No. 677,426. Patented July 2, 1901.

O. PALM.

CANE TOPPER.

(Application filed Aug. 28, 1900.)

(No Model.) 4 Sheets—Sheet 1.

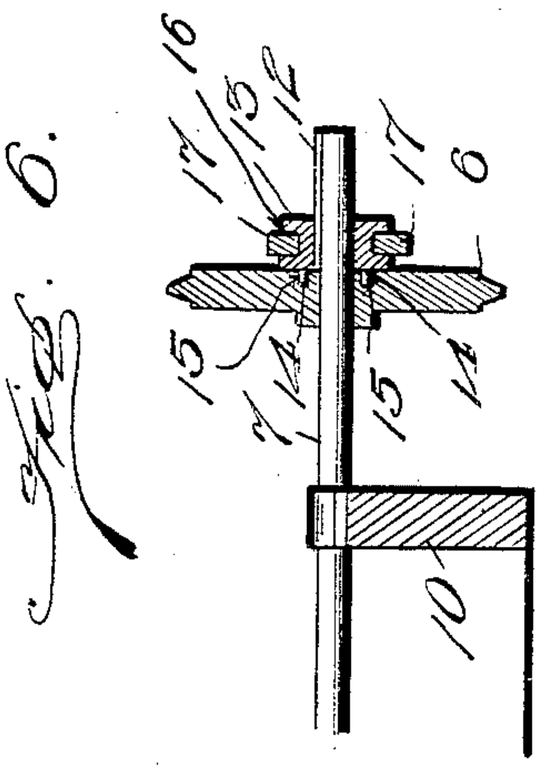

Fig. 2.

Fig. 1.

Witnesses

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Herbert D. Lawson.

Inventor

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(No Model.) 4 Sheets—Sheet 2.

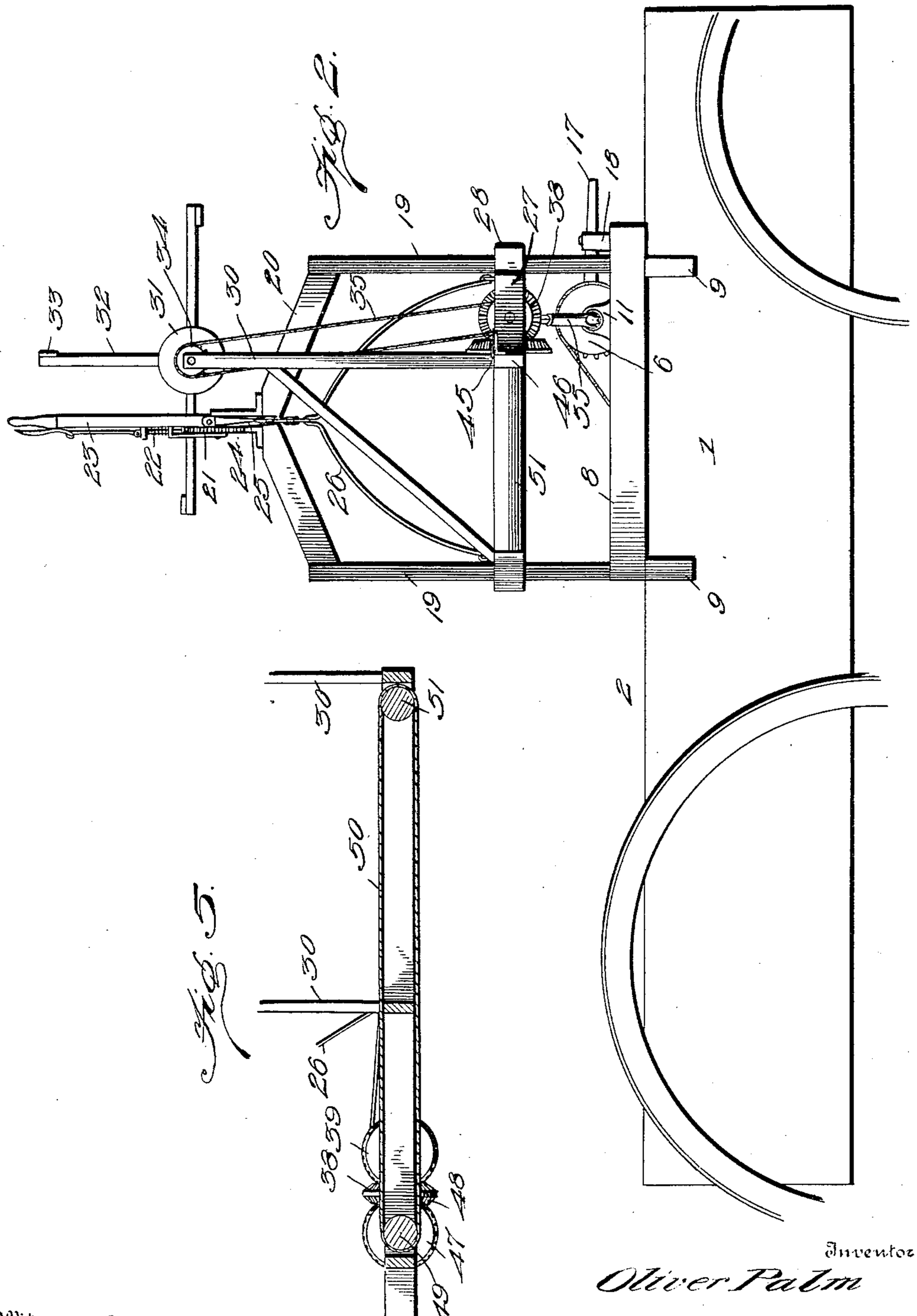

Fig. 5.

Fig. 2.

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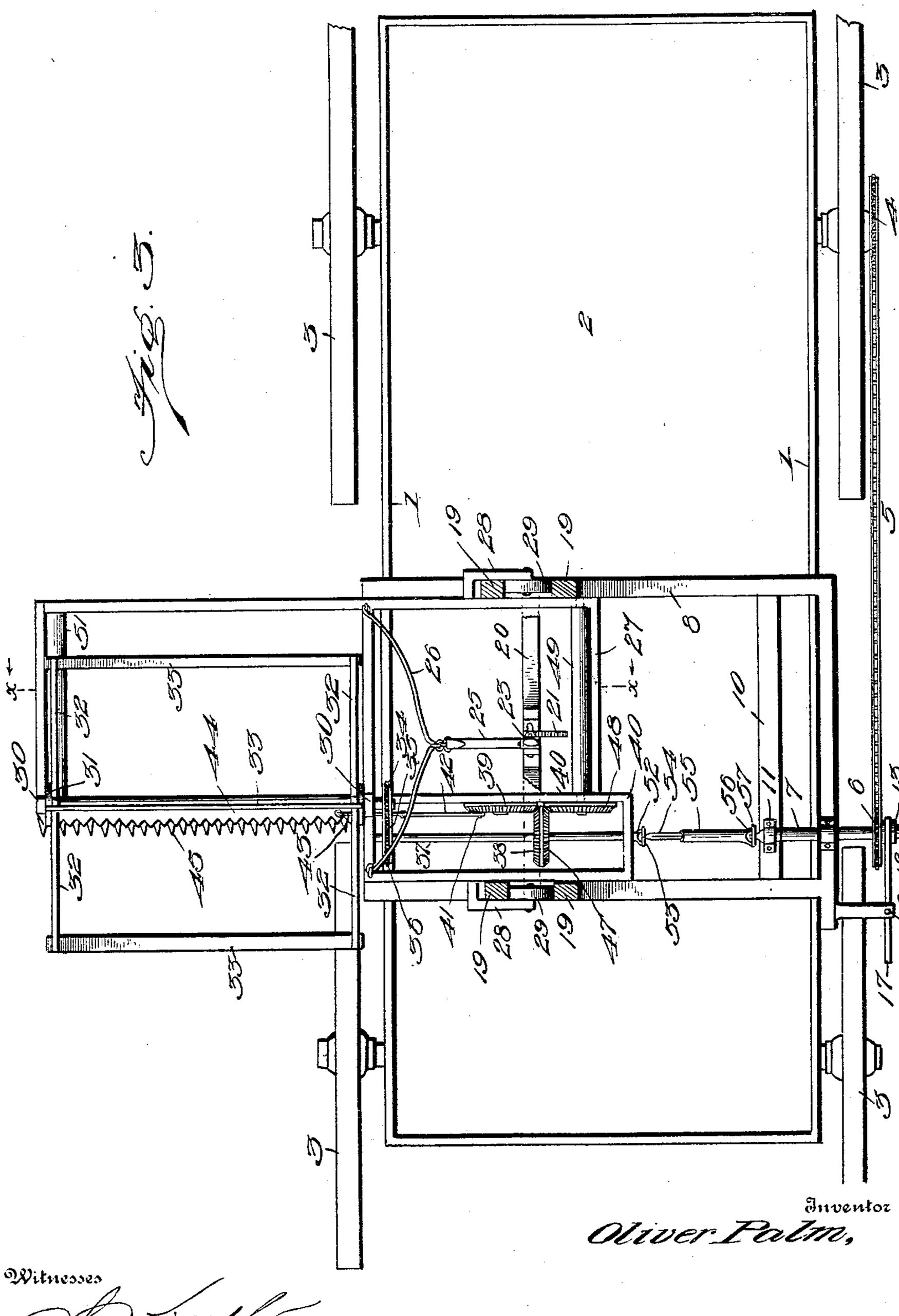
(Application filed Aug. 28, 1900.)

(No Model.) 4 Sheets—Sheet 3.

Fig. 5.



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Hubert D. Lawson.

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No. 677,426. Patented July 2, 1901.

O. PALM.

CANE TOPPER.

(Application filed Aug. 28, 1900.)

(No Model.) 4 Sheets—Sheet 4.

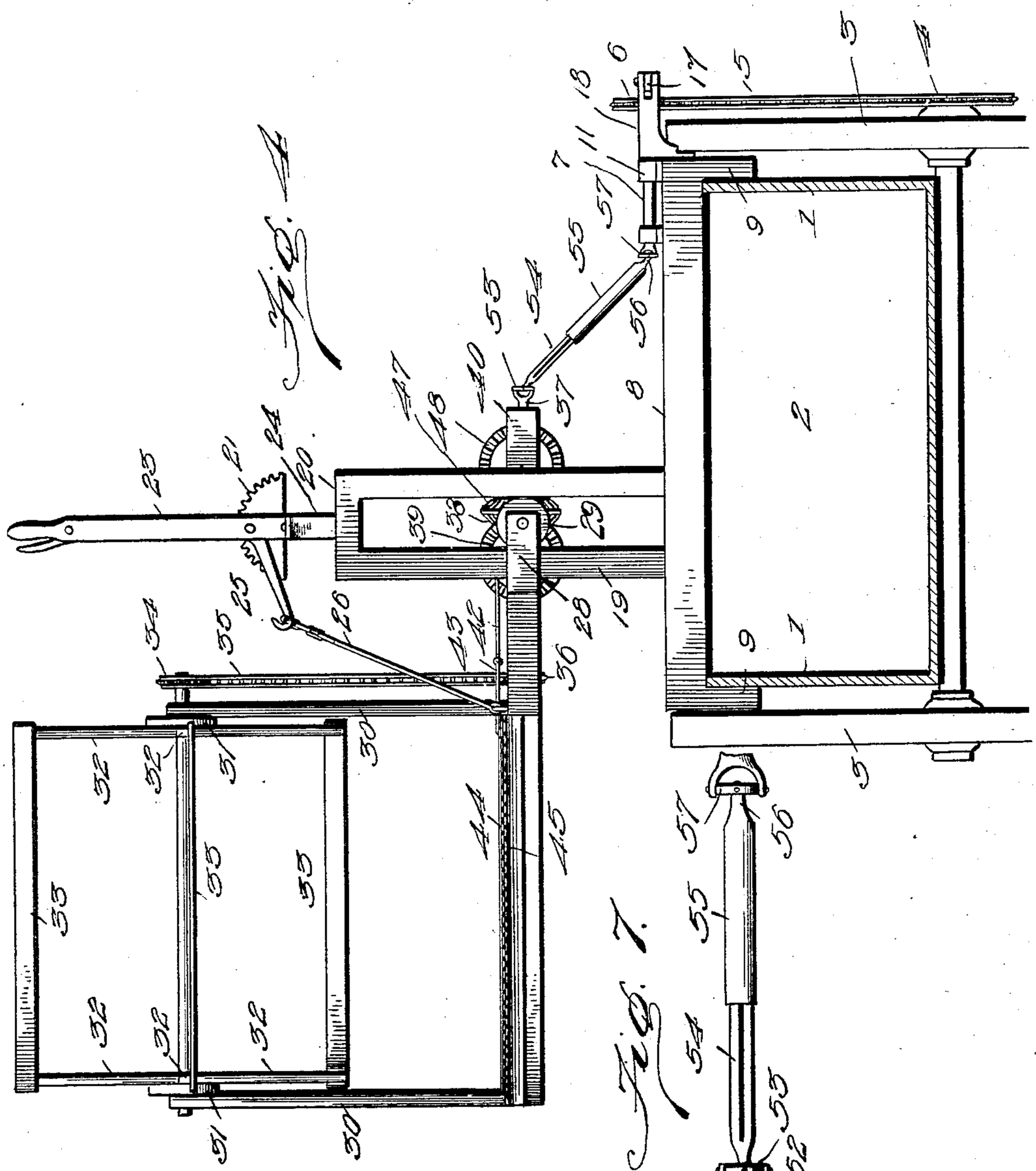

Fig. 4.

Fig. 7.

Witnesses
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Inventor
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By Victor J. Evans Attorney

UNITED STATES PATENT OFFICE.

OLIVER PALM, OF ALBANY, TEXAS.

CANE-TOPPER.

SPECIFICATION forming part of Letters Patent No. 677,426, dated July 2, 1901.

Application filed August 28, 1900. Serial No. 28,350. (No model.)

To all whom it may concern:

Be it known that I, OLIVER PALM, a citizen of the United States, residing at Albany, in the county of Shackleford and State of Texas, have invented new and useful Improvements in Cane-Toppers, of which the following is a specification.

This invention relates to new and useful improvements in machines for cutting the tops of cane; and the primary object is to provide a device which may be readily secured to a wagon or any other suitable vehicle and which may be quickly adjusted so as to cut the tops of cane of different sizes.

A further object is to provide means whereby the tops after being severed will be conveyed to a wagon or to a receptacle adjacent to the cutting mechanism.

The machine comprises a frame having means whereby the same may be quickly and securely attached to the sides of a wagon or to any other suitable support. This frame is provided with uprights upon each side, which serve as guides for rollers mounted at the inner end of a vertically-movable frame. This vertically-movable frame is adjustable by means of a lever which is mounted upon a standard supported by the upright guides, and cutting-teeth and a sliding sickle are mounted thereon and adapted to cut the heads or tops which are brought into contact therewith. A reel is mounted upon the vertically-movable frame for the purpose of throwing the heads into engagement with the teeth and sickle, and a suitable conveyer is also provided upon said frame for conducting the tops to a receptacle located at the inner end of said conveyer. The sickle, as well as the conveyer, receives motion from a shaft which is journaled upon the vertically-movable frame and which is connected to a fixed shaft upon the stationary frame by means of an extensible shaft which is connected at opposite ends to said stationary shaft and to the shaft of the movable frame by means of universal joints. Motion is imparted to the shafts by means of a sprocket-chain which engages a sprocket secured to one of the traction-wheels. This chain also engages a sprocket secured to the fixed shaft of the device.

The invention consists in certain features of construction and combination of parts, which will be hereinafter fully described and claimed, and illustrated in the accompanying drawings, showing the preferred form of my invention, and in which—

Figure 1 is a side elevation of the device attached to a wagon and with parts broken away. Fig. 2 is a similar view of the opposite side of the device with parts broken away. Fig. 3 is a top plan view thereof with the guide-uprights broken away. Fig. 4 is a front end view of the device attached to a wagon. Fig. 5 is a section on line *x x* of Fig. 3. Fig. 6 is a detail view of the mechanism for throwing the device in and out of gear with the driving-wheel. Fig. 7 is a detail view of the jointed driving-shaft.

Referring to the drawings by numerals of reference, 1 1 are the sides of a wagon 2, to one of the traction-wheels 3 of which is secured a sprocket-wheel 4. This sprocket-wheel is engaged by a chain 5, which extends upward and is mounted upon a second (preferably smaller) sprocket 6, which is loosely mounted upon a shaft 7. This shaft is journaled upon a preferably rectangular frame 8, which extends transversely of the wagon and is provided at each end with downwardly-projecting arms 9, which extend over the sides of the wagon and serve to retain the frame thereon and prevent lateral movement thereof. This frame is provided with suitably-located cross-strips, one of which, 10, supports a bracket 11, within which is journaled one end of the shaft 7. This shaft is provided with a feather 12, which engages a sliding collar 13, from the inner face of which project lugs 14, which are adapted to engage recesses 15, formed within the face of the sprocket 6. The collar is provided in its periphery with an annular groove 16, within which is fitted the end of a lever 17. This lever is pivotally mounted between two brackets 18, which extend over and under the same, and it is obvious that by swinging the lever laterally upon its pivot the collar 13 will be thrown into or out of engagement with the sprocket 6. It is of course understood that means are provided for preventing lateral movement of said sprocket.

Projecting upward from each side of the frame 8 are parallel uprights 19, which are

connected at the top by a cross-strip 20, upon which is mounted a toothed segment 21. This segment is adapted to be engaged by a dog 22, which is slidably mounted upon a lever 23, pivoted within a bracket 24, secured to the cross-strip 20. A hooked arm 25 extends forward from the lever and engages a metal yoke 26, the free ends of which are secured to the sides of a sliding frame 27. This sliding frame extends between the uprights 19, and arms 28 are secured thereto and extend over the outer faces of said uprights. A roller 29 is journaled at the end of each of these arms and is adapted to travel vertically between the uprights 19, which serve as guides therefor.

Standards 30 are secured to the frame 27 at the outer end thereof and at a point above the side of the wagon, and a reel 31 is journaled within the upper ends thereof. This reel comprises a desired number of outwardly-extending arms 32, which are connected at their outer ends by longitudinally-extending cross-strips 33. These arms are of such length as to come into close proximity to the frame 27 when said reel is revolved.

A sprocket 34 is secured to the reel-shaft and is engaged by a chain 35, which extends upward from a second sprocket 36, which is secured to a shaft 37, journaled within the frame 27. This shaft is provided with a beveled pinion 38, which meshes with a similar pinion 39, journaled upon a longitudinally and laterally extending strip 40, which is formed with the inner portion of the frame 27. This pinion 39 has a wrist-pin 41 extending from the face thereof, and said pin is engaged by a pitman 42, the opposite end of which is secured to a rod 43. This rod is connected at its outer end to one end of a sickle 44, which extends longitudinally of the frame 27 and is slidably mounted upon teeth 45, which extend from the side strip 46 of the frame 27. This sickle 44 and the teeth 45 are arranged substantially in vertical alinement with the center of the reel 31.

A beveled pinion 47 is secured to the shaft 37 at a point adjacent the pinion 38 and meshes with a beveled pinion 48, which is also journaled upon the outer face of the longitudinally and laterally extending strip 40 of the frame 27. This pinion is secured to the end of a roller 49, which extends across the frame 27 at the rear end thereof and is adapted to conduct an apron or other suitable conveyer 50. (Shown in Fig. 5.) This apron is also mounted upon a roller 51, which is journaled within the outer end of the frame 27.

The shaft 37 is provided at its inner end with a yoke 52, having a ring 53 pivoted therein. The end of a squared shaft 54 is pivoted within this ring on a line at right angles to the pivots of the ring 53, and said squared shaft is slidably mounted within a similar passage formed within a hollow shaft 55. This shaft is also provided at one end with a yoke 56, to which is pivoted a ring 57. The end of the shaft 7 is pivoted to this ring on a line at right angles to the line of the pivots of the ring. It will thus be seen that the frame 27 can be raised and lowered by shifting the lever 23 back and forth upon its pivot, and such movement will cause the shaft 54 to slide back and forth within the shaft 55. As said shaft is arranged at an angle to the shafts 7 and 37, the universal joints formed by the yokes 52 and 56 and the rings 53 and 57 are necessary in order to impart motion from one shaft to the other. It will be seen that the motion imparted to the shaft 7 from the wheel 3 is not only transmitted to the apron 50 through the pinions 47 and 48 and the roller 39, but is also imparted to the reciprocating sickle 44 through the pinions 38 39 and the pitman 42. While these parts are in motion the reel will be revolved through the sprockets and their chain 35. By providing a device of this character the heads can be readily cut from the cane, and the sliding frame 27 is readily adjusted to cane of varying heights. The sickle 44 can be made of sufficient length to extend over two or more rows of cane, and by this construction the work of removing the tops, which has heretofore generally been performed by hand, is greatly simplified and can be performed with great rapidity.

In the foregoing description I have shown the preferred embodiment of my invention; but I do not wish to be understood as limiting myself thereto, as I am aware that modifications may be made therein without departing from the principle or sacrificing any of the advantages thereof, and I therefore reserve to myself the right to make such changes as fairly fall within the scope of my invention.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

1. The combination with a fixed frame, of two sets of parallel standards thereon one set at each side thereof, a moving frame between the sets of standards, arms to the frame extending over the outer faces of the standards, rollers journaled upon the arms and revoluble between the standards on each side, a lever pivoted above the moving frame, a hooked arm thereto, a bail secured to said arm and the ends thereof being fastened to the sliding frame, means for locking the lever in adjusted position, teeth upon the moving frame, a sickle slidably mounted thereon, a shaft upon the fixed frame, and means for imparting motion from said shaft to the sickle.

2. The combination with a fixed frame having a shaft journaled thereon, two sets of parallel standards one set at each side of the fixed frame, a sliding frame between the sets of standards, arms to the frame extending over the outer faces of the standards, rollers journaled thereto and revoluble between the standards, a shaft journaled upon the moving frame, an extensible shaft connecting the

shafts of the two frames and connected thereto by universal joints, a lever fulcrumed upon the fixed frame and above the standards, a hooked frame thereto, a bail connecting said arm with the sides of the sliding frame, teeth upon the sliding frame, a sickle thereon, means for imparting motion to the sickle from the shafts, standards upon the sliding frame, a reel thereon, and means for imparting motion to the reel from said shafts.

3. The combination with a wagon having a sprocket secured to one of the wheels, of a frame upon said wagon, arms thereto extending over the sides of the wagon and adapted to prevent lateral movement of the frame, a shaft journaled upon the frame, a sprocket loosely mounted thereon, a chain connecting the sprockets of the shaft and wheel, a collar slidably mounted upon the shaft and revoluble therewith, lugs to the collar adapted to engage recesses in the sprocket on the shaft, a lever for throwing the collar into engagement with the sprocket, parallel standards upon opposite sides of the fixed frame, a sliding frame, arms at opposite sides thereof extending over the outer faces of the standards, rollers journaled to the arms and mounted between the standards, said standards forming guides therefor, a lever fulcrumed above the standards, a hooked arm thereto, a bail connecting said arm to the sides of the sliding frame, teeth upon the sliding frame, a sickle slidably mounted thereon, a shaft journaled upon said frame, standards to the frame, a reel journaled therebetween and above the sickle, means for imparting motion to the reel and sickle from the shaft on the sliding frame, and an extensible shaft connecting the shafts of the two frames, said shaft being connected thereto by universal joints.

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

OLIVER PALM.

Witnesses:
J. C. TAYLOR,
L. S. HALLOWELL.