

O. I. TOMBLIN.

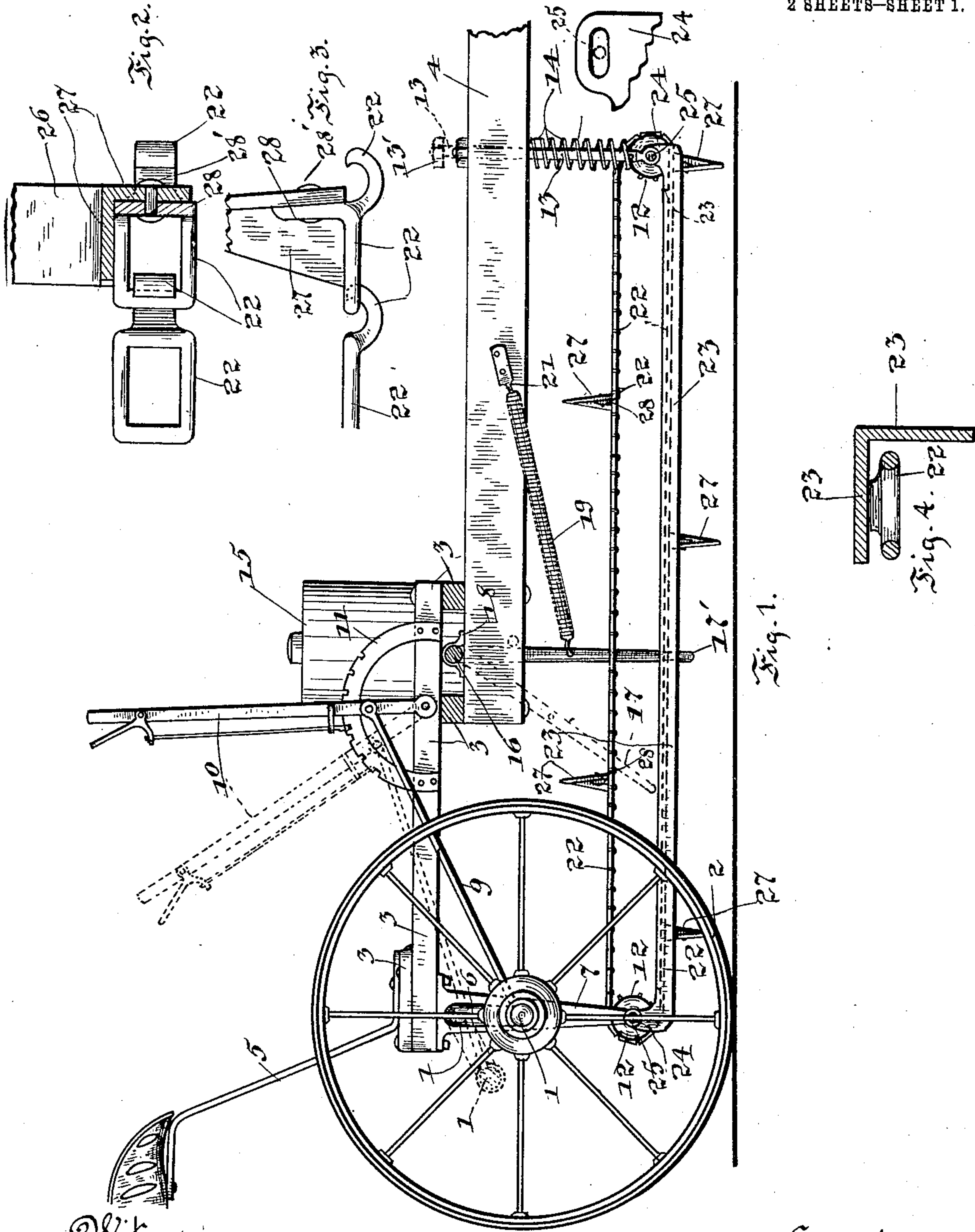
CORN PLANTER.

APPLICATION FILED NOV. 25, 1910.

998,998.

Patented July 25, 1911.

2 SHEETS—SHEET 1.



Witnesses

W. C. Smith
B. G. Richards

Inventor

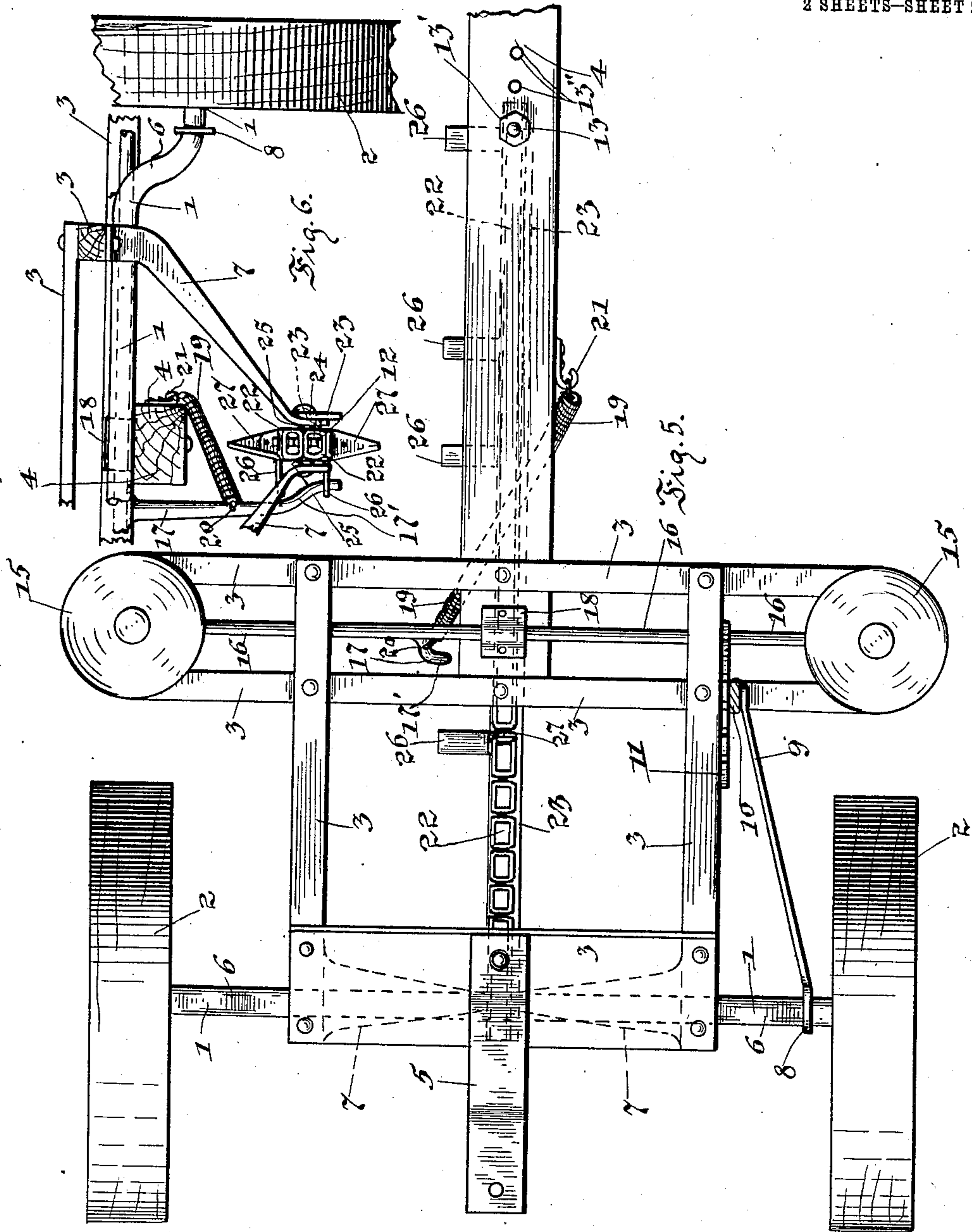
Oscar I. Tomblin
by Joshua R. Torrs
his Attorney

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UNITED STATES PATENT OFFICE.

OSCAR I. TOMBLIN, OF CHICAGO, ILLINOIS.

CORN-PLANTER.

998,998.

Specification of Letters Patent.

Patented July 25, 1911.

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To all whom it may concern:

Be it known that I, OSCAR I. TOMBLIN, a citizen of the United States, and a resident of the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Corn-Planters, of which the following is a specification.

My invention relates to improvements in corn-planters, and especially to that class thereof which are known as "check-row planters," the object of the invention being to provide a corn-planter which shall be capable of dropping the charges of seed positively at regular pre-determined intervals.

A further object of my invention is to provide a corn-planter which shall be simple of construction, strong and durable, and efficient in its operation.

Other objects will appear hereinafter.

With these objects in view my invention consists in the novel construction and arrangements of parts all as will be hereinafter fully described and more particularly pointed out in the appended claims.

My invention will be best understood by reference to the accompanying drawings forming a part of this specification, and in which—

Figure 1 is a side elevation of my improved corn-planter, Fig. 2 is a detail plan view showing a portion of a chain employed in the planter, Fig. 3 is a side elevation of said chain portion, Fig. 4 is a detail transverse section, of the chain guide employed in the machine. Fig. 5 is a top plan view of the planter, and Fig. 6 is a rear elevation of a portion of the planter.

The preferred form of my invention as illustrated in the accompanying drawings comprises an arched axle 1 carrying wheels 2, a main frame 3 being mounted upon said axle as illustrated in Figs. 1 and 5. Extending forwardly from the frame 3 and rigidly secured thereto is a tongue or pole 4, only the rear portion of which is shown in the several figures. Extending upwardly from the frame 3 is a seat spring 5, and extending downwardly from said frame are chain supporting members in which the axle 1 is journaled. An arched portion 6 of the axle 1 as illustrated in Fig. 6, is provided in order that the frame 3 may be elevated or

lowered at the will of the driver, means being connected with said axle whereby said driver can control the position of the same. The chain supporting members 7 extend downwardly and inwardly from the arched portion of the axle 1, and a ring 8 formed integral with a rod 9 is mounted on one extremity of said axle, said rod extending forwardly to an operating lever 10. This operating lever is pivotally connected to the rod 9 and is adjustably connected to a segment 11 provided at one side of the main frame 3. From this construction it is clear that when the lever 10 is in the forward or full line position that the frame 3 will be in its elevated position, and that when said lever is moved to the dotted line position, that the frame 3 will be lowered, thus causing the engagement of ground-engaging stakes with the ground which will be described hereinafter. A chain sprocket 12 is mounted between the lower extremities of the members 7, and a second chain sprocket 12 is mounted in the lower extremity of a vertical movable rod 13 as shown in Fig. 1. Surrounding the rod 13 is a compression helical spring 14 serving to exert a constant downward pressure on the bearings of the forward sprocket 12, thus automatically compensating for variations in the surface of the ground. The upper end of the rod 13 is reciprocally mounted in the pole 4, and the downward movement thereof is limited by a nut 13' provided on said rod as shown in Fig. 1.

The seed receptacles 15 mounted on either side of the machine are of ordinary construction and contain the usual seed controlling mechanism. The plows or other devices which are usually employed for making the furrows into which the seed is dropped are omitted in the accompanying drawings, it being understood that any of the usual devices may be employed. Extending transversely of the machine and terminating in the seed receptacles 15 is an oscillatory rod 16, said rod being of ordinary construction and connected to the corn-dropping mechanism in the conventional manner. Extending downwardly from the rod 16 and approximately at the center thereof is an arm 17 which terminates in a laterally extending dog 17' provided for a

purpose to be described hereinafter. A central bearing 18 is provided for the rod 16, and a tension helical spring 19 is pivoted to the arm 17 at the point 20 and to a hook 21 secured to the pole 4, said spring serving to maintain the arm 17 in a normally vertical position as shown in Fig. 1.

An endless chain 22 is longitudinally arranged under the frame 3 and pole 4 and is adapted to travel over the sprockets 12, the distance between the latter being variable by means of a plurality of perforations 13'' provided in the pole 4 into any one of which the rod 13 may be mounted. In order that all parts of the lower portion of the chain 22 shall be maintained at a uniform distance from the ground, a guide member 23 L-shaped in cross section is provided and secured to the same bearings as the sprockets 12, Fig. 4 illustrating the manner in which said chain contacts with the lower surfaces of said guide member. 24 indicates lugs provided at either extremity of the guide member 23 for attaching to the sprocket bearings 25.

The chain 22 traversing the sprockets 12 is provided with lateral projections 26 which are secured to special links of said chain, the latter being actuated by means of ground-engaging stakes 27 which are adapted to engage with the ground when the frame 3 is lowered by means of the lever 10. The stakes 27 are formed integral with the lateral projections 26, the same being shown in detail in Figs. 2 and 3. The special links of the chain 22 to which the projections 26 and ground-engaging stakes 27 are connected, comprises perforated projections 28 to which said stakes are secured by means of rivets 28', the stakes 27 and projections 26 being thus secured by a single means. The cross section of each ground-engaging stake 27 is L-shaped as illustrated in Fig. 2 in order that the same may afford a minimum of resistance when engaging the ground, the ends of said stakes being pointed as shown in Fig. 1. The projections 26 are arranged to engage with the dog 17' as illustrated in Fig. 6, said dog being moved to the dotted line position indicated in Fig. 1 when each projection 26 engages therewith, thus transmitting an intermittent motion to the seed-dropping devices through the medium of the shaft 16.

From the foregoing construction the special links carrying the ground-engaging stakes may be spaced apart according to the frequency with which it shall be desired to actuate the seed dropping mechanism. Thus, if it is desired to plant corn in hills three feet apart the stakes will be mounted in the links extending exactly three feet apart, and it is desired to be understood that the chain carrying means is to be of such dimensions that not less than two stakes

shall at all times be in engagement with the ground in order that certainty of operation may be insured.

The operation of the machine is as follows:—When the lever 10 is moved to the dotted line position the axle 1 will assume the position shown and the ground-engaging stakes 27 will enter the ground and cause the chain 22 to traverse the sprockets 12 as the machine is drawn forwardly. The projections 26 traveling rearwardly on the lower portion of the chain 22 will engage successively the dog 17' and cause the actuation of the corn dropping mechanism as aforesaid. After each actuation of the dog 17' the spring 19 returns the arm 17 to its normal or vertical position ready to be again moved by the next projection 26 in the series.

A corn planter of the construction set forth having but a minimum number of parts is simple of construction, and due to the peculiar arrangement and mounting of said parts is efficient in operation.

While I have shown what I deem to be the preferable construction for carrying my invention into effect, the same is capable of variation and modification without departing from the spirit of the invention; hence I do not wish to be limited to the exact details of construction and arrangements of parts, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

Having described my invention what I claim as new and desire to secure by Letters Patent is:

1. In a check-row planter, a main frame and means for elevating and lowering the same, an endless chain arranged under said frame and connected therewith, seed-dropping actuating means mounted on said frame, a plurality of ground-engaging stakes provided on said chain and adapted to engage the ground when said frame is lowered, and means on said chain for intermittently actuating said seed-dropping actuating means, substantially as described.

2. In a check-row planter, a frame, a wheeled arched axle supporting said frame, means provided on said frame for rotating said axle for elevating and lowering said frame, a chain arranged under said frame and connected therewith, and a plurality of ground-engaging stakes provided on said chain and adapted to engage the ground when said frame is lowered, substantially as described.

3. In a check-row planter, a main frame and means for elevating and lowering the same, an endless chain arranged under said frame and connected therewith, seed-dropping actuating means mounted on said frame, a plurality of ground-engaging stakes provided on said chain and adapted to successively enter the ground when said

frame is lowered and the machine moving forwardly, and means connected with said stakes for intermittently actuating the said seed-dropping actuating means, substantially as described.

4. In a check-row planter, a frame, a wheeled arched axle, a main frame supported by the arched portion of said axle, adjustable means connecting said axle with said frame for elevating and lowering the same, a pole extending forwardly from said frame and secured thereto, a chain arranged under said frame and pole and resiliently connected to the latter, ground-engaging stakes projecting from said chain and adapted to enter the ground when said frame is lowered, seed-dropping controlling mechanism arranged on said frame, and means for intermittently actuating said mechanism projecting from said chain, substantially as described.

5. In a check-row planter, a main frame carrying all parts of the planter and means for elevating and lowering the same; an endless chain arranged under said frame and connected therewith, seed-dropping actuating means mounted on said frame, a plurality of ground-engaging stakes provided on said chain and adapted to engage the ground when said frame is lowered, and means on said chain for intermittently actuating said seed-dropping actuating means, substantially as described.

6. In a check-row planter, a frame carrying all parts of the planter, a wheeled arched axle supporting said frame, means provided on said frame for rotating said axle for elevating and lowering said frame, a chain arranged under said frame and connected therewith, and a plurality of ground-engaging stakes provided on said chain and adapted to engage the ground when said frame is lowered, substantially as described.

7. In a check-row planter, a main frame carrying all parts of the planter and means for elevating and lowering the same, an endless chain arranged under said frame and connected therewith, seed-dropping actuating means mounted on said frame, a plurality of ground-engaging stakes provided on said chain and adapted to successively enter the ground when said frame is lowered and the machine moving forwardly, and means connected with said stakes for intermittently actuating the said

seed-dropping actuating means, substantially as described.

8. In a check-row planter, a frame carrying all parts of the planter, a wheeled arched axle, a main frame supported by the arched portion of said axle, adjustable means connecting said axle with said frame for elevating and lowering the same, a pole extending forwardly from said frame and secured thereto, a chain arranged under said frame and pole and resiliently connected to the latter, ground-engaging stakes projecting from said chain and adapted to enter the ground when said frame is lowered, seed-dropping controlling mechanism arranged on said frame, and means for intermittently actuating said mechanism projecting from said chain, substantially as described.

9. In a check-row planter, a wheeled arched axle, a frame mounted on the arched portion of said axle, means for angularly adjusting said axle; ground engaging means mounted on said frame, and seed dropping mechanism arranged on said frame to be operated by said ground engaging means, substantially as described.

10. In a check-row planter, a wheeled arched axle, a frame mounted on the arched portion of said axle, means for angularly adjusting said axle, a pole projecting forwardly from said frame, ground engaging means resiliently mounted on said frame and pole, and seed dropping mechanism arranged on said frame to be operated by said ground engaging means, substantially as described.

11. In a check-row planter, an endless chain supported for vertical adjustment, a plurality of ground-engaging stakes secured to said chain, and means for yieldingly forcing said stakes into the ground comprising a sprocket on which said chain travels, a rod connected to said sprocket and passing through a part of the chain supporting means, and a helical compression spring surrounding said rod and interposed between said last-named means and said sprocket, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

OSCAR I. TOMBLIN.

Witnesses:

W. C. SMITH,
JOSHUA R. H. POTTS.