

1,469,293

Oct. 2, 1923.

A. D. CRAMER

ONION SET DISTRIBUTING MACHINE

Filed March 15, 1923

2 Sheets-Sheet 1

FIG. 1

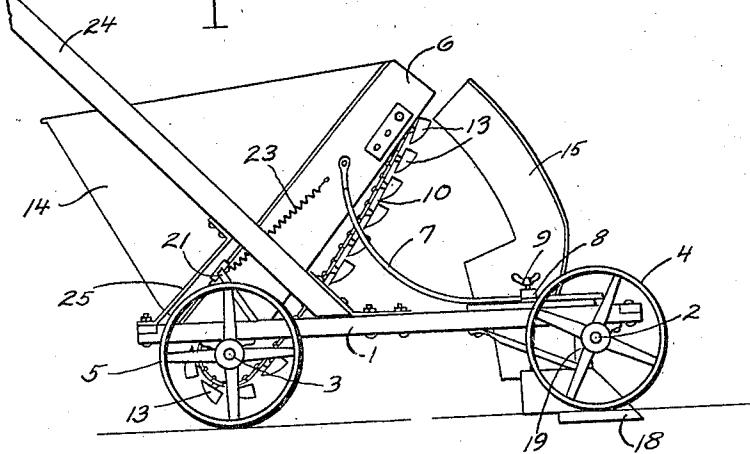
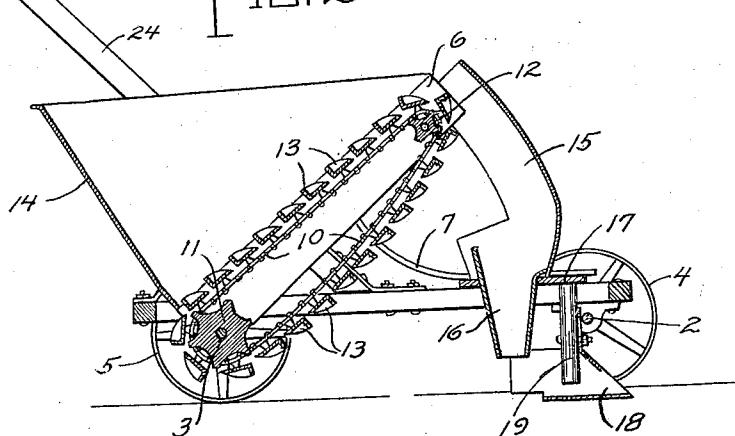


FIG. 2



INVENTOR.
Allen D. Cramer,

BY Walter N. Haskell.

his ATTORNEY.

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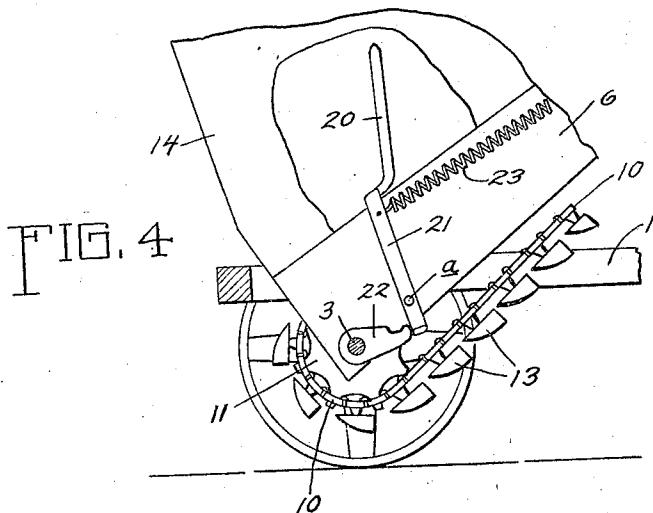
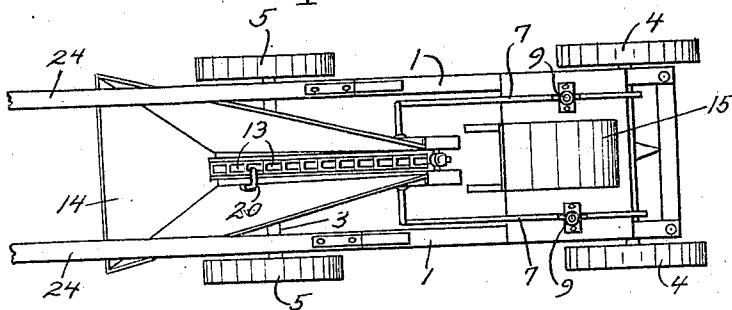
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2 Sheets-Sheet 2

FIG. 3



INVENTOR.
allen D. Cramer,
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Patented Oct. 2, 1923.

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UNITED STATES PATENT OFFICE.

ALLEN D. CRAMER, OF PLEASANT VALLEY, IOWA, ASSIGNOR OF ONE-HALF TO
ARTHUR E. CRAMER, OF PLEASANT VALLEY, IOWA.

ONION-SET-DISTRIBUTUTING MACHINE.

Application filed March 15, 1923. Serial No. 625,400.

To all whom it may concern:

Be it known that I, ALLEN D. CRAMER, a citizen of the United States, residing at Pleasant Valley, in the county of Scott and State of Iowa, have invented certain new and useful Improvements in an Onion-Set-Distributing Machine, of which the following is a specification.

My invention relates to onion set distributing machines, and has for its purpose to facilitate the most tedious and time-taking part of the onion-planting operation. In the larger fields a great quantity of the onion seed is used, and as it is desirable to have the seeds spaced at regular intervals, it is frequently necessary to employ a number of helpers to perform this part of the work. The chief purpose of the present invention is to provide a machine which will convey a quantity of the seed onions, and deliver them at regular intervals, in drills or furrows, ready to be covered.

Another purpose of the device is to provide means whereby the amount of seed which is being delivered by the machine may be increased or diminished, at will, so that the number of sets which are being distributed within a given space in a row may be increased or diminished.

Another object of the invention is to provide a means for preventing the seed from congesting in the hopper of the machine.

The above-named, and other purposes and features of the invention will more fully appear from the following specification, taken in connection with the accompanying drawings, in which:

Fig. 1 shows the invention in side elevation.

Fig. 2 is a medial longitudinal section thereof.

Fig. 3 is a plan view of the same.

Fig. 4 is a detail of the agitator devices.

Similar reference numbers refer to corresponding parts throughout the several figures.

The reference number 1 indicates the frame of the machine, having a front axle 2 and rear axle 3, the front axle being supported by a pair of carrying wheels 4, and the rear axle by a similar pair of wheels 5, which are fixed to the axle so as to impart rotation thereto when the machine is in

motion. Rockingly mounted on the axle 3 is a frame formed of a pair of spaced-apart pieces 6, to the movable ends of which are pivoted rods 7, passing through keepers 8 on the frame 1, in which they can be held in adjusted positions by means of set-screws 9.

In the space between the pieces 6 is operable an endless chain 10, supported and driven at its lower end by a sprocket-wheel 11, and passing at its upper end over a small sprocket-wheel 12, rotatably mounted in the upper end of the frame 6. Fixed to the chain 10 at close intervals are small buckets 13, each of which is of a suitable size to contain an onion set of the usual type for planting. Secured to the pieces 6 is a hopper 14, the sides of which are inclined downwardly toward the space between such pieces, such walls also converging toward the forward end of the hopper, as is shown in Fig. 3. In the operation of the machine the buckets 13 move upwardly in the upper part of the frame 6, and back on the under side thereof, as is clearly shown in Fig. 2. Assuming the hopper 14 to be provided with a quantity of the seed, in the upward movement of the buckets they will become filled therewith, in the usual manner of seeding devices of this kind, the seeds being discharged from the buckets as they pass over the wheel 12.

Partially enclosing the free end of the frame 6 is a shield 15, by means of which the onion sets are directed downwardly to a chute 16 mounted in a cross-plate 17 on the frame 1. Said chute delivers the sets to the ground, in rear of a furrow-opener 18, secured to a standard 19, fixed to the plate 17. A continuous stream of the seed passes through the chute, such seeds being distributed at approximately regular intervals in the furrow formed by the opener 18. The seeds can then be covered by hand, by tool especially provided for that purpose, or in and desired manner.

When the frame 6 is supported at a normal incline, and the hopper is provided with a quantity of onion sets of a uniform size, each of the buckets 13 will convey one of the seeds upwardly to the discharge point. This is on account of the shape of the hopper, and the tendency of the seed to accumulate in the lower part of the hopper. In case extra

seed attempt to ride upwardly on top of the seeds in the buckets, they soon roll backwardly into the bulk of the seeds below. In some cases it is desired to increase the amount of discharge, so that a greater number of the sets will be distributed in a given space. This is accomplished by lowering the movable end of the frame 6, and hopper 14, which also reduces the degree of pitch of the chain 10, decreasing the tendency of the extra sets to roll back into the hopper. If the inclination of the frame 6 is properly established each of the buckets 13 will carry an extra seed, so that the delivery of the seed to the furrow will be doubled.

To prevent the sets from becoming congested or packed in the bottom of the hopper an arm 20 is provided, passing through a slot in one of the hopper sides, and connected with a lever 21, fulcrumed on the outer face of one of the pieces 6, as at *a*. The short arm of the lever 21 is engaged in each revolution of the axle 3 by a cam 22, secured to said axle. The lever is maintained in a forward position by means of a contractile coiled spring 23, fixed to said lever at one end and to a pin in the frame 6 at the other end. A reciprocating movement is thus given to the arm 20, stirring the seeds in the lower part of the hopper.

The machine is also provided with a pair of handles 24, shown only in part, connected with the frame 1, and provided with braces 25.

What I claim and desire to secure by Letters Patent, is:

1. A device of the class described, comprising a main frame and running gear therefor; a frame rockingly mounted on said main frame having a space longitudinally thereof; a seed receptacle mounted on said rocking frame, the sides of which incline towards the rocking point of said frame; means for holding said spaced frame in adjusted inclined positions; an elevating device operable in the space in said rocking frame, provided with a plurality of uniformly spaced seed buckets; means for imparting movement to said elevating devices from said running gear; and fixed means for directing the seed in its discharge from the elevating devices downwardly to the ground.

2. A device of the class described, comprising a main frame and running gear therefor; a seed receptacle rockingly mounted on said frame provided with an upwardly inclined bottom; an elevating device operable in said inclined bottom and operatively connected with said running gear; means for holding the swinging end of said receptacle in adjusted positions, with relation to said frame; a fixed shield partially enclosing the discharge end of said receptacle; and a chute at the lower end of said shield.

In testimony whereof I affix my signature.
ALLEN D. CRAMER.