear tooth *returns the earth to the row*.

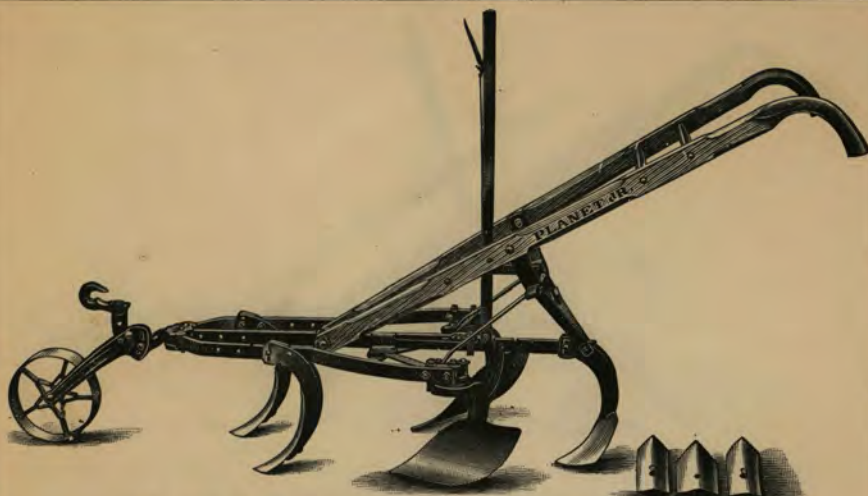
Fig. 3 shows the teeth as arranged for opening furrows for manure and for all kinds of large seeds; and in Fig. 4 the tool is shown as a plain cultivator.

In Fig. 5 we show the horse hoe with three rear standards fitted with sweeps. These are invaluable for shallow cultivation, and for thorough work among Canada thistles, or wherever thorough cultivation with complete weed destruction is needed. We make them of the following widths: 8 in., 10 in., 12 in., 15 in., and 18 in.; all fine models, which work perfectly on all our horse hoes and cultivators, and upon the Universal and Pivot-wheel machines. All advocates of shallow, level cultivation will find in these sweeps just what is needed.

The No. 7 Horse Hoe is the No. 8 without the depth regulator. It works the same as No. 8 in every way, except that it lacks the perfect steadiness and control of depth made possible by the depth regulator.

J. C. HICKS, Gorman, N. C., writes May 24th, 1902: "Regarding No. 8 Horse Hoe, I have learned by experience that the cheap cultivators sold in my town are not cheap in the end: you may run against a hitch and you have to stop and straighten a tooth or standard. I have my fill buying cheap plows, and hereafter I am going to buy the best. A farmer who goes twice to the row with a turn plow when once with a Cultivator is better, is a long way behind this day and time."

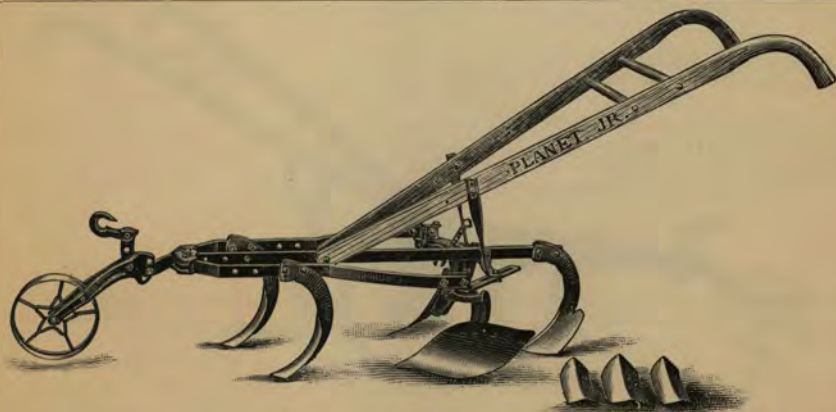
HORACE FENN, Plymouth, Conn., writes March 1st, 1902: "I must say that the cultivator of your make, No. 8 Horse Hoe, does fine work on our stony soil."



No. 9 PLANET JR. HORSE HOE. PRICE, \$7.40.
 WITHOUT WHEEL, \$6.65. Packed weight, 71 lbs.

This Admirable Tool is identical with the No. 7, except that it has a plain wheel instead of the lever wheel. It has the high frame, patented hollow steel standards, patent lever Star wheel, new lever expander, and new hollow steel wheel arms.

No. 5 Horse Hoe. This is similar to No. 9 in general construction but has an older style expanding device, and handle brace. Price, with wheel, \$6.50. Weight, 69 lbs.

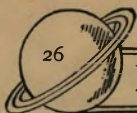


No. 4 PLANET JR. HORSE HOE. PRICE, \$6.35.
 WITHOUT WHEEL, \$5.60. Packed weight, 62 lbs.

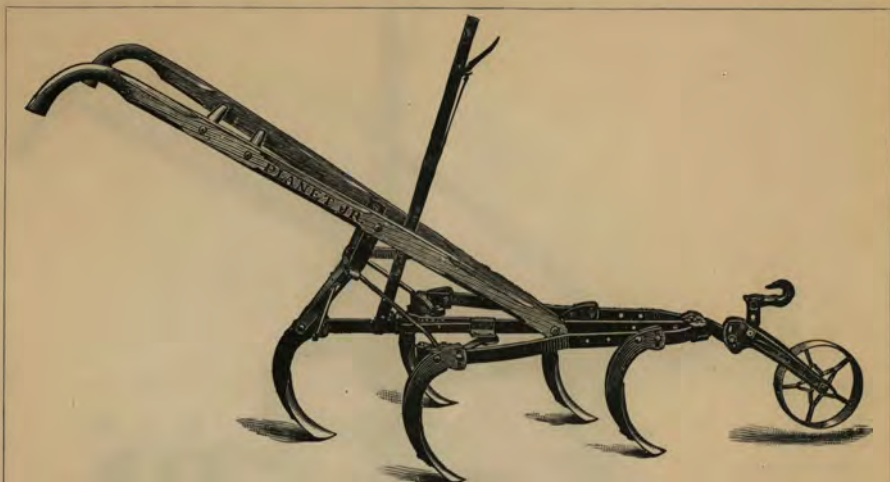
This Tool is low in price, strong and simple; it has the old favorite stirrup clamp and plain expanders, and our latest patent handle braces; firm, simple, strong, convenient.

W. T. BRITT, Orient, Ga., writes May 21st, 1902: "My customers say they would not take \$15 to \$20 for their No. 4 Horse Hoes if they could not get another. I have had 8 years' practical experience."

J. M. HAYMAN, Emmetsburg, Ia., writes March 7th, 1902: "I bought one of your Horse Hoes in 1882, and have used it constantly ever since. I would take no other, and always recommend it."

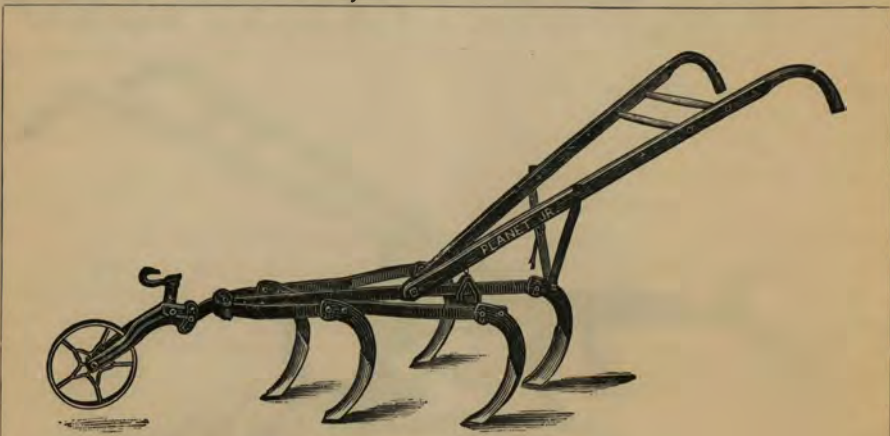


PLANET JR. FARM AND GARDEN TOOLS



No. 9 PLANET JR. PLAIN CULTIVATOR. PRICE, WITH WHEEL \$6.10
WITHOUT WHEEL, \$5.35. Packed weight, 65 lbs.

Our No. 9 Plain Cultivator is a light and very strong tool, having our improved patent hollow steel standards, our parallel and extra high steel frame, new patent lever expanders, handle braces and side adjustments for handles. It is used either with or without a wheel, the wheel being preferred in most sections. For very narrow rows, the outside teeth and standards may be removed from the frame.



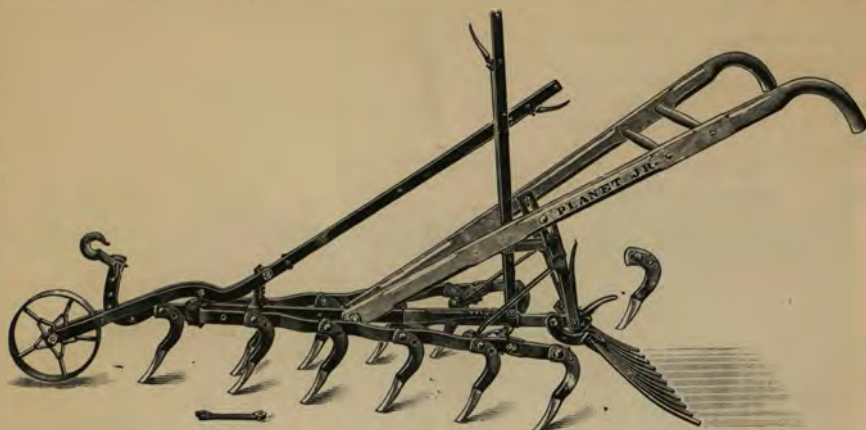
No. 4 PLANET JR. PLAIN CULTIVATOR. PRICE, WITH WHEEL \$5.00
WITHOUT WHEEL, \$4.25. Packed weight, 56 lbs.

The No. 4 Cultivator has our well-known stirrup clamp and it has hollow steel wheel arms and standards, a very strong, rigid tool.

P. V. RAMDELL, Greenville, N. H., writes March 31st, 1902: "I bought a Planet Jr. Horse Hoe and Cultivator more than two years ago and have used no other since; there is nothing so good."

C. N. HOWE, Grafton Center, N. H., writes February 1st, 1902: "Have a Planet Jr. Horse Hoe and Cultivator, and wouldn't be without it. It more than paid for itself the first year."

WM. SHATWELL, Union Grove, Ills., writes February 18th, 1902: "I bought my Planet Jr. Hoe 17 or 18 years ago, it has done lots of work, is a good tool yet, and in full use every Summer. I also bought your % Horse Hoe, and it has been in use not only by myself, but all my neighbors."



PLANET JR. TWELVE TOOTH HARROW, CULTIVATOR AND PULVERIZER

PRICE, PLAIN, \$5.80; WITH WHEEL, \$6.90; COMPLETE, \$8.50.

Packed weight, 74 lbs.

This Tool has rapidly grown in favor among strawberry growers, market gardeners, truckers and farmers. This is because the twelve chisel-shape teeth do such thorough work yet without throwing earth on small plants, and because the tool is so convenient, durable and strong. The combination of teeth and pulverizer leaves the ground in the finest condition. The pulverizer used with the lever wheel, also enables the operator to set the tool exactly to any depth desired, making delicate work not only possible, but very easy. It is invaluable in narrow rows and fine work in market gardens, and close work on the farm.

The great importance of fine, close work is more fully appreciated of recent years, and frequent cultivation of the surface with numerous fine teeth which do not hill the crops, is just what is wanted in many sections.

One trucker tells us he sets this tool to run shallow by means of the wheel and pulverizer, and then has one of his boys use it continually. He says it keeps down the young weeds while cultivating close up to the plants without danger to them, and the surface stirring of this character is so satisfactory that he intends to use the twelve-tooth harrow a great deal more in the future.

DESCRIPTION

This Tool is now made with our improved handle braces, which so stiffen the frame and handles as to make it seem twice as strong as ever, while the handles not only change in height to suit everybody, but also *sidewise*. It is a great advantage to be able to move the handles to one side, when cultivating blackberries, raspberries, vines, hops, etc., saving the hands, the clothes and the crop. The expander is of the latest improved pattern the *same* as on No. 8 Horse Hoe: it works with ease, *yet holds the tool thoroughly rigid*.

The Strawberry Grower finds this tool invaluable, as it works so close and so thoroughly, deep or shallow as wanted, without throwing earth on the plants. He uses

H. A. CORNELL, Croton-On-Hudson, N. Y., writes May 10th, 1902: "Harrow from you received in good order and works like a charm."

H. O. MALLETT, Milo, Ills., writes May 27th, 1902, regarding 12-tooth Harrows: "I would not take four times what I gave for it if I could not get another."

A. F. LIGGETT, Decatur, Ohio, writes June 7th, 1902: "Regarding 12-tooth Harrow, its work is perfect. It affords me almost as much pleasure to work it as to eat when I am hungry."



PLANET JR. FARM AND GARDEN TOOLS

it to keep the ground loose and clean and to *work up and bed the runners*; the *round-throated teeth* lift and turn them aside without injury, and ready to root in the mellow soil.

Farmers and Gardeners use the harrow in deep or close cultivation, or when desiring to work the crop thoroughly, but without hilling.

Depth Regulation.—This is done in the most perfect manner *by the combination of the lever wheel and the pulverizer*, both of which are easily and quickly adjusted.

The Foot-Lever pulverizer is an admirable tool for preparing ground for the seed drill or for plant-setting.

The Hand-Levers regulate both width and depth instantly. The tool expands to thirty-two inches, and contracts to twelve.

STRAWBERRY RUNNER CUTTER

PRICE, \$1.75

This is a ten inch flat steel disc, mounted on an outrigger and attached to the twelve-tooth harrow. It has a castor action, is adjustable for depth and sidewise, and has an adjustable leaf guard, which lifts the leaves to avoid trimming them off, and weakening the plants. It is thoroughly approved by strawberry growers.

For 1903 we sell as an extra an eighteen inch Sweep, with special Standard which



is used in place of the pulverizer for leveling and weed cutting. It is adjustable in height. It throws a little earth each way, hilling up a trifle in rows from twenty-four to thirty inches apart, and it is sure destruction to all weeds in its path.

Price, complete with standard, \$1.25.



PLANET JR. TWELVE TOOTH HARROW WITH ORDINARY WHEEL.
PRICE, \$8.25 WITHOUT PULVERIZER, \$6.55

With the Ordinary Wheel the twelve-tooth Harrow gives excellent satisfaction and is somewhat lower in price.

The Wheel Arms are substantial, being made of steel.

The Handles have the same adjustment in height and sidewise.

JOHN R. RALL, Tivoli, N. Y., writes March 17th, 1902: "I have bought one of your 12-tooth Harrow and Cultivator with pulverizer and runner cutter, and find it works to perfection."

M. V. JEWELL, SR., Gaines, Mich., writes March 24th, 1902: "Your 12-tooth Cultivator with pulverizer beats them all. Have used one for two years in the garden, in the corn field and in the bean field, and I would say right here that I would not part with it for any money."

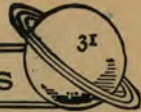


1. Four Four-Row Planet Jr. Beet Hoes in a large field of sugar beets of the Union Sugar Co., Bettaravia, California.
2. Planet Jr. Two-Row Beet Horse Hoe working closely two rows of apple seedlings at one passage in the J. A. Gage Nurseries, Beatrice, Nebraska.



1. Planet Jr. Universal Cultivator working thoroughly three rows of mangolds at once in Scotland.
2. Deep cultivation with No. 42 Universal on the Cudahy ranch near Los Angeles, Cala., in a five hundred acre English walnut grove.

PLANET JR. FARM AND GARDEN TOOLS



PLANET JR. DOUBLE CELERY HILLER. PRICE, \$14.00

Packed weight, 89 lbs.

Celery Hillers are now considered indispensable in celery growing. The leaf lifters are adjustable in height, and are especially valuable for first workings. With them some of our best and largest growers hill their celery **without any handling whatever**. We make both single and double hillers, both with lever expanders and leaf lifters. The double is fitted with lever wheel. The hilling blades are 43 inches long, adjustable in width or height as wanted; the double machine works all rows up to four feet apart. Before hilling, *the soil should be thoroughly loosened with a horse hoe.*



PLANET JR. SINGLE CELERY HILLER. PRICE, \$11.00

Packed weight, 70 lbs.

This runs lighter than the double, and throws rather higher; it works any width rows. Where market gardeners plant close, and first bleach every other row, it is "just the thing." It is also excellent help for burying the crop.

PLANET JR. WHITE POTATO DIGGER. PRICE, \$16.00

Packed weight, 122 lbs.

We have made these tools for a number of years, improving them as experience suggests, until they are recognized as indispensable. The white potato diggers we make with either single or double moldboard. Each does excellent work and with a few new shares will last a life-time. The single is preferred by many, because it may be used to dig every row consecutively; but where the potatoes are planted between rows of corn, strawberries or other crops, the double is preferred, as it leaves the following crops in much better condition.



PLANET JR. SWEET POTATO DIGGER. PRICE, \$18.00

Packed weight, 144 lbs.

This tool has been considered the standard for many years. It cuts the vines on both sides of the row at once, and digs and throws out the potatoes when planted in rows, with a steel-fingered moldboard, leaving the furrow on its edge and the hills on their sides on top of the furrow with the earth knocked off and in fine condition to gather; when grown in hills, the low moldboard, without fingers is used. Send for special circular.



WILLIAM G. ADDIS, Florence, Mass., writes: "Regarding Celery Hiller, I could not do without the machine as it has lightened my labor over two-thirds."

R. L. DALTON, Somerton, Pa., writes October 21st, 1901: "Your Potato Digger works first-class. I consider that I have saved the price of the Digger already."

TARBORO HARDWARE CO., Tarboro, N. C., writes October 21st, 1901, regarding the Sweet Potato Digger: "Our customer is delighted."

J. K. ROYER, Hartville, Ohio, writes: "I cut about three acres of celery this Fall, all handled with Planet Jr. implements, and realized \$1,075.00 net for same. We cannot get along here without Planet Jr. tools."



PLANET JR. FARM AND GARDEN TOOLS

REPAIRS



SPECIAL NOTICE—Our repair trade has become such an important item that we give below a fuller description than usual of our various shapes and styles of teeth. All our teeth are made of special high carbon, high grade steel, and are the very best design and finish and highly polished.

Imitations of our special steels are so numerous and inferior that we wish to guard against their being sold to the public as genuine "Planet Jr." goods. We therefore stamp our trade-mark "Planet Jr." on the back of the genuine. Ask for them and see that you get them, for *they are the best*.

Patent Cultivator Steels. The reversible eight inch pattern we make in five widths as shown in the cut. The 1½ and 1¾ inch are for extra deep work; 2½ inch is for general purpose work in heavy soil, and the 3 inch is for light soil. This size is more generally used than any other on one horse tools. The 4 inch is used for the rear tooth, to fill up against the row and avoid an open furrow there. For Two Horse Cultivators, 10 inch are generally used; the narrowest for deep work, the 2½ inch for general purposes, and the 3 and 4 inch for light lands. They are all our own special invention and design, and so popular that manufacturers of the whole world almost universally imitate them as nearly as they dare, though generally in a crude way. The Patent Bolt Sleeves prevent bolts from pulling through.

Patent Side Steels. 6 and 7 inch used as *plows* on the Horse Hoe, and by reversing, for *hoes*; see pages 21 and 22. Different from imitations, they have our patent plow points; are reversible for wear and for the two kinds of work of hilling and horse hoeing. Used with special clips, on the Two Horse Cultivators also. The patent plow points give increased penetration and wear.

Patent Shovel Steels. These are of exactly the right shape to use on the rear standards of the Horse Hoe, to fill up behind the side plows; 7 inch for the Horse Hoe, 8 inch for the Two Horse Cultivators. Used on the latter for *marking and furrowing*.

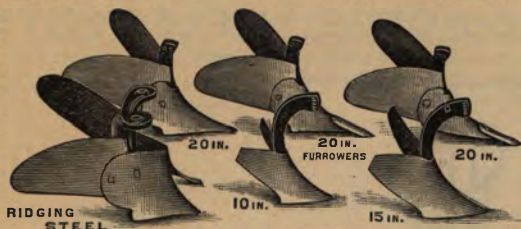
Patent Sweeps, 8, 10, 12, 15 and 18 inches wide. They fit all our Horse Hoes and Cultivators. These are great favorites in cotton fields and orange groves, and are extremely useful for exterminating quack grass and Canada thistles. Used in sets of three on the rear of the Horse Hoe, or a single sweep may be used on the middle standard. Two shapes: regular and special flat. The latter leave the ground nearly level. All sweeps work best on No. 8 Horse Hoe, as the depth regulator controls their depth and makes them run true.

Patent Hoes are more popular year by year. 6 and 10 inch for market garden and flat work generally. They cut clean, are sure death to weeds, and can be used on any of our Horse Hoes. They should be largely used on all our Horse Hoes for flat cultivation; they fit the side standards.

Patent Beet Steels. The hoes are admirably designed and do beautiful work. Two sizes: five and seven inches; they are so shaped as to act perfectly as *leaf guards* and also as *plant protecting shields*, and are eminently satisfactory to most critical and practical men. See also description under Beet Hoes, page 45. The *sweeps* are a special new style, just suited to sugar beet work. Three widths; 5 and 8 inch for shallow work and 3 inch for deep tillage. They shave close to the row at the surface of the ground, but round away from the roots underneath. The guards pick up the leaves instead of cutting or tearing them off.

J. HOLDREN & SONS, Mesa, Arizona, writes January 3rd, 1902: "We have used your Drills and Cultivators for nearly twenty years, and must say in justice to you we have never had cause to regret our acquaintance with the Planet Jr. farm and garden tools."

THE BOTTO FARM, Memphis, Tenn., writes April 14th, 1902: "We now have fourteen different kinds of Planet Jr. implements and they are all O. K."



Patent Furrowers and Ridgers. The former we make 10, 15 and 20 inches. The first two are in one piece and are designed on fine lines. The 20 inch has adjustable wings of admirable shape, which can be set to make narrow or wide furrows, and it also does grand work in hilling. The wings can be removed, when the body makes

a small, neat, double plow. The ridging steels are the same size and pattern as the 20 inch. We now make improved 20" furrowers with renewable points, capable also of being sharpened. We also make the bodies in two styles, for flat and for sharp bottomed furrows.



For Furrowing or Hilling. The cut shows the "Planet Jr." No. 8 Horse Hoe with 20 inch adjustable-wing furrower. This furrower goes on any of our horse hoes or cultivators, as do all of those mentioned above.

PLANET JR. HILLING ATTACHMENT



This Special Hilling attachment, which fits any of our "Planet Jr." Horse Hoes, is very effective. Sold either complete, as shown, or as an attachment to the regular "Planet Jr." Horse Hoe.

Price complete, \$8.50. Attachment alone, \$3.50.



Side Hoes and Roller. The cut shows the use of the side hoes as coverers, with the roller for covering corn, potatoes, etc. Corn, especially, comes up better. It also makes a fine ridge for the drill or wheel hoe, or for plant setting. The handles can be set to one side, so as not to walk straddle of the work.

The "Planet Jr." Pulverizer fits Horse Hoes and Cultivators, and is especially useful where the surface is wanted fine and level. It is adjusted by foot lever, and the width may be lessened by removing the outer teeth. 25 inches wide. We can furnish a similar attachment for our Twelve-Tooth Harrow.



PRICES OF EXTRAS

1 1/4 x 8 inch Steels . .	\$ 08
1 3/4 x 8 " " " " " "	09
2 1/4 x 8 " " " " " "	10
3 x 8 " " " " " "	11
4 x 8 " " " " " "	12
1 1/4 x 10 " " " " " "	12
1 3/4 x 10 " " " " " "	13
2 1/4 x 10 " " " " " "	15
3 x 10 " " " " " "	17
4 x 10 " " " " " "	20
6 inch Side Steels, each	50
7 " " " " " "	60

7 inch Shovel Steel . .	\$ 25
8 " " " " " "	30
Bolts	01 1/2
8 inch Sweep and Bolt	30
10 " " " " " "	35
12 " " " " " "	40
15 " " " " " "	45
18 " " " " " "	55
6 " Hoe and Bolt .	40
10 " " " " " "	50
Beet Hoes, each . . .	40
3 inch Beet Sweeps . .	20

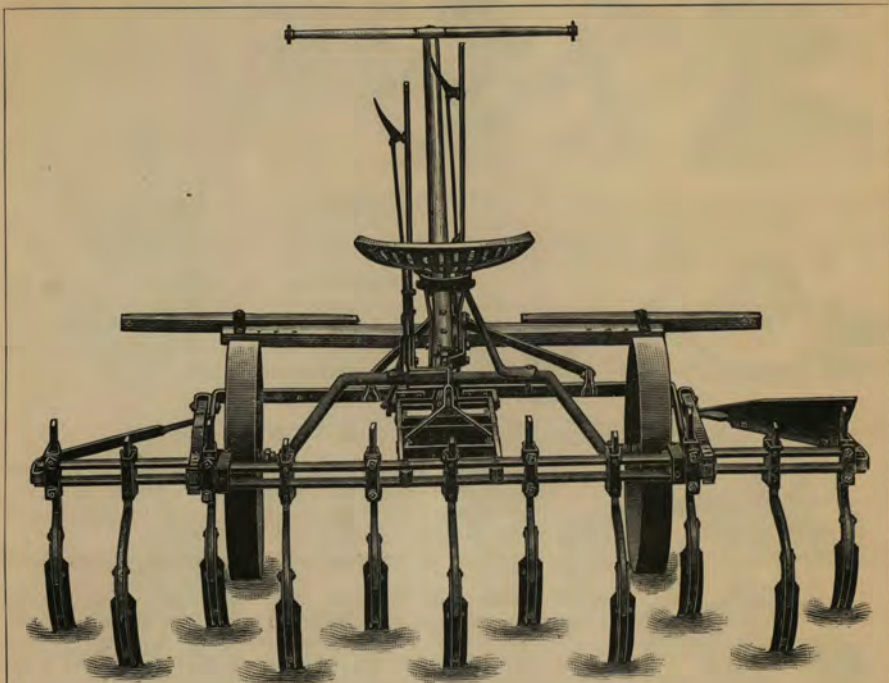
5 inch Beet Sweeps, Steel . .	\$ 25
8 " " " " " "	30
10 " Furrower	75
15 " " " " " "	1 10
20 " " " " " "	1 75
20 " " " " " " with wings	2 00
20 " " " " " " with renewable point	2 00
Ridging Steels, each	1 10
Roller	1 75
Reversed Rake	80
Pulverizer	2 00
Pulverizer for Harrow, special	1 75

C. H. SCHULTZ, New Buffalo, Mich., writes February 4th, 1902: "Have used 'Planet Jrs.' since early in the 80's and the machines have never failed me."

CHARLES DAY, Lakeville, Conn., writes March 3rd, 1902: "Your Horse Hoe with teeth and sweeps from 1 1/4 to 12 inches always does the work if used as it should be. Have used the No. 2 Seeder for years and later your hill and drill seeder, and they are all perfectly satisfactory. I like a catalogue every year to see what you bring out new, and when I find anything I want, I get it if I have enough money left after my wife has bought her Spring bonnet."



PLANET JR. TWO-HORSE IMPLEMENTS



No. 41 PLANET JR. ORCHARD AND UNIVERSAL CULTIVATOR.
PRICE, WITH EXTENSIONS, \$44.00. WITHOUT EXTENSIONS, \$34.00 Packed weight, 450 lbs.

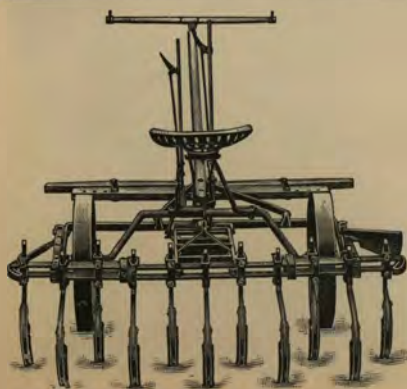


FIG. 2

THIS is a new Orchard and Universal Cultivator, with patents pending, built to combine strength, lightness, adjustability and efficiency to the fullest extent in one tool, representing in itself all the advantages of our earlier patterns, with important improvements added.

Wheels. The steel wheels are low, entirely within the frame, and therefore do not catch and injure low limbs, etc. They do not change in width.

The Tongue is Steel, with either steel or wood evener and singletrees.

The Frame is high carbon steel, compact in form, well braced, heavy and strong.

Without the extensions, it cuts four feet in width, having seven stiff steel standards, carrying $2\frac{1}{4}$ " x 10" teeth.

With the extensions, it cuts six feet six inches, carrying eleven teeth. The frame can be changed quickly to cut any width from six and a half down to four feet.

MR. E. S. CHATTOCK, Solihull, writes January 4th, 1902: I have much pleasure in stating that the 'Universal Cultivator' which I had from you about three years ago, has given me complete satisfaction. Two horses can work it easily in spite of the width of ground it covers, and the tines are set at the right angle for leaving squitch, etc., on the surface of the ground. I find on my light land that it answers well for working stubbles before ploughing, and taking it all round consider it a most useful tool. It has required nothing in the way of repairs since I have had it, *excepting, of course, fresh points.*"

The **Teeth** can be changed to $1\frac{3}{4}$ " or $1\frac{1}{4}$ ", if desired, and set close together, see Fig. 2; or sweeps can be substituted, Fig. 3. Furrowers, plows, hoes and irrigating teeth, etc., fit and work perfectly.

The **Tree and Fruit Shield**, is arranged on the right to be used next the tree row and avoids injury to either trees or fruit.

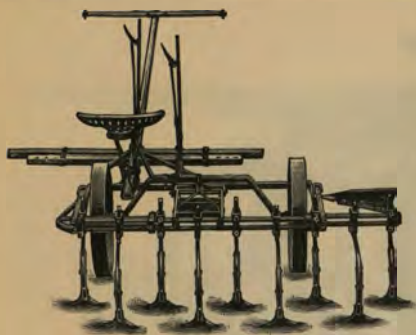


FIG. 3

tension expanded and supplied with shield and the left extension closed, Fig. 5, the tool is arranged for orange and orchard cultivation. The low wheel and the outlying teeth with fruit shield, pass under the low tree limbs, while the horses and driver are outside at the left. This arrangement necessarily creates side draft, but the weight of the tongue and driver causes the left side of the tool to sink deepest, and by a judicious arrangement of the teeth, shallow next the trees and deeper on the outside, the side pressure is relieved. By expanding the left extension and using those teeth it is still more relieved and if the work is then too heavy for a pair of horses, the three center teeth may be removed and the space left unworked can be finished afterwards, with the tool arranged the same; but the horses central.



FIG. 5

The **Extension Standards and Clamps** are very strong, the former of stiff steel, $1\frac{1}{2}$ " x $\frac{5}{8}$ ". The standards are adjustable up and down and sidewise.

The **Hollow Steel Standards** below have two bolt holes near the lower end, to let down the teeth when worn; also two for pitch.

The **Tongue** is hinged to assist in adjusting depth of the teeth and to level them. It also lifts the tool bar higher for transportation.

For **three horses** the tongue and seat are moved over fifteen inches to the left side and the triple eveners (price, \$2.50) is attached to the center of the tool. The driver sits so as to see between the two left hand horses: there is *no side draft*. See Fig. 4.

Side Hitch for two horses. With tongue and driver fifteen inches to the left and with right ex-

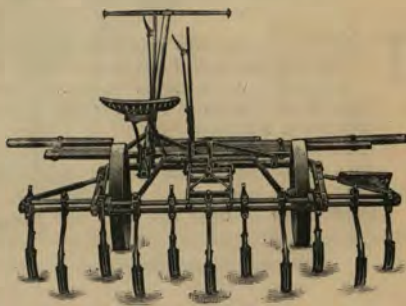


FIG. 4

Four Bolts only need be removed to change the tongue and seat to one side.

Sweeps, 6 inch, are shown in Fig. 3, excellent for level work and for dry countries.

This tool is adapted to a great variety of work, carrying almost any of our teeth, including furrowers, plows, hoes, etc., and the great feature of adjustment for width adapts it perfectly to all vineyards and hopyards, with rows planted from $5\frac{1}{2}$ to 8 feet apart.

It is admirable for orange culture and in cultivating two or three rows at once in row culture until plants are over eighteen inches high.

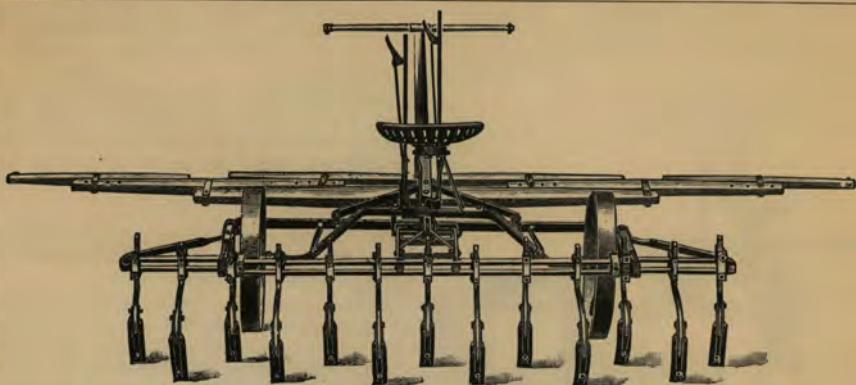
Irrigating Teeth. Set of three, \$3.00.

MR. EDMUND KEMP, The Cherry Trees Farm, Tardebigge, Bromsgrove, writes February 2, 1902: "The 'Universal Cultivator' I had from you, has given me every satisfaction. I have given it very hard usage in breaking up stubbles on strong land, and also in preparing land for sowing. I find it more useful than harrows, as it makes a good tilth, and two horses will work it on level ground. For breaking up stubbles I have worked four horses to it, with the same times in. We managed to break the single trees, but the 'Cultivator' itself is as good as when I had it from you, after two years' wear."

MR. W. WOOD, Shard End, Castle Bromwich, writes January 6th, 1902: "Re 'Universal Cultivator.'—The merits of this implement cannot be expressed on paper. It is a PERFECT IMPLEMENT both as regards draught and strength. I may say we have had no reason to plough the hardest of stubbles and clover roots since the 'Universal' has been here, and as a ridging machine it is *Excelsior*."



PLANET JR. FARM AND GARDEN TOOLS



No. 42 PLANET JR. ORCHARD AND UNIVERSAL CULTIVATOR

PRICE, WITH EXTENSIONS AND TWO HORSE HITCH, \$47.00. WITHOUT EXTENSIONS, \$37.00.
Packed weight, 480 lbs. Additional parts to make four horse hitch, \$5.00.

THIS is a heavy and powerful tool and works seven feet nine inches at one passage; the extension standards are made from high carbon steel. The tool is intended for extensive work and is under full control of the driver. It is a larger pattern of No. 41. **Has Steel Tongue**, but wooden eveners, etc. As above requires four to six horses. **Without Extensions**, as in Fig. 7, it cuts five feet three inches, and is intended for two horses. **Irrigating Teeth**, set of four \$4.00 extra.

To Cultivate Three Rows, from 28 to 36 inches apart, arrange as in Fig. 8. It works the crop safely until 20 inches high. The wheels change in width from 44 to 56 in.

Both No. 41 and No. 42, are adapted to almost universal work, carry all our furrowers, sweeps, plows, etc., etc. Furrows out all widths from 2 feet to 7½ feet.

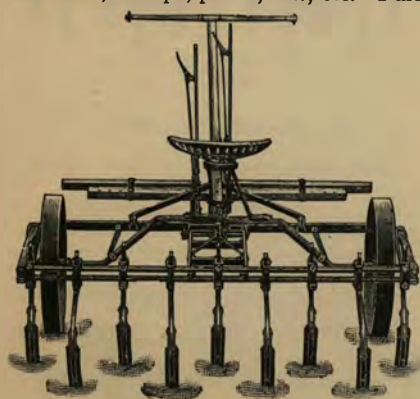


FIG. 7

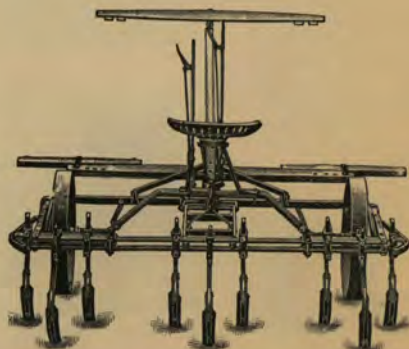
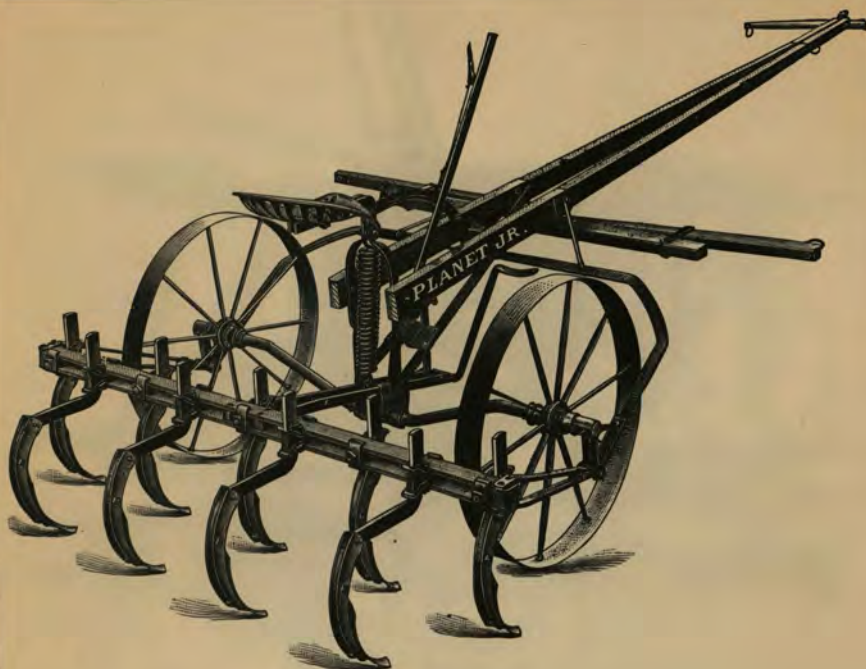


FIG. 8

MR. A. DAYS, Woodrow Farm, Crabb's Cross, Redditch, writes January 31st, 1902: "The 'Universal Cultivator' I bought from you gives every satisfaction. My men thought it would not be strong enough for the stiff land, but my waggoner, the first day of trying it, *scuffed seven acres straight out of the furrow with one pair of horses*, and made *capital work* of it. It has evidently come to stay."

J. A. BAXTER CO., Watsonville, Cal., write August 27th, 1902: "In our estimation there is no Orchard Cultivator on the market the equal of the Planet Jr. Universal. Although a cultivator of unusual lightness, making it very convenient to operate, we have frequently had orchardists report they have set the teeth way down for deep work and with four good horses have failed to strain or break the machine. This speaks for the quality of steel used in their manufacture. Planet Jr. goods are gaining in popularity every season in our locality and we consider them one of our most valued agencies."



**No. 1 PLANET JR. ORCHARD AND UNIVERSAL CULTIVATOR,
FURROWER AND COVERER.**

No. 1 (2 horse) cutting 5 feet 3 inches, weight 370 lbs.,	\$34.00
No. 4 (1 or 2 horse, with convertible tongue and shafts) cutting 4 feet, weight 330 lbs.	34.00
Extensions, extra, adding 15 inches, \$5.00	Furrowing shovels, set of three, 1.00
Set of nine 8 and 10 inch sweeps, 2.90	Turning plows, set of four, 3.00

This Tool is a great favorite and gives excellent satisfaction in a great variety of work, and merits well the title of **Universal**. Almost every shape of tooth we make fits it, so that it will perform an immense variety of work, at all seasons and in nearly all crops, until the plants are two feet high or more. Different widths of double and single-trees supplied to suit different work.

It Has 30-inch Wheels, broad-faced and set *within the frame*. They change from 42 to 48 inches.

The Standards are extra heavy and are made of especially stiff steel, are *adjustable up and down, sidewise, and also for pitch*.

The Single Lever and the spring tension combine to make the tool handle easily.

We Furnish Sweeps, 8 to 18 inch cut (see page 32), 8 inch front and 10 inch back, work best.

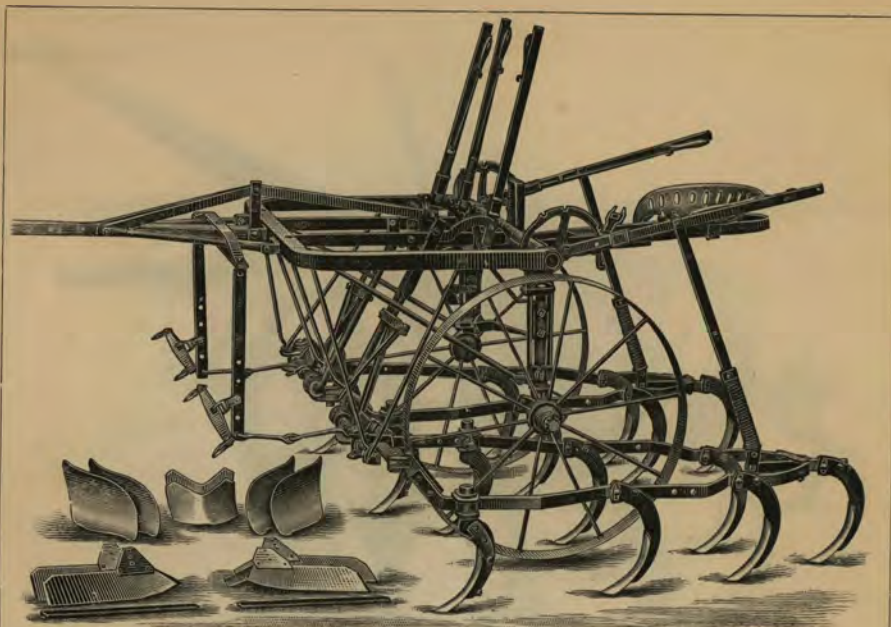


J. L. PINKERTON, Habberton, Ark., writes: "So long ago as 1886, I cultivated my orange grove in Florida with the Planet Jr. and it made me its incurable friend, and now that I have the prospect of fruit growing again, I look it up."

J. HARVEY WOLSIEFER, Egg Harbor City, N. J., writes March 3rd, 1902: "What I have of your goods can't be beaten; they are labor-saving machines."



PLANET JR. FARM AND GARDEN TOOLS



**No. 72 PLANET JR. TWO-ROW PIVOT WHEEL CULTIVATOR,
PLOW, FURROWER AND RIDGER**
WITH LEVER ADJUSTABLE GANGS, PRICE, \$50.00. Weight, packed 560 lbs.

WE have been making two-row cultivators for several seasons past and have found a great demand for a perfect tool of this class, which will do thorough work in rows of irregular width.

With the new No. 72 we complete the cultivation of two rows at one passage, at all widths from 28 to 44 in. inclusive and the implement is especially built to do this when the rows are at irregular distances apart. The changes necessary for rows of different widths are made in a few minutes. While the theory of working two rows at once, is simple enough if they are planted at perfectly equal distances apart, in practice we never find rows so planted; this tool, therefore is especially designed to make changes in width instantly while in motion, by means of a handy lever for each gang, so as to accommodate the machine perfectly to rows which vary greatly in width. The operation of these levers is instantaneous and easy and makes the working of two such rows an easy problem.

In listed corn, the hinged tongue and adjustable front teeth combine admirably, to make beautiful and thorough work.

In Checkrows, it surprises every one. Checkrowed crops are planted two rows at once, and therefore with this tool the gang working between the two rows need not be changed from one end of the row to the other, so that the driver has but one lever to handle. Then in going crosswise of the rows, he need not change either lever, because however crooked the rows may be, the hills are always the same distance apart and the pivot wheels enable the driver to steer around the crooks perfectly.

As shown in the cut, the tool has five levers, yet instead of complicating the tool or its working, it simplifies its management so that a mere boy can operate it with success.

The center lever operates the hinged tongue, regulating the depth of the front teeth to a nicety and levelling up the machine to suit all heights of neck-yoke. The outside levers regulate the depth of the teeth in the rear, while the intermediate levers are those used in changing the width of the gangs, while in motion, to suit irregular planting. These gangs change in width symmetrically; that is, the levers do not open and close the outside half of the gang only, but the whole frame equally exactly as a lever of a one-horse cultivator opens and closes its frame.

Think of the saving made in cultivating perfectly two rows of potatoes, beans or corn or any crop planted in rows not over 44 inches apart, at a single passage. This means double speed at single cost, and the arrangement of the fourteen teeth is such that all the ground is well tilled and **no open furrows** are left next to the crop.

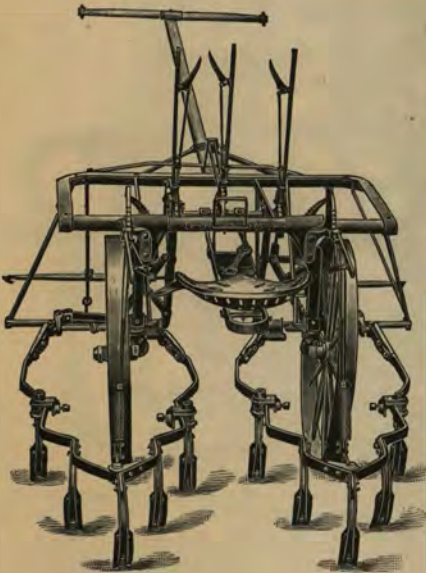
E. W. BRIGHAM, Brockport, N. Y., writes March 21st, 1902: "I am well pleased with your goods, especially your two-wheeled pivot cultivator. I have used Planet Jr. implements for many years and they are always durable and satisfactory."

THOMAS GREEN, Barry, Pa., writes March 31st, 1902: "The Two-row Pivot Wheel Cultivator, plow, furrower and ridger, which I bought last year worked splendid. I would not be without one for three times the cost."

DESCRIPTION.

The Equipment of this tool is a very liberal and practical one. Seven $2\frac{1}{4}$ inch reversible high carbon steel teeth of the best design and finish are carried by each frame, so that the work is most thorough, even at the greatest width of 44 inches. Four large plows take the place of the front cultivator teeth when wishing to plow or hill the crop, while two wide shovels are useful for marking out all rows from two to four feet in width.

The Standards are hollow steel, the five rear ones being attached directly to the frame because they do not need any adjustment, except what is provided for by the levers, but the front standards are all adjustable in height and sidewise, so as to throw to or from the row and at any depth desired. All have break pins.



When Plowing Away from corn or other crops two rows may be completed at once, and cultivated back again at the same passage, in the same way two rows may be hilled at once by the plows and finished beautifully by the cultivator teeth in the rear, at one passage.

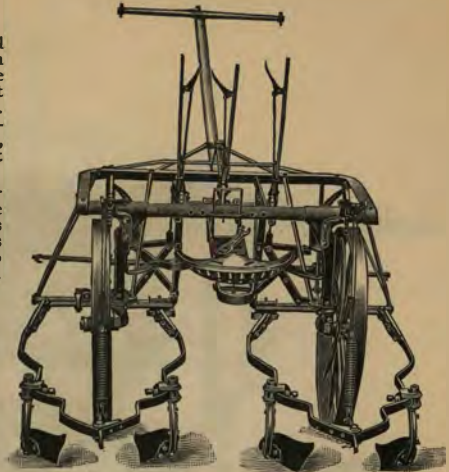
Plant Shields. Each tool is furnished with four plant shields, adjustable in height and made to swing so as to clear themselves of sods and other obstructions.

Bean Puller. For 1903 we offer an improved bean puller; it consists of a pair of adjustable spring tension vine clippers and a pair of adjustable knives with fingers which do the work to perfection. They take the place of the gangs, and then the tool seems like a special bean puller only. It fits either No. 72 or No. 71 machine. Price, complete, \$12.00

C. E. ALDRICH, Canandaigua, N. Y., writes March 3rd, 1902: "I have used the Planet Jr. Pivot Wheel Cultivator for five years. Think it a first-class machine. Last year I purchased one of your two-lever Horse Hoes, and that also has given great satisfaction. I have recommended your Pivot Wheel Two-horse Cultivator to several parties, two of whom bought them and like them very much."

T. D. BLY, Bernhards Bay, N. Y., writes March 25th, 1902: "I purchased one of your Two-horse Pivot Wheel Cultivators last year and it suits me well. It was just what I wanted."

L. L. THOMAS, Darien, Wis., writes July 25th, 1902: "I used one of your two row pivot wheel machines No. 72, and found it to be the very nicest and most complete machine I ever used."

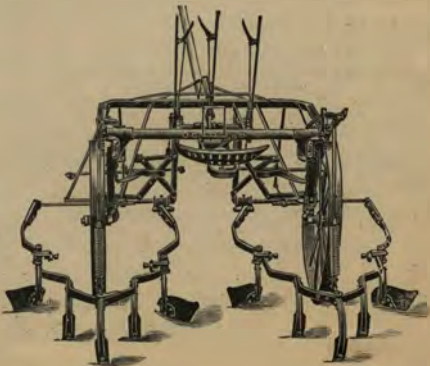


These adjustable Standards also take the very useful plows which also ridge and cover. For the latter purposes they are used as shown in the cut and enable the operator to cover two furrows of manure or potatoes, or corn, peas, beans, etc., that have been dropped in the furrow.

The Pivot Wheels work very quickly and make the cultivation of crooked rows easy. Wheels adjust for all width rows 28 to 44 inches inclusive. Four ft. rows may be worked *if very regular in width*

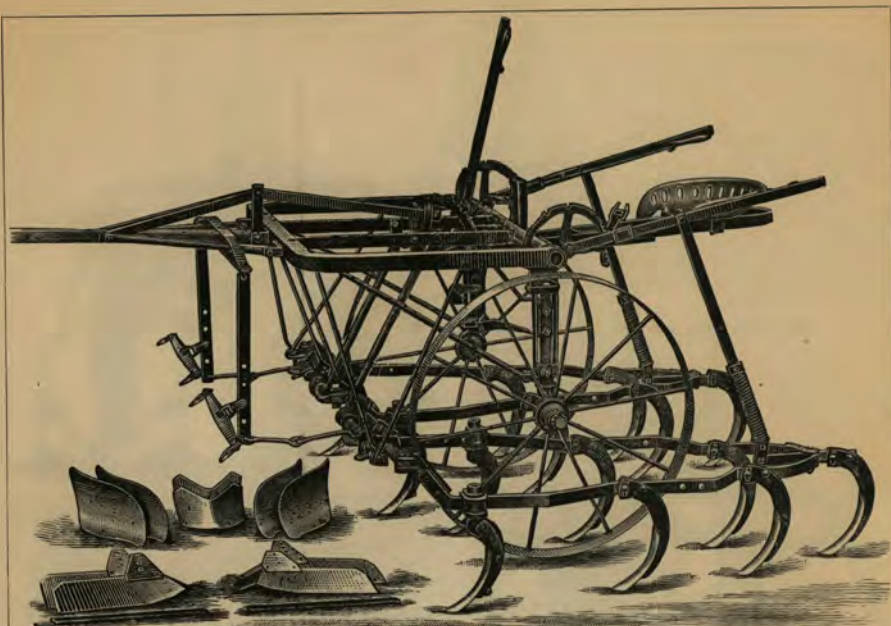
The Arch and Seat are unusually high, 33 inches in the clear; the seat is adjustable back and forth and in height, low enough when plants are small to reach them from the seat, or high enough to cultivate corn when five feet or more.

The Convenient Central Lever makes operation of the tongue and consequent regulation of depth very easy.





PLANET JR. FARM AND GARDEN TOOLS



**No. 71 PLANET JR.
IMPROVED TWO-ROW PIVOT WHEEL CULTIVATOR, PLOW,
FURROWER AND RIDGER.**

PRICE, \$45.00.

Packed weight, 530 lbs.

LAST year our regular No. 71 was the sensation of the season, one of the greatest labor saving tools of the period; but for 1903 we have improved the tool greatly, largely increasing its capacity for work, and at the same time improving its quality.

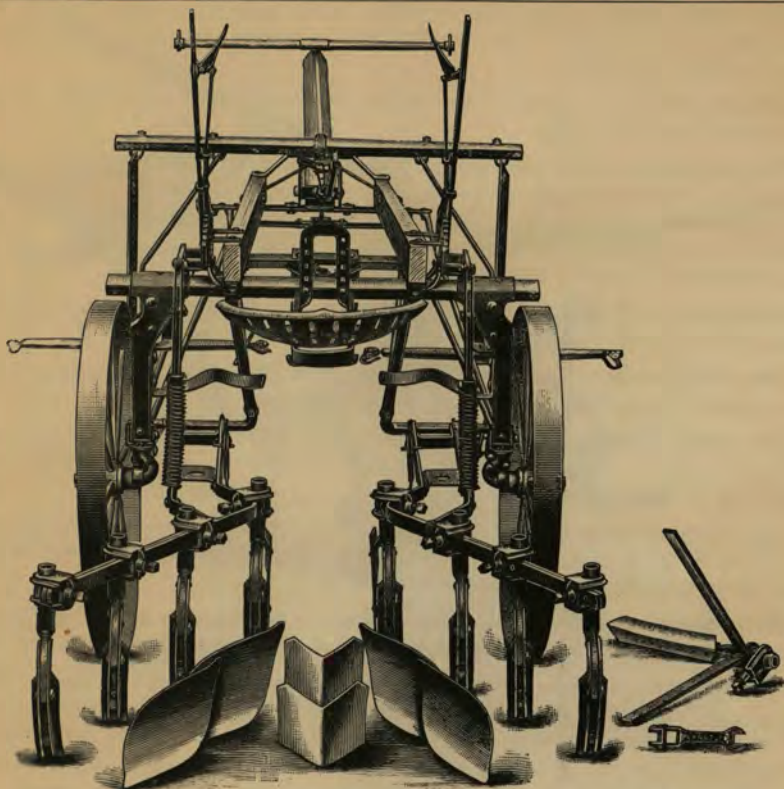
Like our No. 72 it has seven teeth on a side, and also four plows and two furrowing shovels, and the frames adjust for all rows from 28 to 48 inches. The wheels adjust from 28 to 42 inches; the wheels are also pivoted like No. 72 and steer the tool with the greatest ease.

It has adjustable seat, adjustable tongue and the front standards are adjustable, up, down and sidewise; it has adjustable plant guards and the depth of work is readily arranged by levers both front and back. The hitch is also adjustable; all like No. 72. In fact it is identical with No. 72, except that instead of the opening and closing of the frames by means of levers while in motion, it is done by loosening two bolts, setting the frame as wanted and then tightening up again. This way it will do just as perfect work as No. 72 when the rows are at exactly regular distances apart, but when the rows vary, as they almost always do, its work cannot be so close for the two outside rows. The center row is just as perfect as it is possible to have, and by making the alternate rows the center one in successive cultivations, the whole field is perfectly cared for; at work it requires less attention than No. 72, as the levers are absent; but on the other hand the operator cannot regulate the gangs to suit uneven rows instantly, as can be done with the levers of No. 72.

The tool however has a field of immense usefulness and is so far superior to the No. 71 we sold last year, that we no longer make that pattern. The chief points of advantage over the old No. 71 are the much greater adjustability of wheels; adjustable instead of rigid frames; seven teeth on a side instead of five; capacity increased from 40 inch rows to include all up to 48 inches; strong steel frame instead of wood; steel tongue and a number of minor improvements. We do not recommend it for the cultivation of four feet rows with a single team if the ground is exceedingly hard, or if it is necessary to work very deep, but with seven teeth on a side it will do thorough work moderately deep. Many of our very best corn growers now prefer shallow work with numerous teeth.

TRAUGOTT ZAPP, Bismarck, St. Francois Co., Mo., writes January 13th, 1902: "Please send me your new catalogue. I am very well pleased with the Two-horse Cultivator I bought of you three years ago. I think it is the best tool of its kind made."

R. B. CRISP, Victoria, Texas, writes January 25th, 1902: "Permit me to say that after fully testing your 2-horse Pivot Wheel Riding Cultivator, that I am more than pleased with it, I am perfectly delighted. It has many points of superiority over any and all other cultivators that I am acquainted with. While it is light of draught it is strongly and durably made, and adapted to a wide range of work, and then it is so easy to handle that it is a pleasure to work with it. I believe you have reached the acme of perfection in this tool."



NO. 70 PLANET JR. PIVOT WHEEL RIDING CULTIVATOR, PLOW, FURROWER AND RIDGER.

PRICE, \$37.50.

Weight, 462 lbs.

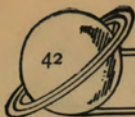
THIS new implement has made many friends during the six seasons it has been before the public, for it is truly the most useful tool of its kind known. It is built in the very best manner, of the best material for the purpose, and is unequalled in the variety and quality of the work it will perform.

As shown in the cut, the equipment consists of eight cultivator teeth, generally used four on a side, and an extra ninth tooth for fallow work; it also has four reversible plows, two medium and two large, and two eight inch furrowing shovels.

Patent Cultivator Teeth. These are made of special high carbon steel 10 x 2 ¼ inches of the very best pattern, reversible and with extension sleeve on the back.

Patent Plows are indispensable. These are six and seven inches high respectively. They are reversible, giving double wear, and for hilling and plowing and for making ridges for plant setting; and also for covering potatoes, peas, beans, etc.

F. E. GILLET, P. O. Box No. 59, Guatemala, Central America, writes February 15th, 1902: "I have five of your No. 70 Pivot Wheel Riding Cultivators which do splendid work."



PLANET JR. FARM AND GARDEN TOOLS

The Ninth Tooth is important for fallow work, and in the cultivation of wide planted crops, such as grapes, hops, blackberries, raspberries, etc. The tool is also an excellent orchard cultivator.

The Shovels are excellent for marking out two rows at once, any distance apart from twelve to forty-two inches.

The Standards which carry these teeth are malleable above and hollow steel pattern below; they are adjustable in height, distance apart and sidewise, and may be set to throw either to or from the row. These standards carry all the different width steels we make and also the sweeps and furrowers. The height of the arch is 33 inches, and the tool will cultivate corn until 5 feet high, both sides at one passage.

Adjustable in Width. The wheels close to 32 inches and open to 40, the tool cultivates all rows from 28 inches to four feet apart.

The Gang Frames. Are made of special stiff steel and are thoroughly braced, and are adjustable sidewise on the arch to and from the row.

The Pivot Wheels. Make steering easy; they act almost as quickly as thought; require scarcely any strength to use them and they enable the operator to follow uneven rows with the greatest ease possible.

The Tongue. Is hinged to the frame and is operated by a lever so as to regulate the depth of the gang in front perfectly while two other convenient levers govern the depth of the gang in the rear with the greatest nicety.

The Seat is adjustable backward and forward to suit man or boy and also in height; it can be dropped so low that the operator can uncover small plants from the seat.

Springs on the lever connecting pieces enable the driver to set the teeth any depth he may choose while still on the headland, instead of having to wait until part way up the row; and the spring tension allows the teeth to adjust themselves somewhat to uneven surfaces.

The Wheels have broad tires, renewable boxes, renewable pivots and dust caps, and are made of steel with welded spokes.

The half-tones are interesting, showing the work unusually well. One of the cultivators shown is owned by a large farmer and potato grower, who says when the cultivating season opens his man just "lives on the machine," as he keeps it running steadily during the whole season, and he cannot see that any change or improvement of the tool is needed.

Notwithstanding the variety of tools and adjustability of the implement it is simple, strong and easily understood, will not get out of order and does an immense quantity of work with the greatest perfection. Every part is made of the best material, in the best manner and is of the finest quality, design and finish. It is comfortable to ride upon, strong yet light in weight, thorough at work yet light in draught, at once simple, efficient and durable in every part.

We guarantee the tool exactly as represented and to give entire satisfaction.

CHARLES E. CONOVER, Wickatunk, N. J., writes June 21st, 1901: "Planet Jr. 1-row Pivot Wheel Cultivator works to my entire satisfaction; of five different cultivators which I have, I consider this by far the best."

JAMES FARQUHAR, No. 11 Leonard Street, New York, writes February 28th, 1902: "Have two of your machines at present, a Pivot Wheel and No. 8 Horse Hoe, and they are the best of their class."

PLANET JR. FARM AND GARDEN TOOLS



No. 53 PLANET JR.

PIVOT WHEEL TWO ROW SUGAR BEET HOE AND CULTIVATOR.

PRICE, \$25.00.

Packed weight, 230 lbs.

Specially for sugar beets and also for market garden crops, when planted in rows 16", 18" or 20" apart.

EQUIPMENT:—Two pairs of Planet Jr. patent beet hoes, three 5" sweeps and a set of seven 1¼" x 8" cultivator teeth with the necessary extra standards.

PRICE, WITHOUT CULTIVATOR TEETH AND EXTRA STANDARDS, \$22.50.

THIS new Two-row Beet Cultivator is thoroughly built and strong; it has channel-steel tool bars and is perfectly adjustable for depth and closeness of work.

The Depth of Work is regulated by adjusting the wheels, though slight variations may be made while in motion by a lever.

By Raising the Left Hand Lever the teeth are carried well up from the ground when moving from one field to another, or from row to row.

The Steering is done to perfection by means of the pivot wheels controlled by the right-hand lever which is of such a length as to give the operator a full view of his work, and to guide the machine with the greatest ease and accuracy. After a little practice it is quite practicable to run the tool with the hoes set as close as 3 inches, without endangering the plants.

The Patent Hoes and the sweeps are identical with those used so successfully for four years past on our Four-row Beet Hoes, and last year on our No. 52, always giving unqualified satisfaction. The hoes are of peculiar shape, specially adapted to the work. The hoe blade has a down cut next the row and is also formed into a protecting shield, as seen in the cuts, which prevents the earth from covering the smallest plants, while the curved shape answers the double purpose of allowing the closest hoeing at the surface, while rounding away from the roots below. The standard is also set over *away from the beet tops*, allowing their free passage without injury, and the front of the hoe

N. B. ATWOOD & Co., Caro, Mich., writes August 23rd, 1902: "The Planet Jr. Beet Cultivators sold by us this season have given the best of satisfaction. Every farmer who has one claims it to be far superior to any other made."

MR. H. C. JOEHNK, Agricultural Supt. of the Macomb Sugar Co., Mt. Clemens, Mich., writes Sept. 1, 1902: "We have in operation several of your two row cultivators in our beet fields and are pleased to say they are giving very satisfactory service. I consider this tool the best I have used for the purpose it is made for, and therefore I can heartily recommend it for cultivating a crop of sugar beets successfully."



PLANET JR. FARM AND GARDEN TOOLS

raises the leaves out of the way instead of cutting them off. The practical sugar beet grower will appreciate these special features.

The Set of Seven narrow cultivator teeth, as shown in the cut are intended for use when the ground becomes hard, for close cultivation without throwing much earth and for deep work late in the season.

The Wheels are Steel, 18 inches in diameter, strong and almost unbreakable.

Strong Shafts control the tool and are of important assistance in steering and in transportation.

Additional Attachments. In addition to the above equipment, we can furnish a set of seven $2\frac{1}{4}$ inch teeth and an adjustable leveling bar, shown in cut. Price, complete, \$3.00.

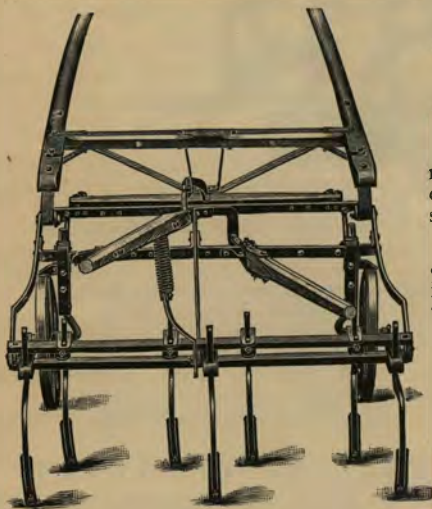


FIG. 3

at regular distances apart, with the leveling bar, makes thorough work and leaves the ground fine and level, a perfect preparation for the seed drill and admirable for work in orchards, vineyards, hop yards, blackberries, raspberries and many other crops.

We strongly recommend this tool and feel sure that beet growers and market gardeners will find it the most labor saving and money making implement they can buy.

We guarantee it in every respect as represented; it will give perfect satisfaction.

B. E. BROTHERTON, of the Sanilac Sugar Refining Co., Croswell, Mich., writes August 23rd, 1902: "I have used the Planet Jr. Two Row Beet Cultivator in different stages of growth, and with the different attachments belonging to it, alongside of beets cultivated by practically every cultivator I am familiar with, and find that the work done by yours is more satisfactory to me than that done by other cultivators."

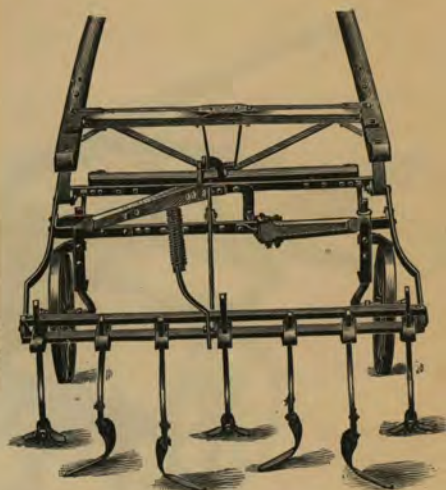


FIG. 2

Irrigation Steels. We can also furnish these where necessary, to use on the cultivator standards; set of three without standards, \$1.50.

The cultivator standards will take any of our 8 inch steels from $1\frac{1}{4}$ inch to 4 inches in width, or any of our sweeps from 8 inches to 18 inches wide.

Either set of cultivator teeth, arranged

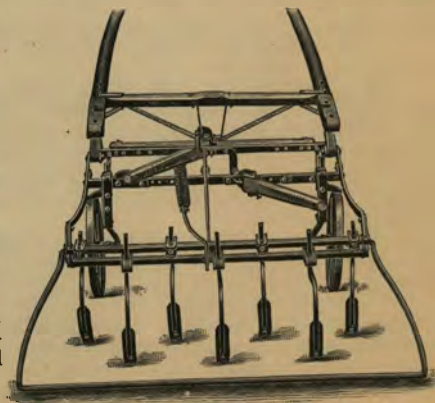
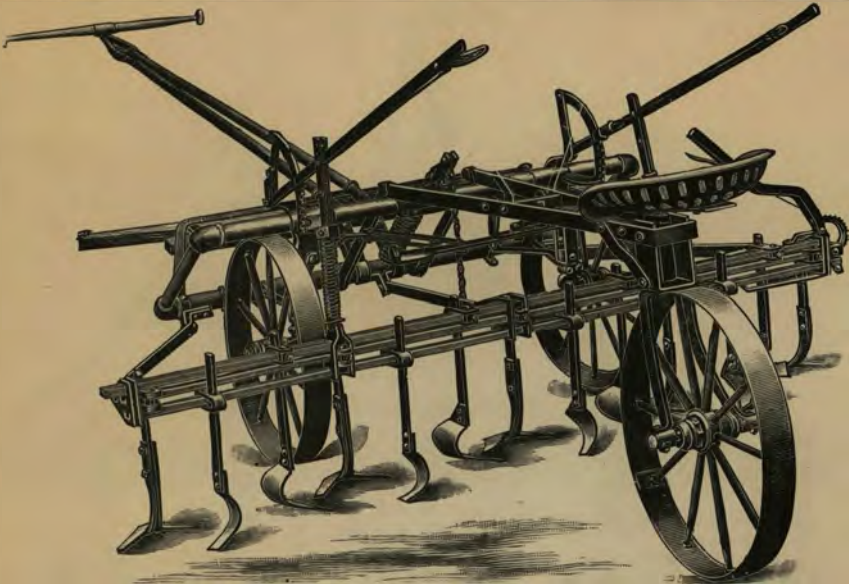


FIG. 4



No. 3 PLANET JR. FOUR-ROW SUGAR BEET HOE AND CULTIVATOR
PRICE, INCLUDING 13 CULTIVATOR TEETH AND STANDARDS AND 5 IRRIGATION SHOVELS, \$85.00.
Packed weight, 600 lbs.

Less cultivator teeth, \$78.00 Less cultivator teeth and irrigation shovels, \$75.00 Packed weight, 520 lbs.
For 18, 20 or 22 inch rows.

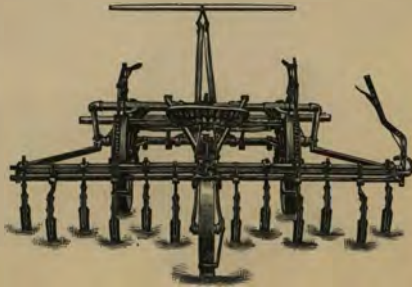
THE No. 3 SUGAR BEET HORSE HOE, for 1903, is our latest and best four row horse-hoe; it differs materially from our No. 2 in having a castor wheel in the rear, carrying the seat in such position as to bring all the work of the hoes directly under the eye of the operator. Two levers control the depth to a nicety. No. 3 hoes four rows at once, 18, 20 or 22 inches apart and No. 2 four rows, 18 or 20 inches apart. The general description below applies to both machines, except where a difference is noted.

DESCRIPTION OF NOS. 2 AND 3

The Wheels are pivoted and are entirely within the frame, have broad tires, and are as low as practicable for a riding machine. They act instantaneously, steering with the greatest ease and accuracy either by a *hand lever when walking or foot levers when riding*; and this plan makes it possible to hoe much closer than by any other method.

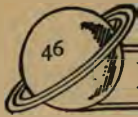
The Hoes, etc.—The hoes are of peculiar shape, specially adapted to the work. The hoe blade is formed into a protecting shield, as seen in the cuts, which prevents the earth from covering plants when small, while the curved shape answers the double purpose of allowing the closest hoeing at the surface while *rounding away from the roots below*; the standard is also set over *away from the beet tops*, allowing their free passage without injury, and the front of the hoe acts as a leaf guard, lifting the leaves out of the way. The practical sugar beet grower will appreciate these special features.

We furnish a set of five special irrigation teeth and standards with each implement which take the place of the sweeps and work *behind the hoes*, so that *hoeing and ditching are both done at one passage*. But two are used if ditching every other row.

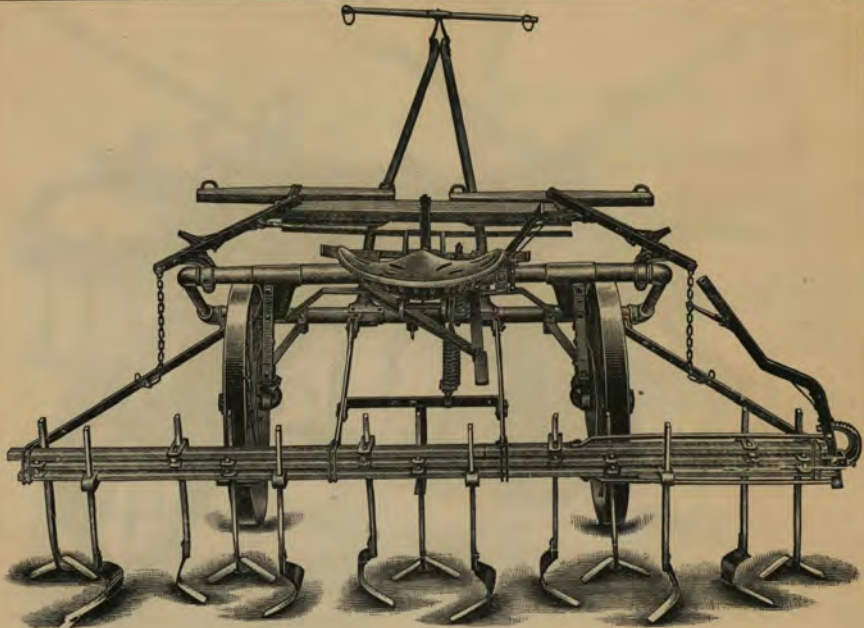


NO. 3 ARRANGED AS A CULTIVATOR

A. M. BURGESS, Manager Hookston Sugar Beet Farm, California and Hawaiian Sugar Refining Co., writes, April 17th, 1900: "The 'Planet Jr.' four row Cultivators are all working very satisfactorily. If I did not have so much of the old stock on hand, I would like to have about ten machines, but will have to defer purchase until another season. Your four row Cultivator is the only machine of its kind that I have found entirely satisfactory. It is substantial in its build and always under perfect control."



PLANET JR. FARM AND GARDEN TOOLS



No 2 PLANET JR. FOUR-ROW SUGAR BEET HOE AND CULTIVATOR.
PRICE, INCLUDING 13 CULTIVATOR TEETH AND STANDARDS AND 5 IRRIGATION SHOVELS, \$60.00.

Less Cultivator Teeth, \$53.00. Less Cultivator and Irrigation Teeth, \$50.00.
Walking only, with steel hand lever, \$48.00. For 16, 18 or 20 inch rows. Packed weight, 500 lbs.

The Tool Bar.—This consists of a truss of three stiff steel bars, the middle one stationary; a convenient lever moves the top bar to the right and the bottom one to the left at the same moment, and *vice versa*. The sweeps are attached to the centre bar, and thus remains stationary. The right side hoes are attached to the upper, and the left side hoes to the lower bar, so that the lever sets all the hoes at one time, instantly, to work close to or far from the row, as desired. Thus, a beginner may set his hoes pretty wide apart at first, and after a few minutes practice, he can close them, and easily get

the best possible work out of the tool. *This is an invaluable device, unknown in any other tool, and thoroughly patented.*

The Lift is very easy, as the frame is held in balance by a tension spring. The teeth are held down to their work by compression springs.

From the Seat, the rider can watch the row of plants, steering the tool by means of the pivot wheels, *with his feet; the hands are free therefore to guide the horse or horses.* When walking, steer with the steel hand lever. If the seed is sown with an accurate four row drill, the hoeing may be done *very close to the plants.*

Tongue or Shafts.—The tongue can be converted into shafts in a few minutes.

The hoes and sweeps are quickly set for different width rows by means of plain distance marks on the frame and are then moved simultaneously by the adjusting lever.

How accurate these tools are in adjustment and work, how easy of management and how practical in every way, can be appreciated only after an actual field trial. The universal verdict then is: "The tool works



SUGAR BEET HOES

like a charm."

For 1903 we equip both No. 2 and No. 3 with a set of 2½ by 8 inch cultivating teeth with standards used in the same clamps for late cultivation of wide planted beets or similar crops. But their greatest usefulness is arranged at uniform distances, to prepare ground in the Spring for the roller and seed drill. See cut page 45.

A. J. LARSON, of the California and Hawaiian Sugar Refining Co., San Francisco, California, writes, April 25th, 1900: "I have in operation in some of our beet fields your 'Planet Jr.' four row Cultivator and am pleased to say they are giving very satisfactory service, and I consider the tool the best I have seen for the purpose, and can very heartily recommend it for use in cultivation of a sugar beet crop."



1. No. 72 Two Row Pivot Wheel Adjustable Frame Cultivator working two middles at one passage, seven teeth on a side. Twenty acres a day. 47
2. No. 72 working two rows of potatoes at one passage. Three feet apart. Fifteen acres a day.



- 48 1. No. 70 Planet Jr. Pivot Wheel Cultivator working large bean field with one pair of plows and one pair of cultivator teeth. Beautiful and thorough.
2. No. 70 working cabbage. Excellent result.

PRICE LIST

		Packed Weight.	Price.
"Planet Jr."	No. 5 Hill and Drill Seeder	48 lbs.	\$13 00
"	No. 3 " " " " " "	44 "	10 50
"	No. 4 " " " and Single Wheel Hoe . . .	47 "	10 50
"	No. 4 " " " plain (as a drill only) . . .	38 "	8 50
"	No. 25 " " " " " "	59 "	13 50
"	No. 2 Drill Seeder	38 "	7 50
"	No. 1 Combined Drill Seeder and Wheel Hoe . . .	45 "	9 50
"	No. 11 Double Wheel Hoe	37 "	9 00
"	No. 12 " " " " " "	32 "	7 00
"	No. 13 " " " " " "	25 "	4 75
"	No. 16 Single Wheel Hoe	26 "	5 85
"	No. 17 " " " " " "	24 "	5 00
"	No. 17½ " " " " " "	21 "	4 50
"	No. 18 " " " " " "	20 "	3 50
"Fire-Fly"	Plow	18 "	2 35
"Planet Jr."	Crass Edger	26 "	6 00
"	No. 8 Horse Hoe and Cultivator	82 "	8 50
"	Nine-Tooth Horse Hoe	181 "	15 00
"	No. 7 Horse Hoe and Cultivator	77 "	8 00
"	No. 9 " " " (with wheel)	71 "	7 40
"	No. 9 " " " (without wheel)	64 "	6 65
"	No. 5 " " " (with wheel)	69 "	6 50
"	No. 4 " " " (with wheel)	62 "	6 35
"	No. 4 " " " (without wheel)	55 "	5 60
"	No. 9 Cultivator (with wheel)	65 "	6 10
"	No. 9 " (without wheel)	58 "	5 35
"	No. 4 " (with wheel)	56 "	5 00
"	No. 4 " (without wheel)	49 "	4 25
"	Twelve-Tooth Harrow (complete)	74 "	8 50
"	" " (without pulverizer)	66 "	6 90
"	" " (without pulverizer or wheel)	53 "	5 80
"	Double Celery Hiller	89 "	14 00
"	Single Celery Hiller	69 "	11 00
"	White Potato Digger	122 "	16 00
"	Sweet " " " " " "	144 "	18 00
"	No. 41 Orchard and Universal Cultivator (cuts 4 ft.) . .	342 "	34 00
"	No. 41 (with extensions, cuts 6 ft. 6 in.)	450 "	44 00
"	No. 42 Orchard and Universal Cultivator (cuts 5 ft. 8 in.)	400 "	37 00
"	No. 42 (with extensions, cuts 7 ft. 9 in.)	480 "	47 00
"	No. 1 Orchard and Universal Cultivator (cuts 5 ft. 8 in.)	370 "	34 00
"	No. 4 " " " (cuts 4 ft.)	330 "	34 00
"	No. 72 Two Row Pivot Wheel Cultivator	560 "	50 00
"	No. 71 Improved Two Row Pivot Wheel Cultivator . . .	530 "	45 00
"	No. 70 Pivot Wheel Cultivator	462 "	37 50
"	No. 53 Two Row Sugar Beet Hoe and Cultivator	230 "	25 00
"	No. 53 " " " " (plain)	215 "	22 50
"	No. 3 Four Row Sugar Beet Hoe (complete)	600 "	85 00
"	No. 2 " " " " " "	500 "	60 00

PLANET JR.

FARM & GARDEN IMPLEMENTS

