

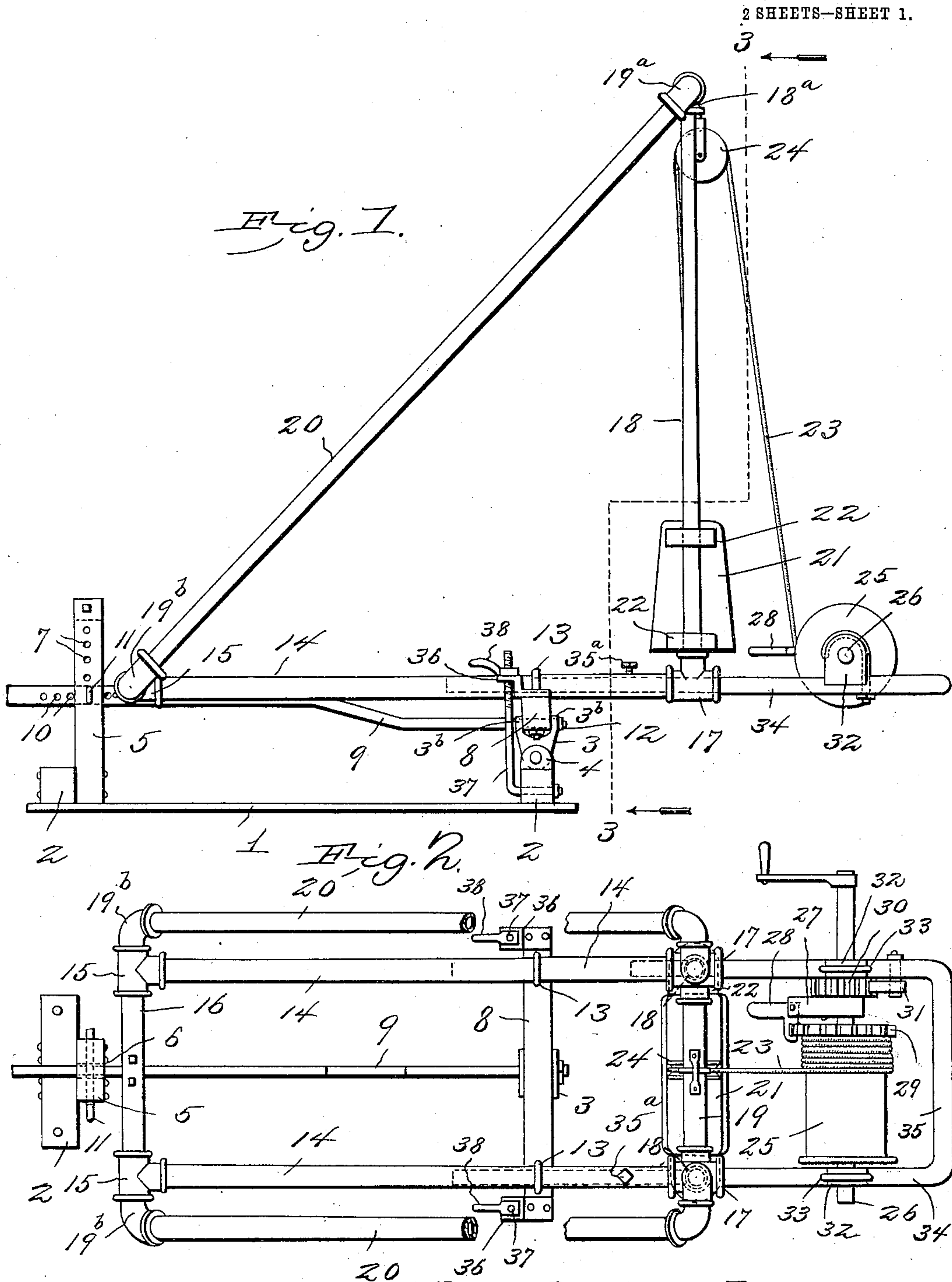
No. 792,249.

PATENTED JUNE 13, 1905.

W. H. COMPTON.
POST DRIVER.

APPLICATION FILED SEPT. 16, 1904.

2 SHEETS—SHEET 1.



Witnesses

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Wm. Bagger

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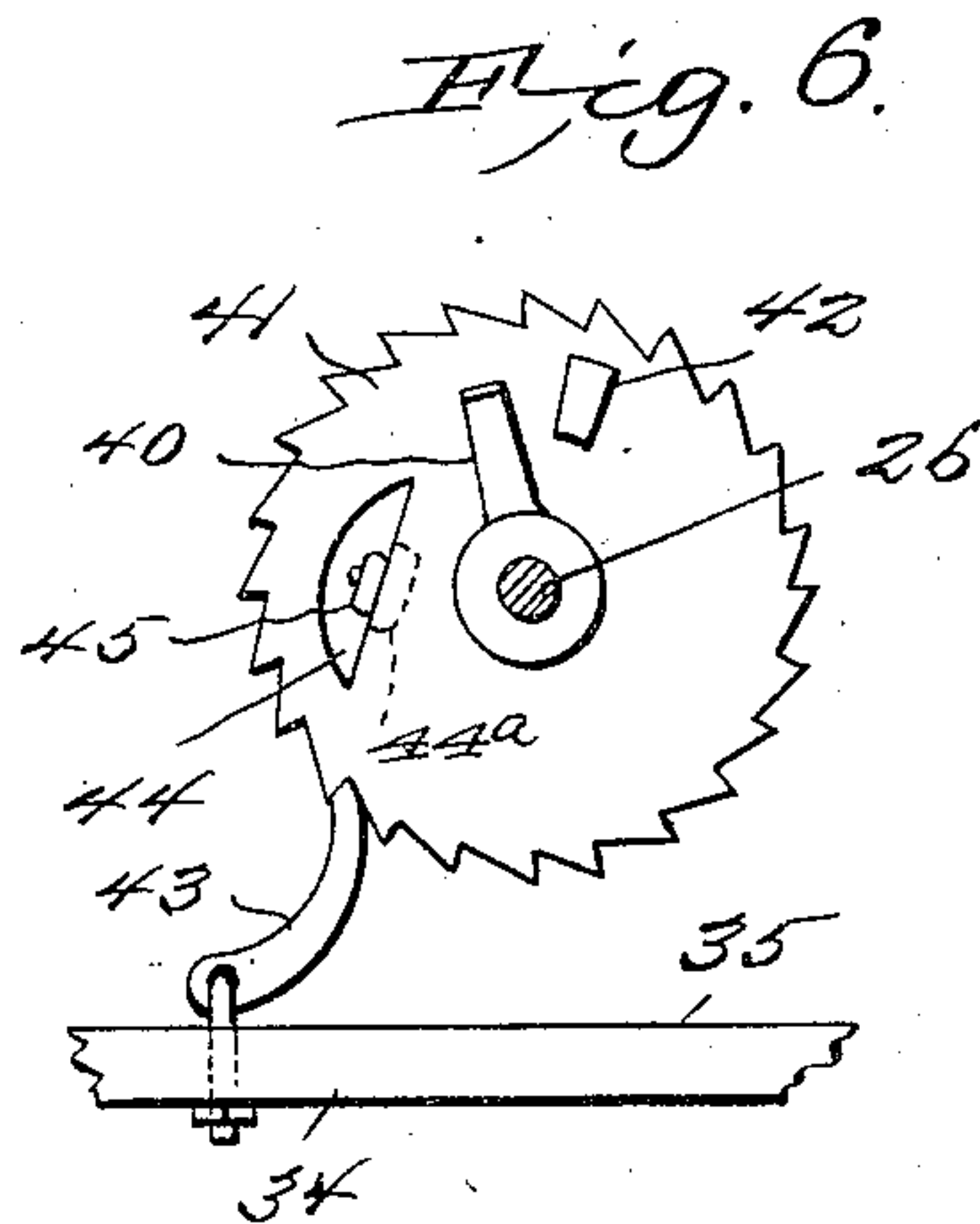
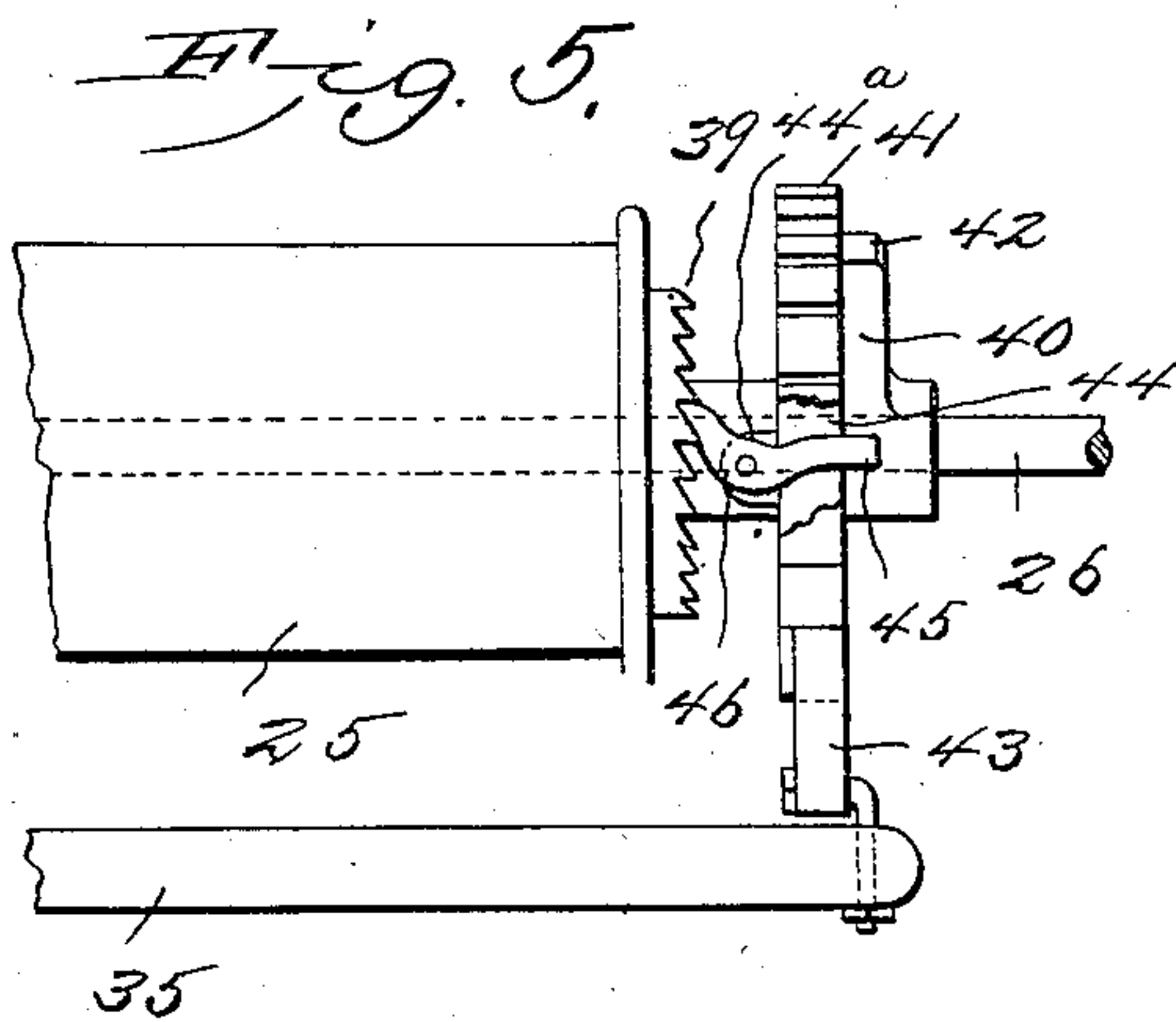
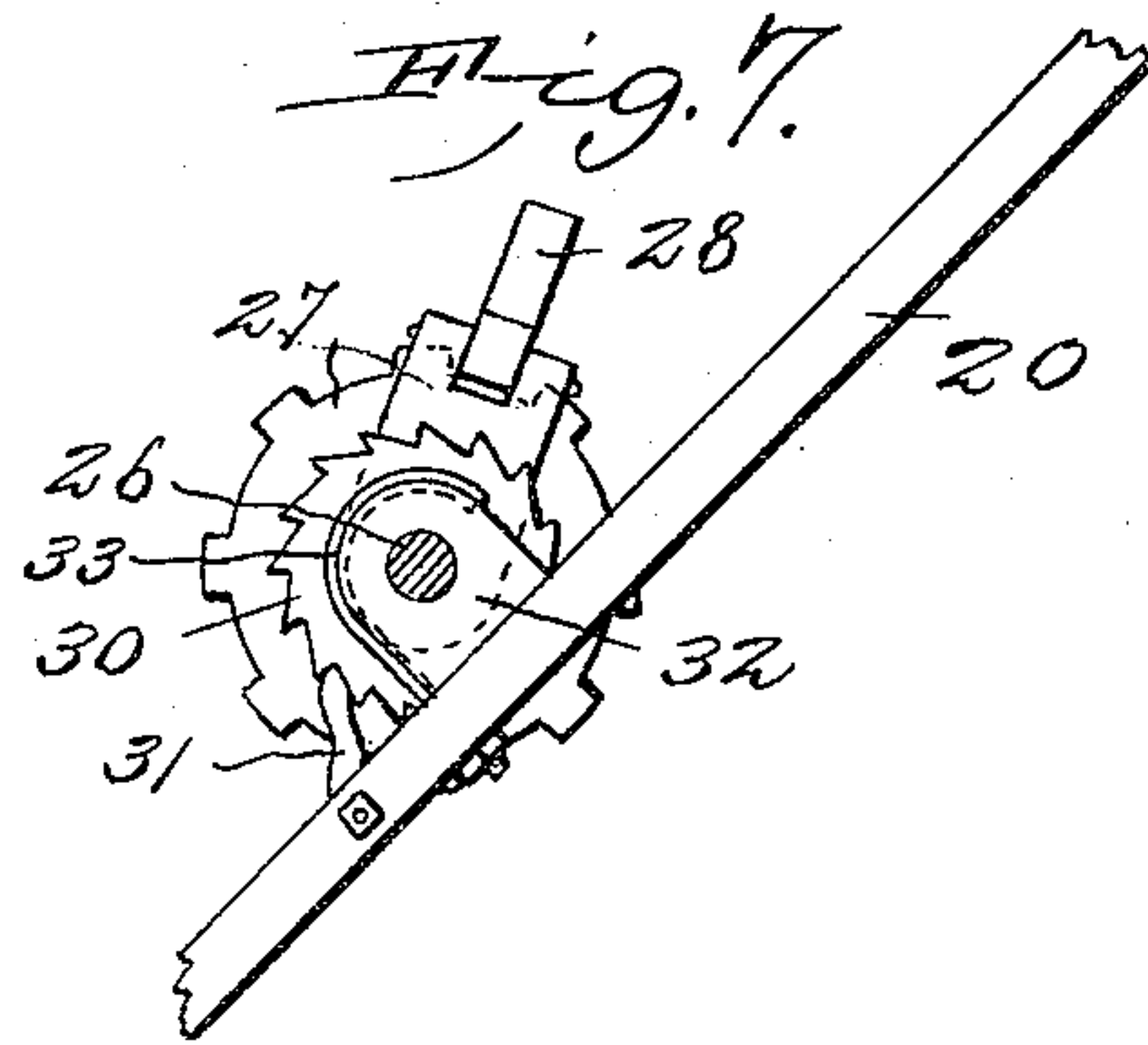
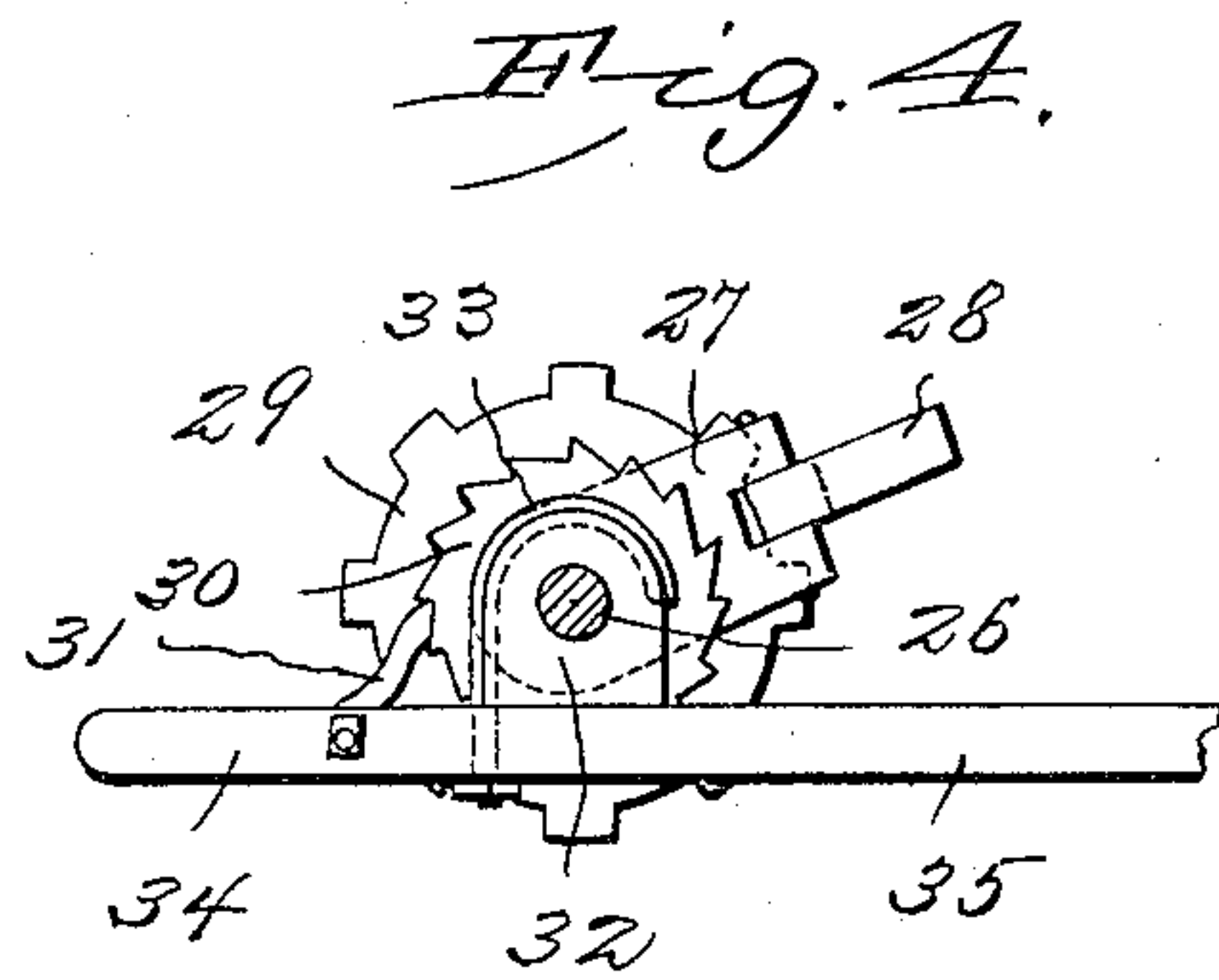
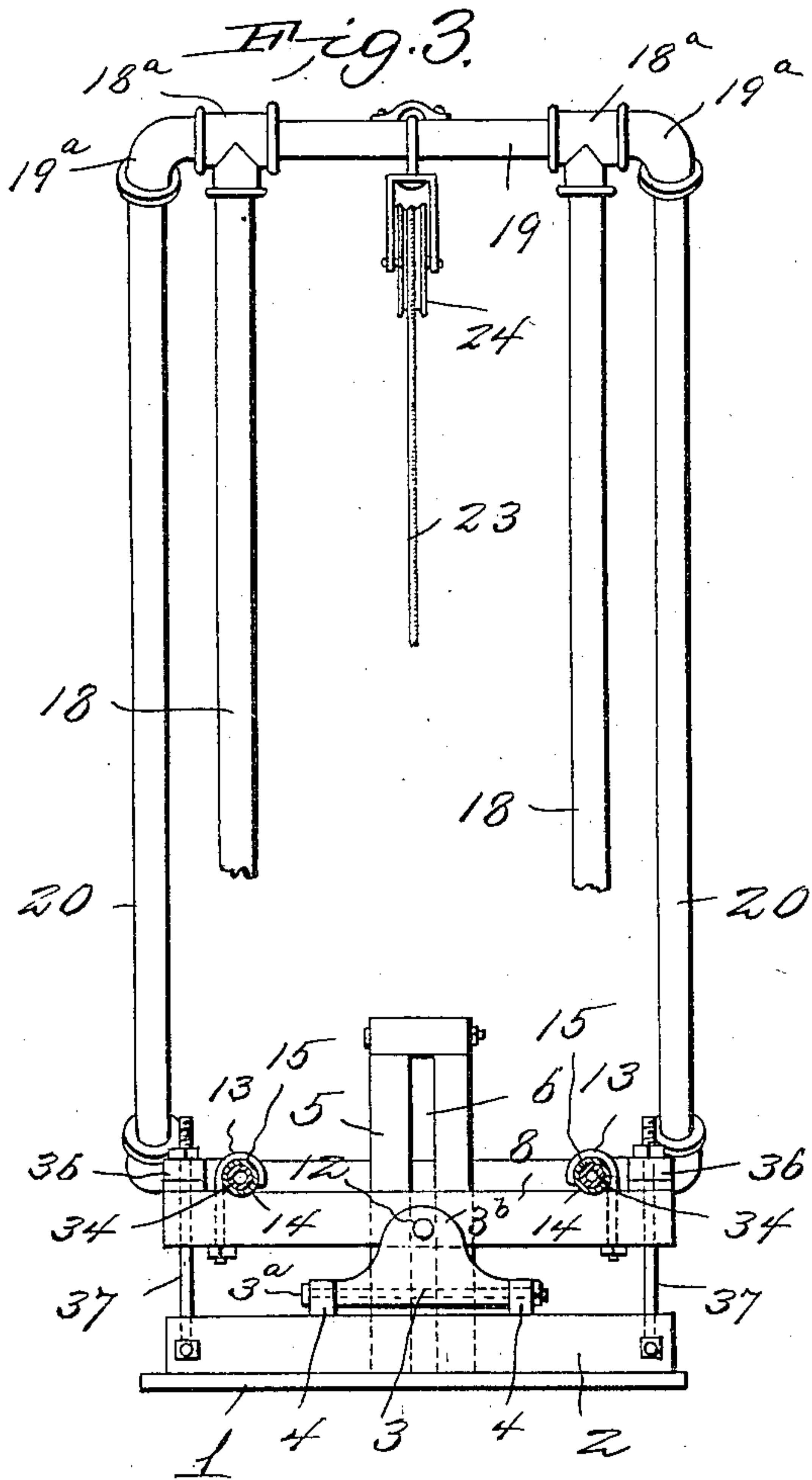
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UNITED STATES PATENT OFFICE.

WILLIAM H. COMPTON, OF FARGO, NORTH DAKOTA.

POST-DRIVER.

SPECIFICATION forming part of Letters Patent No. 792,249, dated June 13, 1905.

Application filed September 16, 1904. Serial No. 224,742.

To all whom it may concern:

Be it known that I, WILLIAM H. COMPTON, a citizen of the United States, residing at Fargo, in the county of Cass and State of North Dakota, have invented a new and useful Post-Driver, of which the following is a specification.

This invention relates to fence-post drivers; and it has for its object to provide a device of this class of simple and inexpensive construction in which the weight-supporting frame may be readily adjusted transversely and longitudinally to correspond with irregularities in the ground-surface and to dispose the weight parallel with relation to the post that is to be driven.

With these and other ends in view the invention consists in the improved construction and novel arrangement and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of embodiment of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations, and modifications may be made within the scope of the invention and without departing from the spirit or sacrificing the advantages of the same.

In said drawings, Figure 1 is a side elevation of a machine constructed in accordance with the principles of the invention. Fig. 2 is a top plan view of the same with parts of the supporting-frame broken away. Fig. 3 is a detail sectional view taken on the plane indicated by the line 3 3 in Fig. 1. Fig. 4 is an end view of the tripping mechanism illustrated in Fig. 2. Fig. 5 is a detail side elevation illustrating a modified form of tripping mechanism. Fig. 6 is an end elevation. Fig. 7 is a detail side view showing the hoisting-drum mounted upon the diagonals of the frame.

Corresponding parts in the several figures are indicated by similar characters of reference.

The improved machine is preferably supported in position for operation upon a base 1, which constitutes the bed of an ordinary

wagon and which in practice will be mounted upon transporting-wheels. (Not shown.) The base 1 supports a pair of transverse timbers 2 2. The rear timber 2 is provided with lugs 4 4, affording bearings for the laterally-extending trunnions 3^a of a block 3. The latter is provided in its upper side with a transverse recess forming ears 3^b, between which is mounted a cross-piece 8, said cross-piece being supported pivotally upon a rod 9, which extends through the ears 3^b and the forward end of which is vertically adjustable in a slot 6 between a pair of uprights 5, the lower ends of which are suitably secured to the front timber 2. The uprights 5 have spaced perforations 7 for the reception of a pin or key 11, adapted to pass through said perforations and through registering perforations 10 in the rod or member 9.

The cross-piece 8 constitutes the support for the frame of the post-driver. Said frame is to be constructed, preferably, of iron tubing, such as ordinary gas-pipe, which combines lightness with strength and which is well adapted for the purposes of the device. Said frame includes the side members 14, provided at their front ends with T-couplings 15, the inner ends of which are connected by a cross-piece 16. At the rear ends of the side members 14 are T-couplings 17, supporting the lower ends of uprights 18. At the upper ends of the latter are T-couplings 18^a, the inner ends of which are connected by a cross-piece 19 and the outer ends of which are provided with L-couplings 19^a. T-couplings 15 upon the front ends of the side members 14 likewise have L-couplings 19^b, which are connected with the L-couplings 19^a at the upper ends of the uprights 18 by means of diagonals or inclined members 20. The latter, it will be observed, owing to the specific construction described, are spaced apart wider than the base member 18, which is desirable in order to afford convenient access to the working parts. The frame constructed as just described will be found to possess the desirable attributes of stiffness, rigidity, lightness, and strength.

21 is a weight which is provided with laterally-extending ears 22, having perforations

whereby to engage the uprights 18, between which the said weight is guided vertically. A flexible member 23, passing over a guide-pulley 24, which is supported from the over-
 5 head member 19, connects the weights with a winding-drum 25, mounted loosely upon a shaft 26. Firmly secured upon said shaft is a radially-extending arm or member 27, having at its outer end a transverse recess in
 10 which is pivoted a dog 28, consisting of an elbow-lever, one arm of which constitutes a handle whereby it may be manipulated and the other end of which is adapted to engage a peripherally-notched wheel or disk 29, firmly
 15 secured upon one end of the winding-drum. The shaft 26 also carries a ratchet-wheel 30, engaged by a pawl 31, which is pivoted to the supporting-frame. The latter, which is designated 35, is provided with side bars 34,
 20 upon which the blocks or boxes 32, having bearings for the shaft 26, are secured by means of hook-bolts 33. The supporting-frame 35 is substantially U-shaped, and the legs thereof are of unequal length. Said sides
 25 are adapted to telescope within the side members 14 of the main frame, whereby the windlass-supporting frame is thus supported in position for operation, suitable means, such as a set-screw 35^a, being employed when de-
 30 sired for the purpose of retaining the frame 35 in operative position.

The side members 14 of the base-frame are supported upon the cross-beam 8 and are there secured by means of clip-bolts 13. The ends
 35 of the cross-beam 8 are provided with horizontally-extending brackets 36, perforated for the passage of bolts 37, which are L-shaped and the lower ends of which are extended through perforations in the rear timber 2,
 40 with which they are pivotally connected. The bolts 37 are equipped with wing-nuts 38, bearing against the upper sides of the brackets 36. It will be seen that by properly adjusting said wing-nuts the frame may be tilted to either
 45 side upon the fulcrum afforded by the rear end of the rod 9, upon which the cross-beam 8 is pivotally mounted. The frame may likewise be tilted longitudinally by properly adjusting the front end of the member 9 with
 50 relation to the upright 5 at the front end of the machine.

The operation of this form of the invention will be readily understood. The machine is transported along the course of a fence where
 55 the posts are to be driven and is placed temporarily for operation with the weight in vertical alinement with the position of the post that is to be driven. By manipulating the crank at the end of the shaft 26 the weight
 60 may be raised, the weight being retained in an elevated position by a pawl 31 engaging the ratchet-wheel 30. The operator then by manipulating the dog 28 releases the winding-drum or windlass, thus causing the weight
 65 to drop. The operation may be repeated any

desired number of times until the post has been driven the desired distance into the ground, after which the windlass-carrying frame may be withdrawn rearwardly until the short side member of said frame is dis-
 70 engaged from the side member of the base-frame. The windlass-supporting frame may then be tilted upon its longer side member as an axis, thus bringing the windlass to an approximately vertical position and enabling it
 75 to readily clear the post which has just been driven, when the machine is moved forwardly to the next post.

In Figs. 5 and 6 of the drawings has been illustrated a modified form of trip mechanism. 80 Under this modification the winding-drum 25 upon the shaft 26 is provided with a crown-ratchet 39. The shaft 26 carries a loose ratchet 41, having a transverse slot or open-
 85 ing 44, at one side of which is a lug 44^a, upon which is pivoted a dog or pawl 46, having an arm or extension 45, which projects through the slot 44 in the ratchet-wheel 41. Firmly secured to the shaft 26 is a radial arm or mem-
 90 ber 40, adapted to engage a lug or projection 42, which extends laterally from the ratchet-wheel 41 in the path of said arm. When the shaft is rotated, the arm 40 will engage the lug 42, thereby rotating the ratchet-wheel 41,
 95 the pawl 46 of which will engage the ratchet 39, thereby causing the winding-drum to rotate. A gravity-pawl 43, mounted to engage the ratchet-wheel 41, serves to prevent re-
 100 verse rotation of the latter. When it is desired to trip the winding-drum, the shaft 26 is rotated in a reverse direction until the arm 40 strikes the projecting arm 45 of the pawl 46, which is thereby disengaged from the winding-drum, which is thus made free to rotate upon the shaft.

Under some circumstances it may be deemed desirable to dispense with the auxiliary drum-carrying frame 35 and to support the wind-
 105 ing-drum upon the diagonals 20 of the frame, as illustrated in Fig. 7 of the drawings. This arrangement will be preferred when the winding-drum is to be operated by a man stationed upon the wagon. When the operator is stationed upon the ground, the former disposition
 110 of the winding-drum will be preferred.

By the foregoing construction an organized machine is produced possessing peculiar ad-
 115 vantages for the ends in view. It is simple, inexpensive, and easily operated.

Having thus described the invention, what
 120 is claimed is—

1. In a device of the class described, a base, a frame pivotally mounted thereon to rock transversely and to tilt longitudinally in a
 125 vertical plane, means for adjusting the frame in both of said directions, means for securing the frame in its adjusted positions, a weight-guide carried by the frame, a weight mounted to travel therein, and means for operating the
 130 weight.

2. In a device of the class described, a base having a supporting-timber, ears upon said timber, a recessed member having trunnions pivotally engaging said ears, a cross-beam pivotally mounted in said recessed member, bolts pivotally engaging the base-timber, perforated brackets upon the pivoted cross-piece engaging said bolts, and adjusting-nuts upon the latter.

3. In a device of the class described, a base-timber having ears, a recessed member having trunnions pivotally engaging said ears, a cross-beam engaging the recessed member, a pivotal rod for said cross-piece extending through the latter and through the recessed member and having a forward extension, means for securing the latter at various adjustments, means for engaging and for securing at various adjustments the ends of the cross-beam, a frame supported upon the latter, a weight-guide included in said frame, a weight mounted to travel in said guide, and means for operating the weight.

4. In a device of the class described, a frame comprising tubular side pieces and a front piece connecting the same, uprights rising near the rear ends of the side pieces, a cross-piece connecting the upper ends of said uprights, and diagonals or inclined members spaced laterally from and connecting the upper and lower cross-pieces.

5. In a device of the class described, a frame including a base comprising side members and a cross-piece connecting the front ends of the latter, uprights rising from the rear ends of the side pieces, a cross-bar connecting the upper ends of said uprights, and diagonals connecting the upper and the front cross-bars,

said diagonals being spaced wider than the base members and the uprights, in combination with a weight having perforated ears engaging said uprights, and means for operating the weight.

6. In a device of the class described, a frame having tubular side members and an auxiliary windlass-supporting frame having side members telescoping within the side members of the main frame.

7. In a device of the class described, a base-frame having tubular side members and including vertical weight-guides, in combination with an auxiliary windlass-supporting frame having side members of unequal length telescoping in the side members of the base-frame.

8. In a device of the class described, a base-frame having tubular side members and including uprights constituting weight-guides, in combination with an auxiliary windlass-carrying frame having side members of unequal length telescoping in the side members of the base-frame, a windlass, a cross-piece connecting the upper ends of the weight-guides, a weight having perforated ears engaging said uprights, a guide suspended from the cross-piece, a flexible element passing from the weight, over said guide to the windlass, and means for operating the latter.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM H. COMPTON.

Witnesses:

GLENN HALLETT,
H. B. HUNTLEY.