UNIVERSITY OF MINNESOTA.

Agricultural Experiment Station.

BULLETIN No. 52.

HORTICULTURAL DIVISION.

DECEMBER, 1896.

One of the many delegations of farmers visiting the Experiment Station. Inspecting the potato machinery.

POTATOES—VARIETY TESTS IN 1896.
POTATO IMPLEMENTS.

ST. ANTHONY PARK, RAMSEY COUNTY, MINNESOTA.

EAGLE PRINTING CO., PRINTERS, DELANO.

University of Minnesota.

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POTATOES, VARIETY TESTS IN 1896.

SAMUEL B. GREEN.

For many years the Horticultural Division of the Experiment Station has grown a collection of the newer varieties of potatoes and has reported on them from time to time. We have found it very important in comparing the results of the yearly yields to take into account such factors as the following:

(*a*) *Place where the Seed Stock has been Grown.*—We have found that with the utmost care in saving potato seed stock grown on the land of the University Farm, that the results from it would begin to decline after the second or third year. The writer knows very well that in some sections of this state the seed stock of potatoes retains its pristine vigor and productiveness indefinitely. Our experience is the very general experience of potato growers living in the vicinity of University Farm. On this account we have been very careful to get new seed stock of the varieties at least once in two years.

(*b*) *It is important to have the Seed Stock of all varieties that are to be compared in the same condition when planted.*—If one lot is plump and fresh and another has been sprouted several times it is not fair to compare the yields, for the crop is appreciably affected by the conditions of the seed when planted.

(*c*) *The yield of potatoes is affected by Scab and Blight.*—Some varieties are more liable to the attacks of these diseases than others and the presence of either disease may seriously reduce the yield. These diseases may seriously affect the late

varieties while the earlier maturing sorts scarce feel its presence and the reverse may also be true.

The variety tests of potatoes at University Farm in 1896 consisted of the trial of two sets of varieties planted and grown in quite different soils. One lot was designed as a trial of early kinds and the other a trial of late kinds. All the seed was cut in the same way; the aim being to secure one, two or three eyes on a piece of potato of good size. They were planted with a Robbins potato planter in rows

TABLE LVII.—Showing yield of fifteen hills of early potatoes that were of marketable size July 14th, 1896.

VARIETY.	Marketable.		Small.		Total.	
	Lbs.	Oz.	Lbs.	Oz.	Lbs.	Oz.
Burpee's Extra Early	20	13½	3	14	24	11½
Vaughan	21	4½	3	1	24	5½
Ohio Jr.	23	3½		11	23	14½
Van Ornam's Earliest	21	5½	2	7	23	12½
Clark's No. 1	19	6½	3	6	22	12½
Early Michigan	19	10	2	13	22	7
Early Burpee	19	4½	3	2	22	6½
Early Norther	18	8	3	14	22	6
Early Ohio	18	12½	2	6	21	2½
Early Harvest	18	3½	2	5	20	8½
Early Puritan	16	2	4	2½	20	4½
Early Six Weeks	18	10	1	7½	20	1½
Houlton Rose	15	10	2	10	18	4
Early Cyclone	14	6	3	13	18	3
Acme	15	14½	1	4½	17	3
Polaris	12	7½	2	14	15	5½

three feet apart and sixteen inches apart in the rows. The land was harrowed three times after planting before the plants were four inches high and they were then cultivated with a one-horse cultivator. The crop was dug by a Hoover potato digger. To determine the comparative earliness of varieties for marketing one lot of potatoes was planted May 8 to 9 and on July 14th fifteen hills of each variety were dug of the kinds that were then large enough for

marketing. The yield of these varieties at this time are shown in Table LVII.

The Pride of Michigan and Extra Early Walton were also examined July 14th and were found large enough for table use, but as we had only a few hills, none of them were dug for comparative yield.

The Ohio Jr., Acme and Early Ohio while not as productive as some others were more nearly mature at this time and hence in better marketable condition than any others. The other varieties were in about the same condition as regards their maturity. The Ohio Jr. gave the largest yield of marketable, very early potatoes, although it ranked much lower in total yield when compared with varieties not quite so early. The Ohio Jr., Early Ohio and similar potatoes are the most popular kinds for early marketing.

All the vines in this plot were vigorous and healthy and free from any blight or insects. Some of the early kinds were not large enough for table use at the time the varieties in Table LVII were dug and these were dug ten days later when they were in good marketable condition. Their yield is shown in Table LVIII. All varieties that matured later than these are considered as medium early and will be found reported on in Table LIX.

TABLE LVIII.—Showing yield from fifteen hills of seven varieties of early potatoes that were dug July 28, but were not of marketable size July 14th.

VARIETY.	Marketable.		Small.		Total.	
	Lbs.	oz.	Lbs.	oz.	Lbs.	oz.
Bovee	31	0	5	10	36	10
Good News	30	13	2	11	33	8
Polaris	29	1½	3	1½	32	3
Early Fortune	28	10	2	6	31	0
Early Wisconsin	22	3½	1	14½	24	1
Early Market	21	5	1	4	22	9
Freeman	12	14½	3	1½	16	0

NOTES ON VARIETIES.

Bovee.—Originated by Mr. Martin Bovee, Northville, Mich. Early; form oblong, thick; color, yellowish-white with pink markings; eyes, shallow, numerous; tubers of good size; foliage, light green, dense and spreading. Cooking qualities good. Our trials for two years show this to be a productive new early sort of much promise.

Carman Nos. 1 and 3.—These two varieties are much alike as to form, size, color, etc., but the No. 3 is later in maturing. Their qualities are good when grown here, but reports show there is a difference in this respect according to the soil they are grown in.

Country Gentlemen.—Late; form, medium to long, flattened; eyes, large but not deep; skin, pink, smooth. A promising new late variety. Cooking qualities, good.

Early Cyclone.—Medium, early; form, oblong, thick; color, pink; skin nearly smooth. The heaviest yielder of the early varieties in 1896.

Early Michigan.—Early; form, medium to long, thick; eyes, shallow and sometimes prominent; skin slightly roughened. A new variety of considerable promise, but needs further trial to determine its value.

Early Thoroughbred.—Introduced by Wm. H. Maule in 1896. Early; good size; form, oblong; eyes, small and shallow; skin, pink; quality, fair.

Extra Early Walton.—Early; form, oblong tapering; eyes, shallow; color nearly white; size, medium; cooking qualities, good. A promising new variety from Mr. F. B. Van Ornam, of Iowa.

Enormous.—Medium late; form, oval; color, white and smooth; vines vigorous, erect. Originated by Mr. A. E. Manum, of Vermont. A very promising new late sort, worthy of trial. Several Experiment Stations have reported it very productive on their grounds.

Great Divide.—Late; form, oblong, somewhat flattened; color, nearly white; eyes, small, medium deep; quality, good.

TABLE LVIX.—Showing the total yields of varieties of potatoes grown on plot one, including total yields of varieties shown in Tables LVII and LVIII.

VARIETY.	Marketable bushels per acre.	Small bushels per acre.	Total bushels per acre.	Consecutive number in yield.
Acme	210	8	218	31
Bovee	405	33	438	4
Burpee's Extra Early	360	26	386	9
Clark's No. 1	318	17	335	19
Carman No. 1	274	8	282	27
Early Burpee	265	27	292	26
" Cyclone	458	34	492	3
" Fortune	340	11	351	17
" Harvest	381	24	405	7
" Market	250	17	267	29
" Michigan	357	25	382	11
" Norther	392	15	407	6
" Ohio	270	6	276	28
" Puritan	324	28	352	16
" Six Weeks	293	16	309	25
" Thoroughbred	365	22	387	8
" Wisconsin	292	18	310	24
Enormous	484	18	502	2
Extra Early Walton	184	26	210	32
Freeman	291	21	312	23
Good News	330	19	349	18
Honeoye Rose	359	12	371	12
Houlton Rose	336	19	355	15
No. $\frac{241}{2}$ (From P. Henderson & Co.)	233	42	275	29
No. 99	189	12	201	33
Ohio Jr	310	17	327	21
Pride of Michigan	343	19	362	13
Polaris, (Webster)	306	23	329	20
Polaris, (Coteau)	298	20	318	22
Rose No. 9	501	9	510	1
Uncle Sam	.....	.....	.....	.....
Van Ornam's Earliest	334	22	356	14
Vaughan	414	17	431	5
Vigorosa	.....	.....	.....	.....
What Not	352	31	383	10

TABLE LX.—Showing the total yield of varieties of potatoes tried on plot two. Land not in as good condition for potatoes as that of plot one shown in Table LVIX.

VARIETY.	Marketable bushels per acre.	Small bushels per acre.	Total bushels per acre.	Consecutive number in yield.
Arizona	153	16	169	11
Banner	144	14	158	16
Brownell's Winner	136	7	143	22
Carman No. 1	158	5	163	15
" No. 3	147	10	157	17
Crown Jewel	154	19	173	8
Country Gentlemen	218	10	228	1
Delaware	144	4	148	19
Everitt	158	10	168	12
Great Divide	163	8	171	10
Hoosier	28	3	31	31
Irish Cobbler	192	7	199	4
Irish Daisy	153	19	172	9
Late Puritan	189	10	199	5
Lookout Mountain	45	11	56	30
Maggie Murphy	136	7	143	23
Money Maker	81	8	89	29
New Queen	171	16	187	7
Parker's Market	151	3	154	18
Peerless	156	11	167	14
Prizetaker	185	9½	194½	6
Rural Blush	100	6	106	28
Rural New Yorker No. 2	115	5	120	26
Snowflake	138	7	145	21
Summit	172	30	202	3
Vick's Perfection	194	16	210	2
White Ohio	154	14	168	13
White Mountain	99	14	113	27
Woodbury White	139	7	146	20
World's Fair	111	19	130	24
Wilson's First Choice	108	17	125	25

Honeoye Rose.—Late; form, oblong; size, meidium; color, pink; eyes, small, shallow; skin, smooth. A new variety introduced in 1896. Quality very good.

Pride of Michigan.—Early; form, oblong; color, nearly white, smooth; eyes, shallow; quality, good. A promising early variety introduced by Mr. M. Bovee, of Michigan.

Rose No. 9.—Late; form, oblong, flattened; eyes, medium deep; color, pink; size, medium to large; quality, very good.

Uncle Sam.—Medium late; form, oblong, thick; eyes, medium deep, but not large; color, pink. Introduced for first time in 1896. Probably of value in many sections as a medium late sort.

Van Ornam's Earliest.—Early; form, oblong; eyes, shallow; skin slightly roughened; size, medium to large. A new early variety of much merit. Quality, very good.

Vigorosa.—Late; form, flat, oblong and sometimes irregular, large; eyes, shallow but large; color, red; skin, smooth. Quality, fair. A new variety which is rather coarse in texture when grown in our soil.

POTATO BLIGHT.

What is known as blight of potatoes affects the tops causing them to die down prematurely. In some seasons we have had considerable loss from this cause, but as a rule it causes very little damage in this section. For several years we have experimented in the use of Bordeaux mixture as a preventive of this disease with varying results; sometimes we have had quite an increase in yield due to its use, but the conclusions from many trials are that it will not pay at the present time to go to the expense of this treatment in this section.

POTATO SCAB.

The word scab, when applied to potatoes may refer to injuries caused by insects as well as by disease, but practically the only scab that seriously injures our potato crop is caused by disease. This subject has been twice referred to

in previous bulletins and the treatment recommended in them has again been found successful in practice. Briefly this treatment consists in soaking the seed potatoes either before or after cutting them for one and one-half hours in a solution of corrosive sublimate (Mercuric bichloride) as follows. Procure from a druggist two ounces of powdered corrosive sublimate, put this into two gallons of hot water in a wooden or earthernware vessel, allow it to stand until dissolved. Place thirteen gallons of water in a clean barrel, pour in the solution of corrosive sublimate and allow it to stand two or three hours with frequent stirrings. Into this put the potatoes in bags for one and a half hours, after which they may be dried and stored until needed for planting or may be planted at once. But when potatoes have been thus treated it is necessary to plant them on land that has not grown scabby potatoes, for the scab disease may remain in the ground several years and may infect the tubers that are planted. This disease is probably communicated to the land by planting scabby potatoes, by manure from animals fed on scabby potatoes and by the wash water from land growing scabby potatoes. It should be understood that corrosive sublimate is a *deadly poison* which requires to be handled with great care and if it is put into metal vessels it corrodes them. In applying this remedy it is desirable to avoid using very scabby potatoes. Some experiments show that potatoes thus treated germinate a little slower than those not treated but we have found nothing to complain of on this account in the use of this remedy.

POTATO IMPLEMENTS.

SAMUEL B. GREEN.

Potato growing has been largely overdone in this country during the past two years and the interest of the people of this state in this subject has considerably lessened. However, there can be no doubt but what this important crop is destined to be very largely grown and that it must play an important part in the rotations of the best Minnesota farms of the future. Perhaps no section of this conntry is better adapted than the northwestern states to raising the potato at a profit and our potato seed stock has no superior.

The application of good machines for cutting, planting and digging potatoes is a matter of quite recent development. Comparatively few people are acquainted with the progress made in this direction of recent years. On this account the Division of Horticulture of the Experiment Station has for several seasons made a special study of this subject and has urged the makers of improved potato machinery to give their machines a trial on our grounds. In almost every case the manufactures have cordially responded, and in most cases have donated them, until we now probably have the most complete assortment of potato machinery to be found in this country. The value of this kind of machinery that has been brought together here, reckoned at the regular retail price amounts to about $600.

This collection has been an object of great interest to probably over two thousand visitors who have looked it over during this year as well as to the students of the School of Agriculture, who find much profit and interest in its study. On this account it is now discussed in bulletin form in the belief that it will interest the potato growers of the state.

The machines mentioned in the following pages do not

include all those we have tried, for we have followed the plan of describing only those that we consider worthy of such notice.

In trying this machinery we have aimed to give them a fair field trial under the ordinary and good conditions that they would probably be subjected to in the hands of a good farmer. To accomplish this we have not only tried them on the land of the Experiment Station but on the land of adjoining farms and even loaned some of them to good farmers in order to give them a fair trial. In every case we have conscientiously aimed to make them do as good work as possible for them to do. We have communicated to the manufacturers any seeming failure of their machines to do satisfactory work and have been guided by their instructions. Several of the prominent machine dealers of this section have taken great interest in these trials, and one party who has been a large dealer in agricultural implements for many years, confessed that he had never seen a potato planter at work until he saw one planting on our grounds although he had sold many of them.

Potato machinery may now be said to have reached a rare degree of development and some of it may be regarded as being as perfect in operation as the mowing machine or the harvester. The tendency is to simplify it and to do away with that which is complicated.

The most expensive potato machinery might often be bought and used co-operatively by several farmers living in the same neighborhood. This is especially true of potato diggers which are very expensive and are used but a short time each season. Potato machinery is better adapted to being used in this way than many other agricultural implements because the time during which they may be used in planting, harvesting or otherwise caring for the crop extends over several months.

POTATO CUTTERS.

In cutting potatoes it matters little how the work is done provided every eye that grows is on a piece large enough to nourish the young sprout until it has a root system and

expanded leaves enough to gather and digest its own food. In practice the seed pieces should have one, two or three eyes according to whether the tubers have a few or many eyes. Varieties like the Rural New Yorker No. 2 that have but few eyes should be cut to about one eye to a piece while those having many eyes should be cut with two or three eyes to each piece. For these reasons none of the automatic potato cutters that we have seen do satisfactory work, but with the best hand cutters there is an opportunity for the person in charge to use his good judgement in cutting the seed and excellent results are obtained from them. The hand cutters

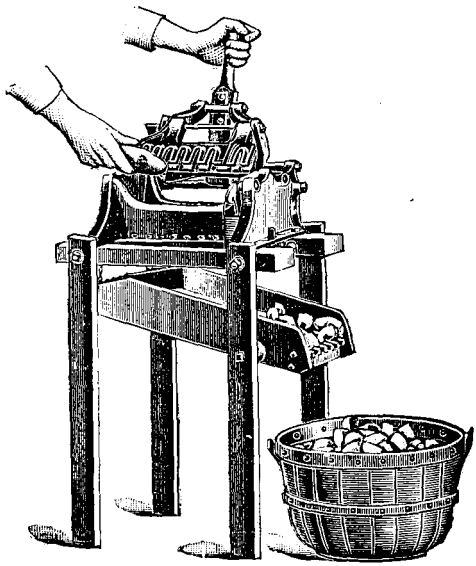


Fig. 213.—Aspinwall Potato Cutter.

also leave the seed in blocky pieces which is the best form for use in potato planters.

Colgrove's Potato Cutter, manufactured by J. Colgrove, Clearwater, Minn.

A medium priced, well-made potato cutter. The potatoes are placed on a bed of knives that cuts them once lengthwise and into as many cross pieces as the length of the potato will allow. List price $8.00 with table, $7.00 without table.

Aspinwall Potato Cutter, manufactured by the Aspinwall, Manufacturing Co., Jackson, Mich.

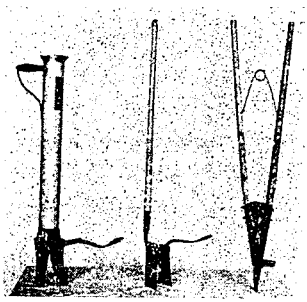
For those who have to cut large numbers of potatoes for planting, this will prove a very helpful implement. The bed of knives is adjustable so that any shape or size of potato may be cut. If reasonable care is used it will be very seldom indeed that a seed piece will be found without an eye. A person can cut satisfactorily a very large quantity of potatoes with this machine in one day. For machine planting, the pieces are cut in the best shape for getting the best work from the planters. It is made in a thorough workman-like manner in every respect. List price $10.00. See Figure 213.

Prairie City Potato Cutter, manufactured by the Dowden Manufacturing Co., Prairie City, Iowa.

A small, low priced potato cutter very useful to those who have a small area to plant. The potato is placed on a bed of knives that cut it once lengthwise and into as many cross pieces as the length of the potato will allow. List price $2.50.

HAND POTATO PLANTERS.

Hand potato planters are quite an efficient aid in planting small areas of potatoes. They are operated in much the



A. B. C.

Fig. 214.—Hand Potato Planters. A—Delmore. B—Acme. C—Colgrove.

same way as hand corn planters. They are simple in construction and cheap. By using any of them an active man can plant from one to three acres per day.

Acme Hand Potato Planter, manufactured by the Potato Implement Co., Travers City, Mich.

This is a very simple planter and is used successfully. The seed pieces are put into the hopper which is pressed into the soil with the foot, then by moving the handle the hopper opens at the bottom and leaves the seed below ground. Well made and useful where only a few acres are grown. List price $1.00. See Figure 214 at B.

The Delmore Potato Planter, manufactured by the Greenville Implement Co., Greenville, Mich.

This implement is simple, strong, durable and easily operated. At one operation the holes are made, seed dropped and covered. It can be adjusted to plant at any depth less than 5 inches. The jaws that enter the ground are both hinged so that the handle has only to be moved a short distance to open them. Price $1.50. See Figure 214 at A.

Colgrove's Hand Potato Planter, manufactured by J. Colgrove, Clearwater, Minn.

A very efficient hand planter. Works on the same principal as the two-handed corn planter, has long slim steel points that easily penetrate plowed land. Persons having only a few acres to plant will find this implement very useful. List price $1.50. See Figure 214 at C.

HORSE POTATO PLANTERS.

A horse potato planter of some sort is a necessity with every large grower of potatoes. Some of them cut as well as plant but the cutting done by these is greatly inferior to that of such hand implements as the Aspinwall potato cutter and others. Perhaps the simplest horse potato planter that can be improvised on our Minnesota farms is made by attaching a stove-pipe to a sulky plow so that the pipe will conduct the potato seed pieces to the furrow, and then with a good boy to drop the seed and a driver, the work is quickly done providing a little good judgement is used in its management. Horse Planters might be divided into two classes according to whether they require one or two persons to operate them. We have found that the best work is done by those that require two persons, and yet most excellent work

can be done by some of the implements that require the attendance of but one person providing careful attention is given to cutting the seed properly.

Aspinwall Potato Planter, manufactured by the Aspinwall Manufacturing Co., Jackson, Mich.

This planter has been on the market for many years and its work is well known in all sections where potatoes are grown extensively. The opening of the furrow, dropping, covering and marking for the next row is done by one operation and by one person. The pieces of potatoes are taken up

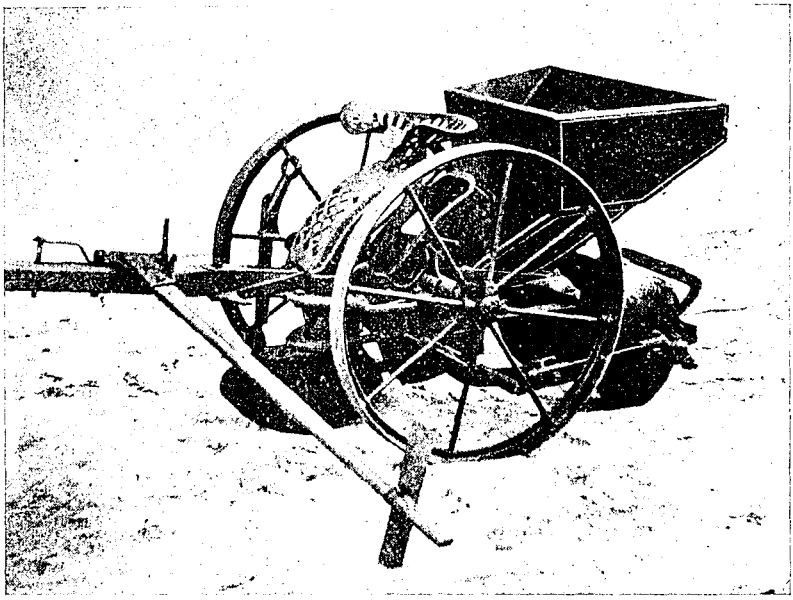


Fig. 215.—Aspinwall Potato Planter.

by means of automatic pickers which rotate on the axle, carrying them over and dropping them into the feed spout. The opening plow opens a nice furrow into which the "seed" falls. The furrow is covered either by two steel drags or by concave disks. The disks fill the furrow very evenly even on very coarse rough land. The distance between the hills may be regulated from 10 to 26 inches by removing or increasing the number of pickers. For most even work, the potatoes

are best cut into solid blocks instead of being cut in long slender pieces. Where they are cut irregularly the pickers are apt to drop more than one piece in a hill. A fertilizer attachment is provided which deposits a small amount of any fine fertilizer in the furrow with the "seed." The machine is well made throughout. List price, plain $60.00, with fertilizer attachment $70.00. See Figure 215.

The Deere Potato Planter, manufactured by the Deere & Mansur Co., Moline, Ill.

This is a well made, very desirable planter and is operated by one man. The hopper is very large which allows of

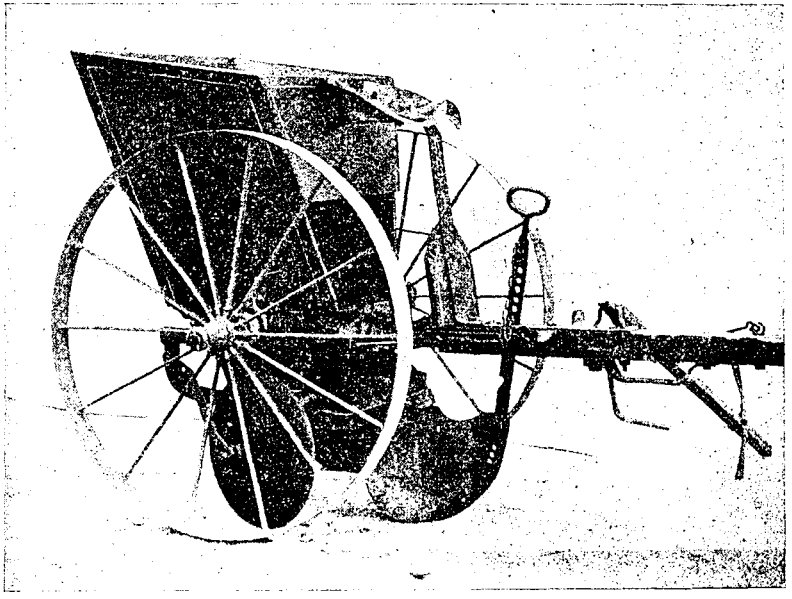


Fig. 216.—Deere Potato Planter.

planting long rows. The opening plow is of good shape and capable of opening a clean furrow. The pieces of potatoes are taken from the hopper by means of automatic pickers, that are arranged on the axle. The distance between the hills is changed by adding or removing the picking arms. If the potatoes are cut in blocky pieces as when cut by a machine cutter, instead of being cut in long pieces, the

pickers can be depended on to drop uniformly. If the seed pieces are long and thin the pickers will sometimes drop two pieces in a hill. The furrow is closed by two concave steel disks. The location of the furrow opener and the covering disks directly under the axle, insures uniformity in depth of planting. Both the furrow-opener and the covering disks are adjustable. List price $60.00. See Figure 216.

The Improved-Robbins Potato Planter, manufactured by the Bateman Manufacturing Co., Grenloch, New Jersey.

The planting is completed in going over the row once. The opening plow does very good work under all conditions.

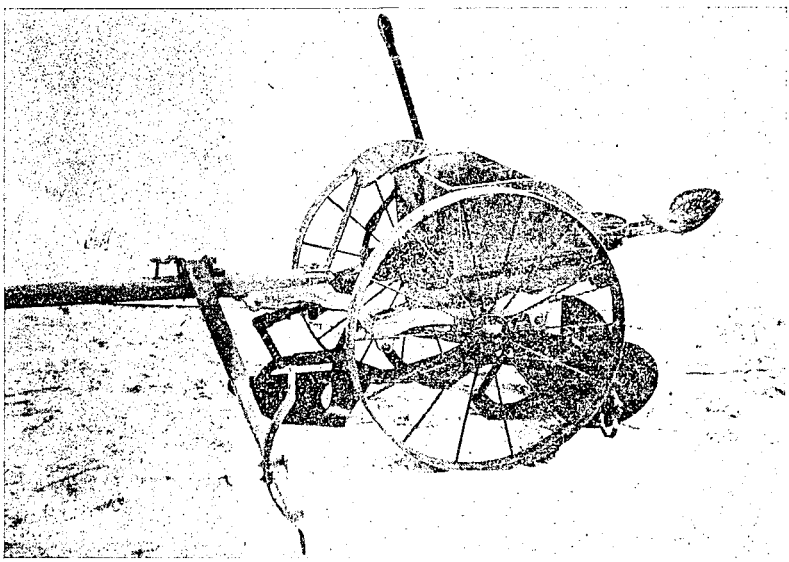


Fig. 217.—The Improved Robbins Potato Planter.

At the rear of the opening plow is a second plow that cleans the furrow and the seed pieces are dropped just behind it. The furrow is covered by large concave disks. The cut seed is placed in a hopper that has an elevating wheel which drops a piece in each section of a wheel which lies in a horizontal position. This latter wheel revolves over the opening of the spout and as each section comes around it drops the piece at regular intervals regulated by different cog wheels.

Two persons are required to operate the machine, one to drive and one to sits at the rear to fill any vacant spaces in the wheel or to remove any extra pieces, thus insuring one piece and no more to every hill. If properly operated this planter will do far better work than can be done by hand. An attachment for sowing corn, beans and peas is also offered as extra attachments. All parts are thoroughly well-made. List price $55.00. See Figure 217.

The Scofield Potato Planter, manufactured by Scofield & Co., Freeport, Ill.

Designed to meet the wants of the small growers of potatoes. This planter is very simple in construction. Its distinct feature is an endless chain with sections on it for

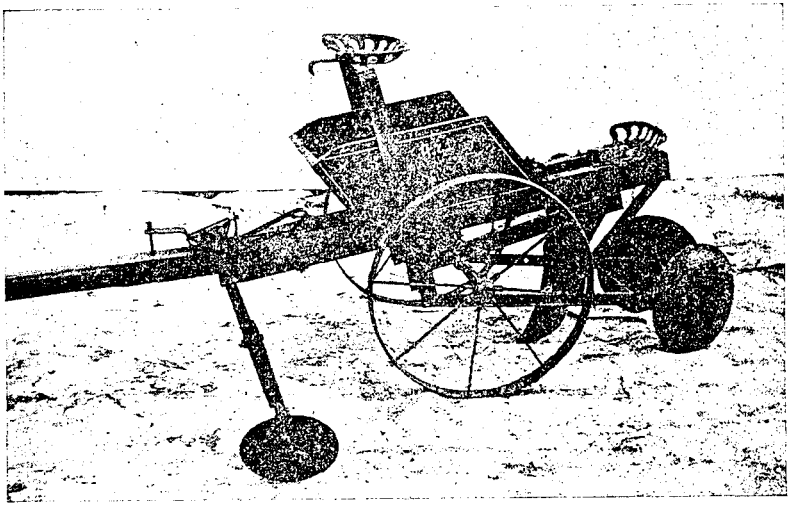


Fig. 218.—Scofield Potato Planter.

carrying the seed pieces to the seed spout. All the work is done at one operation. It requires two persons to operate it, one to drive and another to place the seed in the sections of the endless chain. The furrow is filled by concave disks. It is well made in all parts. List price $36. See figure 218.

POTATO DIGGERS.

For the farmer who raises potatoes in a small way it will often be a question whether he can afford to use a horse digger at all if he can hire cheap labor to dig them by the bushel. In seasons when potatoes are high in price he will probably do much better to dig them by hand, since none of the low priced diggers take the potatoes out as clean as desired, while in seasons when the price is low it may be best for him to use a potato digger. The higher priced horse diggers take the potatoes out clean and leave them on the ground in good shape for picking up. These are a necessity for everyone who grows a large acreage of potatoes.

Dowden Potato Harvester, manufactured by the Dowden Manufacturing Co., Prairie City, Iowa.

The Dowden potato harvester is a powerful digger. With this machine the potatoes are lifted by a plow point

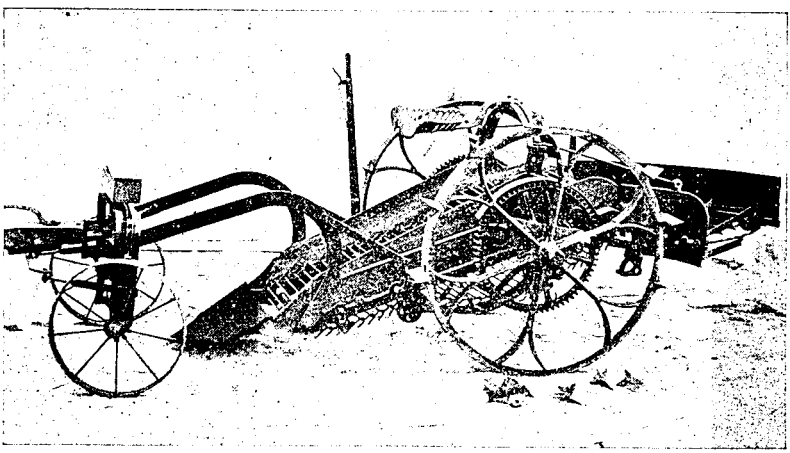


Fig. 219.—Dowden Potato Harvester.

on to an endless elevating chain that carries them to the rear where they are neatly dropped in a row. As they are being elevated by this chain the earth is shaken from the potatoes and falls through. On account of its lifting so large amount of soil four horses are usually required to work it and which are best driven abreast. The machine is well made and works admirably in soil free from stones. List price $100. See figure 219.

The Hoover Digger, manufactured by Hoover, Prout & Co., Avery, Ohio.

The Hoover digger is a very powerful and thoroughly good working machine. The concave shovel point is forced under the row of potatoes which lifts the row onto the ele-

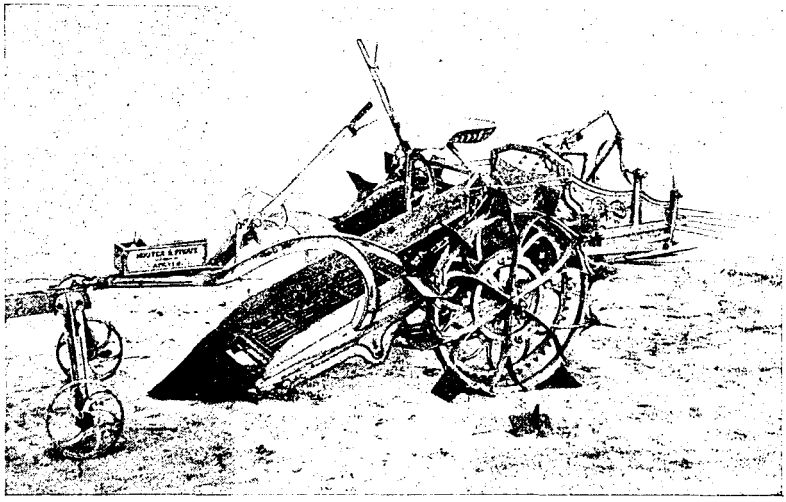


Fig. 220.—Hoover Potato Digger.

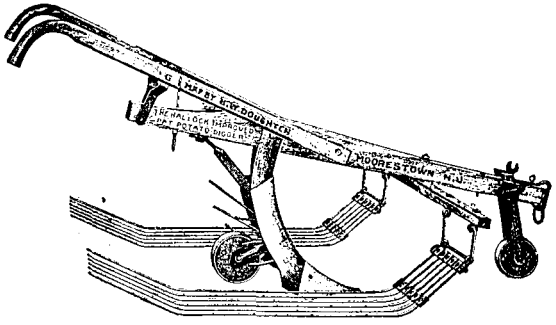


Fig. 221.—Improved Hallock Potato Digger.

vating apron that gradually shakes out the dirt and deposits the potatoes in a neat row behind the machine and the vines are thrown to one side. This machine is made in the best manner. It may be operated either by two or four horses depending on the depth of the potatoes in the land

and the kind of soil in which they are grown. List price $110. See figure 220.

The Improved Hallock Potato Digger, manufactured by H. W. Doughten, Moorestown, New Jersey.

This is simply a double mould board plow that throws the row of potatoes to both sides where the earth falls onto a series of steel rods that drag along the sides. The potatoes are separated in this way very nicely. Well made and very useful for those growing but small amounts of land in potatoes. List price $20. See figure 221.

The Standard Potato Digger (Cummings Patent Low Down Digger) manufactured by the Standard Harrow Co., Utica, New York.

The Cummings low down potato digger is very different in construction from any other on the market. The earth is

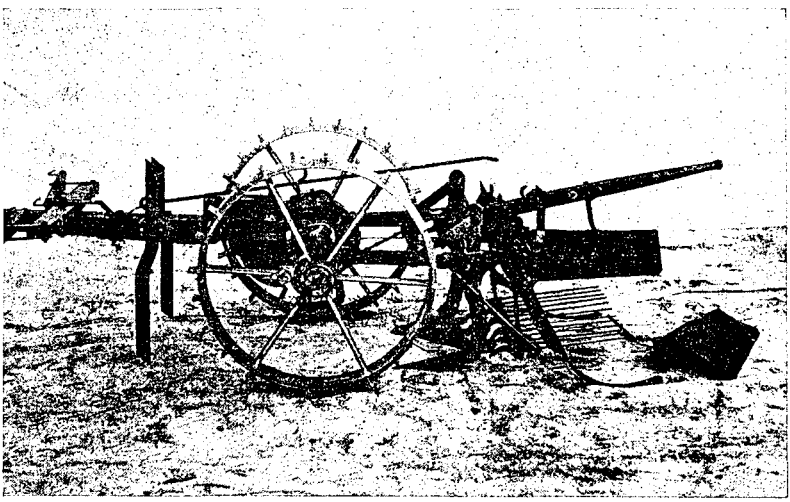


Fig. 222.—The Standard Potato Digger.

moved by a divided shovel pushed under the row of potatoes lifting all of them with the earth onto a shaker, that is novel in construction and very efficient in action. This

shaker works very rapidly, separating the dirt, which falls through and leaves the potatoes on the surface behind. Where the potatoes were more than six inches deep, in our experience with this digger we have been bothered somewhat about getting it to go as deep as desired but where the potatoes are planted shallow or are grown in ridges it does very excellent work and it is easily managed with two horses. This digger is thoroughly well made in all its parts. List price $75, delivered freight prepaid. See figure 222.

POTATO SORTERS.

Potato sorters are used for separating the different sizes of potatoes. They are very useful implements for those who

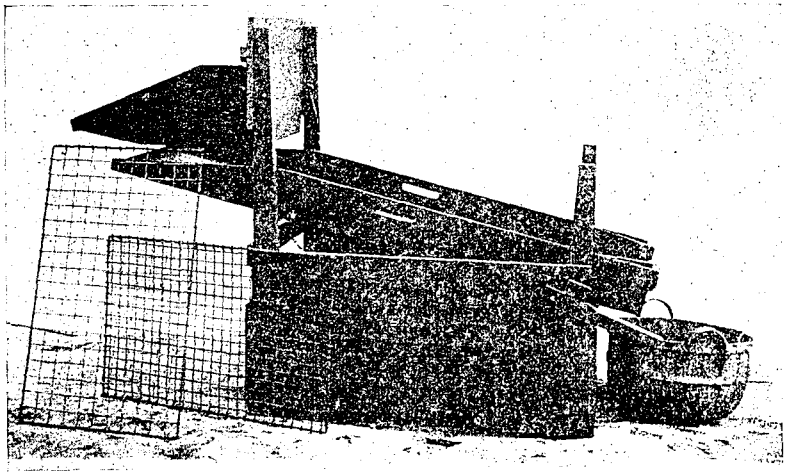


Fig. 223.—Dowden Potato Sorter.

have large quantities of potatoes to handle. They are simple in construction and not expensive.

Potato Sorter, manufactured by the Dowden Manufacturing Co., Prairie City, Iowa.

This machine will be found useful where large numbers of potatoes have to be sorted. Three sizes of screens are provided so that several grades of potatoes may be made. It is an agitating sorter. The illustration herewith shows

its plan of operating and it is well made in all parts. List price $15. See figure 223.

Hoover Potato Sorter, manufactured by Hoover, Prout & Co., Avery, Ohio.

To operate this sorter the potatoes are shoveled into a hopper which allows them to run into a wooden meshed

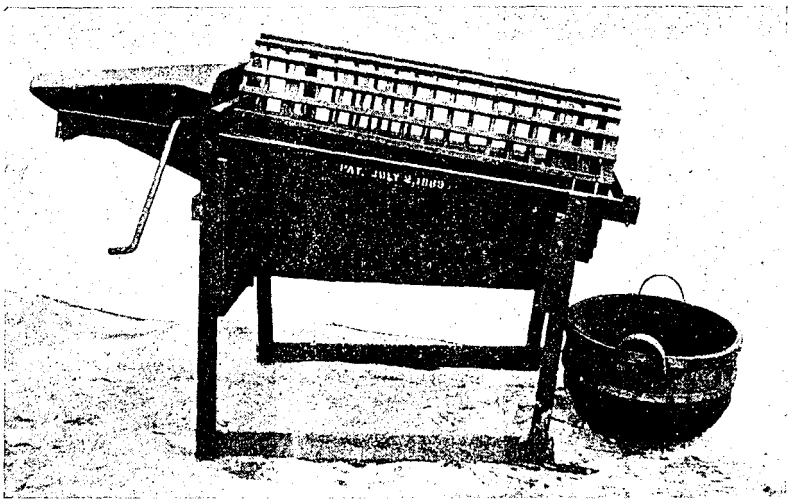


Fig. 224.—Hoover Potato Sorter.

cylinder that is turned slowly and which is inclined enough to allow the large potatoes to gradually pass down into a basket. The size of the meshes may be changed by winding the cylinder with binding twine. The dirt and small potatoes fall through and are thus separated very handily. The same machine may also be used for taking the sprout off of potatoes. List price $15. See figure 224.