

1908

THE
IRON AGE
Farm and Garden
Implements

BATEMAN MFG CO.
Grenloch, N.J., U.S.A.



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LTHOUGH scarcely believable, since the issuance of our last catalogue, the demand for implements and other labor saving devices for the farm and garden has become still more imperative. The economizing of labor has become an absolute necessity.

¶ Inventions hitherto only known in the imagination of the dreamy inventor have been brought into the open and developed into practical, everyday tools; even the milking machine has ceased, in a measure, to be a joking matter only, while the old fashioned farmer—may his shadow never grow less and his tribe ever increase—has been forced to become quite up-to-date.

¶ This demand and the consequent great call for raw material during the past season has made the path of the manufacturer a thorny one and his bed anything but one of roses. His fondest hopes and expectations to fill his orders promptly and satisfactorily have been blasted even when delays had been anticipated and specifications for material placed far in advance.

¶ We desire to express our regret of not being able, during the past season, to be as prompt as we would liked to have been but have the satisfaction of knowing we did the best we could under the circumstances and that we were not alone in our failure to always take the best care of our trade. Notwithstanding these difficulties in manufacturing, we have made and sold, the past season, a greater number of "Iron Age" implements than ever before and we wish to sincerely thank our friends for their share in the good work. We are pleased to note that with the increased demands for labor saving implements we have found the "Iron Age" still advancing in popularity—bringing their use to a point beyond the natural increase—due, we firmly believe, to the fact that their use represents a very satisfactory quality of work as well as being great labor savers.

¶ We trust the high standard of excellence maintained in the "Iron Age" farm and garden implements may merit a continuance of this confidence in them and in us as their sole manufacturers.



The No. 6 "IRON AGE" Combined Double and Single Wheel Hoe, Hill and Drill Seeder

Packed Weight, 57 Pounds

Price, \$12.00

No. 14, No. 6 Combined Hill and Drill Seeder (side
hoes and teeth only). Price, \$10.50

Hill and Drill
Seeder only
(No. 7).
Price, \$9.00

Fig. 114



Combined Double Wheel Hoes and Seed Drills

Prior to the introduction of our famous Combined Wheel Hoes and Seed Drills, combined tools were regarded by many as impracticable, owing to the time and knowledge required to change from one form to the other, to say nothing of the advantages lost over those of the separate implement.

The simplicity and completeness of the "IRON AGE" combined implements in all their forms make their use practical, even with the busiest gardeners.

From Seed Drills these tools can be converted into Wheel Hoes, either Single or Double, it requiring but about three minutes to change to Double Wheel Hoes and about two minutes to Single Wheel Hoes, by an inexperienced operator. T. Greiner, a practical gardener and a well-known writer on garden subjects, writes as follows.

"I have used the 'IRON AGE' Combined Double Wheel Hoe and Seed Drill for three seasons, and I can truly say that it has made the task of sowing seeds (which always falls upon me personally) a veritable pleasure. I do not know of any weak point in this machine; at present I use no other make of garden drill. I used to be very pronounced in favor of single tools, for the reason that in the combined tools one wore out two tools at a time and had to waste much time in making the changes from Drill to Wheel Hoe and vice versa. The 'IRON AGE' meets these objections quite successfully, the former fully, the latter to a great extent. When the Wheel Hoe is wanted, the Drill part is taken entirely off and the change made in a minimum of time."

We show in cut above our No. 6 "Iron Age" Combined Double Wheel Hoe, Hill and Drill Seeder, being the same as our well-known No. 4 Drill, with the addition of a hill dropping device.

The completeness of the tool and the universal satisfaction it has given places it first among our list of garden implements. Combined in this tool, as will be further explained, there are three distinct and thoroughly practical tools, a Hill and Drill Seeder, a Double Wheel Hoe and a Single Wheel Hoe.

As a Hill and Drill Seeder

The Wheel is made of steel, 16 inches high; of steel to obtain lightness, and at the same time strength; 16 inches high in order to run easy, without giving to the inequalities of the soil as a low wheel will do. The tire is 1 1/4 inches wide.



The Frame as shown more clearly in Fig. 182 is made of pipe, coupled to malleable castings; of pipe to again secure lightness and a frame of such shape and strength to make it practically unbreakable. The arch is high enough to work astride 20 inch plants. We call especially attention to our new handle adjustment whereby the handles may be adjusted when they are attached to the frame as well by change of height of wheels on the arms of the frame. The new adjustment gives facility to change the position of the handles to suit the height of a small boy or a tall man.

The Seed-Sowing Device—In designing our Seed-Sowing Device we have kept in view simplicity of construction, convenience of adjustment and perfection of work.

The seed slide and its index adjustment to sow various seeds is plainly shown in cut below, Fig. 146, and is similar to that used on our well-known New Model Seed Drill. The agitator is simply a revolving brush of selected bristles, which absolutely will not injure the seed, wear a long time and can be cheaply replaced. The brush agitator will be found to be peculiarly adapted to feeding out such seeds as beets and tomatoes, in separating the seeds that may be clinging together and acting as a gentle force feed. It will distribute small packets of seed with the same uniformity as a large quantity. The seed hopper holds 2 quarts. The range of variety of seeds capable of being sown with this drill is larger than other drills because of the separating qualities of the brush agitator.

In our experience with Seed Drills, we have found that while some round, smooth seed, such as turnip or radish, will flow through the discharge opening and do not, therefore, need any agitator, one is absolutely necessary for some others to insure a continuous or positive feed.

All seeds such as celery, radish, lettuce, beet, onion, carrot, spinach, chickory, cabbage, peas, etc., can be sown with this drill.

Besides placing the seeds in drills, our No. 6 will also drop in hills at 4, 6, 8, 12 or 24 inches apart. The tool can be instantly changed to drop from hills to drills or the reverse.

The seed is sown or dropped in full view of the operator as it passes out of spout into the furrow. There can be no mistake about it being actually deposited in the soil. The cut in Fig. 183 represents the view which the operator has of the drill and the seed being sown as he pushes it forward.

The Cut-Off.—The flow of seed can be instantly stopped by a *swinging* cut-off, conveniently operated by a cord and ring on handle. This cut-off prevents all loss of seed at end of rows, and its swinging or gravity form will be found far preferable to one that slides under, as it cannot be jammed by the falling seed.

The Opening Plow is clog-proof; all trash which may come in contact with it is ridden down. By a thumb screw it can be instantly adjusted in depth. Distributes the seed in a very straight and narrow row making it possible to cultivate very close to the plants by the Wheel Hoe.

The Marker is pivoted at the rear of the hopper and can be thrown from side to side by the foot, and the adjustment of the drag be made by inches from 6 to 20 inches wide.

The Coverers are flexible to prevent clogging with the trash or lumps.

Sugar Beet and Chickory growers will find this tool to meet every requirement. It will sow the seed accurately and without injury. The arch being high will allow the cultivation of these crops until they are well grown. A very large number of these tools now being used by prominent growers, where the best tools for the purpose are required, is the highest recommendation we can give them.

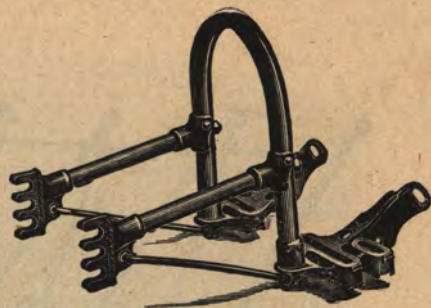


Fig. 182

The frame of the No. 6 Combined Drill. See its very strong construction.

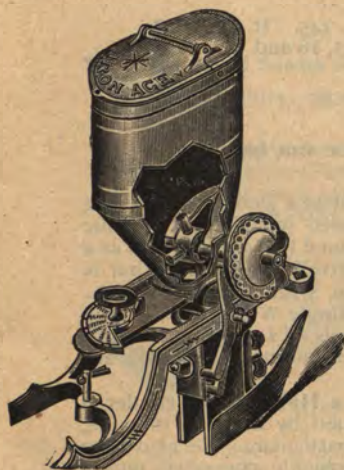


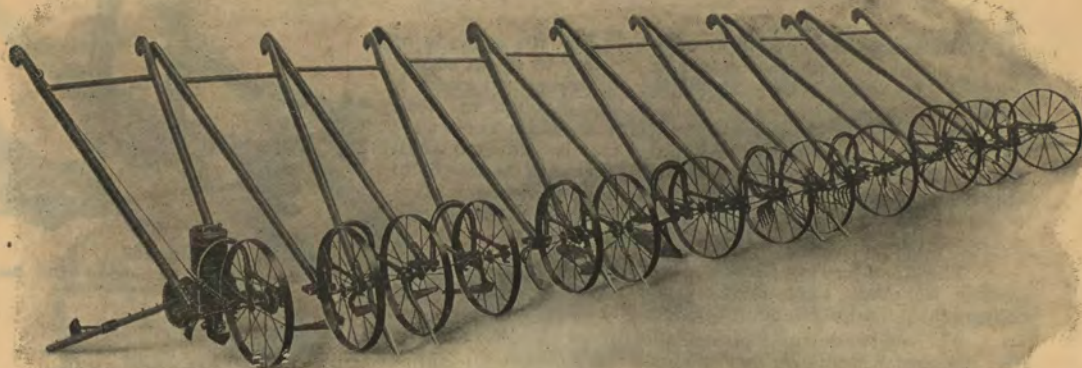
Fig. 146

Showing the brush agitator hill dropping device, index and opening plow.



Fig. 183

Showing how the seed is in full view of the operator as it is being sown.



Representing Some of the Numerous Forms or Combinations of the No. 6 "IRON AGE" Combined Double and Single Wheel Hoe, Hill and Drill Seeder

A Special Plow for sowing onion seed for sets is shown in Fig. 145. It scatters the seed in a row over 3 inches wide, and will fit our Nos. 6, 7, 15, 16 and 22 drills. Price, 50 cents.

As a Double and Single Wheel Hoe

The change from a Hill and Drill Seeder to a Double Wheel Hoe can be made in three minutes; to a Single Wheel Hoe in two minutes.



Fig. 145

The picture below shows the No. 6 "IRON AGE" Combined Tool as a Double Wheel Hoe cultivating cabbage plants, the seed of which had been sown by the seed sowing device of the combined tool. For further cuts and full description of the No. 6 combined tool, set up both as a Double and Single Wheel Hoe, we refer you to Figs. 75 and 76 respectively, page 12. What is there said under the head of our No. 1 "IRON AGE" Double Wheel Hoe, with its various attachments, will also apply to our No. 6 combined tool, for the Double and Single Wheel Hoes of this tool are identical with our No. 1. Although the description of these tools as Double and Single Wheel Hoes is fully given on page 12, let us state briefly some of their merits here for the accommodation of the hasty reader.

Since the wheels and frame of the tool, either in the form of a Hill and Drill Seeder, a Single or Double Wheel Hoe, are identical, the reader is already informed by mention of same, on page 3, of the construction and meritorious points of the tool in this particular. We also here wish to say, the fact that every Double Wheel Hoe can be easily and quickly converted into a

thoroughly practical Single Wheel Hoe makes the tool adapted for a greater variety of work, and makes it possible to change our No. 6 Combined Double Wheel Hoe, Hill and Drill Seeder into as many single wheel combinations as it is possible to make it into double wheel combinations.

The photograph shown at the top of this page forcibly impresses the mind of the almost unlimited number of different combinations into which this tool can be converted, without the use of additional attachments which may be applied to it, such as double weeder, landside plow, single tooth, onion set gatherer, combined disc and fender, double moldboard plow, special fender side hoes and fertilizer distributor attachments shown on pages 14 and 15.



Truly one who purchases a No. 6 Combined Double and Single Wheel Hoe Hill and Drill Seeder, purchases a whole tool house; he is equipped to accomplish in the most satisfactory manner practically all work needed to be done by a kitchen or market gardener, or a farmer in the raising of vegetables which are to be cultivated by hand or for the sowing of seeds where afterwards the plants are to be cultivated by horse.

When we first offered our line of Wheel Hoes and Seed Drills built upon such principles as at present, some of the uninformed ridiculed the high steel wheel idea, claiming that it would not be practical; but the expressions coming to us from farmers and gardeners from all quarters of the earth of their hearty approval of tools so designed, and proven later on by their liberal orders, emphatically convince us that we were and still are correct in our ideas of the matter.

The No. 4 "IRON AGE" Combined Double and Single Wheel Hoe and Drill Seeder

Packed Weight, 55 pounds. Price, \$11.00

As a Drill Seeder only (No. 5).

Price, \$8.00

No. 40, No. 4 Combined Drill Seeder (side hoes

and teeth only). Price, \$9.50.

What is previously said relative to our No. 6 Combined Double Wheel Hoe, Hill and Drill Seeder, is largely applicable to our No. 4. It only differs in the Seed Sowing Device and Opening Plow. Both tools as Double and Single Wheel Hoes are identical.

The Seed Sowing Device of our No. 4 is only designed to sow seeds in continuous rows.

While for convenience' sake and lessening patterns and stock in the manufacture of these tools, we would prefer to furnish all our Drills with the Hill Dropping Device, we have thought best not to deviate from our policy in this particular; namely, in giving the farmer just what he desires at the least possible cost, and not loading down the price of the tool with other devices, unless he desires them.

The Opening Plow is reversible, and also adjustable in depth.

Fig. 215 shows special spout and opening plow for application to No. 5

Seed Drill when it is desired to sow onion seed from which to grow full sized onions for market (not onion sets). The seed is sown in a very narrow row and hand weeding is almost wholly dispensed with, as the side hoes of the Wheel Hoe can be set very close to each other without danger of injury to the crop

If it is desired to have the drill regularly equipped with parts as shown in Fig. 215 instead of the parts as shown in Fig. 83, order the tool by adding the letter "B" to the number, — for instance, No. 5-B. The spout and opening plow may be ordered separately, the price of which is 1.00.



Fig. 215

Fig. 83





Fig. 125

No. 15 "IRON AGE" Combined Single Wheel Hoe, Hill and Drill Seeder

Price, \$11.00

Packed Weight, 49
Pounds

Combined Single Wheel Hoes and Seed Drills

Although we have offered in the past, in our Nos. 4 and 6 Combined Tools, implements which are complete both as Single and Double Wheel Hoes, there has been a demand for a combined tool to be operated as a Cultivator, only as a Single Wheel Hoe, both on account of preference and a desire for a lower priced combination. For a person who raises vegetables for his own use, and for the market gardener who prefers a Single Wheel Hoe to a Double Wheel Hoe, we offer our Nos. 15 and 17 Combined Tools.

Our Combined Single Wheel Hoes and Seed Drills will accomplish all manner of work without the purchase of additional attachments—ground may be ploughed and raked, furrows made, seed sown and covered, plants hoed, cultivated and plowed.

As a Hill and Drill Seeder

The Wheel is made of steel, 16 inches high and has a broad faced tire, $1\frac{3}{4}$ inches; made on these principles, it goes a long way towards making the Seeder light, strong and easy running.

The Frame made of iron tubing coupled to malleable castings, gives great strength combined with lightness, which is a very necessary thing in a tool which is to be pushed by hand.

The Seed Sowing Device sows the seed in a continuous row, or drops in hills at 4, 6, 8, 12 or 24 inches apart. The change from one method to the other is instantly made. The index adjustment and revolving brush agitator are the same as used on all our "IRON AGE" Drills, of which there are many thousands being used by the leading gardeners, and pronounced by them "the best." The agitator not being made of iron, absolutely injures no seed. The opening plow is clog-proof, rides down all trash. Special opening plow shown in Fig. 145, page 4, for sowing onion seed for sets will also fit this tool. The marker is pivoted at the rear and can be thrown from side to side by the foot.

Our No. 15, as a Hill and Drill Seeder only, embodies *every good* feature of a tool designed especially as a Seed Drill. In this form a plain Drill, we offer it as our No. 16 "IRON AGE" Hill and Drill Seeder, as shown in Fig. 126. A careful examination of the cut and description will convince one of its many good qualities.

Although this Seeder is one form of the Combined Tool, not a single advantage is contained in any Plain or Combined Seed Drill that this tool does not possess, while the conversion of it into a complete Single Wheel Hoe can, at any time, be accomplished by the purchase of the necessary cultivating tools.



Fig. 126

No. 16 "Iron Age" Hill and Drill
Seeder. Price \$8.50

As a Single Wheel Hoe

The change from a Seed Drill to a Wheel Hoe is made by simply detaching the Seed Sowing Device—done so by running the chain off the sprocket wheel, taking out of the frame two bolts, and attaching such cultivating tools as may be desired.

For cut and description of this tool in its Wheel Hoe form, see page 17, Fig. 135. All necessary tools, for accomplishing a great variety of work when operating the Wheel Hoe, are furnished with the combinations, such as Side Hoes, Cultivator Teeth, Rakes and Landside Plow. The **Single Weeder Attachment**, as shown in Fig. 84, page 18, the **Double Mold-Board Plow Attachment** as shown in Fig. 170, page 15, and the No. 25 **Fertilizer Attachment** as shown in Fig. 184, page 14, may also be applied to our Nos. 15 and 17 Combined Tools.

No. 17 "IRON AGE" Combined Single Wheel Hoe and Drill Seeder

Price, \$10.00

Packed Weight, 45 Pounds

Likewise, in our Single Combined Tools for the accommodation of those who have no preference for a Seed Drill to drop in hills as well as sow in rows, we offer a tool very similar to our No. 15 without the Hill Dropping Device, which we term our No. 17 "IRON AGE".

Combined Single Wheel Hoe and Drill Seeder, the price of which is one dollar less than No. 15. While, for convenience' sake and lessening patterns and stock in the manufacture of these tools, we would prefer to furnish all our Drills with the Hill Dropping Device, we have thought best not to deviate from our policy in giving the farmer just what he desires at the least possible cost.

What we have said above relative to the Wheel Hoe form of our No. 15 Combined Tool, applies with equal force to our No 17 Combined Tool, for as Wheel Hoes they are identical.

No. 18 "IRON AGE" Drill Seeder

As before stated our Combined Single Wheel Hoe, Hill and Drill Seeder, as a Hill and Drill Seeder only, possesses every advantage of a separate Seed Drill, made especially as such; therefore, our Combined Single Wheel Hoe and Drill Seeder, as a Seeder only, possesses every advantage of a separate tool.

Our No. 17 Combined Tool, as a Seeder only, we offer as our No. 18, shown in Fig. 129. What is said on opposite page referring to our Combined Hill and Drill Seeder, as a Seeder only, is applicable to this, our No. 18 Seed Drill, save what is said about the Hill Dropping Device and opening plow.

Our No. 18, then, as noted, is a most complete tool, embodying every good feature of all Plain Drill Seeders. The price at which we offer it makes it the lowest priced Drill we manufacture. This Drill may also be equipped with spout and opening plow, as shown in Figure 215, page 5. When wanted in this form, order as No. 18 B.



Fig. 127

Fig. 129
No. 18 "Iron Age" Drill Seeder
Price, \$7.50



No. 22 "IRON AGE" Combined Fertilizer Distributor, Hill and Drill Seeder

Price, \$18.00

Packed Weight, 65 Pounds
Net Weight, 50 Pounds

Another step in labor saving tools for market gardeners.

A Combined Fertilizer Distributor, Hill and Drill Seeder, Fig. 130.

A Fertilizer Distributor for side dressing of crops, Fig. 132.

In these days of strong competition in the growing of crops of the market gardener, it becomes necessary that he make a study of the most economical use of fertilizers, one of his most costly purchases, and to obtain this economy re-

quires such a tool as we offer in our No. 22 "IRON AGE" Combined Fertilizer Distributor, Hill and Drill Seeder, which applies the fertilizer in connection with the seed, just where it will do its most efficient work. Or, by the use of the same tool in its other form, No. 23 "IRON AGE" Fertilizer Drill as a Side Dresser, Fig. 132, by applying quick acting fertilizers to the growing plants, they can be forced into quick and vigorous growth. All of this is well known to the intelligent and successful market gardener of the present day.

Although a tool designed to accomplish so much, it is perfectly simple, light of draught, strong and perfection in the quality of work done by it,—its method of sowing the fertilizer and seed, or of sowing the fertilizer alone, is ideal.

The photo shown herewith was taken upon completing the planting of a 4-acre plot of lettuce, where at the same time fertilizer was distributed in two streams each side of the seed but not in contact with it. This gives a clear idea of how thoroughly practical the tool is, even when used on a large scale. The Wheels are of steel, 16 inches high, light and strong. It is need-

less to say that every ounce of weight must be saved in a tool of this kind.

The Opening Plows of the Fertilizer Distributor are made of such shape as to encase the two flexible distributing tubes (one in each plow) leading from the fertilizer hopper. These plows are adjustable in depth and width, giving the gardener the privilege of placing the fertilizer as near or as far from the seed as he desires; or, one plow can be used and the fertilizer placed in the same line with the seed. The plows are immediately followed by coverers, which draw the soil over the fertilizer just deposited.

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Fig. 130





Fig. 132

The Fertilizer Distributor.—This is the distributor of our well-known "IRON AGE" (Improved-Robbins) Potato Planter on a smaller scale, including all its late improvements to prevent stoppage by small lumps.

The fertilizer is divided in two streams by a division made in the spout at the discharge opening, to which the delivery tubes are attached. These delivery tubes are made of brass spring wire, giving flexibility needed for the adjustment of the plows. To avoid rust all of the principal parts are galvanized. The capacity of fertilizer hopper is over four quarts.

The Seed Sowing Device is practically the same as used on our Nos. 6 and 15 Combined Seed Drills, having the same seed slide, index adjustment and revolving brush agitator which injures no seed. The seed may be sown in Hills or Drills; in hills at 4, 6, 8, 12 or 24 inches apart. The tool can be instantly changed from a hill dropper to a continuous row drill. The opening plow is clog-proof. The covers are flexible to prevent choking with trash or lumps. The operation and adjustment of the marker is plainly shown in cut. The seed hopper holds 2 quarts.

No 23 "IRON AGE" Fertilizer Distributor (as a Side Dresser)

Price, \$13.00. Packed Weight, 40 Pounds. Net Weight, 27 Pounds

Hill and Drill Seeder Attachment \$5.00

The side or top dressing of growing plants, especially at critical periods, has become a practice of great importance, and often of absolute necessity with the thrifty and progressive market gardener. It is not merely a matter of economical distribution of high priced fertilizer, but what is of more consequence, the placing of it just where the plant rootlets will quickly seize and absorb its chemical constituents.

A common and wasteful practice is the broad-casting of fertilizers before the seed is placed in the soil. Thoughtful farmers are not applying the full amount of fertilizer at the time of planting the crop, perhaps to be washed into the subsoils at the first heavy rain, but are making a number of applications of quick-acting fertilizers, such as Nitrate of Soda, during the growth of the plants. The quicker and more thrifty the growth of the plant, the more tender and more salable will be the crop,—the higher prices secured. The fact that your neighbor or fellow-farmer marketed his crop one week or ten days earlier than yourself last season, and perhaps at double the price, is probably due to the use of fertilizers in this way.

Note the relative size of carrots shown in photograph. The larger ones show one result of side dressing with 500 lbs. Nitrate of Soda per acre in 4 applications; the smaller bunch, none.

By the use of this tool, Nitrates are placed below the surface in the moist soil, where they readily dissolve in a manner so easily and perfectly accomplished that it is a revelation to those accustomed to the slow, laborious, uncertain, and wasteful method of applying by hand. Furthermore by using this tool there is no danger of injury to the foliage of the plants by the fertilizer which often happens through the careless use of Nitrates when applied by hand.

The application of certain fertilizers is, therefore, not dependent upon the weather, which is the case when applied by hand, unless additional work is resorted to by opening furrows each side of the row and again covering after the fertilizer is sown. Applying the fertilizer in small quantities at different intervals lessens the chances of its total loss at the time of heavy rains; and by numerous applications food is constantly available which is essential for the best growth of the plant.



The No. 8 "IRON AGE" Hill and Drill Seeder

Price, \$11.00. Packed Weight, 40 lbs.

Market Gardeners will find the No. 8 "IRON AGE" Hill and Drill Seeder to fill a long felt need. Frequently have we heard farmers express their desire for a seed sower which would be simple, light, strong and capacious and also accurately drill and hill all the smaller seeds. Prior to the introduction of this tool, no Seed Drill was on the market which possessed all these qualities. We will endeavor to tell you in the following description the excellent qualities of the "IRON AGE," although to be fully appreciated this Seeder should be seen in actual operation, yet we feel confident our reader will agree with us, from reading the description given below, that the "IRON AGE" has more good qualities than any other tool of its kind.



Fig. 95

The Wheel is fifteen inches high, and has a two-inch tread. Being made of steel it is much lighter and yet stronger than an old style cast iron wheel.

The Hopper is low, therefore the delivery of the seed is close to the ground, thus making possible accurate spacing. The capacity of this hopper is four quarts, holding a sufficient quantity of the most bulky seed for even the largest gardeners. Market gardeners and sugar beet growers will find this tool particularly well suited to their needs. The necessity for continually re-filling a hopper is aggravating, and when the tool is so light and easy running as this "IRON AGE" the extra weight of seed is not at all noticeable; particularly is this the case to one who has been accustomed to operating an old style, heavy, clumsy drill made mostly of grey iron.

The Agitator is a revolving brush which makes it absolutely a sure feed and sows all of the seed accurately and without injury.

The Opening Plow is of such shape as to render it positively clog-proof. All trash which may come in contact with it is ridden down. Its shape keeps it at all times highly polished. By a thumb screw it can be instantly adjusted in depth.

In Fig. 119 we show our special plow for sowing onion seed for sets. This plow sows the seed in a row over three inches wide. It is only applicable to our No. 8 Hill and Drill Seeder. Price 50 cents.

Distance of Spacing the seed can be instantly changed by simply varying the number of pins in the outside circle of holes of the "Pin Wheel." By using only one pin (stationary) the seed will be spaced 24"; two pins, 12"; three pins, 8"; four pins, 6"; six pins, 4".

We wish to emphasize the great simplicity of this adjustment as it overcomes a very radical objection to similar tools of having numerous cam wheels to change. This adjustment can be quickly and accurately made by any boy.

From a Hill Dropper to a Row Drill or vice versa. By simply hooking out a small lever, which operates the seed cut off, you at once have a drill seeder and by reversing the operation you again have the tool ready for spacing the seed for hills.

The Coverer is firmly held in place by a spring, thus avoiding all danger of not covering, and at the same time will yield to any obstruction. The wheel rolls and packs the soil.

Shut Off.—The flow of seed can be instantly stopped or started by a convenient finger latch on the handle.

The Marker can be changed in width by inches, without the necessity of changing a screw or pin, and when not in use can be thrown up out of the way.



Fig. 119

The "NEW MODEL" Seed Drill

Price, \$8.00

Packed Weight, 50 Pounds

The record of the "NEW MODEL" has been so entirely satisfactory, and its place as one of the leading drills has become so firmly established, that we are almost tempted to discard the term "New." It is surprising to see how quickly it has been adopted by the seedsmen and market gardeners as an old friend.

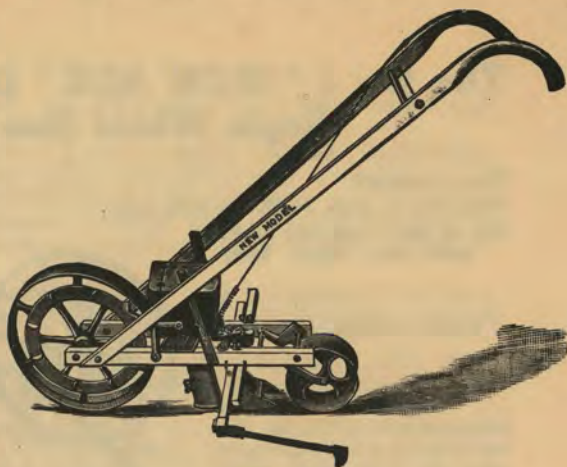


Fig. 28

In reference to the "NEW MODEL" Drill, we do not think it necessary to enter into a discussion about the necessity for and economy in the use of Seed Drills. Farmers and gardeners generally, we believe, are now well enough posted to understand and fully appreciate all these points. Suffice it to say that the "NEW MODEL" is the result of careful experimenting in the field and factory, in close comparison with leading drills, and, being constructed with the view of avoiding all radical defects of said drills, built in a workmanlike manner, of best material and in neat style and finish, we venture to assert it will be found to be the *best seed drill in use* and indeed a *model* in every respect. We invite attention to some of the leading features of the "NEW MODEL."

Regulation of Discharge.—Drills of similar construction are usually provided with a series of holes of varying sizes through which the seed is passed, which, of course, do not always give an opening of the exact size required. The operator is usually told, in substance, that "if one hole don't suit, try another."

As will be readily seen, by reference to the sectional cut, this adjustment is accomplished in a very simple and effective manner by use of a slide with a pear-shaped opening, passing under the bottom of the seed reservoir, which is provided with a perforation of similar shape in a reversed position. This slide can instantly be adjusted to size indicated by Index, or to a *hair-breadth variation between*—a vital point in a perfect seed drill.



PERFECT INDEX

Fig. 29

Index.—As shown by enlarged cut in Fig. 29, the Index or Indicator is plain, convenient and reliable. It is placed in open sight, immediately under the eye of the operator, and, as stated above, can be quickly adjusted to the slightest variation desired. As the names of the principal seeds are plainly shown on the Index itself, it is not necessary to refer to any table of reference.

The sectional cut shows the perfect Index and manner of regulating the flow of seed by the slide, in connection with the index. It also shows the application of the swinging cut-off.

Cut-off.—The flow of seed can be instantly stopped by a *swinging* cut-off, conveniently operated by a cord and ring on handle. This cut-off prevents all loss of seed at end of rows, and its swinging or gravity form will be found far preferable to one that slides under, as it cannot be jammed by the falling seed.

Marker.—Is simple, easily adjusted and firmly held.

Wheel.—The main wheel is of large size and of *unusual* width, preventing its sinking into soft earth.

Covering Roller.—Is attached by swinging frame, enabling operator to roll lightly or otherwise, by varying the pressure on handles; or, as some object to use of roller, it, with its frame, can be quickly removed.

Opening Plow.—Is of *steel*, adjustable in depth.

Handles.—Firmly bolted, braced and adjustable in height.

The No. 1 "IRON AGE" Double and Single Wheel Hoe

Price, complete \$7.00
 Price, No. 3, plain, (with side hoes only) 4.25
 No. 13, No. 1 with side hoes and teeth only. Price, \$5.50

Packed Weight, 40 Pounds

Among the principal labor-saving tools in the hands of the market gardener must be considered *Wheel Hoes*. Nay, we may insist that it leads all others, for they are really indispensable.

They have done away with the back-breaking and time-killing methods of the olden time, one man performing in a more thorough manner, and with greater ease to himself, the labor of several men. As with all other improved methods of labor it requires a little practice to enable one to realize the best results with a wheel hoe. A novice will usually push steadily ahead; not so—give the tool a *thrust* ahead, watching the wheel rather than the hoe, and taking a step at each thrust; this brings a result which the term *wheel hoe* implies; an ordinary hand hoe would accomplish little if simply dragged through the ground.

Having shown what is expected of a wheel hoe we desire to bring to the notice of the reader the "IRON AGE" *Wheel Hoe*. Without disparaging the many excellent tools of this character already in use, we recently became convinced from our own practical tests—we have been making wheel hoes for years—and the expressions coming from the workers in the field, that further improvement was possible and necessary. Higher wheels were called for; the old pattern frames were made of grey iron, and were consequently *too heavy*, to say nothing of their constant breakage. How well we have corrected these points, and made still other improvements we will endeavor to show. We have practically made the tool "bicycle construction."

The Wheels are made of steel, very light and are 16 inches in height.

The Frame made of tubing, coupled to *malleable* castings; high arch, capable of working astride of 20-inch plants; three changes in height of wheels without entirely removing axle nuts; they not only can be placed inside the frame for working in narrow spaces, but an extra axle is sent out with each tool to be used, as shown in Fig. 76, making a *perfect Single Wheel Hoe*. We emphasize this point strongly, as a single wheel is certainly preferable in all garden work, with the single exception of working astride the row.

The Handles are made of best ash and are adjustable in height, to suit a very small boy or tall man. By referring to Fig. 182, page 3, the slot adjustment in the frame for attaching the handles will be plainly seen.

The Working Tools regularly furnished consist of one pair of side hoes, four cultivator teeth, one pair of plows, and one pair of rakes.

The Side Hoes.—Probably the greatest amount and variety of work is accomplished with the side hoes. For first hoeings of small plants these are placed as shown in Fig. 75 when working astride the row, and as shown in Fig. 76 when working between the rows. By reason of the remarkable steadiness of our wheel hoes the side hoes may be set to cut very close to the plants without endangering them. When the side hoes are set as shown in Fig. 76, the hoes will overlap as one is slightly in advance of the other, and weeding can be done in very narrow rows.

The Cultivator Teeth are used principally for deep cultivation and ours will be found to be particularly adapted to this service, as they are formed of a single piece of steel—slender yet strong. One or more can be used as the work demands.



Fig. 75



Fig. 76

Showing the Double Wheel Hoe set up as a Single Wheel

The Plows can be used in various operations ; in plowing away from or hilling crops ; opening furrows and covering them after the manure and seed are placed therein.

The Rakes are used for leveling and fining the soil when preparing it for seed, and breaking the first crust, thereby destroying millions of young weeds. They can be used astride the row or placed closely together, while by the use of ratchet washers, they can be adjusted to several angles.

The Vine Lifters are detachable, and adjustable in height without entirely removing the confining nut. They are valuable in lifting the leaves and vines to prevent their being covered by the soil thrown by plows or hoes.

We wish to strongly emphasize the really extraordinary ease with which the "IRON AGE" Wheel Hoe is operated, the lightness and construction of the tool being such that every ounce of effort goes direct to the work accomplished.

The Attachments applicable to this tool are shown on the two following pages. The ability to apply any of them increases the variety of work that may be performed, and thus increases their value over others not possessing this feature.

Their Merits as Told by Others.—Our letter files contain numerous letters of strong commendation, referring not only to our line of "IRON AGE" Garden Tools but also particularly to the excellent qualities of our "IRON AGE" Double Wheel Hoes—the following being a sample :

"The Cultivator received—thanks. The 'IRON AGE' is one of the best machines we have on the place. Did not know how good it was until I got to using it. Have three other kinds but the 'IRON AGE' takes the lead."

In the "Experience Pool" of "Practical Farmer," discussing the subject of Experience with Garden Hand Cultivators, we read the following letter together with a number of others, referring to the merits of the "IRON AGE" Garden Tools :

"Five or six years ago I got a Garden Wheel Hoe and have taken good care of it, consequently it is good for as many more years. Mine is an "IRON AGE," has four cultivator teeth, two rakes, two shovels or plows, and two hoes. I use the four cultivator teeth more than any of them. It is a two wheel one, but you can change it to a one wheel hoe, having this wheel in the center. I use two wheels more, for then I can go astride the rows and cultivate the garden stuff when it is small. I plant my garden in rows a foot apart for small stuff, and can work both sides of the rows in the same time any one can work one-fourth of a row with a common hoe. As to a farmer's wife running one, it depends upon the farmer's wife whether she can run it or not. Any one who really wants to, can, and can do it with more ease than with a hoe. I have a small garden, 60x100 feet, and I sold almost \$15 worth of stuff out of it, besides all we wanted to use and gave some to the neighbors, and I had very little help from my husband; as he had his hands full. I will say I could not have done it if I had not had a cultivator. I would not be without one if I only had a garden for a small family."



Attachments to "IRON AGE" Wheel Hoes

The value of a garden tool largely depends on the quality, quantity and variety of work which it will accomplish. If still further valuable attachments may be applied to such an implement, for performing special and more varied work, its value is greatly increased.

Oftentimes the simple application of an inexpensive attachment, which may be applied to an "IRON AGE" garden tool, will result in saving hours of labor or the necessity of purchasing a tool especially to perform work in a certain manner.

It will be noticed more attachments may be applied to the "IRON AGE" garden tools than any other make. While you may not think you will need any or all of the attachments shown on these pages at the time of buying a garden tool, yet you never can tell how soon you may need them in order to satisfactorily plant, fertilize, cultivate or care for some new crop which you may wish to raise, or, in changing your methods of raising the old. The many expressions of satisfaction coming from those who have had this experience and afterwards purchased and used these attachments, prompts us in emphasizing this point.

No. 6 "IRON AGE" Hill and Drill Seeder Attachment. Price, as shown in Fig. 134 with all necessary parts, \$5.00

One of the most important attachments to those who have purchased a No. 1, 3, 13, 20 or 21 "IRON AGE" Wheel Hoe is the No. 6 "IRON AGE" Hill and Drill Seeder Attachment. The application may be made in two or three minutes and when applied the tool is converted into a thoroughly reliable and satisfactory Hill and Drill Seeder, for sowing seed in hills at 4, 6, 8, 12, or 24 inches apart, or in continuous rows. With this attachment applied to the No. 1 Double and Single Wheel Hoe the combination makes the same tool as the No. 6 "IRON AGE" Combined Double and Single Wheel Hoe, Hill and Drill Seeder, as shown in Fig. 114, page 2; and when applied to the No. 20 Single Wheel Hoe, the same as the No. 15 "IRON AGE" Single Wheel Hoe, Hill and Drill Seeder, Fig. 125, page 6.

A sectional cut showing the brush agitator device may be seen by referring to Fig. 146, page 3. Also an end view of the attachment showing how the seed can be seen dropping into the furrow, while the machine is in operation, is shown in Fig. 183, page 3. The remarks made there in reference to the operation of the seed drill apply with equal force to this attachment, because the seed devices are the same.

No. 4 "IRON AGE" Drill Seeder Attachment. Price, as shown in Fig. 133 with all necessary parts, \$4.00. This attachment is very similar to the No. 6 "IRON AGE" Hill and Drill Seeder Attachment, as mentioned above; but instead of sowing the seed both in hills and continuous rows, it is designed to sow in drills or continuous rows only, just as its name implies.

The No. 4 Drill Seeder Attachment will fit the same list of wheel hoes as mentioned above in connection with the No. 6 Hill and Drill Seeder Attachment. When applied to the No. 1 Double and Single Wheel Hoe the combination makes the same tool as the No. 4 "IRON AGE" Combined Double and Single Wheel Hoe and Drill Seeder, shown in Fig. 83, page 5; and when applied to the No. 20 Single Wheel Hoe, the same as the No. 17 "IRON AGE" Combined Single Wheel Hoe and Drill Seeder, Fig. 127, page 7.

No. 25 "IRON AGE" Fertilizer Attachment. Price as shown in Fig. 184 with all necessary parts, \$4.50.

Carrying out the same excellent plan of being able to add to Nos. 1, 3, 13, 20 and 21 "IRON AGE" Wheel Hoes a Hill and Drill Seeder or a Drill Seeder Attachment, we now have to offer a Fertilizer Attachment which is not only useful for those making use of the above tools but also to those having our "IRON AGE" Nos. 4, 5, 6, 7, 15, 16, 17, and 18 tools.

This attachment is not only applicable to such of these tools as may be purchased in the future, but it may also be applied to any of the above numbered tools which have been purchased in the past.

Our No. 25 Fertilizer Attachment is applied to the frames of our tools in the same place and manner as the Seed Attachments, and when applied to the frame of the Nos. 15, 16, 17, 18, 20 or 21, it becomes identical with the No. 25 "IRON AGE" Single Wheel Fertilizer Distributor as shown in Fig. 189, page 16. For further information read description of the No. 25 "IRON AGE" Single Wheel Fertilizer Distributor.

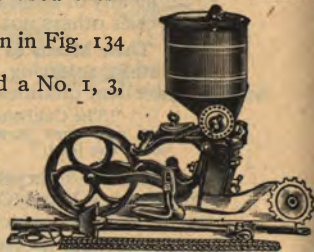


Fig. 134
No. 6 "Iron Age" Hill and Drill Seeder Attachment. Price, \$5.00

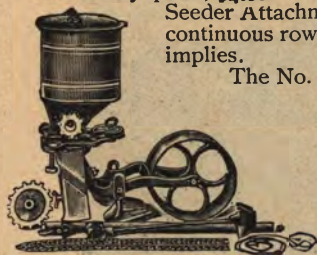


Fig. 133
No. 4 "Iron Age" Drill Seeder Attachment. Price \$4.00



Fig. 184
No. 25 "Iron Age" Fertilizer Distributor Attachment, Price, \$4.50

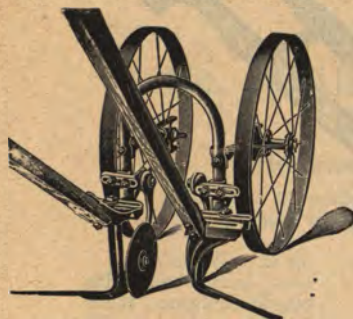


Fig. 169

Combined Disc and Fender Attachment. Price, \$1.10

Combined Disc and Fender Attachment. Fig. 169. Price, \$1.10. Since the introduction of this attachment it has increased in sale very rapidly. A sample order usually brings a larger order and an expression of appreciation. In cases where the small plants have become fastened in the crust that has formed around them it becomes difficult to hoe closely without displacing them, and it is the avoidance of this that makes this attachment valuable. As will be seen by the cut the discs are used in connection with the side hoes and are set to cut the surface a little in advance of same.

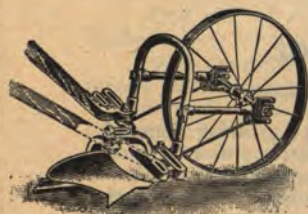


Fig. 82

The Landside Plow Attachment. Price, 90 cents

The Attachment as a fender is mostly used in connection with the cultivator teeth. By simply loosening one nut both may be set back in like positions, and this prevents the soil from falling on the small and young plants.

Landside Plow, Fig. 82. Price, Plow and connection, 90 cts. The cut plainly shows the Landside Plow following in line with the single wheel, which converts the tool into a *perfect Wheel Plow*. This attachment can be used with two wheels, but is much more manageable with but one, as shown in cut. It is easily attached, plows deep, throws a strong furrow and runs remarkably steady. It is used largely for breaking ground in small gardens and also in poultry yards.

Double Mold-Board Plow. Fig. 170. Price, \$1.40. This plow may be applied to any and all of our wheel hoes and combined tools. Has adjustable wings to suit opening furrows of various widths. For narrow work the wings can be removed altogether.

Special Fender Side Hoes. Fig. 216. Price, \$1.40. These side hoes made with special high sides or fenders are offered to meet a call from onion growers and others for early working of crops. They may be used in reversed position, if desired.

If it is desired to have wheel hoe equipped with these special side hoes instead of hoes regularly furnished, order same by adding the letter "C" to the number—for instance **No. 1C**. The list price of which would be increased 65 cts.

Single Tooth Attachment. Fig. 112. Price, 60 cts. When using the "IRON AGE" Double Wheel Hoe as a Single Wheel Hoe, as a Cultivator, a wider space is left between the two inside teeth than there is between the other teeth. This is because as a Double Wheel Hoe the crops cultivated must pass between the two inside teeth, while the distance between the others should be less. Therefore, to thoroughly cultivate all the ground while working the tool as a Single Wheel Hoe it is necessary to add an extra tooth, as shown in Fig. 112.

Onion Set Gatherer. Fig. 33. Price 80 cts. This attachment will fit all of our Double and Single Wheel Hoes, also combined tools. It saves hours of hard labor and does its work in a most complete and thorough manner. Besides being used to gather onions, it is used largely for gathering radishes and other root crops.



Fig. 33

Onion Set Gatherer.

Price, 80 cents

The Double Weeder Attachment. Fig. 81.

Price per pair, \$1.10. Very often it is found that the crust of soil is so firm the side hoes will not break it sufficiently to destroy the young weeds just germinating, and labor expended seems almost lost. Just here our new Weeder Attachment comes in fine play, as attached to the rear slot of the frame and touching the ground a short distance behind the hoes they complete the destruction of the weeds.

The side hoes are made, therefore, with very little pitch, and the action of the Weeder Attachment is to throw back to the plants what little soil is turned away, and moreover, leaves the ground perfectly level with a mulch of fine soil on the surface that makes an admirable protection in time of drought. By changing to opposite sides they can be used *between rows*, while, if necessary, the width of cut can be reduced by removal of one or more teeth.



Fig. 81

Double Weeder Attachment.
Price per pair, \$1.10



Fig. 170

Double Mold-Board Plow Attachment.
Price, \$1.40



Fig. 216

Special Fender Side Hoes. Price, \$1.40



Fig. 112

Single Tooth Attachment.
Price, 60 cents.

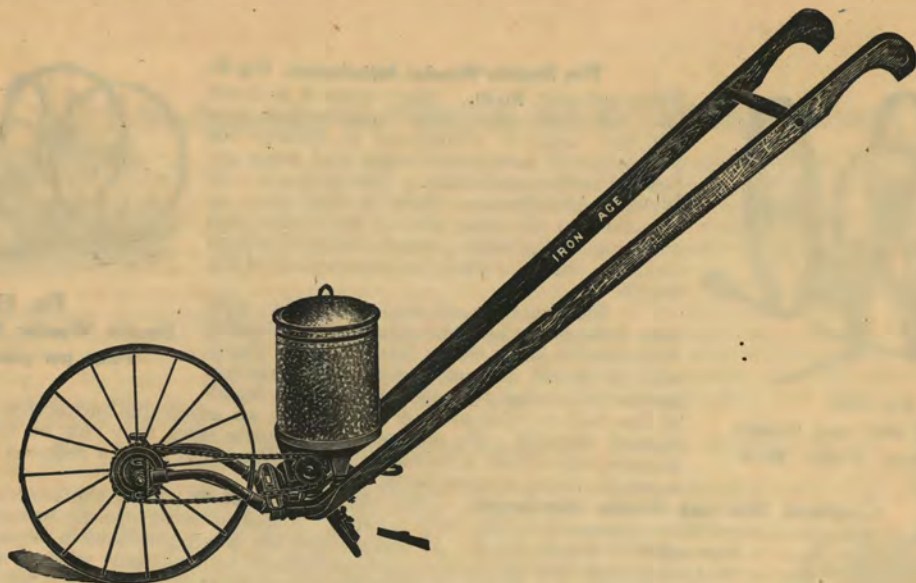


Fig. 189

No. 25 "IRON AGE" Single Wheel Fertilizer Distributor

Price, \$8.00

Packed Weight, 28 Pounds

With the increasing sale and use of commercial fertilizers there has been a growing demand for an inexpensive garden implement for the application of same, both in furrows and for side dressing. The fact that commercial fertilizers are easier and more pleasant to handle than barnyard manures needs no explanation to those who have used both. They will also be found more effective if fertilizers of proper analysis are used.

With the "IRON AGE" Fertilizer Distributor fertilizer may be sown across the bottom of the furrow or on either side so it will not come in contact with the seed and possibly injure it; or, the tool may be used for side dressing the growing crops. Side dressing often forces a crop to mature earlier, becoming more tender and salable. The tool is light in weight and very strongly built.

The feed consists of a revolving wheel of such design as to force the fertilizer out. The castings inside of the hopper, coming in contact with the fertilizer, are galvanized to prevent rusting.

The chain which drives the agitator is made of steel—very strong and durable.

The fertilizer hopper is attached to the frame in the same way as our "IRON AGE" Seed Drills attachments and its capacity is over 4 quarts.

In designing this tool we have kept in mind the inter-changing of parts, and we are pleased to state the following attachments may be purchased with this tool or added any time in the future: No. 6 "IRON AGE" Hill and Drill Seeder Attachment, Fig. 134, page 14; No. 4 "IRON AGE" Drill Seeder Attachment, Fig. 133, page 14; Double Mold-board Plow Attachment, Fig. 170, page 14; Onion Set Gatherer, Fig. 33, page 14; Single Weeder Attachment, Fig. 84, page 18. Furthermore, any one wishing to purchase cultivating tools, such as shown in connection with the No. 20 Wheel Hoe, Fig. 135, page 17, may do so—the frames of the No. 25 and No. 20 being identical.



No. 20 "IRON AGE" Single Wheel Hoe

Price, complete, \$6.00

Price, No. 21 plain (hoes only), \$4.00
Packed Weight, 28 Pounds

In our No. 20 we offer our latest and most complete Single Wheel Hoe. The Wheel is 16 inches high and has a broad faced tire, being $1\frac{3}{4}$ inches wide. It is securely held in position by two rigid arms which are made of tubing and coupled to a malleable casting, to which the working tools and handles are attached. Being constructed on the principles mentioned above, it is necessarily very strong and yet light in weight.

One pair of side hoes, three cultivator teeth made of solid steel, one pair of rakes, and a landside plow are furnished with the tool when it is purchased complete.

With the different working tools a great variety of work may be accomplished; in fact, it completely fills every desire in handling the soil. There is a large class of amateur gardeners, who in buying a garden tool, question whether they will have enough use of a Seed Drill to warrant them in paying the additional price for a Combined Wheel Hoe and Seed Drill. To all such we especially recommend our No. 20 when a Single Wheel Hoe is desired, for at any future time a seed drill attachment may be applied which converts the tool into a Seed Drill possessing every advantage of a tool made expressly for the purpose, and at simply the additional cost of a seed attachment. Likewise a Fertilizer Distributor Attachment may be applied with equally satisfactory results. Further information of these attachments is given below and cuts and description of same are given on page 14.

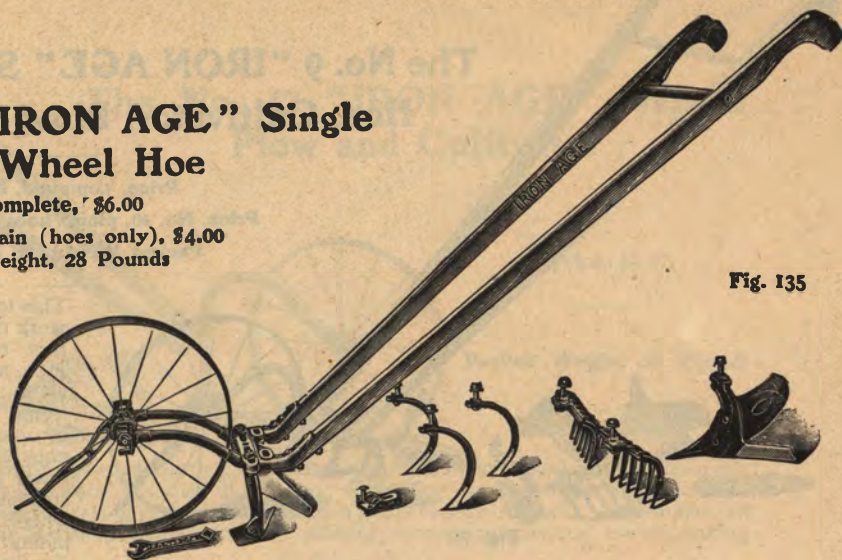


Fig. 135

Attachments

The No. 6 "IRON AGE" Hill and Drill Seeder Attachment. Price with all necessary parts, \$5.00. This attachment is shown in Fig. 134, page 14, and may be quickly and easily applied to or detached from our No. 20 Wheel Hoe. When applied the combination makes the same tool as the No. 15 "IRON AGE" Combined Single Wheel Hoe, Hill and Drill Seeder shown in Fig. 125, page 6.

The No. 4 "IRON AGE" Drill Seeder Attachment. Price with all necessary parts, \$4.00. For cut of this attachment see Fig. 133, page 14. It is very similar to the No. 6 "IRON AGE" Hill and Drill Seeder Attachment, but instead of sowing the seed in both hills and drills it sows them in drills or continuous rows only. When this attachment is applied to the No. 20 Wheel Hoe the combination makes the same tool as the No. 17 "IRON AGE" Combined Single Wheel Hoe and Drill Seeder.

No. 25 "IRON AGE" Fertilizer Attachment. Price with all necessary parts, \$4.50. See Fig. 184, page 14 for cut of this attachment. In designing this attachment we have carried out the same excellent plan of being able to apply it to our various tools as we have our Nos. 6 and 4 Seed Attachments. When this attachment is applied to the frame of our No. 20 Wheel Hoe the combination represents the same tool as our No. 25 "IRON AGE" Fertilizer Distributor shown on opposite page, Fig. 189. Read description of that tool carefully for further information.

The Single Weeder Attachment. Price, 80 cts. In Fig. 84, page 18, we show this attachment, and what is there said, and also said in reference to the work performed by the Double Weeder Attachment, Fig. 81, page 15, largely applies to this.

Double Mold-Board Plow Attachment. Price, \$1.40. For cut and description of this attachment see Fig. 170, page 15.

The No. 9 "IRON AGE" Single Wheel Hoe, Cultivator, Plow and Rake

Price, complete, \$5.25

Price, No. 10, plain (hoes only),

Packed Weight, 28 Pounds



Fig. 78

This tool is, in regard to the work done, almost a counterpart of the Double Wheel Hoe, and the same remarks as to its construction, extreme lightness and ease of operation will apply with equal force. In addition, its lower price, less weight and steadiness given by one wheel, make strong arguments in favor of this tool. For the small kitchen garden

we consider the single wheel hoe, with these points of merit, as being preferable. The work is done principally between the rows, although plants of small growth can be hoed on both sides at once by placing the wheel on the left side. With this single wheel tool, spaces of exceedingly narrow width can be worked, even using but one cultivator tooth. With the large plow attachment, deep furrows can be opened or closed; potatoes, celery and other crops hilled—in short all work usually accomplished by a special plow.

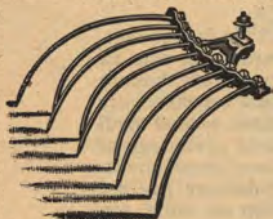


Fig. 84. Price, 80 cts.

The picture herewith shown gives the reader an excellent idea of the application of this tool; the ease by which it is operated, and the thoroughness of its work are features which impress everybody.

Fig. 84. Weeder Attachment for Nos. 9, 10, 20 and 21 Single Wheel Hoes. By the application of this to the rear of the Single Wheel Hoe the same admirable work is accomplished, of tining the soil and destroying the countless small weeds, just pushing above the ground, as by the similar attachment to the Double Wheel Hoe. The Weeder can be reduced in width to pass through narrow rows by removal of a portion of the teeth.

The No. 11 "IRON AGE" Wheel Plow

Following out the idea of bicycle construction, as shown in the preceding tools, we offer also a wheel plow constructed in same manner, and we think we can not be accused of extravagant language in claiming it to be a little "beauty." Its graceful shape and exceeding lightness accord well with its ease of operation and perfection of work. Adjustable in depth.

It will plow from three to four inches deep and throw a furrow four to six inches wide.

Poultrymen will find this tool to be the easiest, quickest and most efficient implement for turning under the accumulated filth and droppings in their poultry yards.

Price, \$2.50

Packed Weight, 15 Lbs.



Fig. 79

The No. 12 "IRON AGE" Wheel Plow and Cultivator



Fig. 120

Price, \$3.50.

Packed Weight, 20 Pounds

With all the different styles of Garden cultivators we have been manufacturing, there still remained a demand for a tool such as shown in Fig. 120; something light, strong, low in price and still possessing the necessary tools to make it accomplish a great variety of work. Yes, in fact, all work needed to be done in a small kitchen garden: plowing, furrowing, covering, hoeing, raking and cultivating.

The wheel is of steel 16 inches high; the frame of pipe coupled to malleable castings; the tools of best steel and malleable iron.

The average weight of this implement fitted with one working tool is but eight pounds, and can therefore be carried about the garden and used as readily as a common hoe.

Only those who have actually used one of these tools in his garden can appreciate its value or dream of its usefulness. Every day from early Spring to late in the Fall brings some special work for this tool. The first thing after the frost is out of the ground, it must be stirred and prepared for planting, and for this purpose the tool is fitted with the landside plow, which thoroughly breaks up the ground, after which the rake is applied and the ground pulverized. Furrows may be made and covered, in which seed, manure or fertilizer may be shown, while during the growth of the plants, the hoe and other tools will be found to do excellent service.

The simple means of detaching or applying the tools practically makes the implement ever ready for the purpose needed, therefore, this tool is emphatically a friend of the laborer and mechanic who can afford only to invest a small amount of money in a garden tool, and whose few moments in the garden must be devoted to "straight-ahead" work.

The photograph shows the use of the tool in a small kitchen and flower garden. It gives only an idea of the efficient work it will perform in working all garden crops. The attention of the amateur flower gardener is especially called to this tool. Do not fail to cultivate your flowers as you do the vegetables in your garden—it will pay.

Those who raise poultry, even in very limited numbers, will find this tool of great value for stirring the soil in their poultry yards, especially when fitted with the plow. Even when there are but a few fowls, the top soil of the ground is sure, at times, to become sour and need turning under.



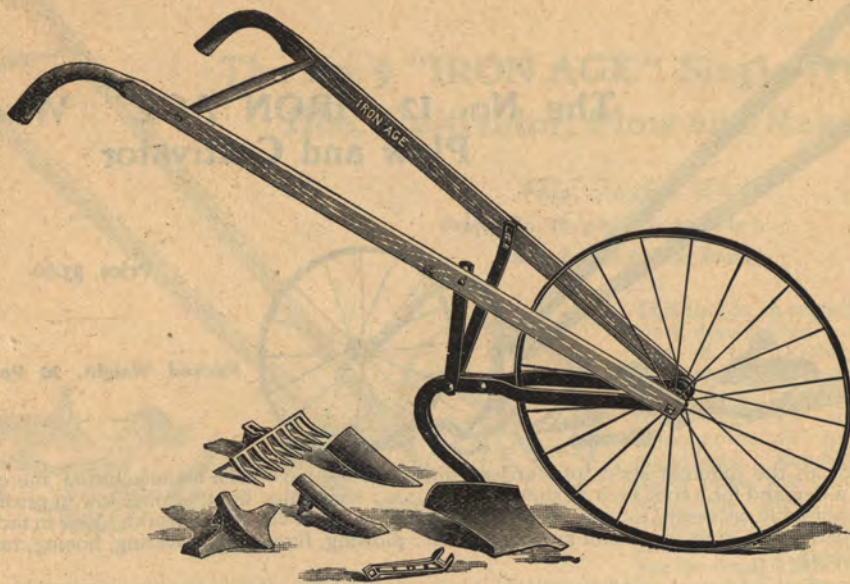


Fig. 193

No. 19 "IRON AGE" Wheel Plow and Cultivator

Price. \$3.25.

Packed Weight 22 lbs

To meet a demand coming from some sections for a Wheel Plow and Cultivator equipped with a higher wheel than anything we have previously offered, we designed our No. 19 "Iron Age" Wheel Plow and Cultivator. In doing so it will be noticed we have kept in mind those excellent features which have made our whole line of "Iron Age" Garden Implements so popular, viz., lightness combined with strength.

The Wheel is made of steel, twenty-four inches high, and is very strong. The tire is one inch in width.

The Frame is made of steel throughout, which insures durability and lightness.

The Handles are made of best oak, and are nicely finished.

The Working Tools consist of a plow, rake, scuffle hoe and two cultivator teeth. The plow is used for breaking ground, opening furrows, covering and cultivating; the rake for leveling, raking and cultivating the crops while they are small; the scuffle hoe for breaking the soil which may have become hard from rain, baking or tramping; the two cultivator teeth for making small furrows, deep cultivation, etc.

The photograph shows this tool in operation in cultivating spinach on a small truck farm.



The "GEM OF THE GARDEN" Single Wheel Hoe

PRICE

Plain, with 5 teeth only.

\$3.75

Complete, as shown, \$5.00

Packed Weight, 25 Lbs.



Fig. 30

No greater proof can be given of the popularity of a tool, or of its intrinsic worth, than the one simple fact of a *continued* demand for it. During the past few years, we have placed about *twenty thousand* of the "GEM" Wheel Hoes in the hands of gardeners, and we are not aware of a single instance in which it has failed to give entire satisfaction to the user.

It is not a toy; neither is it a tool made of light grey castings, calling for constant repair, the "GEM" being largely made up of *steel and malleable iron*. The set of slender stirring teeth, each stamped from one piece of steel, can not be excelled for thorough work, especially in hard soil.

The "GEM" is nicely finished, and when set up makes a handsome, quick selling implement.

"GEM" Landside Plow

Can be applied to either the "GEM" Single or Double Wheel Hoes. It opens a straight deep furrow, and is a valuable addition to either tool.
Price, 90 cts.



Fig. 32

"Gem" Landside Plow.
Price, 90 cts.

The "GEM" Double Wheel Hoe

Complete as Shown

Price, \$6.00

Packed Wt., 30 Lbs.



Fig. 31

For first and second working of crops the tool is used astride the row, while for subsequent hoeings the wheels can be closed together by means of the telescopic axles, and used between the rows as a single wheel tool. With the double wheel machine we usually send out the side hoes (as shown in cut), and with the single wheel, the scuffle hoe (see cut of single wheel machine), although the side hoes may be used effectively with the single wheel. Also an Onion Set Gatherer, Fig. 33, shown on page 15, is used by passing under the row; also makes a very good scuffle hoe. Can be used with either style "GEM" though more particularly adapted for the Double Wheel.

The No. 6 "IRON AGE" Horse Hoe and Cultivator

Price, as in Cut

\$6.75

Packed Weight, 83
Pounds.

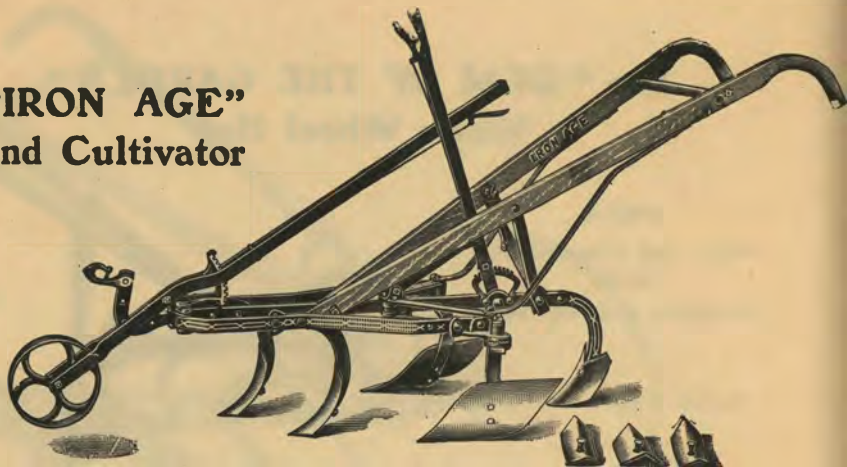


Fig. 160

Our No. 6 "IRON AGE" Horse Hoe and Cultivator is truly a 20th Century tool. It is a popular implement wherever the sun shines and crops grow. Its great adjustability adapts it for numberless uses and conditions. The following description will convince one why it "heads the procession."

The Frame of this tool is high and long, therefore it runs steady and with excellent clearance of trash. The Horse Hoe standards carry the cultivator teeth, as shown in Fig. 71, instead of using an additional pair of cultivator standards as we do in the case of our No. 1 "IRON AGE" Horse Hoe, Fig. 64.

The Horse Hoe Standards are of heavy *solid* steel and are attached to the bars by means of malleable iron ratchet castings, thus making a very firm connection and one capable of withstanding severe shocks without injury.

The Ratchet Castings are constructed so as to give easy and numerous adjustments to the side hoes, not only *sidewise*, but in angle of pitch. This adjustment also permits of the side hoes being entirely reversed for hoeing, or, for covering purposes, with point forward, as shown in Fig. 104, they can be quickly changed from side to side. Although our No. 6 Horse Hoe, when used as a cultivator, expands to a width of 30 inches, and

closes sufficiently for ordinary purposes, the hoe steels, if necessary, can be brought into immediate contact with each other by placing the ratchet castings in a reversed position, on the *inside* of the side bars. In this shape the tool is capable of doing excellent work, opening furrows for manure and other purposes. This arrangement is shown by Fig. 80.

Our Lever Expander has stood the test for several years with but little change, and we consider it, with its pair of double expander bars, the best of its kind for strength, simplicity and rigidity. It is made entirely of steel and malleable castings, of good length and placed in a convenient position for the operator. By the use of this Lever Expander the tool, as a cultivator, can be instantly changed while in motion from the extreme width of 30 inches, to 14 inches as its narrowest. Or, the castings of the Hoe Standards of No. 6 can be placed on the *inside* of the frame and it can then be used as a cultivator as narrow as 11 inches.

The Lever Wheel is also extremely simple, the lever handle being of steel, the castings malleable and is attached to the forward part of the Horse Hoe, the two bolts of the hinge-plates passing through the malleable ratchet piece. This lever wheel gives the facility of adjusting the depth of



Fig. 100.

The No. 6 "Iron Age" Horse Hoe and Cultivator, shown with Plain Wheel. Price, \$6.25 as in cut.

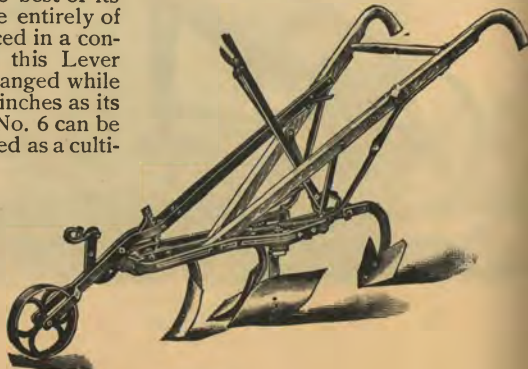


Fig. 80

The "Iron Age" No. 6 shown as a Furrower.

working while the tool is in progress, and is, therefore, to be commended as a good time-saver in a busy season. We furnish as ordered any of our Horse Hoes equipped with the *plain* wheel attachment, as shown in Fig. 102.

Figure 167 shows the horse hoes in a reversed position, with the rounded edge forward used for paring away soil from ridged crop or for close hoeing.



Fig. 167

Figure 101 represents the "IRON AGE" equipped with No. 18 Sweeps in such a manner that a wide cut is made and at an exceedingly shallow depth. This arrangement is particularly intended for cases where flat cultivation is desired. It is remarkable what rapid growth this practice has recently made; farmers who at one time used the plow as a means of cultivating are to-day using tools which will keep the surface very near level. By experience we know level cultivation to be the correct plan, and it is probable others have learned from the same source. The cultivator fitted with sweeps is also largely used as a thistle exterminator. They can, of course, be set to run deeper, and be used in various combinations.

We make our No. 18 sweeps in four sizes, as shown on page 27: 8, 10, 12 and 15 inches in width.

Prices, respectively.

28, 32, 38 and 45 cents each

Figure 102 shows our No. 6 "IRON AGE" Horse Hoe in a simpler form, being equipped with plain expander bars, held in place by our new wheel clamp, or our well-known steel stirrup clamp.



Fig. 102

The No. 6 "Iron Age" Horse Hoe and Cultivator without Lever Expander. Price, \$5.45

It is needless to say that in this shape, though not so convenient, in making changes, it is by far the most *rigid* and consequently the most durable form of the Horse Hoe. For rough knocks in the hands of careless or inexperienced laborers we recommend the "IRON AGE" shown in Fig. 102.

Figure 71. By reason of the fact the furrow closing attachment is such an important feature of this cultivator, we show it applied.

Very often has been heard this criticism on a five-tooth cultivator, and a well-founded one it is; that the rear tooth on each side bar, passing closely to the crop, leaves an open furrow which should by all means be closed. This is especially noticeable when the cultivator is opened wide—too wide to enable the centre tooth or sweep to close this furrow. It is the avoidance of this that makes the *better* work done by a two-horse cultivator working astride the row.

In a very simple manner, however, we accomplish this with our No. 6 or No. 7 Cultivator, an extra standard, with a narrow tooth being bolted in rear of and on the *inside* of the second tooth. This not only fills in the open furrow nicely, but more thoroughly pulverizes the soil.

It is, in fact, a seven-tooth attachment, and converts the tool into a most perfect seven-tooth cultivator.

The tool in each form is simple, strong and effective, besides having a pleasing design; the finish is the very best, and is something really unusual, the frame, standards, etc., being covered with two coats of paint and one of varnish, while the handles have two coats of varnish.

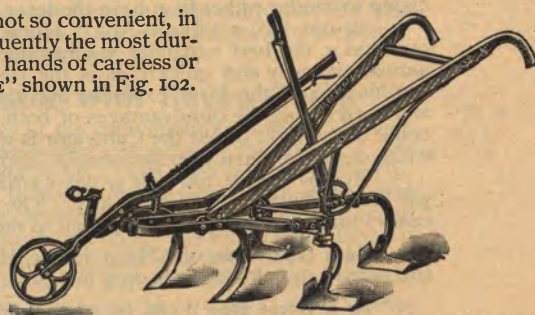


Fig. 101

The No. 6 "Iron Age" Horse Hoe and Cultivator equipped for Level Cultivation

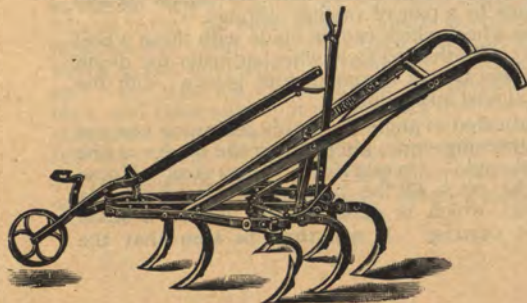


Fig. 71

No. 6 "Iron Age" Horse Hoe as a Cultivator, shown

The No. 7 "IRON AGE" Horse Hoe and Cultivator

Price, as in Cut;

\$7.75

Packed Weight 80 Lbs.

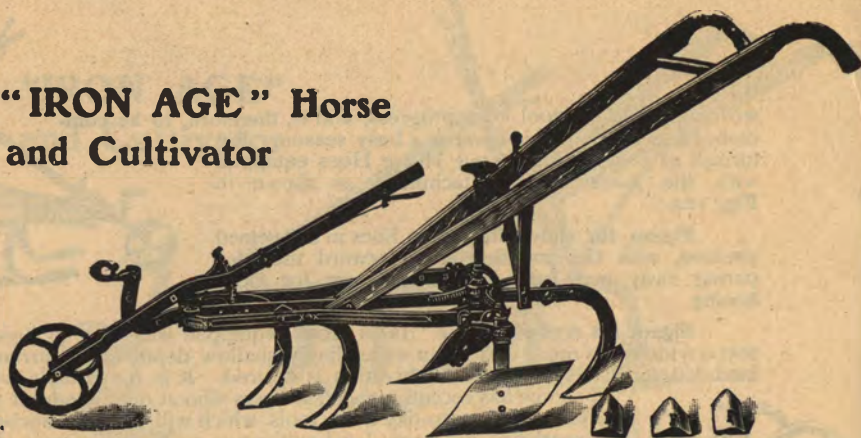


Fig. 161

Our No. 7 "IRON AGE" Horse Hoe and Cultivator Combined has gained many warm friends among the farmers and gardeners who constantly use tools of this class, and whose requirements of such tools are necessarily most exacting. Think over what we say below. We are confident that you will agree with us in appreciating the excellent advantages of this tool.

The frame is practically the same as our "IRON AGE" No. 6, viz.: high and long, therefore runs steady and does not choke in trashy ground.

The New Expander.—Ever since the first introduction of the lever expander for Cultivators and Horse Hoes, objections have come from the users of the tools that while they effected a saving in time, yet their use seriously interfered with the rigidity of the tool. So strong have been these complaints that manufacturers of this class of goods have worked and planned to their wits' end to devise a lever expander which would hold the parts rigid at every point one wished to set the tool. So serious has been this objection, thousands of farmers have clung to the old style clamp expander rather than have the lever expander with its lack of rigidity.

In our No. 7 "IRON AGE" Horse Hoe we offer to the public a device, which without question is the best expander yet introduced. The tool is at all times rigid, this being attained almost as easily and quickly as is the case in an ordinary lever expander. It is in principle a combination of the lever expander and the old style clamp expander, maintaining the advantages and overcoming the disadvantages of both. By simply releasing the wheel clamp and moving the crank to the right or left the Cultivator is widened or narrowed. When the Cultivator is set at the width desired tighten with the wheel clamp, and the tool is made rigid.

By this device, *one side of the Cultivator may be set nearer the middle bar than the other, yet being adjusted in the same way.* The absence of this adjustment on the lever expander has caused many "truckers" to still hold to the old style clamp.

As a Cultivator, our No. 7 Horse Hoe will widen so as to cultivate a surface of 30 inches and narrow to cultivate only $10\frac{1}{2}$ inches.

As a Horse Hoe it can be so contracted that the blades will come into immediate contact with each other, in which position it can be used for opening furrows, etc.

We would call attention to the segmental design of the expanding racks, which keeps them entirely within the frame, even when fully closed; thus avoiding all injury to crops.

Our New Wheel Irons.—To adjust our new wheel irons requires but one-fourth of the time of the best fitting ordinary wheel irons. No bolts or nuts are lost, as to set the wheel at any desired depth it is merely necessary to slightly loosen the nuts, and again tighten them. The wheel is firmly held to its place by a pair of ratchet castings.

The fine adjustment in depth of the wheel which can be made with these wheel irons is an important feature; with the old style wheel adjuster the depth of running of the wheel was always set at one of four places; with the new the wheel can be set at almost any point.

The Horse Hoes are adjusted in angle by simply loosening one nut and tightening same, after setting the blades at the desired angle. On our No. 7 "IRON AGE" Horse Hoe the pitch of the blades can also be finely adjusted, which is done by the use of a small ratchet casting. It will thus be seen that the

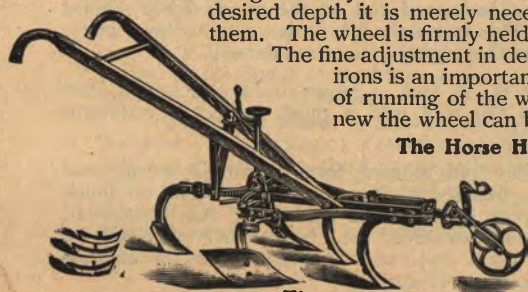


Fig. 91

The No. 7 "Iron Age" Horse Hoe and Cultivator, shown with Plain Wheel. Price, \$7.50

adjustment of the Horse Hoes in either direction can be quickly accomplished by simply loosening and tightening two nuts, a feature which will be appreciated by the user in the field. As the point of the blade becomes worn it may be set down lower, and thereby greater wear can be obtained from it. These blades are made of the best steel, tempered in oil and highly polished.

The Lever Wheel is the same as used on our No. 6 and No. 1 "IRON AGE" Horse Hoes, with the exception of being somewhat shorter. It has but one pivot and is therefore not apt to become shaky.

The Furrow-Closing or Seven-Tooth Attachment.—Please bear in mind that this attachment which has become so valuable, and which is a special feature of the "IRON AGE," is also applicable to our famous No. 7 "IRON AGE" Horse Hoe.

The Handles are made of the best oak; while ash no doubt would give a brighter appearance, yet for durability oak is much preferable.

No. 1 "IRON AGE" Horse Hoes and Cultivators

The No. 1 "Iron Age" Plain Cultivator, with Clamp Expander

Price, as in Cut, \$3.50.

With Plain Wheel, add 60 cents

With Lever Expander add 80 cents

With Lever Wheel, add \$1.10

With Horse Hoe and Sweep, add \$1.35.

Packed Weight, plain, 50 lbs.



Fig. 10

In this cut we represent our "IRON AGE" in its simplest form—a plain cultivator. In this shape we sell it largely in those sections of the country where labor is inefficient and a cheaper and simpler tool is desirable. It is an honest, strong and faithful servant.

The No. 1 "IRON AGE" Cultivator with Seven Teeth

It is obvious that very many times in the cultivation of crops a Cultivator having seven instead of five teeth becomes very desirable, as shown in Fig. 57. Of this arrangement we can not speak too highly. Equipped with narrow teeth, No. 0 ($1\frac{1}{4}$ inches), or No. 1 (2 inches), it does most excellent work in the first workings or in flat cultivation of crops, running very deep, and still throwing furrows so small as to endanger young plants but little. On this account tobacco growers are especially well pleased with the "IRON AGE" in this shape. It most thoroughly pulverizes all conditions of soil.

As will be plainly seen from the annexed cut, the change is made simply by the use of additional pair of standards and teeth. Price, as in Fig. 57: \$5.75.



Fig. 57

The No. 1 "IRON AGE" Horse Hoe and Cultivator Complete

On previous pages we have shown our latest pattern Horse Hoe, the No. 6 and No. 7, but in the cut below, Fig. 64, we represent the tool that has been carrying for years the fame of the "IRON AGE" far and wide. There is scarcely conceivable a portion of the tillable earth where it has not been in use, or a cultivated product of the ground which it has not helped to produce. This tool is somewhat lighter than No. 6 and No. 7, and for this reason is still preferred by some. The frame is not so high, and consequently it is necessary to make use of a separate pair of cultivator standards when wishing to convert it into a plain cultivator. All the "IRON AGE" attachments, with the exception of the Furrow-Closing and Depth Regulator are applicable to this admirable and well-known tool. Price, Fig. 64. \$6.75.



Fig. 64

The No. 8 "IRON AGE" Horse Hoe and Cultivator.

Price as in Cut. \$7.75

Packed Weight, 81 Pounds.

In the cut of the horse hoe here-with shown we offer a tool which has only been designed after very careful thought and trial. It possesses some advantages over horse hoes of any other style—we refer particularly to the expanding device.

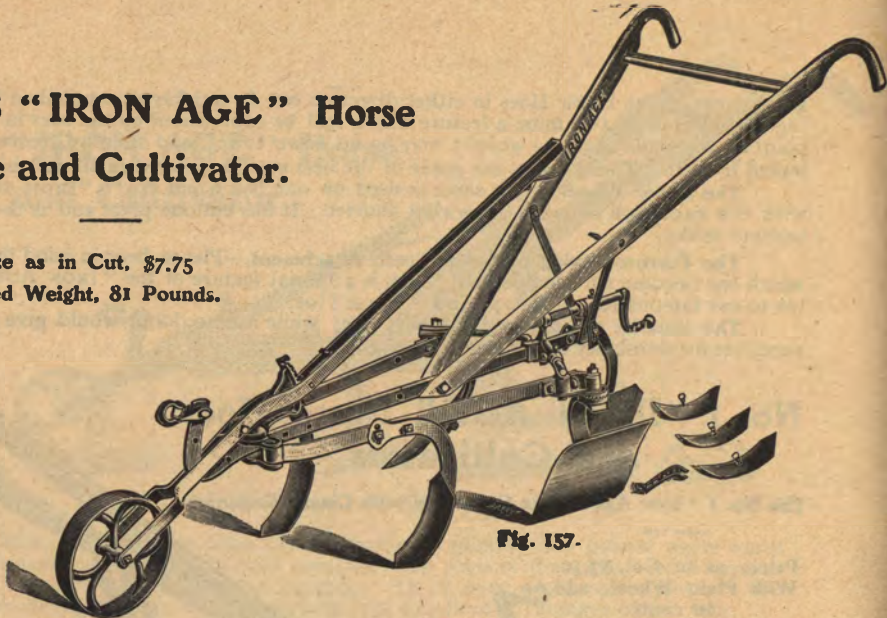


Fig. 157.

The Screw Expander.—It is true the screw expander (more plainly shown in Fig. 166) cannot be changed as rapidly as the lever expander, as shown applied to our No. 6 Iron Age Horse Hoes, yet the rigidity is the same at any and every point from the widest expansion, 28 inches, to its narrowest, or to a point where the standards come together and make the hilling blades used largely for opening furrows. There is no width at which the side bars may be set but that they will be held rigid and even without the slightest tendency to close up when the gangs are closed in for very narrow work. By reason of the fact that the change in width is made by a screw instead of a lever having a pawl to engage in a rack of a certain number of notches, it does not require a certain amount of change to hold it securely, but a very slight change may be made.

In Fig. 166 we plainly show the set screw in the casting connected with the side bar, which is designed for the purpose of giving adjustment to the connecting rods of this expander, thus adapting it for the cultivation of either wide or narrow rows and yet all the time obtaining the same rigidity. Furthermore, this same set screw allows for the setting of one side bar in or out further than the other. In cultivating growing crops, in going twice to the row, it is often desired to set the right hand side bar in, so the outside tooth running next to the crop will not leave a furrow, but it will be filled up by the rear tooth. By this plan the crop will not be endangered by a furrow having been left to give an opportunity for the sun and wind to absorb the moisture and dry out the rootlets. The setting of the side bars at irregular widths can not be accomplished by an ordinary lever adjustment.

The side bars are straight, which allows for narrowing the tool to its very closest position; and the frame is long, which enables it to run very steady. Market gardeners who need a combined horse hoe and cultivator having a large range of adjustment, will make no mistake in purchasing this tool.

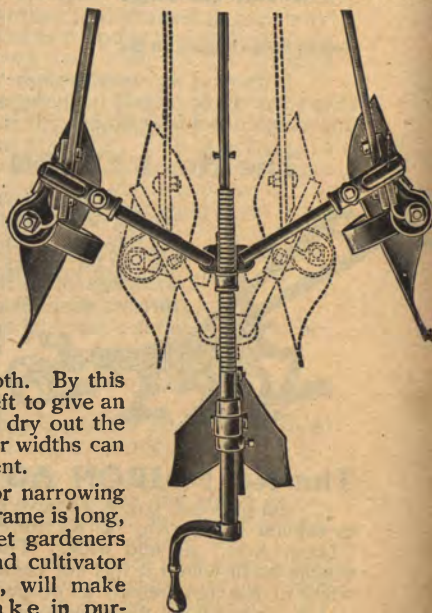


Fig. 166

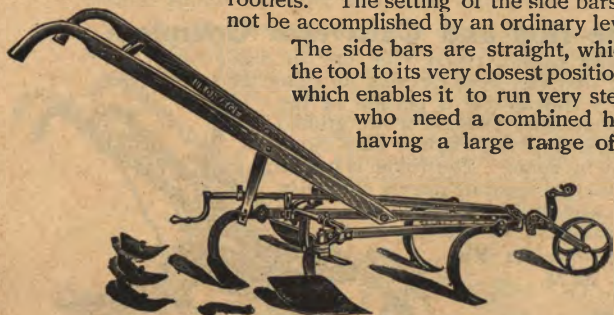


Fig. 158

The No. 8 "Iron Age" Horse Hoe and Cultivator, shown with Plain Wheel. Price, \$7.25

As shown in Fig. 158 we also furnish this horse hoe with plain wheel, when desired.



Fig. 148

The No. 35 "IRON AGE" Weeder and Cultivator

Price, as in cut, \$7.25

Packed Weight, 70 pounds

Especially adapted
for the cultivation of
Sugar Beets.

The tool shown in the cut above has become a great favorite among the sugar beet growers, where it has been sold in large quantities the past seasons. In the cultivation of plants when small, the tool is so designed that three narrow (1½-inch) cultivator teeth thoroughly mellow the soil in the center of the rows, while the side hoes cut the surface close to the young beets, without throwing any soil on them to do injury to the small tender plants.

The rear sweep is eight inches wide, and in passing through the soil, completes the destruction of weeds, and the mellowing of the soil. This sweep also turns back towards the plants, loose and mellow soil, after the weeder has cut the hard and oftentimes weedy surface away. When the crop is advanced, the weeder is disengaged with and the tool is converted into a plain cultivator, equipped with the narrow points, and so constructed it makes a most satisfactory tool for completing the cultivation of the crop.

The lever expander will expand the cultivator 22 inches and contract it to 13 inches.

The tool is made throughout of best material, and like all other "IRON AGE" implements, is sure to give the best of satisfaction.

We wish to call special attention to the fact that while this tool is a sugar beet implement, yet it is one which is admirably adapted to the use of all truckers and we urge them to give it a trial, knowing from our own use and experiments the tool cannot but please.

No. 35 Side Hoe Attachment. In Fig. 211 we show the side hoes together with their couplings, as an attachment. We call attention to the blocks having an adjustment for pitch besides the standards having an adjustment for depth.

This attachment is not only applicable to our No. 35 Cultivator above described, but will fit all "IRON AGE" cultivators and horse hoes. Price, per pair \$1.00



Fig. 211

The No. 5 "IRON AGE" Orchard Cultivator

Price, as in cut, \$7.75. Furnished with either style Wheel, but with Clamp Expander only.
Packed Weight, 80 pounds

Orchardists will do well to examine this modification of the "IRON AGE," it being something particularly well adapted to their needs. Its wide spread (nearly four feet) and numerous teeth is not made up by additions to the ordinary five tooth cultivator, but is complete in itself, having a construction that gives great rigidity, good clearance to the teeth, and yet handled by the operator with nearly the same ease as that of the smaller tool.

It affords, at a moderate price, just the tool for peach and orange groves, where it is already extensively used.

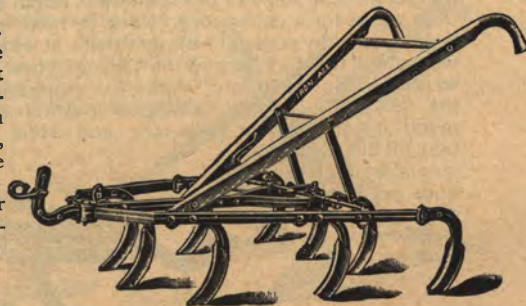


Fig. 70

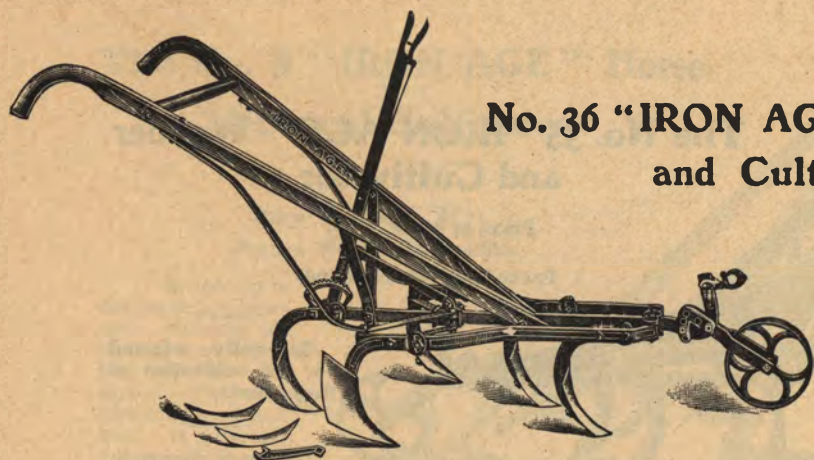


Fig. 162

No. 36 "IRON AGE" Horse Hoe and Cultivator

Price as in cut, \$5.40

Packed Weight,
65 pounds.

For a number of years
past we have been fur-
nishing to certain trade a

horse hoe designed with hilling blades, as shown applied to the above tool, but have only recently offered it to our trade in general. Where we have sold it heretofore it has been known as the Acme, and a number of our customers seeing the cut will recognize it as such. By reason of the hilling blades being pointed and shaped as they are, the tool will enter hard soil and will not clog on sod ground or where there is coarse manure. Owing to the shape and design of these blades it does not become necessary for any change of angle, as is the case with other style horse hoes. The hilling blades have proven entirely satisfactory to a large class of farmers for all purposes where they desired to hill the crops. There being no intermediate block or blocks between the blades and the standards, they are held very secure and rigid, being bolted direct to the standard. As can readily be seen, this tool is very simple, well proportioned, made of the best materials and well finished, which makes it a very satisfactory implement both in the hands of the dealer and farmer.

No. 37 "IRON AGE" Cultivator

Price as in cut, \$3.00

Packed Weight, 43 pounds

In very light and sandy soil, such as is largely found in the South Atlantic and Gulf States, our other horse hoes and cultivators, as shown, are found too heavy to do satisfactory work, and for this reason we have been manufacturing for a number of years a lighter weight tool, known to the trade as the Light Dixie and Dixie, Jr.

The No. 37 "Iron Age" Cultivator is made on the same high-grade stock and material as our other "Iron Age" Cultivators, but is built on the same model and of the same weight as the Light Dixie mentioned above. The tool is usually furnished in its plain form as shown in the cut, but same may be purchased with the lever expander, horse hoe attachment and plain wheel, when desired. We can also furnish this tool equipped with bent side bars instead of straight, when so ordered.

For some years past we have considered the advisability of placing this tool in our catalogue, but have refrained for fear some of our customers might be led to fill their wants for a cultivator to work in medium or heavy weight soils, by reason of the low price at which we can sell this tool because of it being lighter in weight. We therefore wish to emphasize the fact that we only catalogue and recommend it for work in light soil, and while it may fill the requirements in other sections, yet those purchasing it in such territory do so at their own risk.

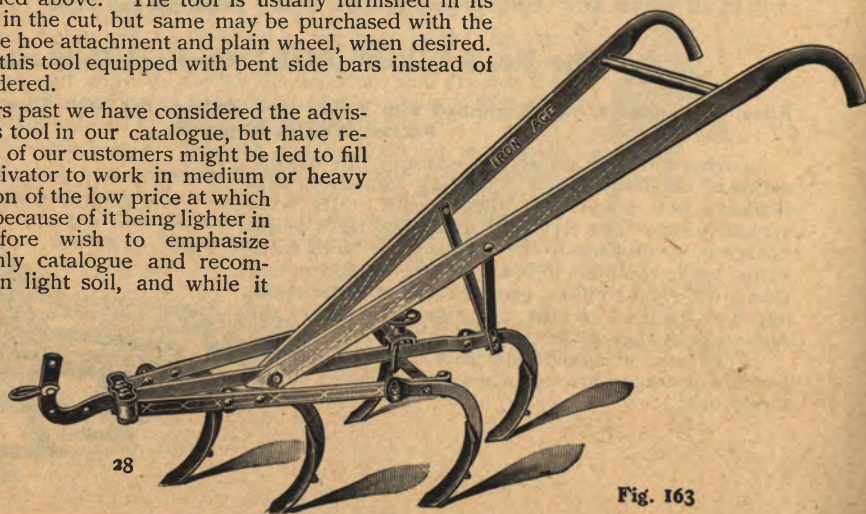


Fig. 163

"IRON AGE" Horse Hoe and Cultivator Attachments

A characteristic, and a valuable one it is, that a large portion of the "IRON AGE" tools are interchangeable. All of the following attachments, except the furrow closing and depth regulator, will fit our Nos. 1, 6, 7 or 8 Cultivators and Horse Hoes—not only our present patterns, but such styles as we have made for years past. For instance, the wheels now made for our cultivators will fit on our cultivators as made 20 years ago. The furrow-closing and depth regulator attachment will fit only our Nos. 6 and 8.

In these days of rapid and continued developments of new things, the addition of these devices to an implement is expensive when one must buy a complete tool in order to gain the advantages of such improvements.

The Depth Regulator Attachment is applied as shown in Fig. 188, and by adjusting the front lever the depth of running of the Cultivator may be quickly changed. It will be noticed the wheel and the Depth Regulator work in unison, although the comparative depth of either may be quickly changed. By throwing the Depth Regulator down to its extreme depth, the Cultivator may be completely raised from the ground and easily carried to and from the field. **Price, attachment only, \$1.85**

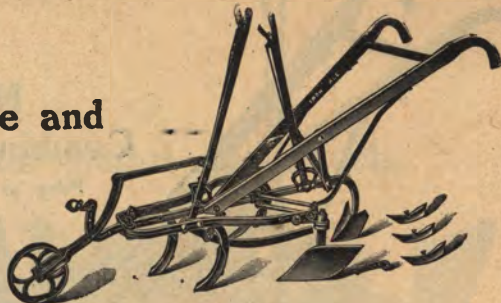


Fig. 188

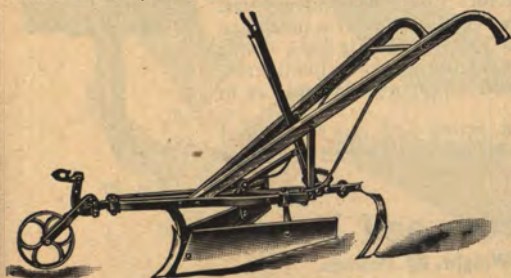


Fig. 103

The Vine Lifter Attachment is applied as shown in Fig. 73. This tool is used principally in working sweet potatoes, but is also very useful among all vine and bush crops. **Price, attachment only, \$1.60**

The Hilling Attachment is applied as shown in Fig. 103. This attachment is used in cases where higher ridging is desired than what can be accomplished with the regular Horse Hoe blades. **Price, attachment only, \$1.60**

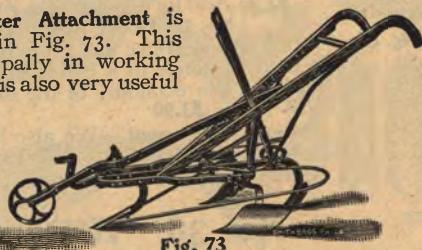


Fig. 73

No. 38 Side Hoe Attachment. In Fig. 212 we show the full set of parts furnished. The side hoes together with their couplings will fit all makes of cultivators, horse hoes and harrows. **Price per pair, \$1.00**

No. 35 Side Hoe Attachment shown in Fig. 211, page 27, and described thereon, will fit all "IRON AGE" cultivators and horse hoes. **Price, per pair, \$1.00**

The Furrow Closing Attachment shown in Fig. 180 is only applicable to our Nos. 6 and 7 "IRON AGE" Horse Hoes. We show this attachment applied to a Cultivator in Fig. 71, page 23, and on same page more fully describe it. **Price, attachment only, \$1.25**



Fig. 180

The Leveler is applied as shown in Fig. 104, and is used in connection with the Horse Hoe in covering corn, potatoes, peas, etc., and making up rows for root crops, etc. The covering is accomplished by simply reversing the Horse Hoe standards. **Price, attachment only, \$1.00**



Fig. 212

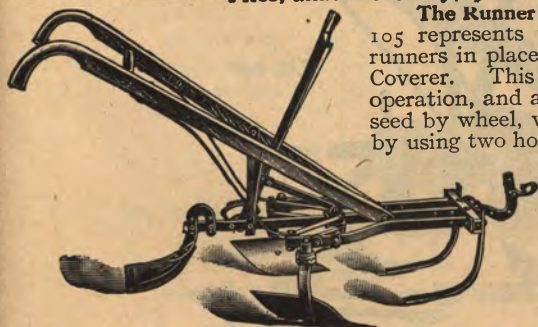


Fig. 105

The Runner Attachment as shown in Fig. 105 represents the "IRON AGE" with steel runners in place of wheel, while being used as Coverer. This arrangement is steadier in operation, and avoids all danger of displacing seed by wheel, which danger is still lessened by using two horses. **Price, attachment only, \$1.00**

\$1.00



Fig. 104

No. 1 "IRON AGE" Combined Harrow and Cultivator

Price, as in Cut, \$5.80

Packed Weight, 60 Pounds



Fig. 106

Fig. 106 represents our "IRON AGE" Combined Harrow and Cultivator, a tool that has, since its introduction, seemed to go "right to the spot" among farmers over the whole land. It is extensively used in cultivating Sugar Beets. As plainly shown in cut, the teeth are diamond shape, with a small cultivator

tooth forged on one end—steel of course. For very close work, every other tooth can be quickly removed. In common with all good things, this tool has numerous inferior imitations, but for solid quality, design or finish, is not approached by them. We furnish this tool, when ordered, in its plain form or with the addition of the lever expander plain or level wheel. Cultivating width when equipped with lever expander 34 inches; with plain expander in place of lever expander 38 inches. **Price, plain Harrow, \$4.40 Add for Plain Wheel, 160cts. Lever Wheel, \$1.10. Lever Expander, 80cts.**

No. 2 "IRON AGE" Diamond Tooth Harrow.—We also offer a modification of the above tool provided with 13 double ended teeth (see Fig. 87). This is in response to a call from those who do not care for the several adjustments, but who wish the economy of the double end. **Price, with Lever and Wheel, as in cut \$5.30. plain \$3.90**

Sweep Attachment.—We also have, as an attachment, fitting both our Nos. 1 and 2 Harrows, a wide, flat sweep on a high-throated standard, for use on rear end of middle bar. Sure death to weeds and grass. **Price, \$1.00**



Fig. 86



Fig. 87

No. 38 "IRON AGE" Weeder and Harrow

Price, as in Cut, \$7.50

Packed Weight, 82 Pounds.

In the cut below we show another tool which we have developed, owing to a special demand originating among the *Sugar Beet Growers*. It is, as can readily be seen, a tool adapted for deep and thorough cultivation, and yet, one which prevents the soil from falling on the plants.

The fenders serve as a protection to the plants, as no stones, lumps of dirt or soil can be thrown on them by the teeth. The fenders adjust themselves to the surface of the soil.

The side hoes thoroughly cut the surface close to the growing crop, and naturally throw it towards the centre of the row, while the sweep upon the rear standard turns the loose soil back again towards the plants. The result is, although the soil is thoroughly stirred several inches deep, yet the surface is left practically level after the Harrow has completed its work.

We invite especially the attention of all *Sugar Beet Growers* and *Truckers* to this new and excellent tool, knowing the results obtained by the use of it can not help but please and prove profitable to them. The tool will widen to 29 in., and narrow up to 14 inches.

Like all "Iron Age" tools it is made of the best materials.

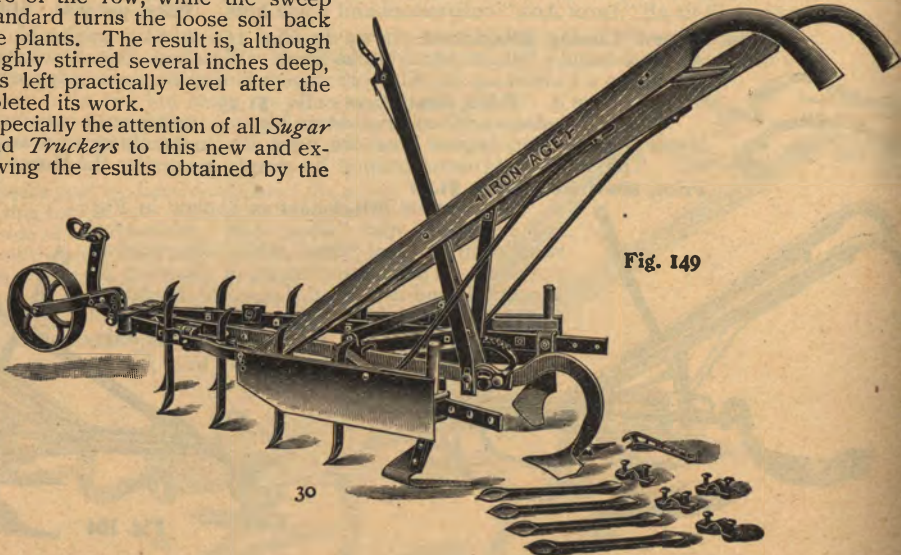
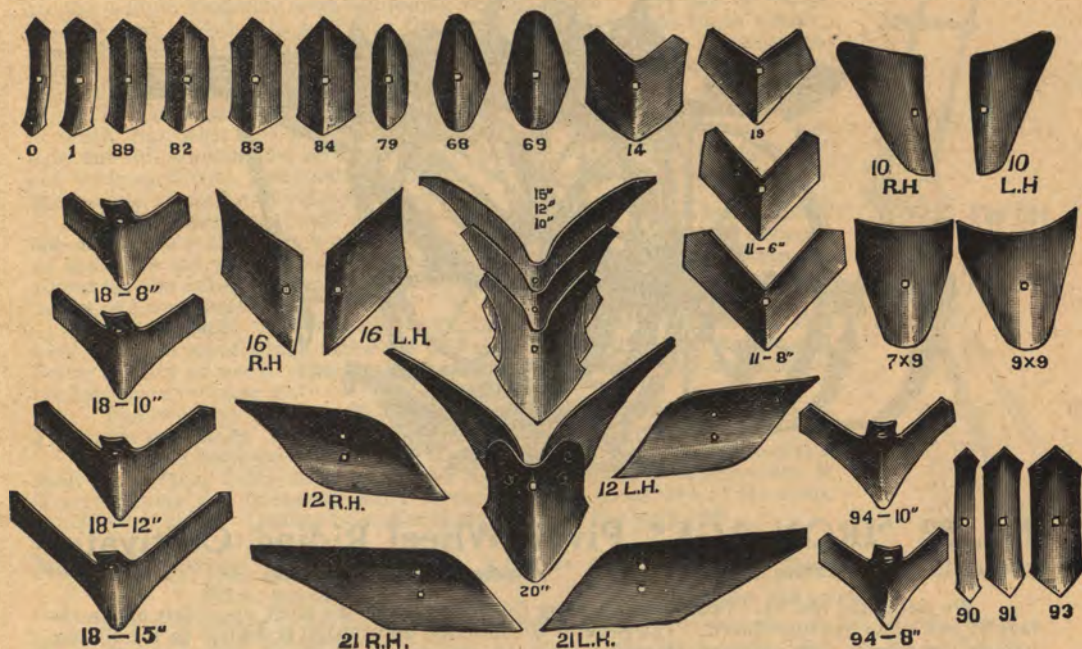


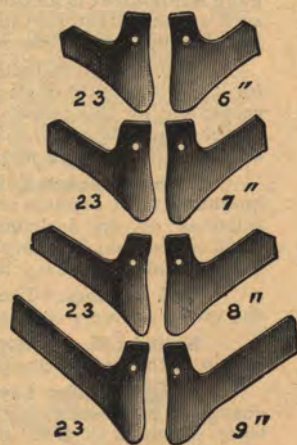
Fig. 149

"IRON AGE" Cultivator Points and Steels



No. 0, 1 1/4 inches	\$0.10
" 1, 2 "	.10
" 89, 2 1/2 "	.10
" 82, 3 "	.11
" 83, 3 1/2 "	.13
" 84, 4 "	.14
" 79, 2 1/2 "	.12
" 68, 4 "	.12
" 69, 4 1/2 "	.14
" 10, R. or L.	.25
" 11, 6 inches	.25
" 11, 8 "	.30
" 12, R. or L.	.30
" 14, 7 inches	.25
" 16, R. or L.	.25
" 18, 8 inches	.28

No. 18, 10 inches	\$0.32
" 18, 12 "	.38
" 18, 15 "	.45
" 19,	.30
" 21, R. or L. . . .	.50
" 23, 6 inches, R. or L.	.26
" 23, 7 "	.30
" 23, 8 "	.35
" 23, 9 "	.40
10-inch Furrower . . .	.90
12 " " " " . . .	1.10
15 " " " " " " . . .	1.40
20-inch Furrower, Adj.	
Wings	1.75
Shovel Blade, 7x9 . .	.40
" " 9x9	.50



FOR RIDING CULTIVATORS ONLY

No. 90, 1 1/4 inches	\$0.18
" 91, 2 1/4 "	.20
" 93, 3 1/4 "	.22
" 94, 8-inch Sweep .	.28

No. 94, 10-inch Sweep	\$0.32
" 95, 6-inch Side Hoes	
R. or L.	.50



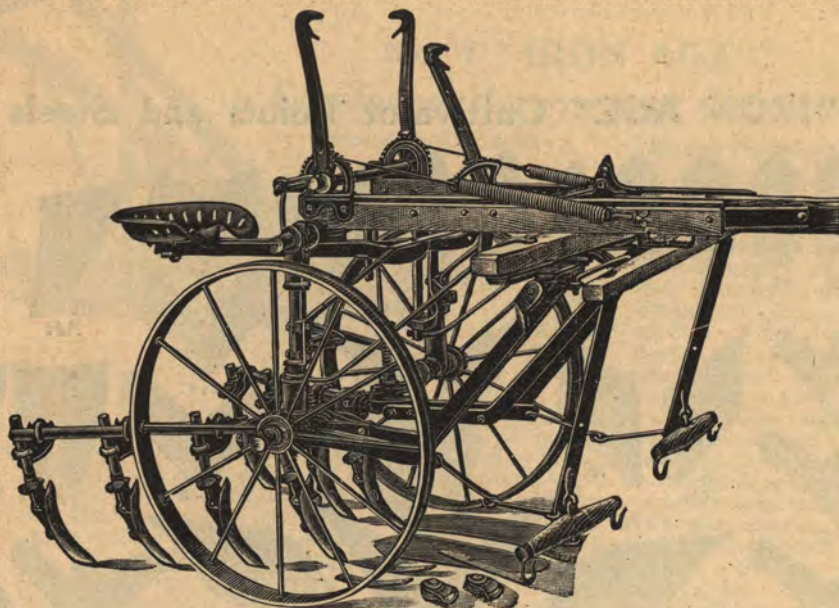


Fig. 225

No. 82 "IRON AGE" Pivot Wheel Riding Cultivator

Price, \$35.00

Packed Weight, 425 pounds

We claim the No. 82 "IRON AGE" Riding Cultivator to be the most up-to-date and satisfactory cultivator yet introduced. The general construction and design is similar to the No. 80, having low wheels, our patented pivoted gang bars, etc., but the heads of the gangs and lever gang adjustment is identical with our famous No. 60 Riding Cultivator, which feature has played such an important part in its sale. Therefore, the No. 82 Riding Cultivator is a combination of the especially good features of two of our most popular riding cultivators.

Since the introduction of this Cultivator, we have experienced a large and growing demand for it. On account of its great adjustability, it is adapted for use in cultivating a large variety of crops, and for this reason it is a great favorite of the truck grower and general farmer. It is the leader of all low wheel riding cultivators, and we believe the following information will convince all of its special high merit.

Pivot Wheels.—This Cultivator is guided by pivoting the wheels, with which method of operation most farmers are familiar, especially those who have occasion to work a cultivator on hillsides; or, are desirous of economizing space at the end of rows. The wheels can be easily fixed in position, by simply dropping a pin in a hole, for the working of the cultivator in fallow ground and for drawing it to and from the field.

Ball Bearings.—The whole weight of this tool rests upon hardened steel balls, and since the pivots are very close to the centre of the wheels it can be very easily guided.

Spring Lift.—A new feature of this tool is the addition of powerful springs to assist in the lifting of the gangs, thus making this operation easy work for a small boy.

Gang Adjusting Lever.—The gangs can be moved close together or further apart, so as to change to cultivate young or more matured crops, simply by the movement of the gang adjusting lever which is in front of the operator, just in a correct position to easily handle. It is often desirable to plant a different crop in another end of the field, with rows the same width apart, but of different growth,—for instance, potatoes and corn. In cultivating such the gangs must be set comparatively wide for the potatoes, while for the other part of the row, containing corn, the gangs must be closed up, in order to cultivate near enough to the crop. By a simple easy move of the gang adjusting lever, the change can be made while the team is in motion. By reason of not being able to adjust the gangs quickly by a lever, extra space for turning must be used; thus one crop or the other left to suffer, by the gangs being set too wide apart to do the desired good to one, and too narrow so as to injure the other.

Even in cases where the crops are not so planted, the gang adjusting lever saves valuable time in adjusting the gangs for the proper width, before starting to cultivate a crop, or a succession of planting of the same crop.

A special advantage of this lever, is that the gangs move at all times parallel with each other so the face of all the teeth are presented squarely to the front, and therefore will not throw soil to ridge the crop when set wide, or throw it away from the crop when set close together, as is the case where the gangs pivot at the front.

Pivoted Gang Bars.—The gang bars are hinged or pivoted as shown in Fig. 139, and the cultivating width can thus be quickly changed by the simple loosening and tightening of two bolts. They are of round bars of steel, rolled with a groove that engages a rib on the tooth holder, while the eye-bolt firmly clamps the tooth-holder to the bar. This combination also gives the facility of changing the position of the teeth, and increasing or reducing the number.

It is customary when cultivating narrow rows to reduce the number of teeth, but with this new adjustable gang bar it is not necessary; not only the full number can be used, but by the use of the narrow points sent out with each tool, ideal cultivation can be accomplished—the soil being thoroughly worked and yet remaining level.

The Wheels are made of steel, 32 inches high, with a broad faced tire 2½ inches wide. They are adjustable in width at any point between 42 inches as the widest, and 32 inches as the narrowest. This adjustment allows for the entire cultivation of rows 54 inches apart, and as close as 28 inches or even narrower.

Attachments.—The following attachments may be applied to this tool, any and all of which make the tool adapted for a greater variety and better quality of work. The first two are shown and described on page 34 the last three on page 40,

Fallow tooth, Fig. 140, \$1.25. Double Row Extension, Fig. 147 \$3.50. Plows, per pair \$0.85 Discs, per pair \$3.00. Spring Hoes (per set of 8), \$10.00.

In conclusion we wish to say, the purchaser of this tool will find it a most satisfactory Cultivator. Although light and simple in construction, it is very strong and possesses many advantages not contained in far more complicated tools. Quality of material and finish is the very best.



Fig. 139

No. 82A Spring Tooth "IRON AGE" Pivot Wheel Riding Cultivator

Price, \$34.00

Packed Weight, 415 pounds

To accommodate those desiring a Cultivator of the same construction as our No. 82, except being equipped with spring teeth in place of the regular break pin standards, as shown in Fig. 225, we offer the No. 82A Riding Cultivator.

We call special attention to our new style spring teeth. Each tooth consists of two independent pieces of tempered steel bent the correct shape, the larger piece forming a complete spring, the smaller serving as a helper and is attached by the same bolt that holds the larger tooth. The lower end of the helper is drawn out, lips are then formed and turned down, which fit over the larger spring, holding them together. The object of the helper is to assist the large spring when a severe strain is brought upon it. After it springs back to a certain point (before it reaches the breaking point) the strain is taken up by the helper.

Some make an error in the selection of a spring tooth Cultivator as a substitute for a tool fitted with spring hoes, see Fig. 110. Where very rocky or ledgy ground is to be cultivated, it is only practicable to use a Cultivator fitted with spring hoes; spring teeth in some soils and under certain conditions of the soil will do admirable work, especially where there is wire or coffee grass, as the shake of the springs throws the weeds on the surface, exposed to the sun.

Attachments

We have the following attachments applicable to this Cultivator: Fallow tooth, Fig. 141, \$1.25, page 34; Disc, similar to Fig. 118 (order as No. 3), \$3.60, page 40; Spring Hoes \$12.00 per set of eight, Fig. 110, page 40; Plows with special standards and standard holders, \$2.50; Break Pin Standards (per set of eight) including points and standard holders, see Fig. 152, on opposite page, \$8.00.

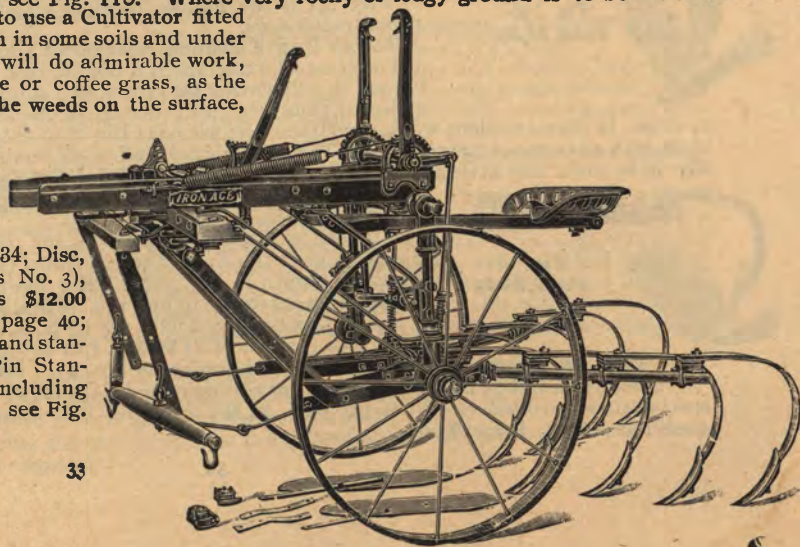


Fig. 228

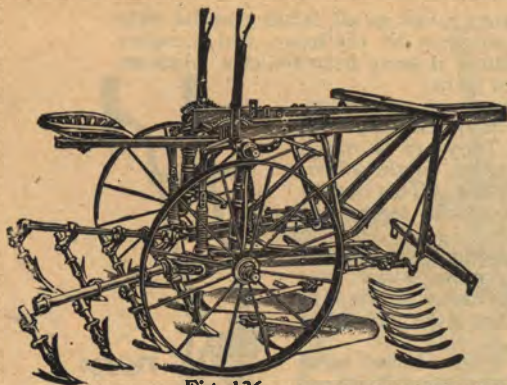


Fig. 136

No. 70 "IRON AGE" Combined Pivot and Fixed Wheel Riding Cultivator

Price, \$39.00

Packed Weight, 425 pound.

In many respects this tool is similar to our well known No. 82 Riding Cultivator, shown on previous page; the only difference being that it is a Fixed Wheel Cultivator as well as a Pivot Wheel. It is the only implement on the market that can be made into a pivot or fixed wheel at the will of the operator. In either form it is a distinct Pivot or Fixed Wheel tool, without losing any of the advantages of an implement designed expressly as a pivot wheel or fixed wheel cultivator.

Advantages of a Combined Pivot and Fixed Wheel Riding Cultivator.—Certain work can be more satisfactorily accomplished by a cultivator with Fixed Wheels, while at other times it seems absolutely necessary to make use of one with Pivot Wheels. Renters of farms, particularly those who make frequent changes, going from a hilly to a level farm or the reverse, will find it especially adapted to their varying needs. Inexperienced persons can sometimes more easily operate a riding cultivator with fixed wheels than one with pivot wheels, since the ability to operate the latter (without injury to the crop) requires some experience.

As a Pivoted Wheel Cultivator.—There are two forms in which the cultivator may be operated as a pivot wheel: The wheels can be guided by the feet while the gangs remain rigid; or in rows that are unusually crooked, in a moment's time the operator can have the gangs moving in unison with the wheels. In the latter form it is marvelous how satisfactorily very crooked rows can be cultivated.

As a Fixed Wheel Cultivator.—In this style the wheels are made rigid while the gangs move, guiding of the latter being accomplished by pressure of the feet on one or the other of the foot rests—the same method of moving the gangs as when operated as a pivot wheel.

No. 75 Spring Tooth "IRON AGE" Combined Pivot and Fixed Wheel Riding Cultivator

To accommodate those desiring a spring tooth cultivator, we furnish the No. 70 Riding Cultivator equipped with spring teeth, the same as we do the No. 82 as shown on previous page. Price,

Attachments

Fallow Tooth Attachment, Fig. 140.—This attachment will fit our Nos. 82 and 70 riding cultivators. When applied these tools are perfect fallow cultivators and used largely in cultivating orchards and preparing land in the fall, for sowing grain.

Fig. 141 is the Fallow Tooth applicable to our Nos. 82A and 75 riding cultivators.

Double Row Extension Attachment (Fig. 147).—We offer as an attachment a double row extension for use in cultivating two rows, at a single passage, of beans, potatoes and other crops planted equally as close. It does excellent work,—no open furrows next the crop as the outside tooth is in advance of the rear one. For fallow work and in cultivating especially wide rows, this attachment is also very valuable. Price, \$3.50 per pair.

We can furnish this attachment equipped with spring teeth when especially ordered.

The following attachments shown on page 40 are also applicable to the Nos. 82 and 70 riding cultivators:

Plows, as shown in Fig. 117. Price per pair, \$0.85

Spring Hoes, as shown in Fig. 110. Price, \$1.25 each.

For cultivators equipped with spring hoes, add to list price of tool (per set of 8) \$5.00; (per set of 6) \$3.75

similar to Fig. 118 (order as No. 2). Price, \$3.00

Disc Attachment,

Nos. 82A and 75 riding cultivators may be equipped with plows having rigid standards and special standard holders. Price per pair, \$2.50; also with Disc Attachment, similar to Fig. 118 (order as No. 3), Price, \$3.60.



Fig. 140
Price \$1.25



Fig. 141
Price, \$1.25



Fig. 147

Price,
\$3.50

The No. "60 IRON AGE" Pivot Wheel Cultivator

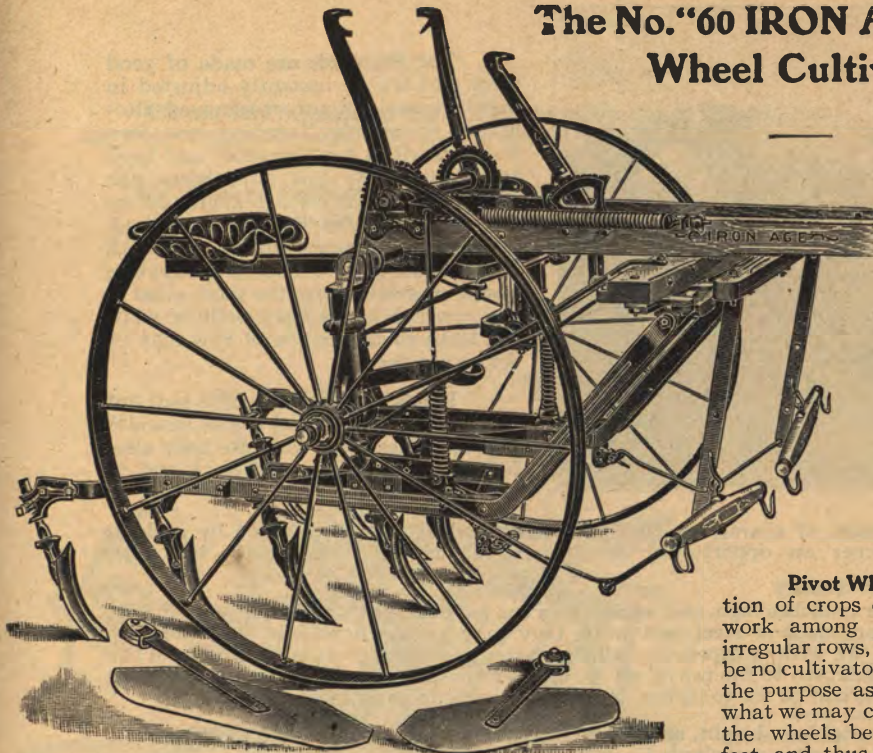


Fig. 121

No. 60.—Price with Spring Pressure Lock-Down and Lever Gang Adjuster, as in cut, \$39.00.

No. 61.—Price with Lever Gang Adjuster, Chain Lift in place of Spring Pressure, Lock Down, \$38.00.

Packed Weight, 450 pounds

Pivot Wheels.—For cultivation of crops on hillsides, or for work among very crooked and irregular rows, there probably can be no cultivator so well adapted to the purpose as one making use of what we may call Pivoted Wheels, the wheels being guided by the feet, and thus carrying the entire implement with its gangs of teeth, to right or left, as desired. In

devising our Pivot Wheel Cultivator we have endeavored to provide several very essential features, and believe in these respects the tool will be found to excel any similar one offered.

Some, on the start, in operating a Pivot Wheel Cultivator, may find it a little awkward, but a steady, slow team and a little patience are all that is required to master the "trick," and after it is once learned, the working of the Cultivator will be plain and simple.

A Pivot Wheel Cultivator has a great advantage over one having Fixed Wheels, in the time and minimum of room required to turn at the ends of rows. Swinging the wheels in the opposite direction to which the horses are turning, the Cultivator may be quickly carried over in position to cultivate the return row.

Ball Bearings.—It has wonderful ease of guidance, the pivots being vertical near the wheels, and the ends resting upon hardened steel balls.

Spring Lift.—A recent, but important improvement, is the addition of powerful springs to assist in the lifting of the gangs, thus making this operation easy work for a child.

Spring Pressure Lock-Down.—To prevent the gangs from rising and slipping over hard places, we furnish both our Pivot and Fixed Wheel Cultivator with a spring-pressure lock-down, strong enough to hold it to its work in stiff ground, but weak enough to allow the gangs to rise before damage could occur to them or the standards.

These springs are held in position by collars which can be quickly loosened, thus releasing the pressure and allowing the gangs to float, if desired.

The Lever Gang Adjuster gives the operator immediate control of the width of his gangs. With this Adjuster the gangs are always at equal distance from the centre. One important feature of our Adjuster is that the gangs and necessarily the teeth are always kept parallel with each other, each tooth presenting its face squarely to the front at all times, and therefore will not throw soil toward the row when expanded, and from the row when narrowed up, as is the case when the gangs are pivoted at the front. Especially is this Adjuster valuable where a variety of crops is cultivated in a short time, or a succession of the same crop; or in short where the distance must be changed frequently.

The Gangs are of such design as to give great strength—very rigid, so as to instantly follow the directions given by the wheels. For cultivating potatoes and all close grown crops the outside part of gang is removed, together with its standard and tooth. Both gangs may be raised with one lever by taking the steel pins from the ends of the cross shaft, and placing them through the lever and shaft together.



The Axles.—Steel, of course, are straight pieces, and each held in place by a single bolt, giving the farmer an opportunity of replacing same, when worn, with but little trouble or expense.

The Wheels are 42 inches high, and as shown in cut have flanged tires to prevent slipping on hill sides. They are made of steel, and while they may appear light, yet they are very strong and durable. We wish to especially call your attention to the great adjustability of this tool, thus making it adapted to the use of **all** farmers, from the corn grower to the market gardener. The wheels can be set 50 inches wide or narrowed up to 39 inches.

The Seat is adjustable in height, so in the cultivation of small crops the operator can, without dismounting, uncover any plants he might by accident cover.

Attachments.—The following attachments may be applied to this tool: Fallow Attachment, Fig. 116, page 40, price, **\$1.25**; Plows, Fig. 117, page 40, price per pair, **85 cts.**; Disc. Fig. 118, page 40, price per pair, **\$3.60**; Spring Hoes, Fig. 110, page 40, price per set of 8, **\$10.00**.

When the No. 60 "IRON AGE" Pivot Wheel Riding Cultivator is equipped with spring hoe instead of break pin standards, the additional cost is **\$5.00**.

The Tobacco Cultivating Attachment cannot only be applied to our No. 60 Riding Cultivator, as shown in Fig. 228, but also to our No. 82 Riding Cultivator.

To especially fill the demands of tobacco growers for an implement whereby very thorough and close cultivation of the crop may be obtained, we have developed the above device. The cultivator, when the attachment is applied, is worked by two persons—one sitting on the front seat to drive, and one on the rear seat to operate the two independent and adjustable gangs, each of which contains three narrow reversible diamond shape teeth, with a cultivator tooth forged on one end and a harrow tooth on the other. The teeth are so applied whereby the number may be reduced; in some cases of trashy soil it may be found desirable to use two teeth only on each gang. The gang's pivot and a spring permit them to be raised easily, or both of them may be hung up out of the way at the end of rows.

The Standards are made of good steel, and can be instantly adjusted in depth or angle of cut or removed altogether by simply loosening one nut. Farmers tell us it is "sensible" and "just the thing." By this adjustment, the teeth can be set at a sharp angle and the soil cast to or from the crop as desired. By the teeth being adjusted in depth independent of each other, in cultivating young or small crops, the teeth close to the row can be set very shallow, while the teeth in the centre of row may be set to run deep.

Points.—The steel points sent out on the Cultivator are $2\frac{1}{2}$ inches in width and 10 inches long, while we have also, of the same length, points $1\frac{1}{2}$ and $3\frac{1}{2}$ inches in width.

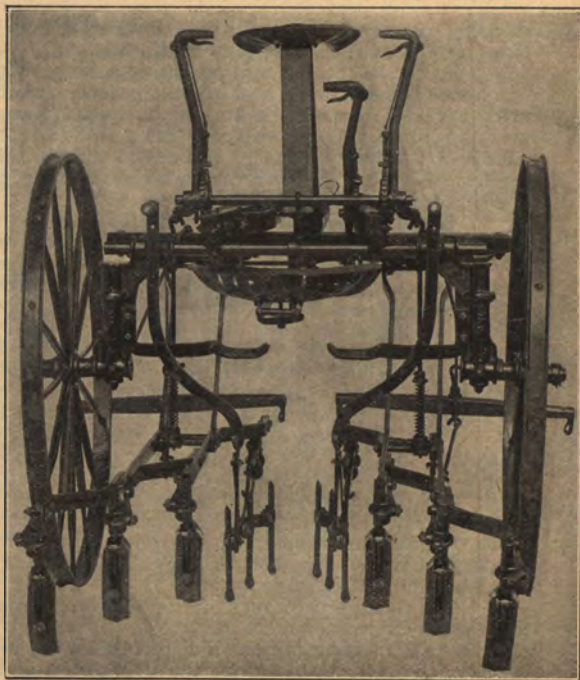


Fig. 228

We not only recommend this tool for the cultivation of tobacco, but for thoroughly cultivating other crops where level cultivation is desired and to work between the hills.

The Tobacco Cultivating Attachment will fit the cultivators of the following numbers, 60, 61, 62, 82 and 82A. When furnished either as a part of the cultivator or as an attachment the price is the same, viz \$5.00

The No. 62 "IRON AGE" Pivot Wheel Riding Cultivator

Price, \$37.00

Packed Weight, 435 lbs.

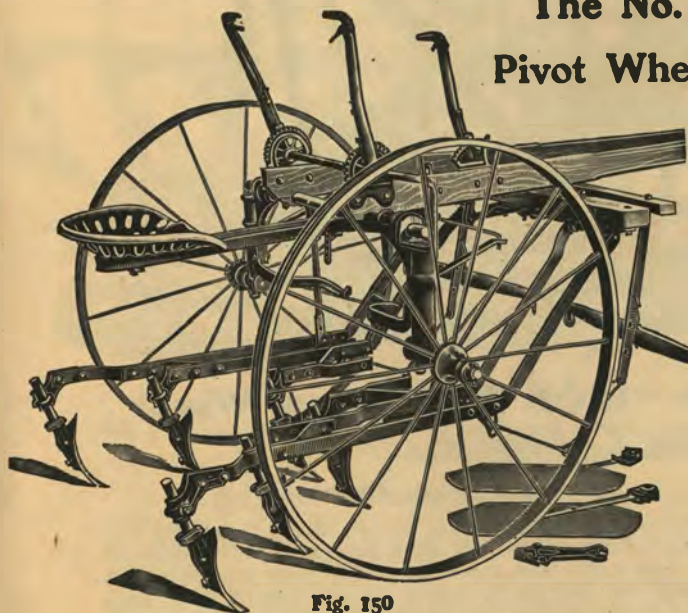


Fig. 150

Our No. 60 "IRON AGE" Riding Cultivator having given such good satisfaction with eight hoes, there came a demand from some for its equipment with only six hoes and we offer this tool herewith, which we call our No. 62. The gangs are very strongly constructed, so the same rigidity is possessed as in the gangs of the No. 60.

Since the cutting width of the No. 62 must of necessity be proportionately greater, because of there being only 6 hoes, wider teeth must be used on a part of the The inside tooth of each gang is $2\frac{1}{2}$ inches. The gangs are of such width as to

standards in order to pulverize all the surface thoroughly. inches wide, the middle and outside teeth being $3\frac{1}{2}$ inches. stir the soil thoroughly 43 inches wide.

The greatest call for this cultivator comes from sections of the country where crops are planted in narrow rows and yet level culture is not practiced.

The standards being set further apart on the gangs gives opportunity to work the tool in more trashy ground than is possible in the case of the No. 60, and for this reason it is desired by some.

Any one having a No. 60 "IRON AGE" Pivot Wheel Riding Cultivator and desirous of converting it into a No. 62, can readily make the change by simply purchasing a pair of No. 62 gangs. The conversion is simple and easily made. The other parts of the tools, No. 60 and No. 62, are the same.

Attachments.—The following attachments are applicable to this tool: Fallow Tooth, shown in Fig. 116, page 40, price \$1.25. Plows, Fig. 117, page 40, price per pair \$0.85. Disc, Fig. 118, page 40, price per pair \$3.60. Spring Hoes, Fig. 110, per set of 6, \$7.50. When the No. 62 Riding Cultivator is furnished with Spring Hoes (6) instead of break pin standards, the additional cost is \$3.75.

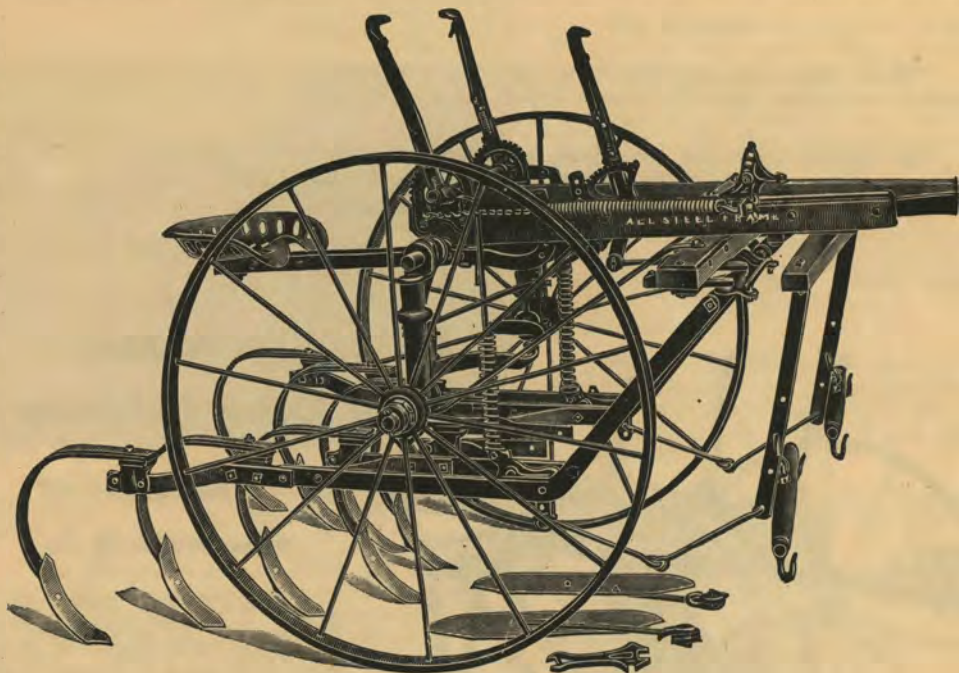


Fig. 195

No. 65 Spring Tooth "IRON AGE" Pivot Wheel Riding Cultivator.

Price \$38.00

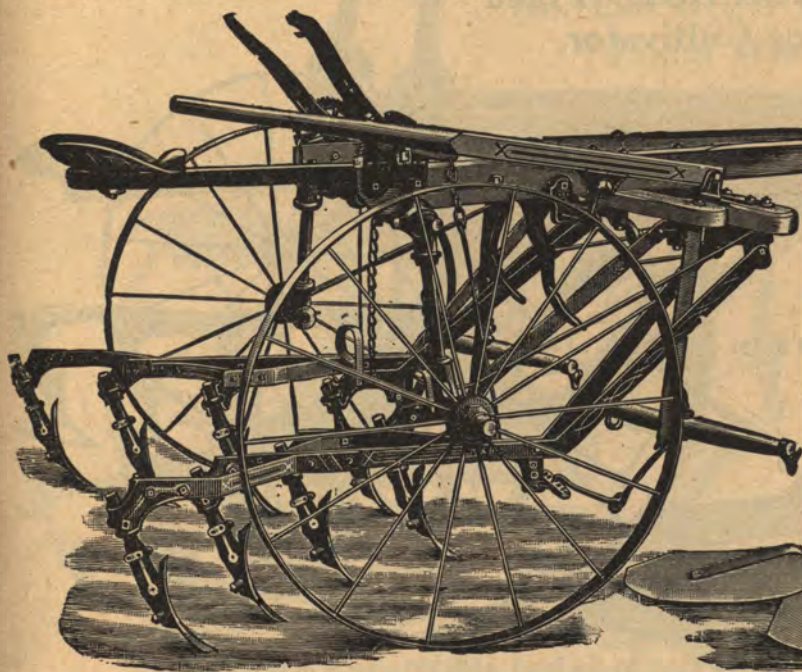
Packed Weight, 450 pounds

The very satisfactory results obtained by the use of our No. 60 Riding Cultivator has resulted in our furnishing this tool fitted with spring teeth, and thus securing for it a sale in sections using spring teeth. We have already experienced a large sale on it, and the expressions of satisfaction coming from those who have used them and the very good results obtained from trials made by ourselves warrant us in highly recommending this tool to all desiring one equipped with spring teeth.

The Spring Teeth.—We call special attention to our new style spring teeth. Each tooth consists of two independent pieces of tempered steel bent the correct shape, the larger piece forming a complete spring, the smaller serving as a helper and is attached by the same bolt that holds the larger tooth. The lower end of the helper is drawn out, lips are then formed and turned down, which fit over the larger spring, holding them together. The object of the helper is to assist the large spring when a severe strain is brought upon it. After it springs back to a certain point (before it reaches the breaking point) the strain is taken up by the helper.

We call attention to the fact that our No. 65 Riding Cultivator at any future time may be equipped with blocks and break-pin standards as shown in Fig. 121, which then converts this tool into a No. 60 Riding Cultivator, or it may be equipped with spring hoes.





The
No. 50
"IRON AGE"
Riding
Cultivator
Fixed Wheel

Price, No. 50, as shown in
cut, Chain Lift, \$32.00
Price, No. 51, with Spring
Pressure Lock-Down
\$34.00

Packed
Weight
410 lbs.

Fig. 122

For cultivation of crops on level or slightly rolling ground we offer our "IRON AGE" Fixed Wheel Cultivator as shown in Fig. 122

Our Patent Lever.—Even a few hours work on one of the old style tools will tell the user in the most convincing manner that the guidance of the gangs, by the feet, in dodging misplaced or bushy hills, should be a thing of the past; it is laborious and unsatisfactory work to make the best of it.

We offer, then, our patented lever arrangement, by which this wearisome work of guiding the teeth by the feet is almost entirely dispensed with. By the use of this *single lever* all misplaced hills are easily and quickly dodged.

Further than this, by the same lever the independent pair of teeth are so completely under the control of the operator that the two teeth can be opened out to pass a wide spreading plant; or, by simply depressing the lever, brought so closely together as to thoroughly cultivate the space between the hills. This is not, to our knowledge, attempted by any other implement on the market, and it is needless for us to point out to any intelligent farmer how capable it is of close, exact work among small plants. We know that "truckers" have been looking for and demanding just such a Cultivator. The front teeth are provided with a pair of foot loops, to be used in case of an unsteady team that requires the use of both hands in driving, and also at ends of rows for the same reason. Ordinarily the feet should be placed on the outside gangs, in order to give more pressure, when required. As shown by the cut, we have a hitch, adjustable in two ways—lower, for hard ground, and sideways, to overcome the leading of the plows.

The Standards are the same as used on our No. 60 Pivot Wheel Cultivator, having the same adjustment in angle and depth.

The Wheels are made of best steel, and can be narrowed up to 39 inches and widened to 52 inches, thus making it like our No. 60 Cultivator, adapted to the cultivating of nearly all crops.

The Spring Pressure Attachment, similar to one described on page 35, is also applicable to our Fixed Wheel Cultivator.

We furnish this tool, when ordered, with **Fallow Tooth Attachment**, as shown in Fig. 116, page 40. Price, \$1.25. Equipped with *Spring Hoes*, Fig 110, page 40. Add to list, \$5.00.

The Plows as shown in Fig 117, page 40, can also be applied. Price, per pair, 85 cents. This Riding Cultivator, in common with our other tools, is made of best steel, wood, malleable and grey iron, and is finished handsomely.

The No. 52, "IRON AGE" Fixed Wheel Riding Cultivator.

Price, \$31.00

Packed Weight
390 pounds.

Owing to the desire of some for a Fixed Wheel Riding Cultivator, low in price and simplified in construction as much as possible,—one adapted for straight ahead work we offer this, our No. 52 Riding Cultivator, which is a modification of our No. 50 Cultivator, shown on previous page. It is identical, with the exception of omitting the wood lever and yoke which is used to move the independent gangs to the right or left, closer together or further apart by the hand, while the team is in motion.

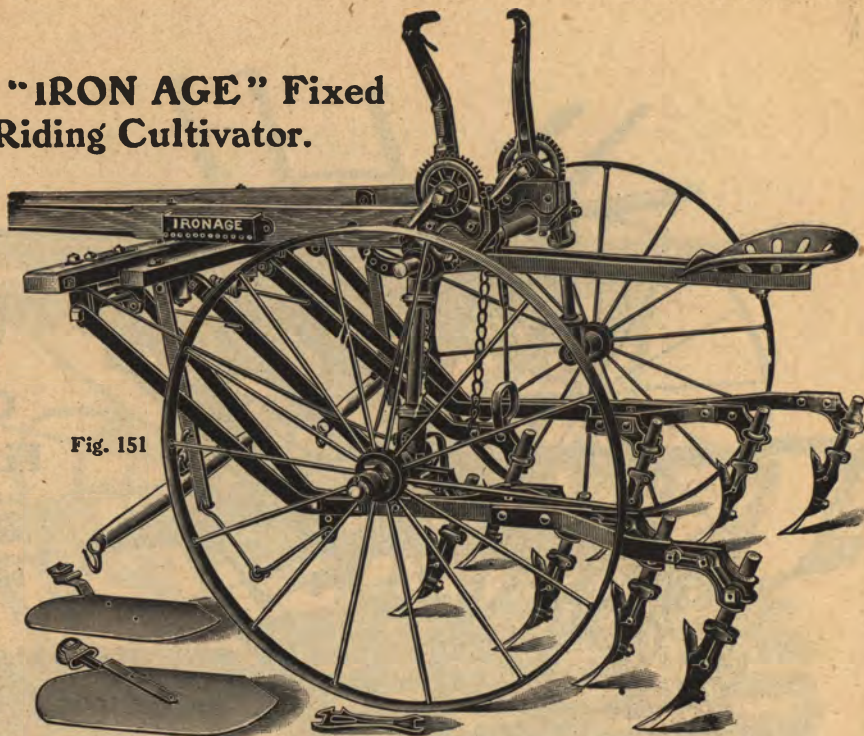


Fig. 151

Attachments.

Fig. 116. This Fallow Tooth Attachment will fit our Nos. 60, 61, 62, 50, 51 and 52, "IRON AGE" Riding Cultivators, and when applied these tools are perfect Fallow Cultivators. They are used largely in orchards and in preparing land in the Fall for the sowing of grain. **Price, \$1.25.**

Fig. 117. The Plows are made to fit any of our Riding Cultivators, except our Nos. 75, 82A, 95, 96, 130A and 131A, and they will do perfect work in turning earth away from the plant in hilling up and for marking out rows. **Price, per pair, 85 cents.**



R. H. L. H.
Fig. 117



Fig. 116

Fig. 110. Spring Hoes. In some sections, where the soil is of rough character, it becomes quite a tax to replace the broken wooden pins, and a Spring Hoe becomes a thing of necessity.

As will be readily seen, the standard of this tooth is entirely independent of the gang frame, and can, therefore, be adjusted in every way, an unusual feature with Spring trip teeth.

The break-joint is now adjustable by a set screw—a good feature. **Price, \$1.25 each.** May be applied regularly to all styles except Nos. 75, 82A, 95, 96, 130A and 131A. See note bottom pages 33 and 34.

For our Riding Cultivators equipped with Spring Hoes (a set of 8) add to list **\$5.00.**

Fig. 118. By the use of our Disc Attachment, earth may be turned away from the crop or thrown to it without being necessary to cut deep and possibly injure the roots of the growing crop.

By the correct use of the Disc Attachment, wire, coffee, and similar grasses can be comparatively easily exterminated, while baked clay soil can be cultivated without danger of injury to the crop, and without the use of the fenders. When ordering Disc Attachment for our Nos. 60, 61 and 62 Cultivators, call for No. 1.

Owing to the great efficiency of this attachment we regret it cannot be applied to our Nos. 50, 51 and 52 Fixed Wheel Riding Cultivators. **Price, per pair, Nos. 1 or 3, \$3.60; No. 2, \$3.00.**



Fig. 118



Fig. 110

No. 130 "IRON AGE" Fixed Wheel, Riding Cultivator

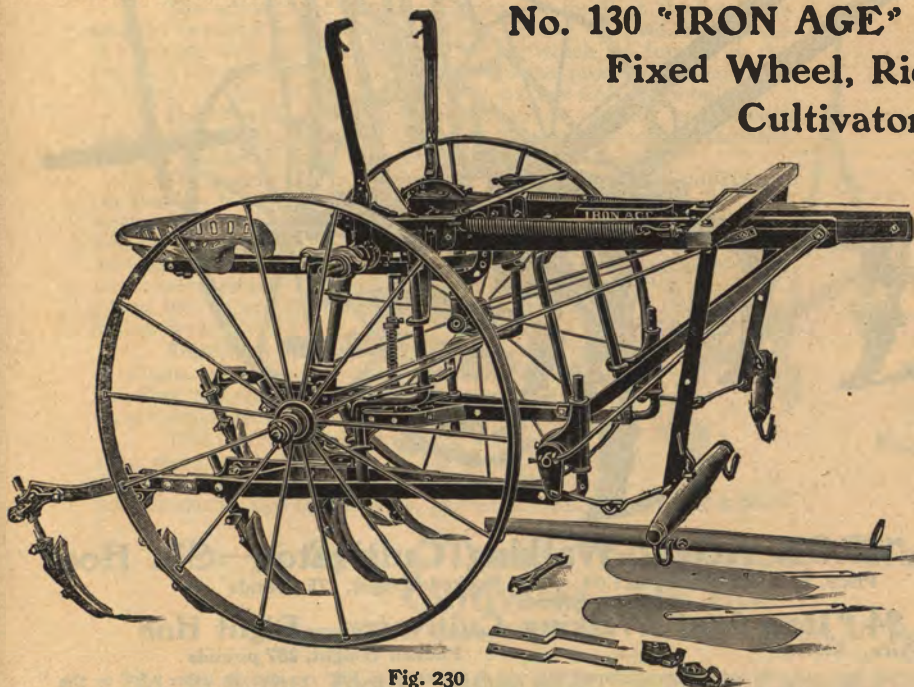


Fig. 230

Price, \$32.00

No. 131
Six Hoe
Price, \$30.00

Packed
Weight
450 lbs.

By making a careful study of the needs of certain trade, combined with their preference for a fixed wheel tool with pivot gangs, we have developed our No. 130 Riding Cultivator, as shown herewith.

It is not adapted for the cultivation of crops planted in rows closer than 36 inches, therefore, its use will be limited to those who plant their crops in rows not less than this width.

How Operated.—In working the cultivator, the feet of the operator rests upon the foot rests and the pressure of the feet moves the gangs to the right or left. The width of the gangs may be changed on the front arch and the width the inside teeth are set from the crop is adjusted by a steel strap, with a series of holes resting on top of the crank castings over the frame. The teeth may be adjusted in depth and angle of cut, to suit the operator, the same as all "Iron Age" Riding Cultivators.

The Gangs.—Are strongly constructed, are easily moved in the position desired, and also have a quick adjustment for leveling up the gangs.

The Wheels.—Are made of steel 40 inches high, having flanged tires and are two inches on the tread.

The Lifting Levers.—Are equipped with powerful springs to assist in the lifting of the gangs, thus making the operation one of extreme ease.

Attachments.—Fallow tooth similar to Fig. 116, page 40; price \$1.25. Plows, Fig. 117, page 40; price per pair \$0.85. Disc, Fig. 118; price \$3.60 (order as No. 1). Spring Hoes, Fig. 110, page 40; price per set of eight, \$10.00; set of six \$7.50.

For cultivators equipped with eight spring hoes add to list price of tool (per set of eight) \$5.00; (per set of six) \$3.75.

No. 130 A Spring Tooth "IRON AGE" Fixed Wheel Riding Cultivator.

Price, \$31.00

Packed Weight, 450 Lbs.

There are some conditions under which the spring tooth performs more satisfactory work than the break pin, and therefore we offer this tool with spring tooth equipment.

This cultivator equipped with six spring teeth instead of eight, is known as our No. 131-A "Iron Age" Spring Tooth Riding Cultivator, Price \$29.00.

Attachments.—Fallow tooth, similar to Fig. 141, page 34; price \$1.25. Disc. similar to Fig. 118, page 40; price \$3.60. Order as No. 3. Spring Hoes, Fig. 110, page 40, set of 8, \$12.00; set of 6, \$9.00. Plows with special standards and standard holders, Fig. 117, page 40; price \$2.50 per pair.

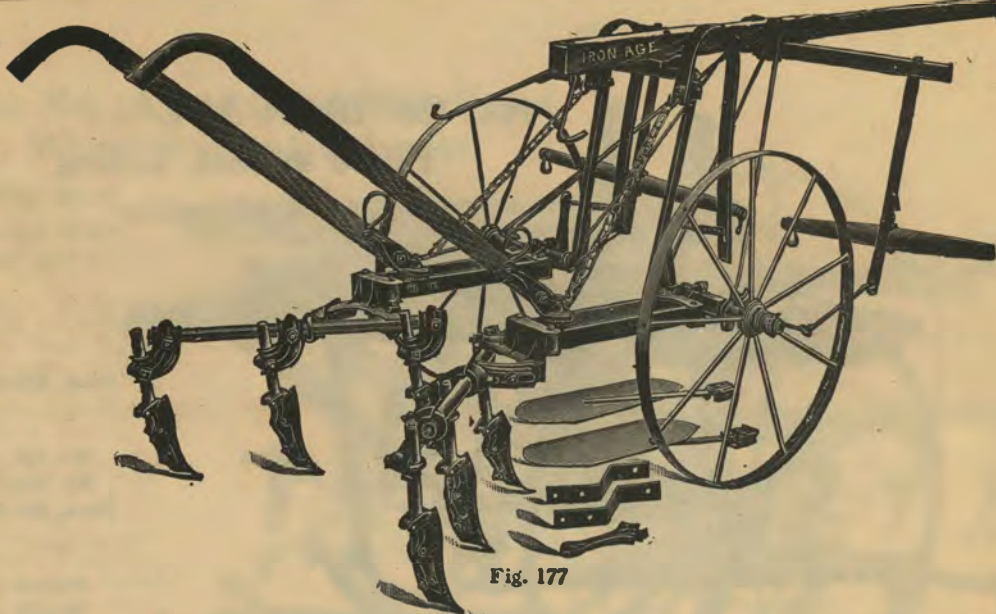


Fig. 177

No. 93 "IRON AGE" Walking Cultivator—Six Hoe

Price, as in cut above, \$21.00

Packed Weight, 275 pounds

No. 94 "Iron Age" Walking Cultivator—Eight Hoe

Price, \$22.00

Packed Weight, 287 pounds

In ordering Nos. 93 or 95 cultivators equipped with gangs as shown in Fig. 217 add the letter "B" to the number, thus: Nos. 93B or 95B.

There are certain conditions under which it is not practicable to operate a riding cultivator, and when a walking cultivator becomes an implement of necessity, due to very steep hillsides, very rough ground, either stony or stumpy, and due in many cases to the fact that a walking cultivator can be designed less expensively and sold at a low price.

By observation and experiment we learned we could much improve this class of implements by designing them with certain patented ideas which have been and are at present applied to some of our riding cultivators.

The Gangs.—In Fig. 178 we show clearly the construction of the pivoted gang bars. Embodied in the gangs one will recognize the valuable and patented features of the gang bar construction of our Nos. 70, 80 and 55 riding cultivators.

The dotted lines represent the extreme positions at which these may be set; of course, one is able to set the bars at any intermediate point. These bars are pivoted on a heavy bolt, between the first and second standards. The change in the angle is made by loosening the nuts of this bolt and the bolt on the segment casting which grips the gang, just in advance of the second standard. The gang bars are round bars of steel, rolled with a groove which engages a rib on the tooth holder, while the eyebolt firmly clamps it to the bar. These bars being grooved and designed in the manner which they are, gives the facility of changing the position of the teeth, independent of each other, and makes possible another important advantage which very often is lost sight of in a two-horse walking cultivator—that of adding another pair of standards and teeth, making an equipment of 8 hoes instead of 6. It is not necessary to purchase a complete set of gangs to make such a conversion. By swinging the gangs outward to their

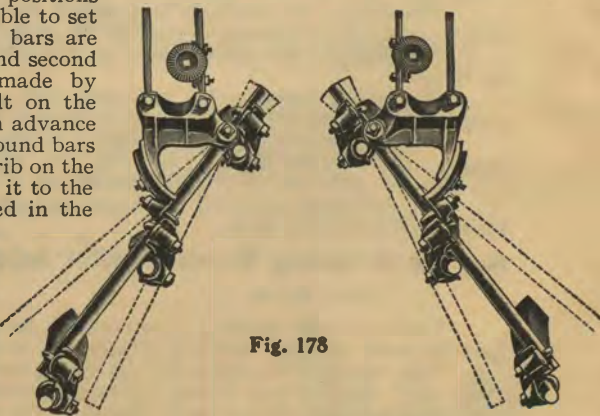


Fig. 178

extreme position, leaving an average distance between the two inside teeth for passing the crop, it will cultivate a surface 50 inches wide; and the narrowest to which it can be adjusted to cultivate is practically down to nothing. When the cultivator is reduced in its cultivating width we recommend the use of narrow teeth, especially where it is desired to practice level cultivation. The standards are of the same equipment as used on our Riding Cultivators, being adjustable up or down, turned to the right or left, by simply loosening and tightening one nut, which makes an especially valuable feature in connection with a Walking Cultivator.

The adjustment of the gangs can be made at the head, the amount of adjustment being 12 inches. In Fig. 217, we show gangs of a simpler and lighter construction, and which we furnish in the place of the pivoted gang bars shown on the preceding page, when so ordered. As will be seen, this is a six hoe Cultivator only.

The Wheels are 30 inches high, made of steel and have a tread of $1\frac{1}{2}$ inches. The average width apart is 36 inches, but they may be increased to 42 or narrowed up to 30.

The Spring Lift is designed for quick and easy balancing of the gangs. It consists of a pair of long, flat springs connected to the gang heads, by an adjustable strap. The application of two additional hoes (making it an 8 hoe tool) makes it more necessary for correct adjustment of the spring lift to produce the results which will give ease of handling the gangs, and especially for easily raising them at the end of rows.

Regulation of Depth is accomplished by means of chains, which give to the operator great ease for handling the tool and insure more perfect and uniform cultivation of the crop.

This cultivator may be fitted with plows, Fig. 117, page 40; price, **85cts.** per pair. Equipped with spring hoes, Fig. 110, page 40, instead of break-pin standards, add to list price, per set of 6, **\$3.75**; per set of 8, **\$5.00**

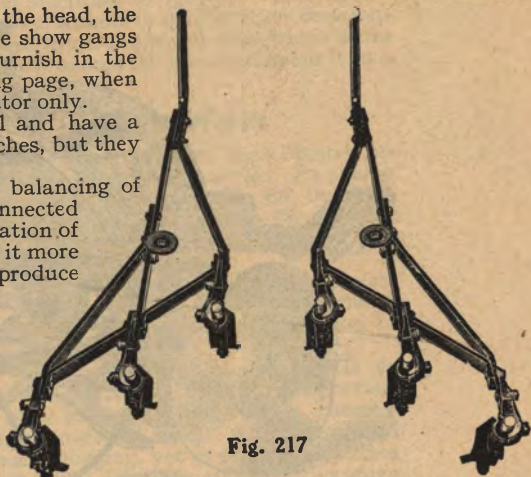


Fig. 217

No. 95 Spring Tooth "IRON AGE" Walking Cultivator—Six Hoe

Price as in cut below, **\$20.00**

Packed Weight, 275 pounds.

No. 96 Spring Tooth "IRON AGE" Walking Cultivator—Eight Hoe

Price, **\$21.00**

Packed Weight, 287 pounds

We also furnish our Walking Cultivators equipped with spring teeth, either 6 or 8 hoe, as ordered. The spring teeth are the same style and equipped in the same manner as those furnished on our Nos. 75, 85, 57 and 58 Riding Cultivators; and the same remarks as to the merits of them will apply with equal force when made a part of the equipment of the Walking Cultivators.

Plows may be added with special standards and standard holders; price, **\$2.50** per pair. Break-pin standards, including points and standard holders (see Fig. 177, opposite page), per set of 6, **\$6.00**, per set of 8, **\$8.00**. For Spring Hoes, Fig. 110, page 40, per set of 6, **\$9.00**, per set of 8, **\$12.00**.

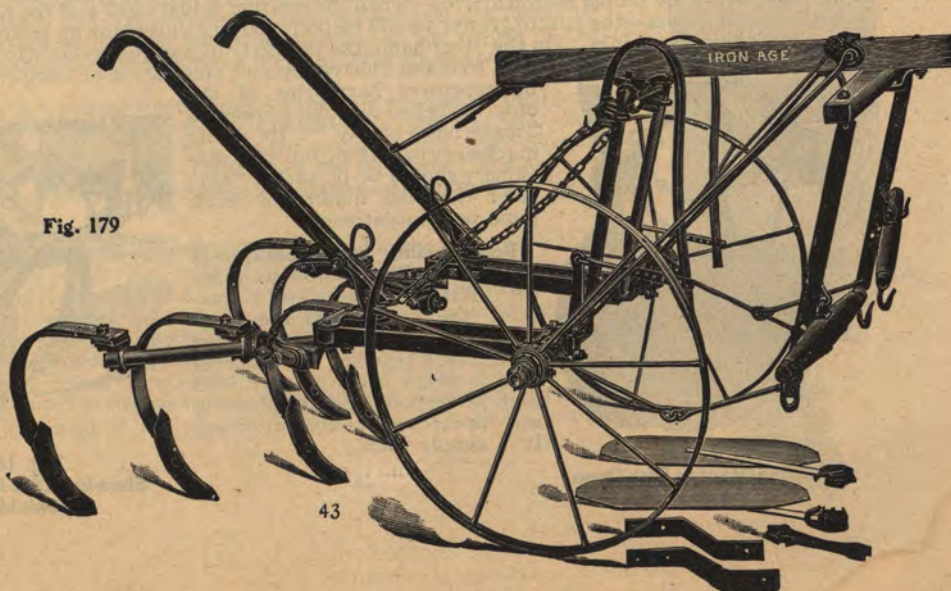


Fig. 179

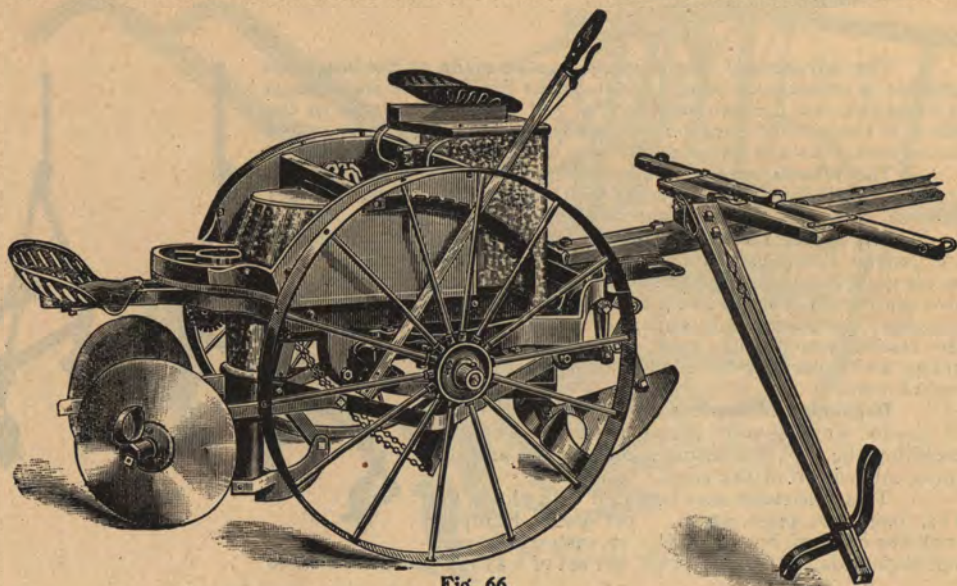


Fig. 66.

"IRON AGE" (Improved-Robbins) Potato Planter

Packed Weight, with Fertilizer Distributor, 735 pounds; Without Fertilizer Distributor, 675 pounds.

Nos. 1 or 3 Planters complete with Fertilizer Distributor with plow as shown in Fig. 66.	\$83.00
" 2 and 4 " " without " " " " " " " "	73.00
Fertilizer attachment with full equipment to apply to Nos. 2 or 4	13.00
Any style of opening plow as shown in Figs. 66, 142, or 218.	3.75
Corn, Bean, and Pea attachment.	5.00
Leveler Attachment	1.00

Nos. 3 and 4 Planters are designed to plant especially large cut seed, weighing not less than about 4 ounces. In other respects the planters are the same.

If planter is wanted equipped with opening plow as shown in Fig. 142, add the letter "A" to the number: thus, No. 1-A; or, if wanted as shown in Fig. 218, add the letter "B" to the number: thus No. 1-B. We furnish the planter with any style plow at the same price.

Old-Time Methods.—It is needless to speak of the slow, laborious method of potato planting as practiced by the large majority of growers; of the consequent improvident waste of time at the opening of the busy season, and the interference caused by the uncertain weather of early spring. When the proper season arrives—when the weather is just right and the time just fits in with other business—the potato grower should be prepared to do his planting promptly and with as little delay as possible. On the other hand, the potato crop is so costly—costly in high-priced seed, thorough preparation of soil, frequent cultivation and application of insecticides, followed

by expensive harvesting of the crop, it behooves the grower to "make haste slowly." He wants machinery to aid him, but that machinery should be of such a character that the quality of work must be unquestioned.

Both Quality and Quantity.—It must be quality as well as quantity. With the "IRON AGE" however, the farmer has the comfortable assurance of attaining both, easily planting with it from four to seven acres per day, and such perfection of potato planting was never before accomplished. It is simply ideal.

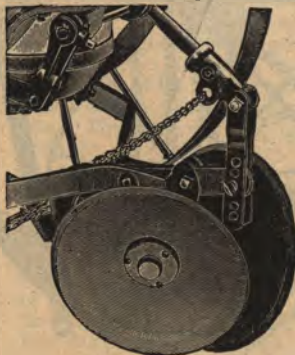


Fig. 218
Showing Double Disc Opening Plow.

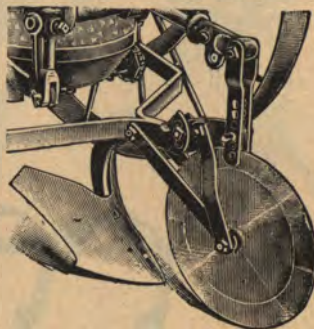


Fig. 142
Showing Disc in place of Shield.

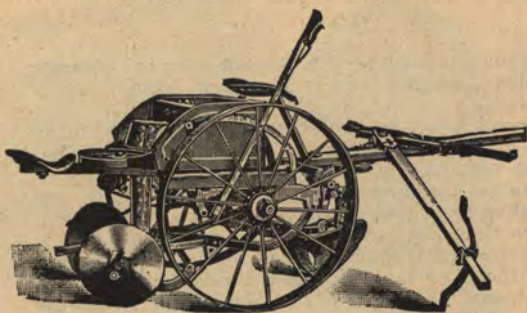


Fig. 67

"Iron Age" [(Improved Robbins) Potato Planter Without Fertilizer Distributor.

injury to the machine. In striking a "fast" rock the blow is gradual, and enable him to pass over the rock. While, in ground which is somewhat trashy, the Plow with Shield will prevent clogging, yet in case of long vines and very trashy ground, a sharp disc will do better work. The Disc has another advantage over the Shield, in giving the Plow a better chance to scour; result, a lighter draft. The adaptation of our Planter to pass through ground without interference, where cow peas or a heavy growth of other vegetable matter has been previously plowed under, will be very gratifying, especially to the potato growers of the South. For this purpose, we should especially recommend our Double Disc Opening Plow, as shown on opposite page in Fig. 218.

A valuable feature common to all these Opening Plows is the fact that on each side is thrown a free furrow of loose soil with no packing or wedging to crowd the future growth of the crop, and they have independent adjustments by which their positions can be changed to suit the different depth of furrowing in different soils. Immediately following the Plow comes the deposit of fertilizer (if used) in a broad stream across the bottom of the furrow.

The Fertilizer Distributor.—When we devised the Fertilizer Distributor of the "Iron Age" Planter we were congratulated by all using this machine, upon its high merit. As will be noticed from the cut below, in our new one we have retained many of the old and good features of the distributor as used heretofore, but we have also added some new ones which make it as far in advance of the old as the old was of others at the time it was placed on the market.

The fertilizer is placed in a round hopper of galvanized iron, holding about 100 lbs., and it is fed downward through a central opening formed by a revolving upright agitator shaft containing steel pins. This feeding is accomplished by a winged scraper which is placed on top of the fertilizer—*never underneath*—and descends by its own gravity as the material is fed away. The fertilizer falls upon a cone at the bottom of the shaft, in a light, loose condition, and is thrown by this cone outward on to a revolving disc, which, together with a star feed wheel applied at the mouth of the opening, carries it to the gate and forces it out into the spout and down on the spreader.

All waste of fertilizer when turning at ends of rows is avoided by a simple arrangement whereby the feeder can instantly close the gate. The capacity of the Distributor is up to a ton per acre and even more, depending, of course, largely upon the condition of the fertilizer. The amount sown is quickly and easily regulated by the adjustment of gate or change of sprocket wheels.

Dropping of the Seed.—After placing the seed in the hopper it is then carried by means of an elevator wheel and deposited in the corresponding pocket of the revolving feed wheel. For illustration of the elevator wheel and the feed wheel see Figs. 115 and 186. In order to suit the different size cuttings of the seed, we furnish three sizes of elevator wheels, each having different sized pockets; one for small cut seed, numbered P—129; one for medium, numbered P—107; one for large, numbered P—126. The knowing of which wheel to use for the elevation of the different sized cuttings must be left to the judgment of the operator—actual trial soon shows which

Recent Improvements: We call special attention to the very valuable improvements made in the Fertilizer Distributor, and in an improved shoe which more uniformly spaces the seed and keeps it in a straight line.

How it Works

We offer our "Iron Age" Planter fitted with three different styles of opening plows: one as shown in Fig. 66; one preceded by a shield as shown in Fig. 142; or one with two concave discs as shown in Fig. 218.

In some sections the Shield is preferable, while in others the Disc becomes a necessity for the satisfactory operation of the Planter.

The purpose of the Shield is to divide the soil for the Plow and to prevent

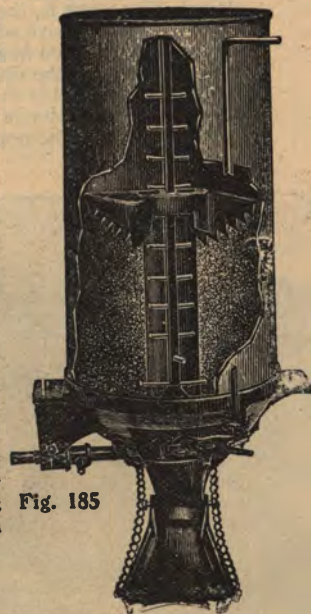


Fig. 185

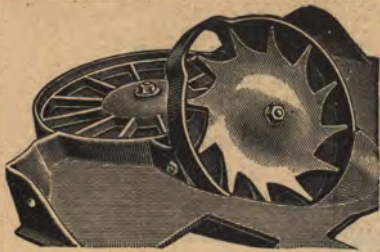


Fig. 115

operates best. When too much seed is deposited by the elevator wheel, use a smaller pocketed wheel; when not enough, use a larger pocketed wheel.

Up to this point it will be noticed the seed is carried in its dropping process entirely automatically by the planter itself, but here we bring into use the boy or man whose duty is only to supplement and correct the operation of the machine, taking out the pieces where they are doubled and putting in where missed. In actual operation from sixty to ninety per cent, of the seed is found to be correctly fed without the assistance of the feeder,

depending entirely upon the manner in which the seed is cut. Always remember that the more uniform the cutting of the seed, the more perfect the action of the Planter, the easier the work of the feeder, the better and more uniform the stand and future growth of the plants—Results, a better crop.

In Fig. 186 we represent the boy seated in the rear, making the necessary corrections; the photo shows him just in the act of placing one seed piece in a vacant pocket of the feed wheel, which piece had been delivered in the preceding pocket and removed—thus making only one piece in each pocket. The feed wheel carries each successive piece of potato over the potato tube and drops it through to the furrow below. This gives the assurance that the seed is actually deposited—there can be no speculation as to whether a row has any seed in it; there are no misses, no doubles, no trouble on hillsides.

No injury can result from the seed coming in contact with the fertilizer, as the seed is deposited below the fertilizer and after it is thoroughly mixed with the soil, by having been spread in a broad stream, six to eight inches wide, across the bottom of the furrow and the shoe preceding the potato tube passing through it.

The new style shoe attached to the potato tube opens a very small groove about three-quarters of an inch wide and one inch deep in the bottom of the furrow, into which the seed falls. This groove is of such size and shape that the instant the seed falls into it, it stops and there is no chance for it to roll or become misplaced. The result is, the seed is very uniformly spaced. This groove also serves as a purpose for keeping the seed in a straight line—the only variation being in the driving of the team. The planting of the seed in this manner adds greatly to the ease of keeping the weeds down and the more satisfactory cultivation of the crop.

For cut showing this groove in the bottom of the furrow and manner in which the potatoes are lodged or caught in it, see Fig. 187, opposite page.



Fig. 186

No Injury to Seed.—The seed is prepared in the usual fashion for hand planting and placed in the hopper, where it is neither punctured nor injured in any manner while being deposited in the furrow below; so one may rest assured, the seed, after it is planted is in as good condition as when first placed in the machine.

The Covering.—The discs are conveniently adjustable in every way and cover the row with a full free covering in the most perfect manner possible and one that is a pleasure and a delight to the grower. He knows that his seed is in the center of the furrow, not on one side, giving chance for "greened" potatoes, and covered with an ample covering, giving a good chance for harrowing down, thus getting his ground and crop in first-class shape for future cultivation.





Fig. 187

for use in making up rows for cabbage, etc., doing the marking, furrowing, sowing the phosphate and hilling so perfectly that it is a pleasure to see the work done so well and so economically.

Our New Seed Attachment (see Fig. 68) will sow corn, beans and peas in continuous rows, or drop corn and beans in hills at 12, 14, 15½, 17, 18½ and 20 inches apart, or even closer by applying the small sprocket wheel intended for changing the speed of the fertilizer distributor to the shaft of the feed wheel.

The Seed Attachment works automatically, and after once set for sowing the proper amount requires attention only in refilling. In trucking and dairying sections we are meeting with very large sales of it. The truckers use it from early spring to late summer almost continuously in making their succession of plantings, and the dairymen in sowing corn for fodder purposes as well as the machine itself for the preparation of rows for root crops.

Our Leveler Attachment, also shown in Fig. 68, is a capital thing in leveling and smoothing the rows.

Perfect in Principle and Construction.—We claim the Planter to be one of the most thoroughly constructed machines offered to the farming public; it is carefully made of the very best materials and consequently is strong, durable and thoroughly practical.

You cannot afford to be without it.—No potato grower, if he plants but a few acres, can afford to be without it. If he clings to the old methods of hand-planting, he is handicapped,—he is really almost out of the race—he cannot successfully compete with modern machinery. With the “IRON AGE” Improved-Robbins he has all the advantages of hand-planting with none of its disadvantages. Dr. W. I. Chamberlain says, in the *Ohio Farmer*: “It is hand-dropping, spaced with unerring accuracy by machinery.”

We wish we were able to give you here the very favorable reports from those who have used our planter; we know they would help convince you of its very high merit.

Distance Apart.—The speed of the wheel which drops the potatoes is likewise regulated by a simple change of sprocket wheels, those sent out with the Planter dropping at distances of about 12, 14, 15½, 17, 18½ or 20 inches.

We have a sprocket wheel for use in dropping the seed 24 inches apart when it is desired, or we will substitute it for any of the others when ordered with the machine.

Simple and Easy.—The handling of the Planter is exceedingly simple and easy, the movement of one lever stopping both potato and fertilizer feed and at the same time raising the entire gang of opening plow, potato tube and covering discs entirely free from the ground. Provision is made for adjustment of the lever to suit the “dead furrows” or “backings” there may be in the field.

Other Work, Cabbage Rows, etc.—We would also emphasize the worth of this machine



Fig. 68

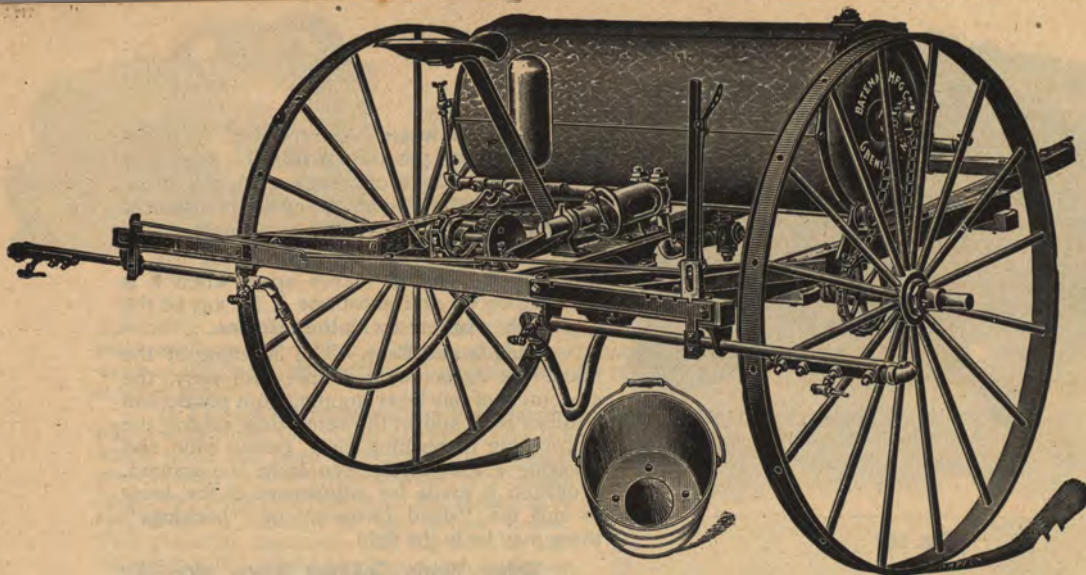


Fig. 207

"IRON AGE" Four Row Sprayer

Packed Weight, Nos. 102 and 103, 700 pounds

No. 102—Four Row Sprayer, rear discharge (equipped with shafts), as shown in Fig. 207 . . .	\$73.00
No. 103—Four Row Sprayer, rear discharge (equipped with tongue) . . .	75.00
Middle Row Attachment for twin Nozzles (no nozzles) applicable to only Nos. 102 and 103 sprayers, as shown in Fig. 209 . . .	2.00
Bucket Strainer Attachment . . .	1.75
Orchard Attachment, as shown in Fig. 194 . . .	7.00
Tongue Attachment, as shown in Fig. 210 . . .	5.00

For Sprayer equipped with four twin nozzles, as shown in Fig. 208, instead of four single nozzles, add to the above list prices \$6.00. In ordering this equipment add letter "A" to indicate style of sprayer. Thus: No. 102 A.

The sprayer has become in recent years an absolute necessity to the farmer, in successfully and economically growing various crops, especially potatoes; in fact, it is so regarded because without a rapid and thorough means of spraying, the potato beetle or the "blight" may in short order damage the crop. Therefore, to our already valuable and important line of "IRON AGE" implements adapted for potato culture, we offer the "IRON AGE" Sprayers—implements designed after a very thorough study of what was needful. As our readers will notice from the cuts and description of the tools given herein, we have introduced some new and valuable features which will help to make growing of potatoes and other crops still more certain and profitable.

With the various attachments mentioned on page 5, the usefulness of these machines is very much extended and they are made of much greater value.

The Pump.—Every one, especially those who have had any experience with a sprayer, will recognize the importance of a satisfactory pump. In fact, a good pump is as essential to a successful sprayer as a good heart is to a strong man.

In Fig. 191 we show an enlarged cut of the pump, its connection with the tank and the pipe leading from the pump.

The pump derives its power from the main axle, by a sprocket wheel driven by both wheels; therefore, there can be no side draft. A convenient clutch throws the pump in or out of gear. The shaft driving the plunger does not pivot on the end of it, but the plunger is slotted and the shaft is pivoted at the furthest end of the slot; therefore, the plunger enters the chamber squarely, causing little or no friction or wear on either.

That portion of the plunger entering the chamber is covered with brass tubing and passes through a brass gland; therefore, it will not rust

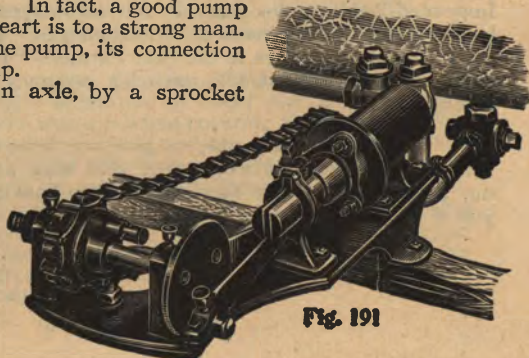
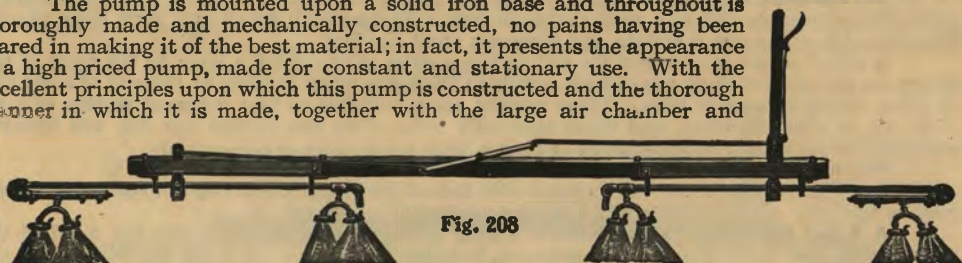


Fig. 191

or be affected by the solutions being sprayed. This plunger does not work directly against the walls of the chamber but against the packing which may be renewed, if necessary, any time. We call special attention to the fact that the brass and packing only come in contact with the solution, which cannot affect either. Oil cups are furnished to retain a good quantity of oil and prevent dust from getting on the bearings.

The pump is mounted upon a solid iron base and throughout is thoroughly made and mechanically constructed, no pains having been spared in making it of the best material; in fact, it presents the appearance of a high priced pump, made for constant and stationary use. With the excellent principles upon which this pump is constructed and the thorough manner in which it is made, together with the large air chamber and



Showing Sprayer Bar Equipped with Two Nozzles for each Row

other appliances used for spraying the solution, we are able to deliver a spray under a very high pressure. The spray is so fine, a satisfied farmer remarked that the "IRON AGE" sprayer produces more of a fog or mist than a spray—this is just what is needed to accomplish the best results.

The Tank.—It will be noticed we have departed from the plan of furnishing a wooden barrel common to so many sprayers. Those who have used them, especially the second season, know the difficulty they had to make them tight and prevent them from leaking, aside from other disadvantages.

We have made use of an iron tank, heavily galvanized after being made up—no bands to tighten, no staves to swell, but always in readiness for immediate use. Each and every one of the tanks are made of the same size, and by reason of this we are able to fit the dashers so that in revolving they will just wipe the inside circumference of the tank. The solution to be sprayed is therefore kept churned up continually and there is no chance for any sediment or undissolved material to gather in the bottom, there to become hard, cake and crack up, and interfere with later use of the sprayer. Furthermore, by thorough agitation and very high pressure we are able to use strong solutions and a minimum amount of water, without danger of any portions of the plants getting a stronger dose than the others.

The tank is 18½ inches in diameter, 48 inches long and holds about 55 gallons—a little more than a large barrel. Between the cylinder and tank heads are rubber gaskets, against which each are firmly bolted. An opening will be found in the top for attaching the funnel,



Showing Operation of Sprayer on Farm of R. E. Gould, Lisbon Falls, Maine

through which the solution is poured. Aside of it is a bent tube, which permits the free passage of air to and from the tank. At the outlet of the tank is located a three way valve, see Fig. 191, which permits the tank to be thoroughly washed out by removing the bottom plug.

The Spraying Nozzles are located in the rear of the machine, in plain sight of the operator, and adjustable in height to a remarkable degree, spraying both small and very large plants. The adjustment of same is simple, yet possesses great rigidity.

A novel device is arranged for sliding the nozzles in or out by a lever to the right of the driver, to prevent catching the outside nozzle in the fence when turning at the end of rows and in going through gates or bars. These nozzles are adjustable to four different widths of rows—28, 30, 33, and 36 inches, and when especially ordered we can furnish our No. 102 Sprayer equipped for spraying rows as wide as 42 inches, with same range of adjustment.

When so desired, order by adding the letter B to the number, thus No. 102 B.

Our Sprayers are sent out equipped with four single nozzles, but two or even more nozzles may be applied. Fig. 208 shows two nozzles applied for each row.

A Relief Valve with an adjustable spring pressure is attached to the left head of the tank, giving not only relief to over-pressure, but also facility for changing the fineness of the spray. We consider this a valuable feature.

The Wheels are adjustable for any width of rows between 28 and 36 inches, and are made of steel, 50 inch diameter, with 2½ inch channel tire.

For formulas of spraying solutions see special circulars. Full operating directions accompany each machine.

Attachments.

Middle Row Attachment, Fig. 209.—This is applicable to Nos. 102 and 103 Sprayers only, and can be used only when Sprayers have the tongue equipment applied. It is quickly attached to the center of the sprayer bar, and is intended for use when spraying three rows of vine crops, such as cucumber, tomato, etc. It is intended to carry one or more nozzles, but with this attachment we furnish the twin coupling without nozzles. Price, \$2.00

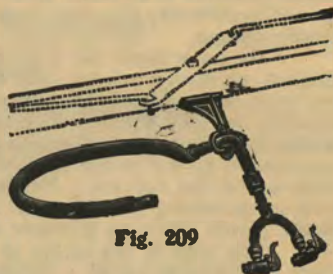


Fig. 209

Tomato Spraying Attachment, FIG. 219.—In further development of our Sprayer, we have met a demand for devices for spraying tomatoes as shown herewith. To make use of these it is necessary to have sprayer equipped with tongue, spraying one or two rows, the number depending on the sizes of the vines.

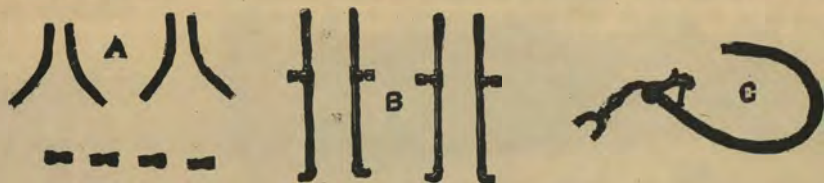


Fig. 219

When plants are small, the curved pipes marked "A" are used spraying two rows, astride of one and side of two adjoining rows. When plants are medium in size the pipes and equipment marked "B" are used in spraying the same number of rows and in the same manner and position as the curved pipes. When plants are large and full grown, one half of the pipes and equipment "B" are used in connection with the middle row attachment marked "C" for the spraying of the one row only.

Price of Attachment complete, \$5.00 Without middle row attachment, \$3.00



Fig. 227



Fig. 226

The Strainer Attachment.—Fig. 226. Here we show a very valuable and important attachment for applying to the nozzles of our sprayer. It makes no difference what crops are being sprayed, the attachment is equally valuable as it strains all the solution and prevents the particles of dirt from stopping the flow. In Fig. 227, we show the strainer together with the nozzle, taken apart,—this gives a good idea of the fineness of the screen and how effective the attachment is in preventing the stoppage of the nozzle or nozzles. The device is perfectly simple and effective,—when ordering sprayer equipped with strainers add the letter "C" to the number, thus No. 102-C. **Price, strainer only (without nozzle) each \$1.00.**



Fig. 220

Wild Mustard Attachment.—In Fig. 220 we show an equipment and its method of attachment, for the extermination of wild mustard, which in certain sections is becoming so troublesome.

It consists of the four sections of piping and the four extra nozzles to be attached to spray pipes of Sprayer. **Price, \$4.00.**

Tongue Attachment. Fig. 210.—We show this as an attachment, as we find some desire both shafts and tongue. We, however, furnish our Sprayer equipped with tongue, known as No. 103, in which form we especially recommend it for hilly sections, and also for greater steadiness in operation. It is likewise a necessity for three row spraying.

We call especial attention to the fact that this Tongue Equipment is of very rigid construction; and the double tree and neck yoke are of unusual length, so as to permit spraying astride of two 36 inch rows. **Price, \$5.00.**

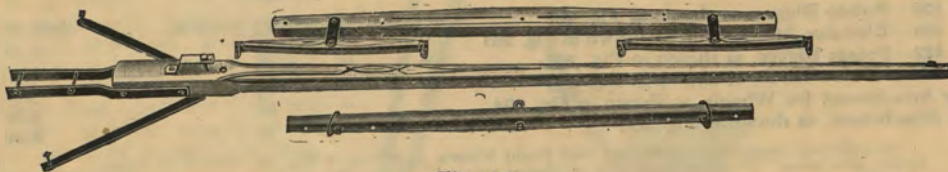


Fig. 210

The Orchard Attachment is a very valuable addition to our Sprayer, especially since it has become an absolute necessity to spray trees, grape-vines, berry bushes, etc. So efficient is its work for tree and vine spraying that it has been sold for this purpose only. By reason of the high pressure given by our pump the height and fineness of the spray give the most satisfactory results possible.



Fig. 194

As will be seen by the cut in Fig. 194 the attachment consists of the pump lever, one nozzle, 10 feet iron pipe, 25 feet rubber hose, and a stop cock which screws into a fitting, enabling the operator to instantly stop the spray.

For tree spraying two persons are required, one to operate the pump and the other to handle the spray nozzle. Operating the pump by hand is surprisingly easy, requiring but about a quarter of a turn to and fro. This same operator can easily guide the horse from tree to tree. **Price of all parts necessary as shown in Fig. 194, \$7.00.**

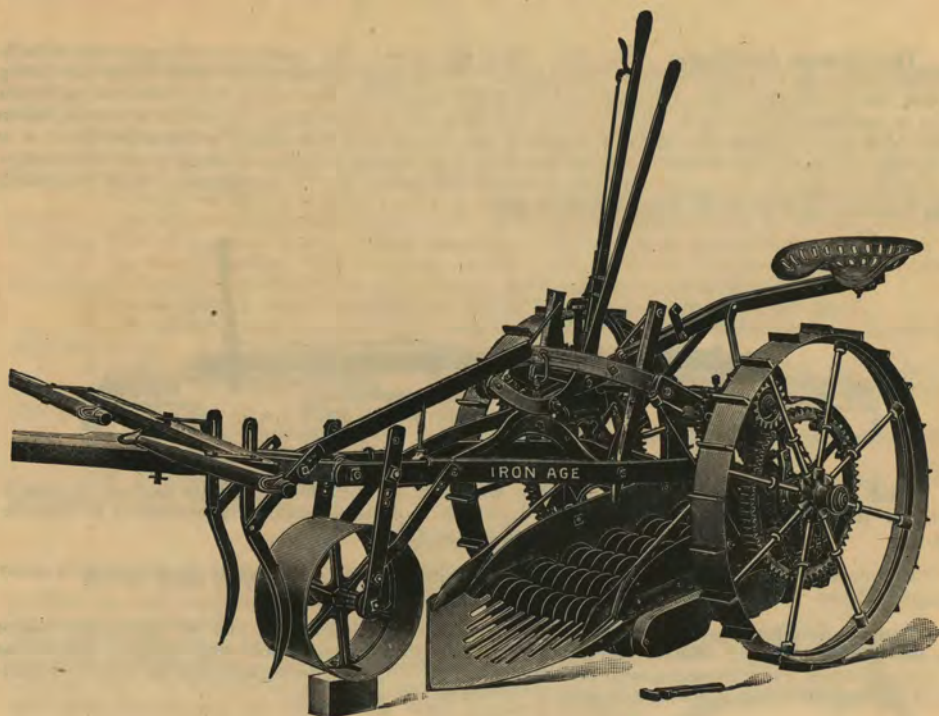


Fig. 200

"IRON AGE" Potato Digger

No. 120—Potato Digger, as shown in Fig. 200 . . .	Packed weight, 1013 pounds, . . .	\$100.00
No. 121—Elevator Attachment, as shown in Fig. 201 . . .	" " 255 " . . .	15.00
No. 122—Potato Digger, as shown in Fig. 202 . . .	" " 1268 " . . .	115.00
The Three Horse Hitch, as shown in Fig. 203 . . .	" " 25 " . . .	3.00
Spur Attachment for Wheels, as shown in Fig. 204 . . .	" " 40 " . . .	3.00
Disc Attachment, as shown in Fig. 205 . . .	" " 70 " . . .	8.00

In ordering Digger equipped with Two Front Wheels, as shown in Fig. 206, instead of Front Roller, add letter "D" to indicate style of Digger wanted. Thus: No. 120 D.

If digger is wanted with the elevator equipped with Vine Separator attachment as shown in Fig. 231 add letter B; thus No. 122 B, or if the elevator attachment is ordered separately specify it as No. 121 B.

We feel more than ever from our experience of the past season, the principle of our digger is the correct one, and that the "IRON AGE" is adaptable to a wider diversity of conditions of culture and soil than any digger on the market.

As will be noticed we have not endeavored to make one machine cover all conditions, but have several attachments, the application of which makes it possible to satisfactorily operate the digger under more varied conditions than any other digger on the market—our belief being that a satisfactory digger is one with many attachments. Furthermore, this plan eliminates the necessity of loading down the machine with parts which many farmers will not need.

It will be noticed the "IRON AGE" Digger is designed upon novel lines and different from potato diggers heretofore offered. We wish to emphasize just at this point an important feature of this machine, aside from its mechanical construction—it being a Combination Low Down and Elevator Digger. This, we believe, is an entirely unique idea and something never before attempted. We feel safe in stating that to satisfactorily dig a large majority of the potatoes grown, taking the country as a whole, an elevator digger is not required with its attendant disadvantages, increased draft, excessive cost of repairs, unnecessary handling of the potatoes, etc., etc. Therefore, under such circumstances the "IRON AGE" Digger is used as a Low Down Digger; *but when it meets* those conditions where an Elevator Digger is absolutely necessary, in order to get satisfactory separation, the elevator attachment shown in Fig. 201 may be quickly applied,

thus placing in the hands of the operator a perfect elevator digger. As a Low Down Digger the "IRON AGE" is emphatically a two-horse machine, because of the easy, rotary motion of the separating disc and the slight increase of elevation, and usually the machine can be satisfactorily operated with a pair of horses of medium size under any ordinary conditions.

With the Elevator Attachment applied, our digger may be operated by three horses instead of four as are usually required by other elevator machines, because the separation is partly accomplished by the rotary discs before the elevation is commenced.

The Vine Gatherers.—"Well begun is half done." This is what we do; we begin well by taking care of the vines. The forks preceding the roller are designed in such shape and may be so adjusted as to straighten out the vines in the direction the machine is traveling, throwing them under the roller.

The Roller is 14 inches in diameter, 8 inches in width and the tire is concave. As the roller passes over the vines they are crushed and easily kept in a desired shape for the most satisfactory digging. This gives us full control immediately—the vines being straightened and flattened before the hill of potatoes is lifted and carried on the cradle. Where the vines are exceedingly large or a very grassy condition prevails a pair of discs may be applied to the wheel standards as shown in Fig. 205, and satisfactory work performed.

The Plow is a wide, heavy, concave blade $\frac{1}{8}$ inch thick; and as the cut shows, it is slotted at the upper end, reducing friction of the soil and causing separation to begin at once.

The Separating Discs.—After the soil and potatoes are lifted by the plow, they are carried on to a series of discs made of steel, mostly $5\frac{1}{2}$ inches in diameter and 66 in number. These discs revolve continually while the machine is in operation; and the soil rapidly leaves the potatoes, it falling through and between the rolls. A dry or loose condition of the soil produces quicker separation; a damp, caked or packed condition, slower separation.

Fig. 200 shows the machine with six rolls, which number we have found to be sufficient for separation of potatoes in

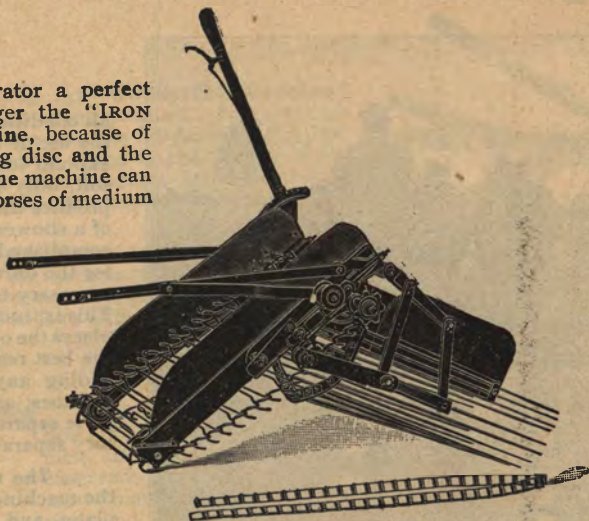


Fig. 201
The Elevator Attachment

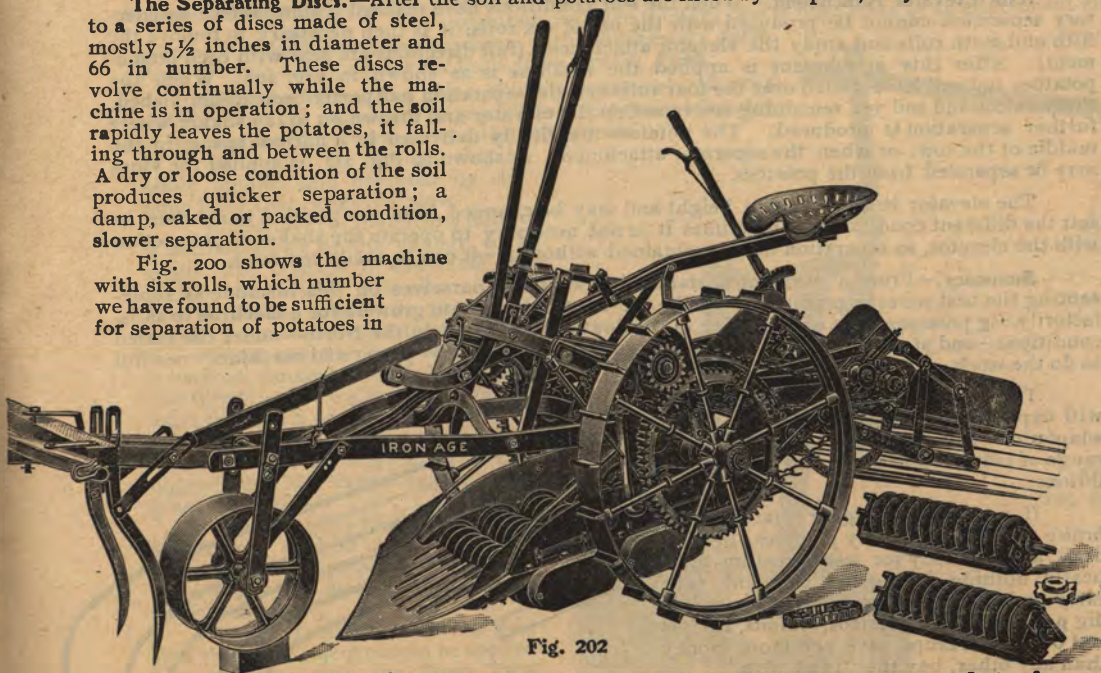


Fig. 202

No. 122 "IRON AGE" Potato Digger Complete with Elevator Attachment



Caught digging his last row—you should see his smile

and cheaply replaced by the farmer himself. means of sprocket wheels and chain, and where necessary they are protected by covers, from clogging and wear of the soil.

The Elevator Attachment. When the soil conditions have reached a state where satisfactory separation cannot be produced with the use of six rolls, it is then necessary to remove the fifth and sixth rolls and apply the elevator attachment (full directions are sent with each attachment). After this attachment is applied the machine is as shown in Fig. 202. When the potatoes and soil have passed over the four rolls and the separation has partly been accomplished, the potatoes and soil yet remaining are raised on the elevator and thrown on to the shaker where further separation is produced. The potatoes are finally delivered in a narrow space, in the middle of the row, or when the separator attachment, as shown in Fig. 231, is applied the vines may be separated from the potatoes.

The elevator is adjustable in height and may be changed from one position to another, to suit the different conditions. Sometimes it is not necessary to operate the shaker in connection with the elevator, as separation may be obtained without it—it can be easily removed.

Summary.—From a mechanical standpoint we pride ourselves on this machine as representing the best we ever produced. It fills the want of all potato growers for a machine to satisfactorily dig potatoes from early Spring in the South, to late Fall in the North—under the varied conditions—and at all times only employ the minimum amount of power and machinery needful to do the work.

The different attachments which we will explain later assist materially in the adaptation of our machine to the very wide range of culture practiced, and of soil conditions.

If you want a digger that will not bruise or skin your early potatoes, light of draft, always ready for work, costing practically nothing for repairs, dig both your early and late potatoes (clean or weedy), dig peanuts, sweet potatoes, onions, carrots and other root crops, save you more money than any other, buy the "IRON AGE."

all conditions where it is possible to dig without the use of the elevator attachment, which we will explain later. It often happens in light, sandy soil, only five or even four rolls are required to produce the satisfactory separation, but by reason of a shower of rain the separation may not be accomplished so easily, and therefore to compensate for the difference in condition of the soil it may be necessary to apply the rolls previously mentioned. This is, indeed, a very valuable feature because it places the operator, on the one hand, to accomplish the best results in different soil conditions without adding any unnecessary power and agitation of potatoes; and yet on the other of producing complete separation. Our object is to secure satisfactory separation and stop the agitation.

The Cradle is our term for that portion of the machine made up of plow, revolving discs, side plates and their connections. These parts are combined in such a manner as to produce a *minimum of wear and breakage*.

The discs with their separating thimbles are placed on square steel shafts and for bearings have revolving bushings, made of hardened steel. It will, therefore, be seen the working parts are entirely of steel, making the wear almost nothing; and when necessary these bushings can be quickly Motion is transmitted from one roll to another by

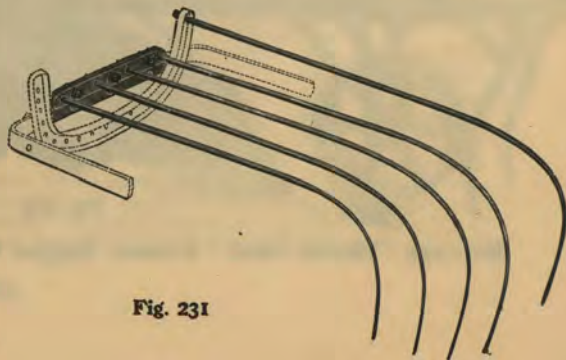


Fig. 231

The Vine Separator Attachment, Fig. 231—We offer this attachment to those desiring to separate the vines from the potatoes. The vines are delivered to one side of the row while the potatoes fall between the tines of the shaker and are placed in a narrow space in the middle of the row. The use of this attachment also often produces better separation on account of the curved tines. Price of necessary parts to apply to the shaker, \$2.50.

Front Two-Wheel Equipment.—In Fig. 206 we show how the two-wheel equipment is placed in front of the machine, in place of the roller. We only recommend this where potatoes are planted in checks and the ridges are not continuous from hill to hill, in either direction.

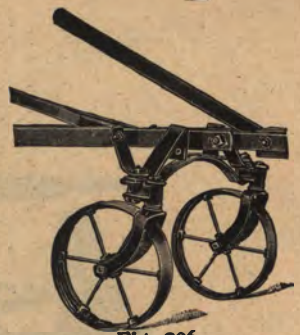


Fig. 206

Front Two-Wheel Equipment



Fig. 203

Three-Horse Hitch

the use of three horses driven abreast. In Fig 203 we show the necessary parts to convert the double and single trees into a complete triple tree. This is sold as an attachment. Price, \$3.00.

Attachments

Three-Horse Hitch. Fig. 203. In the operation of the "IRON AGE" Diggers with Elevator attachment throughout the country, the past season, we have observed that very few of them have been operated with more than two horses. However, under adverse conditions and for continuous digging we would recommend

The Spur Attachment for Wheels.—Fig. 204. On account of the rotary motion and light draft of our Digger we have found it very seldom necessary to make use of spurs on the drive wheels; but occasionally when digging where deep planting has been practiced; in heavy, grassy or wet conditions; in loose sandy soil or on hillsides, the digger operates more satisfactorily with them applied. For very steep hillside we have special side hill spurs which we furnish when ordered and at the same price as the spur attachment, Fig. 204. Therefore, we have all our wheels arranged so that these may be attached at any time. Their use is so seldom required, we have thought best to offer them as an attachment and



Fig. 204

Spur Attachment for Wheels

thereby not load down the machine with unnecessary parts. Price of spurs for equipment of both drive wheels, \$3.00.

Disc Attachment, Fig. 205.—When digging early potatoes and the vines are extremely large and troublesome to take care of, we recommend the use of our disc attachment.

As shown in the cut this is easily applied and operated by the same lever that raises the plow.

Adjustment of the cutting depth is accomplished by the change of a single pin, making it adaptable for high or low ridges. It is also adjustable in width, to suit the growth of different varieties of potatoes.

These concave discs accomplish a twofold purpose, not only cutting and throwing aside a large part of the vines but also a portion of the soil.

Aside from its use above mentioned it is often of great benefit in digging the late crop overrun with grass and weeds.

It will readily be seen that this attachment applied to our Potato Digger makes it possible to satisfactorily work the machine in digging sweet potatoes.

We call attention to the fact that this attachment cannot be applied in connection with the Front Two-Wheel Equipment. Price, \$8.00.

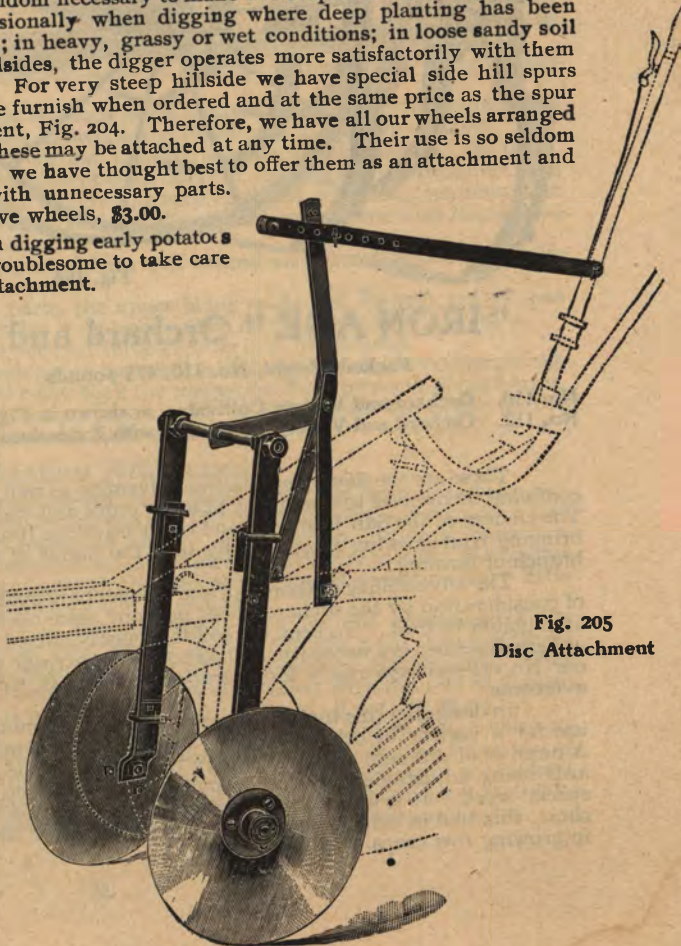


Fig. 205

Disc Attachment

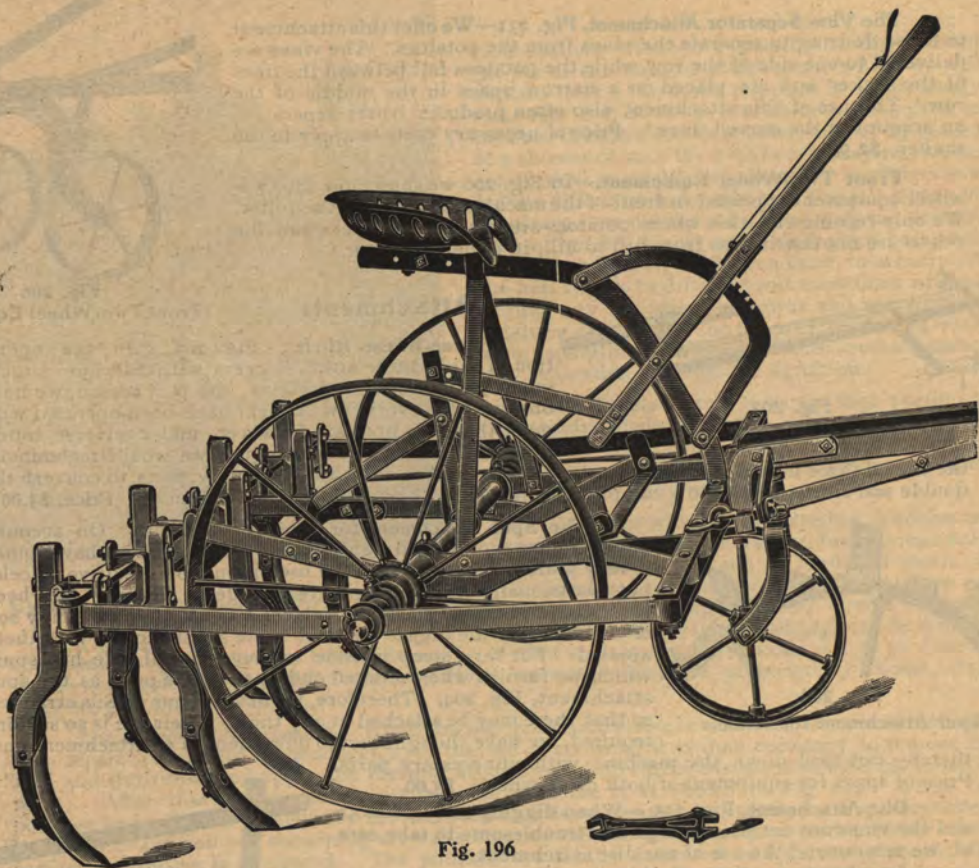


Fig. 196

“IRON AGE” Orchard and Variety Cultivator

Packed Weight, No. 110, 475 pounds

No. 112, 545 pounds

- | | | | |
|----------|---|-----------|---------|
| No. 110. | Orchard and Variety Cultivator, as shown in Fig. 196 | | \$35.00 |
| No. 112. | Orchard and Variety Cultivator, with Extensions, as shown in Fig. 197 | | \$43.00 |

These are the days of specialties in farming as well as other lines of business. Farmers are confining themselves to the raising of fewer crops and making a thorough study of the few raised. The coming of the San José scale and other injurious insects to fruit trees have assisted much in bringing fruit-growing more rapidly into the hands of the specialist than possibly any other branch of farming.

The advisability of thorough and frequent cultivation of the orchard is no longer a matter of consideration by the orchardist—it has long since been proven to pay big, both as to quantity and quality of fruit. To keep the soil thoroughly stirred and to do the work economically a tool as here described is a necessity, and although the acreage may be small to have an implement like our No. 112—always ready for operation—dollars in time are saved and hours of hard labor overcome.

In designing this tool we have not only kept in mind the need of the orchardist but also its use for a variety of other purposes, among them being many common to the fruit grower. A number of different style teeth may be applied to the standards and by reason of the standards being adjustable, reduced or increased in number, it may be used for hilling and other special work. It is an ideal tool for fallow work in the open field as well as the orchard. In short, this tool is indispensable for the orchardist, for the specialist in trucking or one engaged in growing row crops.

The Main Wheels are made of steel, 28 inches high, having a tire 3 inches wide. Both wheels have an adjustment on the axle of 7 inches to suit the running of the machine in row crops, to increase their width when the extensions are being used and thus give steadiness, or to allow for furrows which may have previously been made; also as a further protection against injury of low hanging branches.

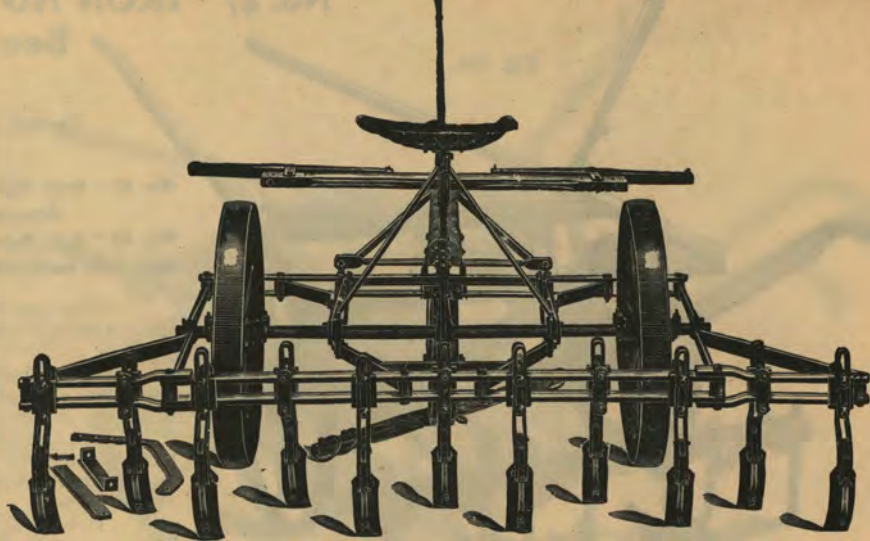


Fig. 197

The Front or Castor Wheel is 14 inches in diameter, with tire 3 inches wide. The purpose of this wheel is to take the weight of the machine off the horses' necks, and more uniformly control the depth of working the tool. It is certainly a pleasure to see this cultivator even when performing its hardest tasks, producing no downward pressure on the tongue, the front wheel taking all of this weight instead of the horses' necks.

For very hard soil we recommend the use of *two* of the castor wheels, they being readily applied to frame on each side of tongue.

The Gang of the Cultivator without the extensions cultivates 4 feet 2 inches wide and is equipped with 7 teeth, which are adjustable in height and depth and in relative position.

The construction of the gang is very strong, likewise the method of attaching the teeth.

The Lift.—This we wish to especially emphasize because, even with the extensions with eleven teeth, the gang may be raised out of the ground very easily, it only being necessary for the operator to simply pull up the lifting lever and simultaneously push down with his feet—a novel and simple device.

The Frame is constructed of heavy steel bars well braced and therefore will stand the most severe usage without injury.

The Standards consist of only two parts, the upper being made and formed out of one piece of steel. They are firmly gripped to the gang bars by two heavy one-half inch bolts.

The Axle is a special grade of steel one and three-eighths inch in diameter.

The Tongue is attached in such manner, in connection with the novel construction of the tongue attachment, that there is no weight other than the tongue itself on the necks of the horses.

The Double Trees and Neck Yoke are adjustable in width to suit the desire of the operator, and that the horses may walk between furrows or crops.

The Extension Attachment

In many cases for economical use of the tool for orchard work, the extensions become a necessity. They may be easily applied and when applied the tool cultivates a surface of 6 feet 9 inches in width. In order to cultivate under low branches an adjustment is given for moving the tongue and seat to one side, and in actual operation very little side draft will be produced.

The necessary irons for the extension of the seat and also a fender for the right hand side we furnish as a part of the extension attachment. This attachment may be purchased with the tool or applied at some future time. Price of all parts is **\$8.00**.

In conclusion we wish to say, although this tool was new last year it is one which has been placed under severe tests. The excellent and novel principles it contains, together with its simplicity and great strength, assure for it the hearty approval of all purchasers.

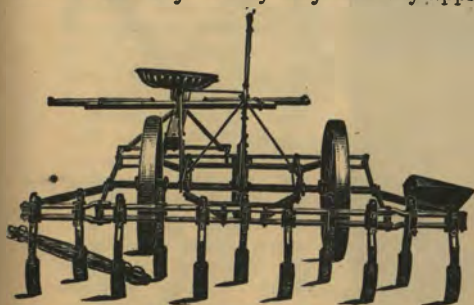


Fig. 198

No. 47 "IRON AGE" Two-Row Beet Cultivator

Fig. 124.

Price, \$20.00

Packed, Weight, 145 pounds

No. 45 "Iron Age" Two-Row Beet Drill Attachment, \$25.00

No. 45 "Iron Age" Two-Row Combined Beet Drill and Cultivator, complete, \$45.00

This tool has become very popular especially among the sugar beet growers.

It is thoroughly adjustable, of necessary strength and can be adapted to a large scope of work.

The frame is made of best, selected oak and is well braced. The wheels are made of steel; the tires being 1 $\frac{1}{4}$ inches wide.

It is being used not only by sugar beet growers, but by market gardeners for cultivating and planting all garden crops, such as radish, beet, carrot, etc., when used in connection with the seed attachment.

The hoes are easily adjusted in width, depth and angle of pitch, while the gang being carried by the lifting chain requires but a slight move to follow the rows accurately and closely.

The regular equipment of the Cultivator is with three sweeps and standards and two pairs of side hoes. The style of side hoes regularly furnished is like those shown in cut, Fig. 124. When side hoes, such as shown on our No. 35, page 27, or our No. 38, page 30, are desired, same will be furnished.

Each standard, as will be seen by referring to Fig. 175, has an independent adjustment for the change of its angle of pitch.

The photograph below shows the practical application of the tool as a Two Row Cultivator, the same two rows being cultivated as were sown together.

Attachments

The Seed Drill Attachment.—To convert the Two Row Beet Cultivator into a Two Row Hill and Drill Seeder, it is only necessary to remove the cultivator gang by simply withdrawing the two bolts from the axle couplings.



The two seed drills are readily attached to the axle, yet perfectly independent of each other and adjustable to sow rows 16, 18, 20, and 22 inches apart.

The seed hoppers are capacious, each holding six quarts of seed and are hinged independently on the frame, so as to pass over an obstruction or trash that may accumulate under the plow. The operator also has the opportunity to lift and clear the drill from trash, an important point, and which cannot be done on the four-row two-horse drills. Neither will the seed be buried too deep, as the drills will follow the irregularity of the surface and will not make

depressions into which will be blown the loose surface soil, and thus bury the seed too deep for germination.

The agitator is simply a revolving brush of selected bristles which absolutely will not injure the seed, wear a long time and can be cheaply replaced. The brush agitator will be found to be particularly adapted to feeding out beet seed, as it will separate seed which may be clinging together, and acts as a gentle force feed.

Hills or Drills. The seed can be sown in drills or in hills 6, 8 or 12 inches apart, the change being instantly made, while the amount of seed sown can be finely adjusted to suit the ideas or wishes of the grower.

The Disc Marker makes a guide for the sowing of the next two rows, the horse following in the furrow made by the disc. As shown by the cut, the marker is adjustable, thrown from side to side, and stayed by chain to end of axle.

The Opening Plows are clog-proof; all trash which comes in contact with them is ridden down. By reason of the plows being so constructed, it distributes the seed in a very straight and narrow row, making it possible to cultivate very close to the plants, with the tool as a cultivator.

The Covering is accomplished by concave press wheels.

The firmness with which these seed attachments are held to the ground is determined by the stiffness of the springs, which can be plainly seen in the cut in advance to the hoppers. If the soil is hard, the springs want to be closed up; or if loose and moist, released.

The Stirring Tooth Attachment, Fig. 154. As during the late cultivation of beets, it is considered especially desirable to stir the soil deep in the centre of the rows, we therefore offer this stirring tooth attachment, claiming it to be the most satisfactory and economical means of accomplishing this work. It consists of three teeth, diamond shape, with a small cultivator point forged on each and arranged in such position to give good clearance of trash. This attachment is readily applied, it substituting the position of the

Fig. 155

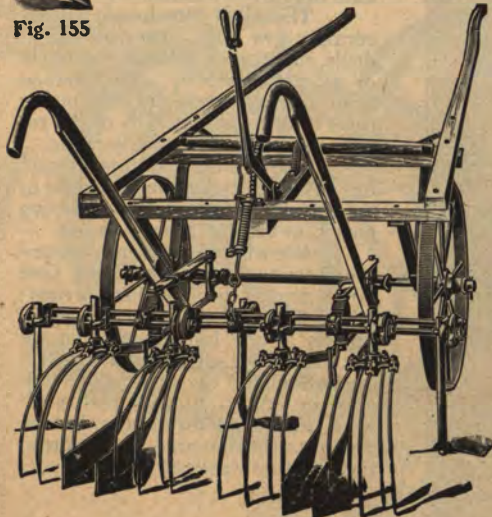


Fig. 175

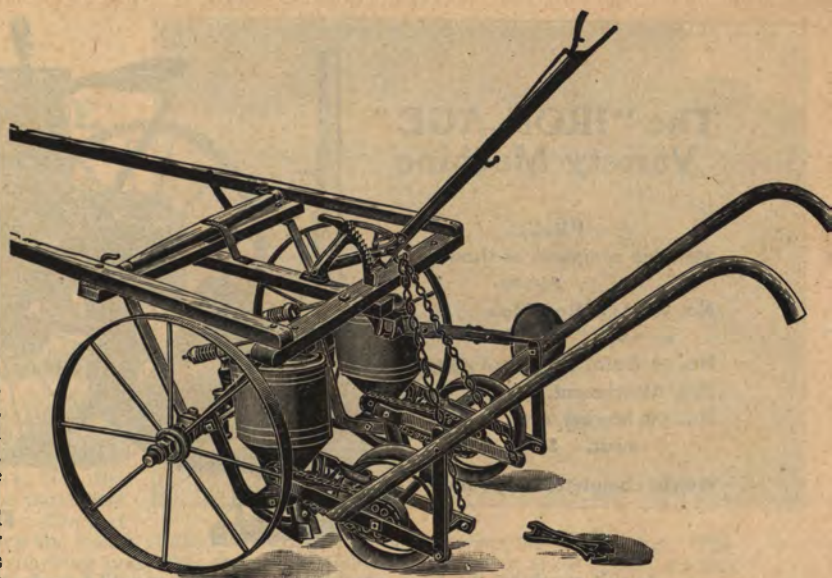


Fig. 123



Fig. 154

three sweep standards. **Price per set of three (9 teeth) \$3.00**

Fig. 155. For deeper cultivation in the centre of the rows; and for various other purposes, we have standards equipped with narrow shovels as shown in Fig. 155. These are secured in same manner and place as the hoes and sweep standards. **Price, each, \$0.50**

The Combined Weeder and Fender Attachment is shown applied to our beet cultivator, in Fig. 175. Those who have made use of weeders for the early cultivation of beets will at once appreciate the excellent work which an attachment of this kind will perform, especially by reason of the fact that what little soil may be turned aside by the teeth is prevented from falling on the crop by the fenders. We of course, only recommend this for the first workings of the beets. By reason of each standard having an independent adjustment as to the angle at which it is set, its height and depth, most any adjustment desired may be obtained. **Price, per set, 2 pairs, \$6.00**

The "IRON AGE" Variety Machine

PRICE,

Machine complete, as shown in cut,

\$60.00

No. 90 (As a Row Mak-

er only) \$46.00

No. 90 Corn, Bean and
Pea Attachment, \$6.50

No. 90 Marker Attach-
ment, \$7.50

Weight complete, 500 pounds

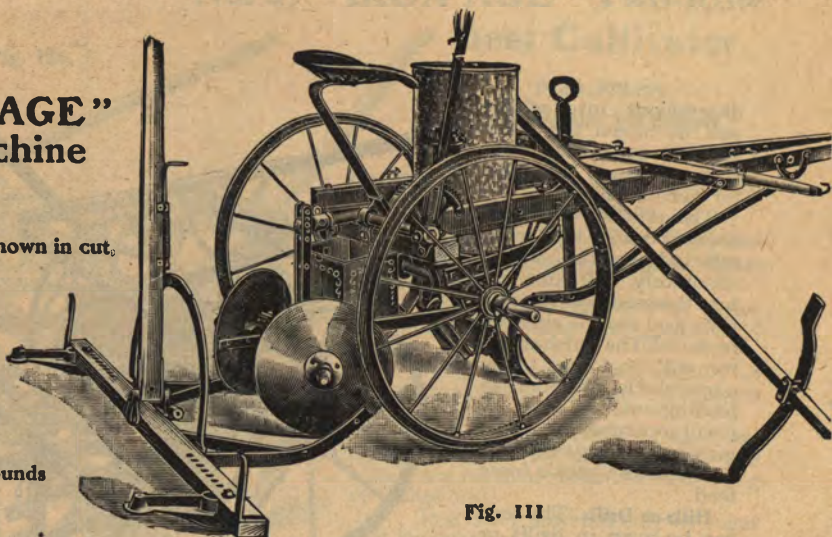


Fig. III

In this machine we have combined a double mould-board plow, a fertilizer distributor, a coverer, a pea, bean and corn drill and a two-row furrower.

What it will do.—It will open furrows, distribute fertilizers, plant corn, peas and beans and cover in one operation or separately. Mark and open two furrows.

The Opening Plow is a double mold-board plow which lifts the soil and throws it out loose on both sides. It will run eight inches deep or as shallow as desired.

The Fertilizer Distributor.—The capacity of the fertilizer hopper is about one hundred pounds and its discharge is accomplished by a winged scraper, which descends by its own gravity as the material is fed away, while the fertilizer, falling upon a cone below, is thrown outward on to a revolving disc, which in turn carries it to the gate opening at its edge. The fertilizer then passes down through the spout into the chute or spreader where it is divided into two streams, in order that the fertilizer shall not fall into the bottom of the furrow, but on both sides. Waste of fertilizer at ends of rows is avoided by a simple arrangement whereby the driver can instantly close the gate.

The Covering Discs (16 in. in diameter) are conveniently adjusted in every way and cover the row with a full, free covering in the most perfect manner possible.

The Wheels are made of steel, 32 inches high, with angle-shaped tires 3 inches broad, to prevent the machine from slipping on hillsides and to cause it to run steadier on the level. In order to insure correct working of the machine the wheels are adjustable on the axle from 36 to

50 inches wide, so they can be set at various distances to accommodate the furrows made.

The Seed Attachment will accurately sow peas, beans or corn in drills, or drop in hills at 12, 16, 20 or 24 inches apart. The change from sowing seeds in continuous rows to dropping in hills or the reverse is easily and quickly made.

The position of the seed sowing device is under the seat close to the ground, between the covering gangs, as the cut plainly shows.

We wish to especially recommend the tool to pea planters. One large grower in Maryland writes: "The machine we purchased of you is a fine implement, and we are more than satisfied with it."

Such are the expressions not only in regard to the quality of work done in planting peas, but in regard to the machine in performing all of its work.



No. 92 "IRON AGE" Variety Machine, as a Row Marker

Weight, 345 pounds Price, \$27.50

The increasing demand for, and sales of our "Iron Age" Variety Machine as a Row Marker only, as shown in the cut below, leads us to illustrate the tool set up and equipped as a Row Marker. The cut shows the tool ready for marking two rows.

The discs are adjustable on the cross-bar, so rows can be made close together or further apart, the distance being $2\frac{1}{2}$ feet as the narrowest and 5 feet as the widest. Changes

may be made so as to vary the width of the rows every 3 inches between the two limits. The cross-bar with the discs, marking pole, etc., may be detached by drawing three pins; and the covering frame attached by making use of the same pins. The same discs and ratchet castings that are used on the gang-bar of the two-row marker are placed on the covering frame. The depth of running of the discs can be finely and instantly adjusted by the lever, and entirely thrown out of the soil at the ends of the rows, preparatory to turning around. After the discs are raised, the driver can easily reach over and raise the marker pole without dismounting. Those who have used the old style marker will appreciate the great advantage of a tool where the operator is not obliged to dismount or lift around the machine. Farmers having rolling or hilly land will find this tool operates much better on same than any similar tool, as the angle-shaped tire prevents slipping. In photograph, top of page, we show the Marker working on a hillside; note the straight rows which are being made.

To all purchasers of this tool we offer an important advantage, in being able at any time in the future to furnish them the necessary attachments for the equipment of the tool with an opening plow, fertilizer distributor or seed attachment. Some farmers may not think they will need any of these additional parts, but the life of the machine is long, and a change in location, the wearing out of some other tool, or the fact that some crop they are not now growing becoming profitable, may bring about their need of the machine to possess the attachments, or at least some of them.

The purpose for which this tool is used the greatest is for marking out land both ways, for the planting of corn in checks; although it is largely used for preparing the soil for planting many other crops.

The change from operating the tool as a two-row marker to a coverer is very quickly and easily made, so easily that it can be done in the field, and after the rows are made and the crops planted, the tool can be fitted for immediate covering of same.

A leveler attachment may be purchased and the ridge leveled off, as shown in Fig. 68, page 47. This is especially advantageous in planting peas or leveling off a ridge which has been made, where fertilizers or manures have been previously distributed.

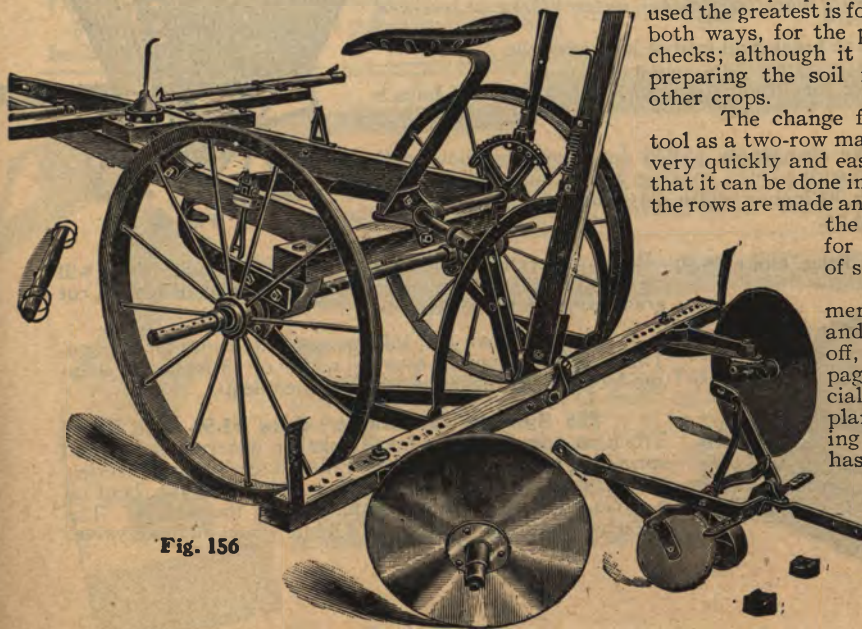


Fig. 156

The "IRON AGE" Barrel Truck

Hand Cart Box Attachment	\$3.25
Leaf Rack Attachment . . .	5.50
Sprinkler Attachment for barrel	3.50

Truck and Barrel as in cut,

With 1½ inch Wheel	\$10.50
" 2½ " "	11.25
" 3½ " "	12.00

Without Barrel, but including One Pair Trunnions,
deduct \$3.00

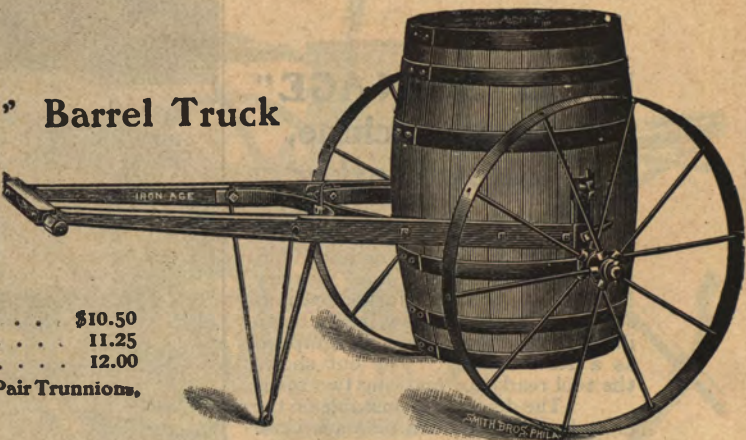


Fig. 88

When we consider the almost innumerable uses to which our Combined Truck and Hand-cart can be applied, its "handiness" and the immense amount of time and hard labor saved by its use, it is not a matter of surprise that it is steadily growing into popular favor. It is one of those articles that cause the user to wonder how he ever did without it, as it really becomes indispensable when once used.

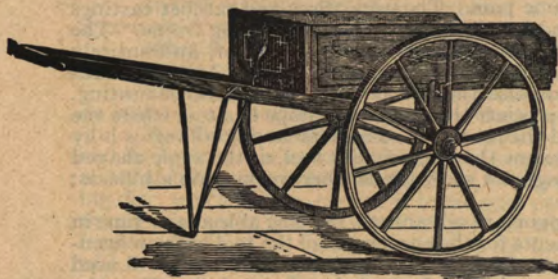


Fig. 89

We are the original inventors and makers of this style of Barrel Truck, and believe we still excel all imitators. The cut plainly shows the operation of the truck. The barrel is raised from the ground, carried to the place desired and *instantly detached*, all *without handling*. The weight being balanced over the axle, no lifting or down pressure is needed in transportation. Other barrels for various purposes can be used as needed, extra trunnions being furnished if desired, which can be readily attached to any oil or spirit barrel, thus increasing indefinitely the value of the truck.

Our trucks are equipped with *steel wheels*—durable, strong and handsome. We have wheels of 1½, 2½ and 3½ inches tread, *but always send truck wheels 2½ inches, unless otherwise specified.*

No castings to break; all iron of best wrought.

The width of this truck from outside to outside of hubs is 39½ inches.

Fig. 89.—We also supply a Box (as shown in above cut) with trunnions and spring catch, making a very superior *dumping* hand-cart. Length, 37 inches; width, 23½ inches; depth, 8 inches. Price, box only, \$3.25.



Fig. 63

Leaf Rack. Price, alone, \$5.50.

We have recently added a very light Leaf Rack, which will be found extremely convenient for the cartage of leaves, cut grass from the lawn, etc.

Knocks down *flat*, taking very little room for storage. This Leaf Rack has an average width of 28 inches by average length of 42 inches and is 21 inches deep.

The Sprinkler Attachment. Price \$3.50. The Barrel Truck as a Sprinkler is invaluable for watering lawns and sprinkling walks about houses, railroad stations, cemeteries, etc. It consists of a perforated wrought-iron pipe, bent on a circle, thus throwing the water outside the wheels. The water is turned on and off by a hand wheel and ball valve.

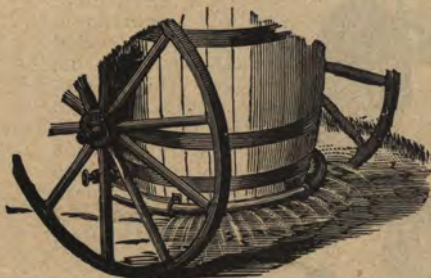


Fig. 48

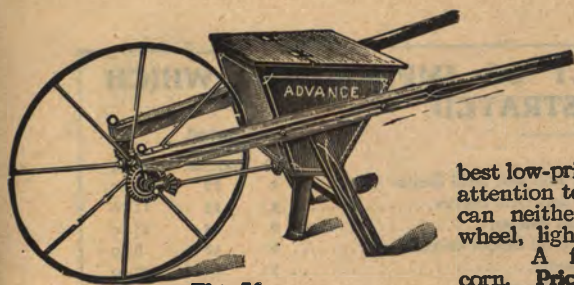


Fig. 56

"Advance" Fertilizer Drill

Packed Weight, 46 pounds

We claim the "Advance" to be the best low-priced distributor on the market, and would call attention to its distributing disc of *galvanized* iron, which can neither break nor rust; also to the wrought iron wheel, light and strong.

A first-class tool for the drilling of peas and corn. Price, \$6.75 each.

Fig. 128

Garden Dibble

Price, \$3.25 doz.



Bateman's Hand Garden Plow

It is very useful in opening furrows for seeds and manures, for covering them, and for tending the crops afterwards. Built on a very neat model, highly polished steel mold-board, is carefully made and handsomely finished. Has side handle, and being regulated in depth by a simple thumb nut, is the most manageable tool of the kind yet produced.



Fig. 39

Price, \$14.00 doz.

Fig. 40

Transplanting Trowel Solid Steel

Largely used by Truckers in transplanting sweet potatoes, cabbage, etc., etc. Price, \$4.00 doz.

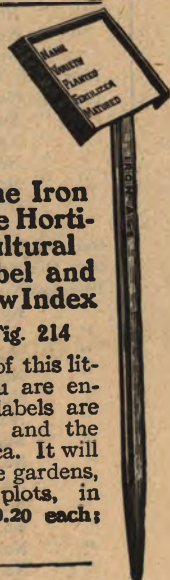


The Iron Age Horticultural Label and Row Index

Fig. 214

able to know what you plant, where you plant it and when you plant it. The labels are removable and may be filed for future reference.

By the use of this little novelty you are entitled to novelty you are entitled to. It is made of galvanized iron and the label is protected by sheet of mica. It will be found indispensable for private gardens, trial grounds, experimental plots, in greenhouses, parks, etc. Price, \$0.20 each; \$2.00 per doz. & \$15.00 per 100.



Asparagus Knife

Fig. 45

Price, \$3.25 doz.



Fig. 43

Vine Cutter

For cutting vines of sweet potatoes. Saves the back. Price, \$6.50 doz.



Dandelion Puller

Fig. 168

Price, \$3.50 doz.



Fig. 42

Eureka Corn Knife

A Corn Cutter forged under the hammer from a solid piece of steel. Hardened in oil and tempered in metal bath. Price \$4.25 a doz.

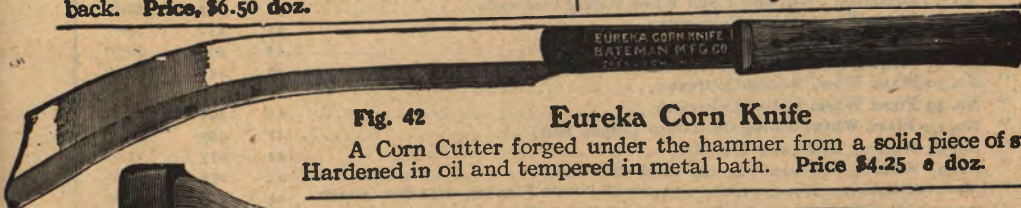


Fig. 44

The "Bateman" Hoe

Light and strong, and JUST THE THING for purposes almost innumerable. One or more should be found on every farm. Beveled Edges. Oil Tempered. Three sizes. No. 1, 5½ in. \$12.00 doz. No. 2, 6½ in. \$13.00 doz. No. 3, 8 in. \$14.00 doz.

Tomato Transplanting Hoe

Fig. 41

A very convenient Hoe for transplanting tomatoes, or other large plants. Price, \$6. doz.



INDEX AND PRICE LIST ONLY OF IMPLEMENTS WHICH ARE ILLUSTRATED

	Page.	Packed Weight, Pounds.	Price.
Iron Age No. 6 Combined Double and Single Wheel Hoe, Hill and Drill Seeder	2	57	\$12.00
" " No. 4 Combined Double and Single Wheel Hoe and Drill Seeder	5	55	11.00
" " No. 15 Combined Single Wheel Hoe, Hill and Drill Seeder	6	45	11.00
" " No. 16 Combined Single Wheel Hoe, as Hill and Drill Seeder only	6	38	8.50
" " No. 17 Combined Single Wheel Hoe, and Drill Seeder	7	45	10.00
" " No. 18 Combined Single Wheel Hoe, as a Drill Seeder only	7	40	7.50
" " No. 22 Combined Fertilizer Distributor, Hill and Drill Seeder	8	65	18.00
" " No. 23 Combined Fertilizer Distributor, as a Side Dresser only	9	40	13.00
" " No. 8 Hill and Drill Seeder	10	40	11.00
New Model Seed Drill	11	50	8.00
Iron Age No. 1 Double and Single Wheel Hoe	12	40	7.00
" " No. 25 Single Wheel Fertilizer Distributor	16	28	8.00
" " No. 20 Single Wheel Hoe	17	28	6.00
" " No. 9 Single Wheel Hoe	18	28	5.25
" " No. 11 Wheel Plow	18	15	2.50
" " No. 12 Wheel Plow and Cultivator	19	20	3.50
" " No. 19 Wheel Plow and Cultivator	20	22	3.25
Gem Single Wheel Hoe	21	25	5.00
Gem Double Wheel Hoe	21	30	6.00
Iron Age No. 6 Horse Hoe and Cultivator, Fig. 160	22	83	6.75
" " No. 6 Horse Hoe and Cultivator, with plain wheel and lever expander, Fig. 100	22	78	6.25
" " No. 6 Horse Hoe and Cultivator, with plain wheel and clamp expander, Fig. 102	23	70	5.45
" " No. 7 Horse Hoe and Cultivator, Fig. 161	24	80	7.75
" " No. 7 Horse Hoe and Cultivator, with plain wheel, Fig. 91	24	74	7.50
" " No. 1 Cultivator, plain, Fig. 10	25	50	3.50
" " No. 1 Cultivator, with seven teeth, Fig. 57	25	73	5.75
" " No. 1 Horse Hoe and Cultivator, Fig. 64	25	89	6.75
" " No. 8 Horse Hoe and Cultivator, Fig. 157	26	80	7.75
" " No. 8 Horse Hoe and Cultivator, Fig. 158	26	74	7.25
" " No. 35 Beet Hoe and Cultivator, Fig. 148	27	70	7.25
" " No. 5 Orchard Cultivator, Fig. 70	27	80	7.75
" " No. 36 Horse Hoe and Cultivator, Fig. 162	28	65	5.40
" " No. 37 Cultivator Plain, Fig. 163	28	42	3.00
" " No. 1 Combined Harrow and Cultivator, with plain wheel and lever expander	30	60	5.80
" " No. 2 Combined Harrow and Cultivator, with plain wheel and lever expander	30	66	5.30
" " No. 38 Beet Hoe and Harrow	30	82	7.50
" " No. 82 Pivot Wheel Riding Cultivator	32	425	35.00
" " No. 82A Pivot Wheel Riding Cultivator, with spring teeth	33	415	34.00
" " No. 70 Combined Pivot and Fixed Wheel Riding Cultivator	34	425	39.00
" " No. 60 Pivot Wheel Riding Cultivator	35	450	39.00
" " No. 62 Pivot Wheel Riding Cultivator (Six Hoe)	37	435	37.00
" " No. 65 Pivot Wheel Riding Cultivator, with spring teeth	38	450	38.00
" " No. 50 Fixed Wheel Riding Cultivator	39	410	32.00
" " No. 52 Fixed Wheel Riding Cultivator	40	390	31.00
" " No. 130 Fixed Wheel Riding Cultivator (Eight Hoe)	41	450	32.00
" " No. 93 Walking Cultivator (Six Hoe)	42	275	21.00
" " No. 95 Walking Cultivator, Spring Teeth (Six Hoe)	43	275	20.00
" " (Improved-Robbins) No. 1, 1A, 1B, 3, 3A, or 3B Potato Planter, with fert. attach.	44	735	83.00
" " (Improved-Robbins) No. 2, 2A, 2B, 4, 4A, or 4B Potato Planter, without fert. attach.	45	675	73.00
" " No. 102 Four Row Sprayer, rear discharge (equipped with shafts)	48	700	73.00
" " No. 100 Four Row Sprayer, front discharge (equipped with shafts)	50	700	73.00
" " No. 120 Potato Digger, Fig. 200	52	10 13	100.00
" " No. 122 Potato Digger, complete with elevator attachment, Fig. 202	53	12 68	115.00
" " No. 110 Orchard and Variety Cultivator	56	475	35.00
" " No. 112 Orchard and Variety Cultivator, with extension attachments	57	545	43.00
" " No. 47 Two Row Beet Cultivator	58	145	20.00
" " No. 90 Variety Machine, as a Row Maker	60	500	46.00
" " No. 92 Variety Machine, as a Marker only	61	345	27.50
" " Barrel Truck with Barrel, Wheels 2 1/2-inch tire	62	150	11.25
Advance Fertilizer Drill	63	46	6.75
Iron Age Small Tools	63		

WORKS ESTABLISHED 1836

