

No. 626,512.

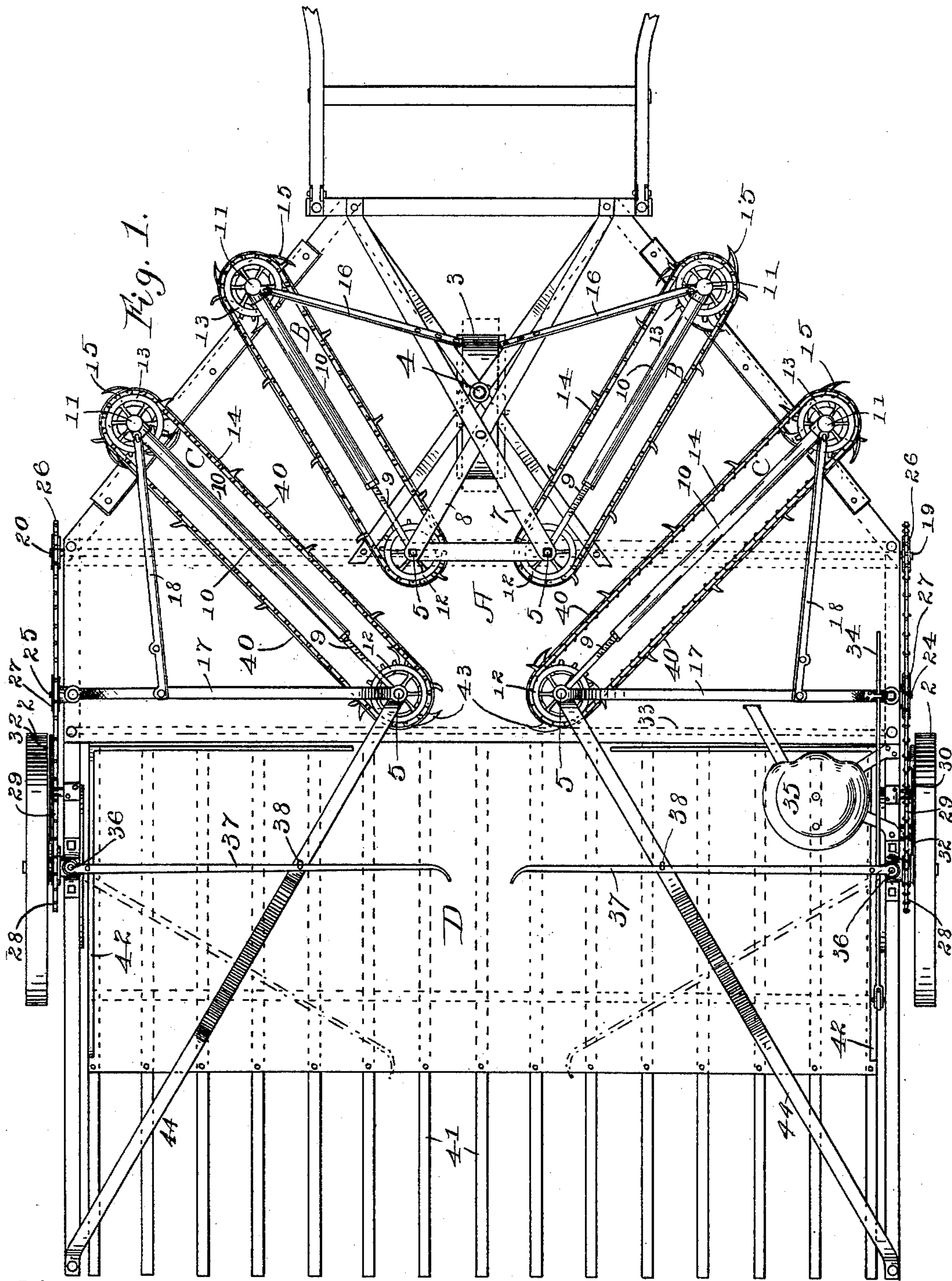
Patented June 6, 1899.

C. H. UNDERWOOD.
CORN CUTTER, SHOCKER, AND BINDER.

(Application filed Sept. 2, 1896.)

(No Model.)

3 Sheets—Sheet 1.



Witnesses:

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Inventor:

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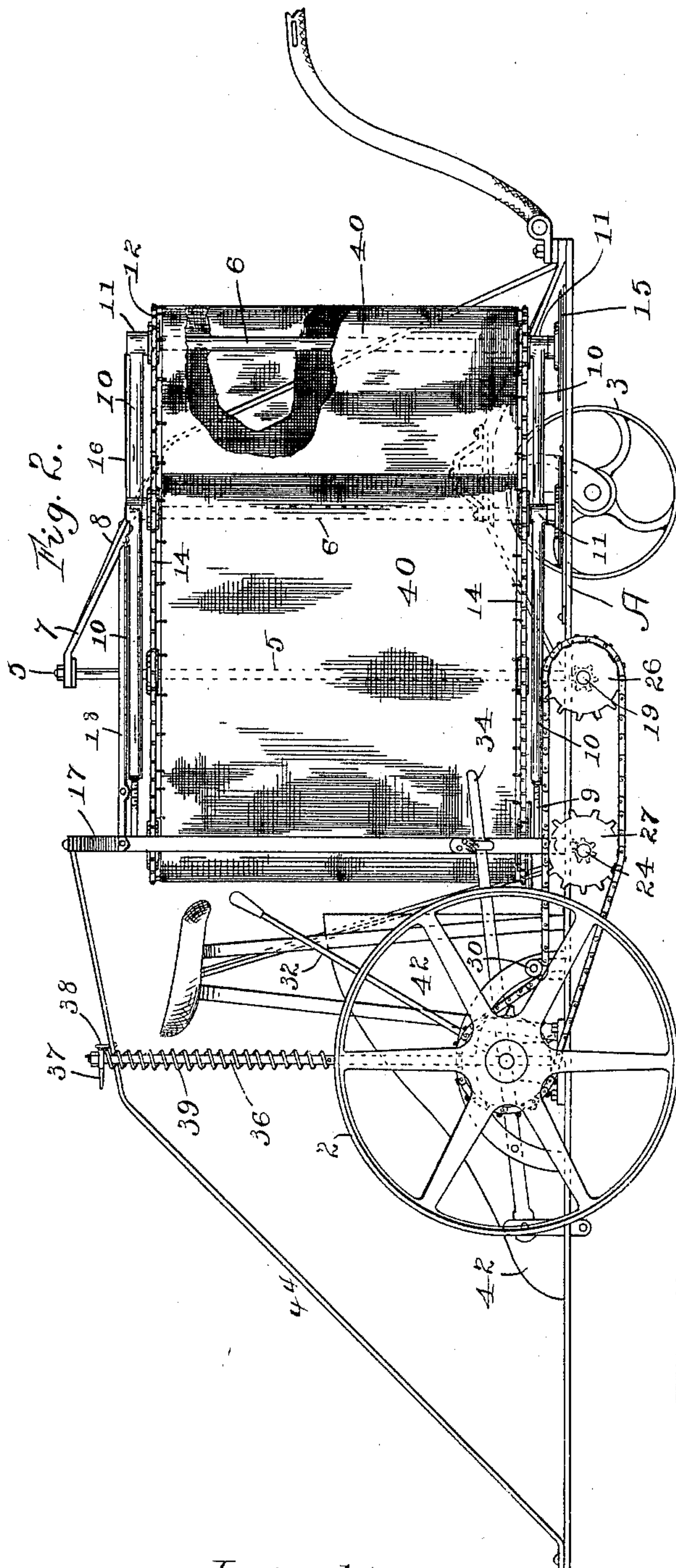
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3 Sheets—Sheet 2.



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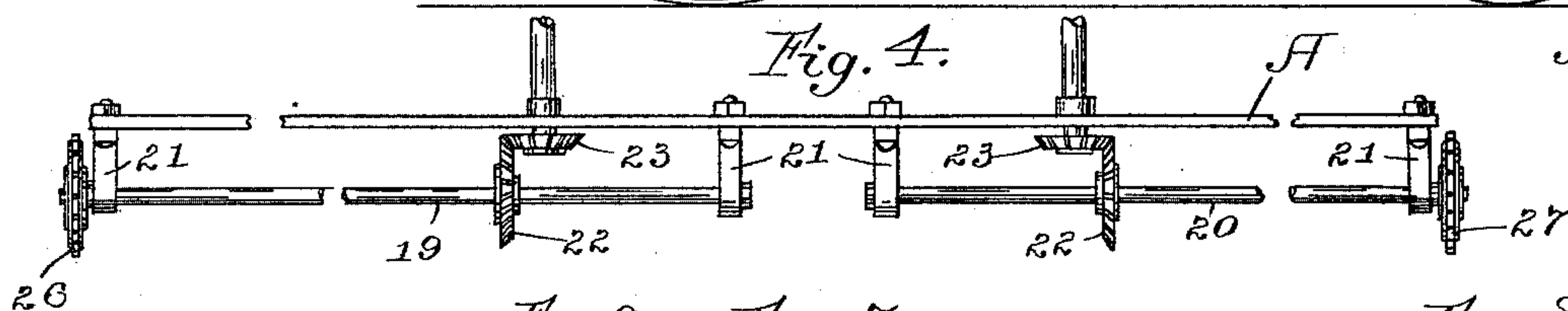
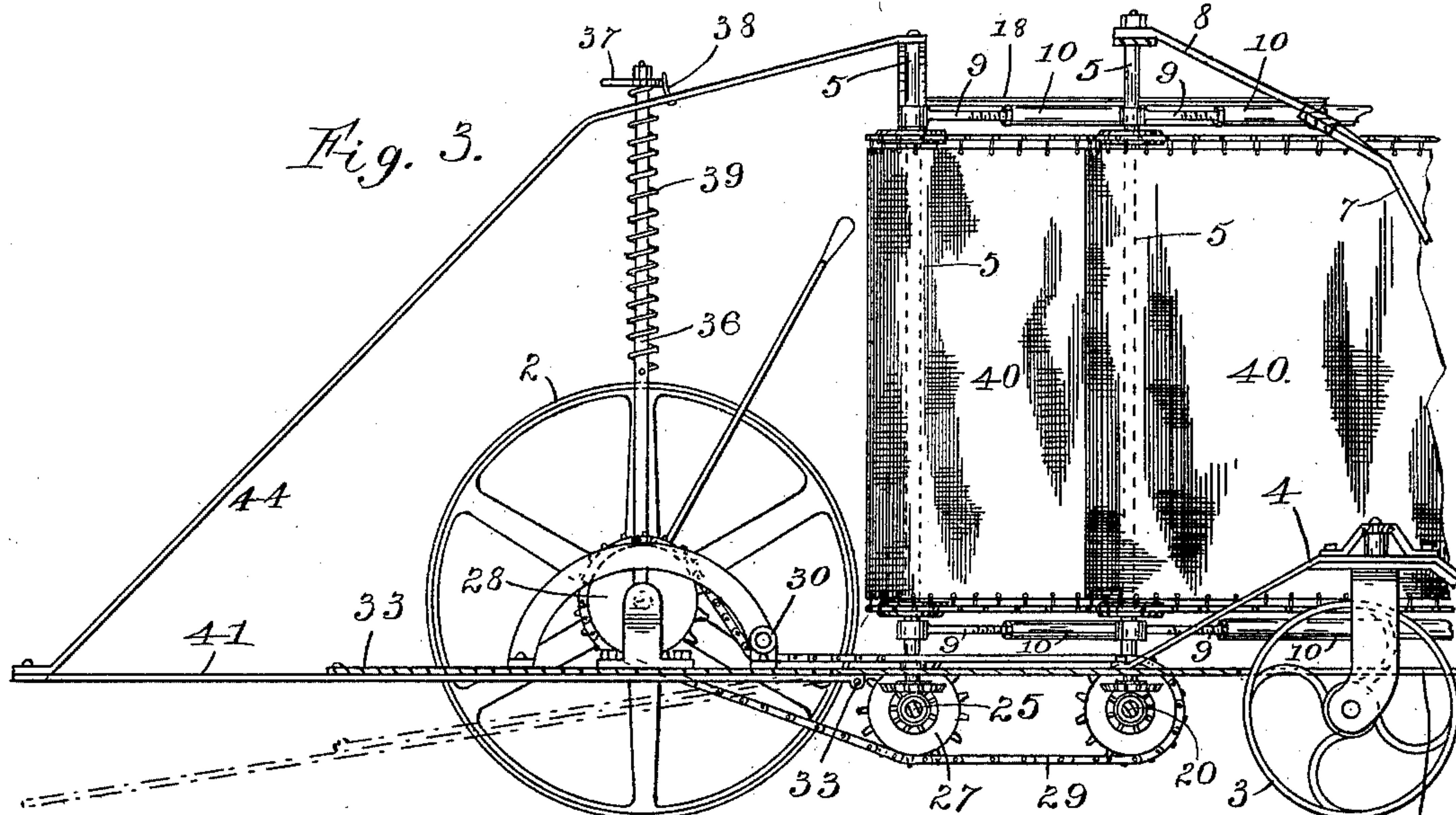
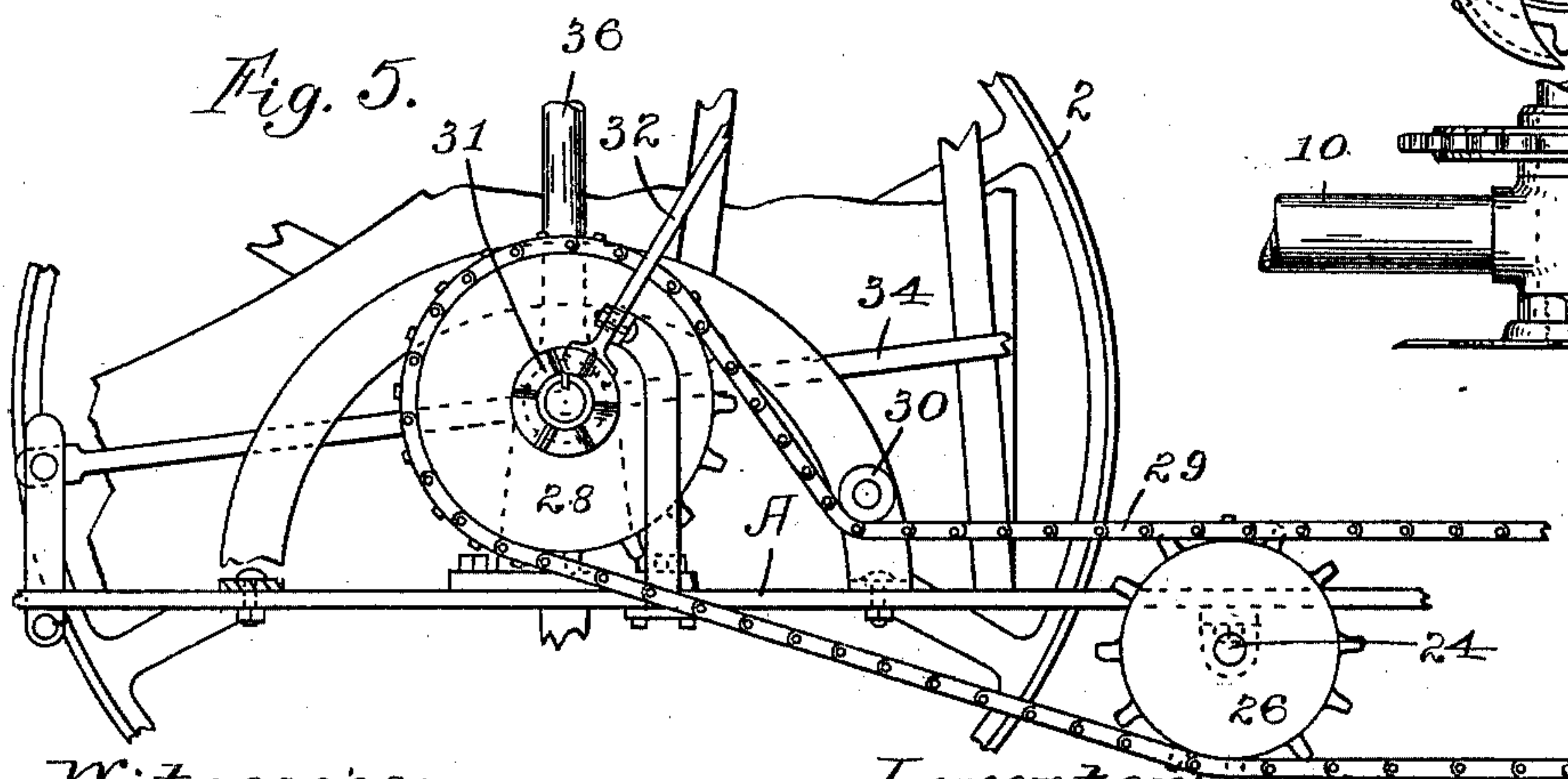
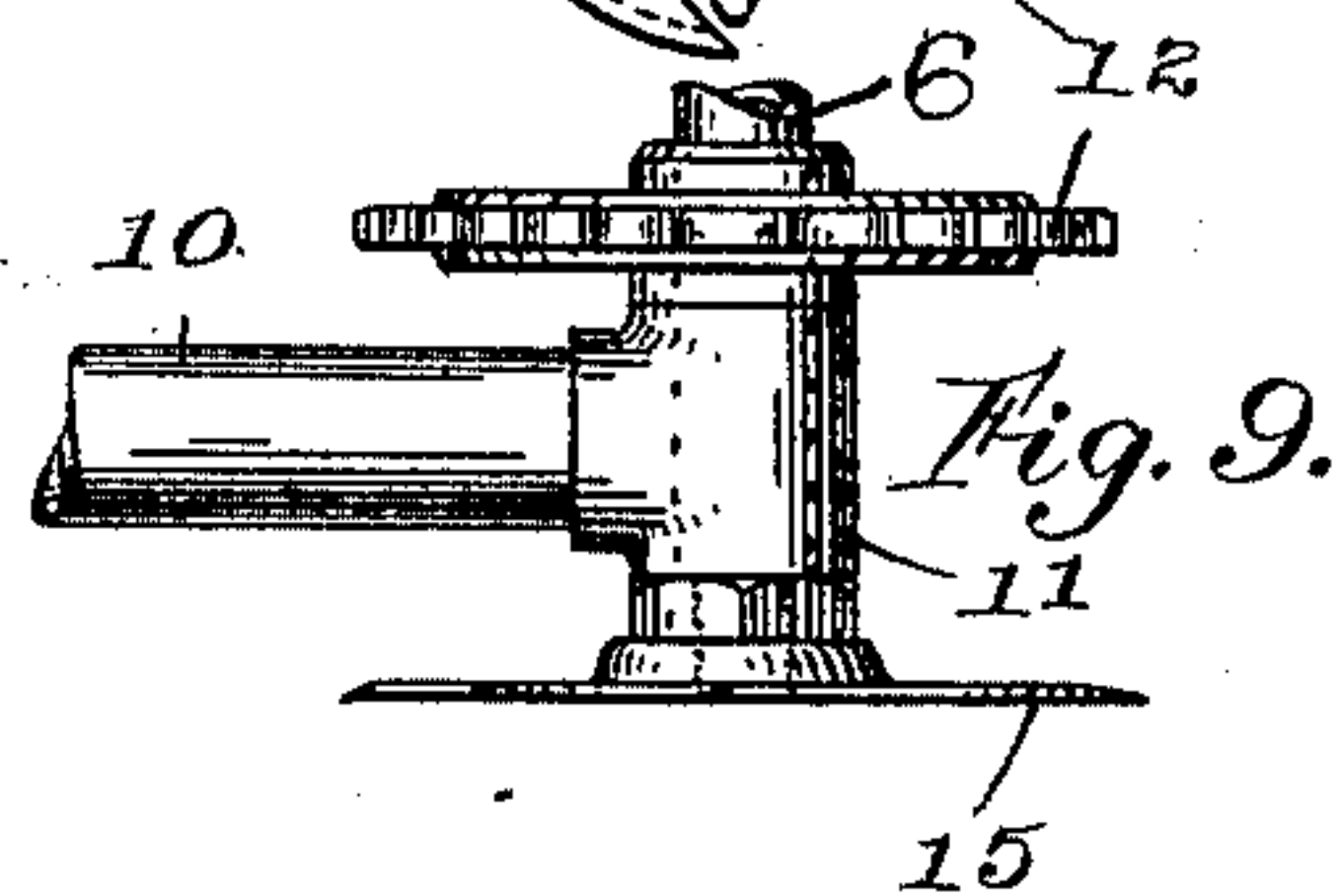
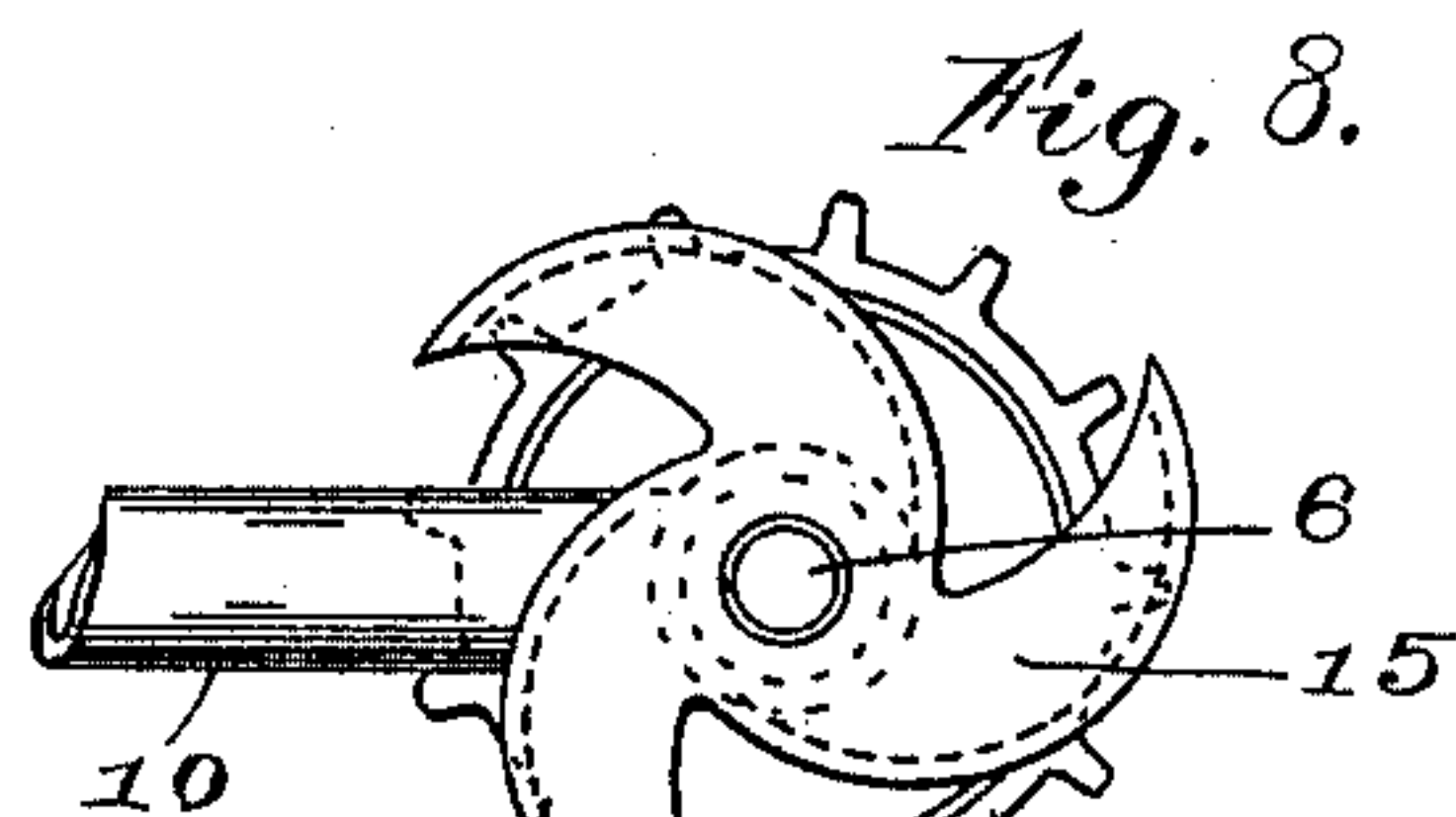


Fig. 6. *Fig. 7.*



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UNITED STATES PATENT OFFICE.

CHARLES H. UNDERWOOD, OF ST. PAUL, MINNESOTA, ASSIGNOR OF ONE-HALF TO GEORGE J. REIM, OF SAME PLACE.

CORN CUTTER, SHOCKER, AND BINDER.

SPECIFICATION forming part of Letters Patent No. 626,512, dated June 6, 1899.

Application filed September 2, 1896. Serial No. 604,595. (No model.)

To all whom it may concern.

Be it known that I, CHARLES H. UNDERWOOD, of St. Paul, Ramsey county, Minnesota, have invented certain Improvements in Corn Cutters, Shockers, and Binders, of which the following is a specification.

My invention relates to improvements in corn-cutters; and it consists in the features of construction and combination hereinafter particularly described and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a plan view of my improved machine. Fig. 2 is a side elevation of the same. Fig. 3 is a partial vertical longitudinal section of my machine with the side board 42 removed. Fig. 4 is a detail of part of the gearing between the driving-wheels and carriers. Fig. 5 is a partial side elevation of the front of the machine with one of the drive-wheels removed. Figs. 6 and 7 are details of one link of the carrier-chain, and Figs. 8 and 9 are details of the cutters mounted upon the outer shafts of the carriers.

In the drawings, A represents the frame of the machine, provided with the ordinary driving-wheels 2 and the centrally-arranged rear carrying-wheel 3, journaled in a suitable support 4. Arranged upon each side of the front of the machine and extending rearwardly toward the center are the endless carriers B and C. The carriers B are made up of the upright shafts 5 and 6, the shafts 5 having bearing-support in the brace-arms 7 and 8. The shafts 5 and 6 are connected at the top and bottom by the rod 9 and tube 10, forming a telescoping connection, by means of which the shafts may be adjusted toward and from each other, the ends of the tubes 10 being provided with T's 11, in which the upright shafts 6 turn. Mounted upon the shafts 5 and 6 are the sprockets 12 and 13, connected by the endless toothed chain 14, and mounted upon the lower end of the shafts 6 are the rotary cutters 15.

The shafts 6 of the carriers B are connected with the braces 8 by rods 16, having adjustable connection with the braces, whereby the outer ends of the carriers may be moved to vary the distance between them and the

ends of the carriers C, resting upon the platform. It will thus be evident that the shafts 6 are adjusted and held in adjusted position by means of the telescoping rod and tubes 9 and 10 and the rod 16. The rod 9 is threaded and a nut is screwed thereon and held in engagement with the tube 10, thereby holding the rod 9 and tube 10 in adjusted positions.

The carriers C are similar in construction to the carriers B, their shafts 5 having journal-support in the braces 17. The outer ends of the carriers C are adapted to be moved by means of the rods 18 connecting them with the braces 17. The upright shafts 5 of each set of carriers B and C have preferably independent operative connection with the drive-wheels 2. The connection for driving carriers B consists of a pair of counter-shafts 19 and 20, mounted in suitable supports 21 upon the machine-frame adjacent the lower ends of the shafts 5 of the carriers B, being operatively connected with said shafts by intermeshing gears 22 and 23. The shafts 5 of the carriers C are similarly driven by means of counter-shafts 24 and 25. These counter-shafts are operatively connected with the drive-wheels by means of the sprockets 26 and 27, mounted upon their ends and connected with sprockets 28 upon the drive-wheels by means of the sprocket-chains 29, the chains each being held in contact with its sprockets by means of a suitable tightener 30. Suitable clutch mechanism 31 is interposed between the sprockets 28 and the drive-wheels 2, operative by the lever 32 to throw the sprocket-gearing into or out of action.

Mounted upon the shaft 33, at the rear end of the frame, is the platform D, adapted to be turned on the shaft 33, (see dotted lines in Fig. 3,) being controlled by means of the lever 34 adjacent the driver-seat 35. This platform is made up, preferably, of parallel longitudinal bars 41, so as to allow the dirt and refuse from the corn to fall through, and is provided with the side boards 42 to keep the corn from coming in contact with the drive-wheels.

Mounted upon the uprights 36, adjacent to the drive-wheels 2 and extending out over the platform D, are the fingers 37, adapted to serve as stops for the cornstalks. These fin-

gers, as shown, are held against the stops 38 upon the cross-braces 7 by means of torsion-springs 39 upon the uprights. In order to prevent the corn as it is being carried into the machine from becoming entangled in the carrier-chains, I preferably surround the carriers by suitable guards 40, preferably of wire screening, the chains projecting outward below and above the guards.

Mounted upon the shafts 5 of the carriers C are packers 43, these packers being preferably mounted upon the shafts below the upper carrier-sprockets.

In operation the machine is driven between the rows of corn, the parts being so adjusted that the stalks will strike the machine between the carriers, so as to be brought into contact with their rotary cutters. As the stalks are cut by the knives or cutters they are engaged by the carrier-chains, which carry them in vertical position toward the center of the machine into the space formed by the braces 44 and fingers 37, the packers 43 upon the shafts 5 of the carriers C pressing the stalks close together in said space. When the space has become filled with corn, the same is tied into bundles and shoved back upon the platform D past the fingers 37, the space between the fingers and braces 44 then being ready to be filled by stalks to form another bundle. The bundles are shoved back

upon the rear end of the platform in standing position, so that when it is desired to place the accumulated cornstalks upon the ground the lowering of the platform by means of its controlling-lever will drop the stalks upon the ground in upright position or shocks.

I claim—

1: A machine of the class described, comprising in combination the main frame and the platform hinged to the rear thereof, the cutters projecting beyond the frame, the endless carriers for conveying the material cut by said cutters toward the rear of the machine, and the means for adjusting said cutters, both laterally and in line with the carriers.

2. A machine of the class described, comprising in combination the main frame, and the platform hinged to the rear of the same, the cutters projecting beyond the frame, the endless carriers for conveying the material cut by said cutters to the rear of the machine, the supports for said cutters, and the adjustable rods connecting said supports with the inner ends of the carriers.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES H. UNDERWOOD.

Witnesses:

H. S. JOHNSON,
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