

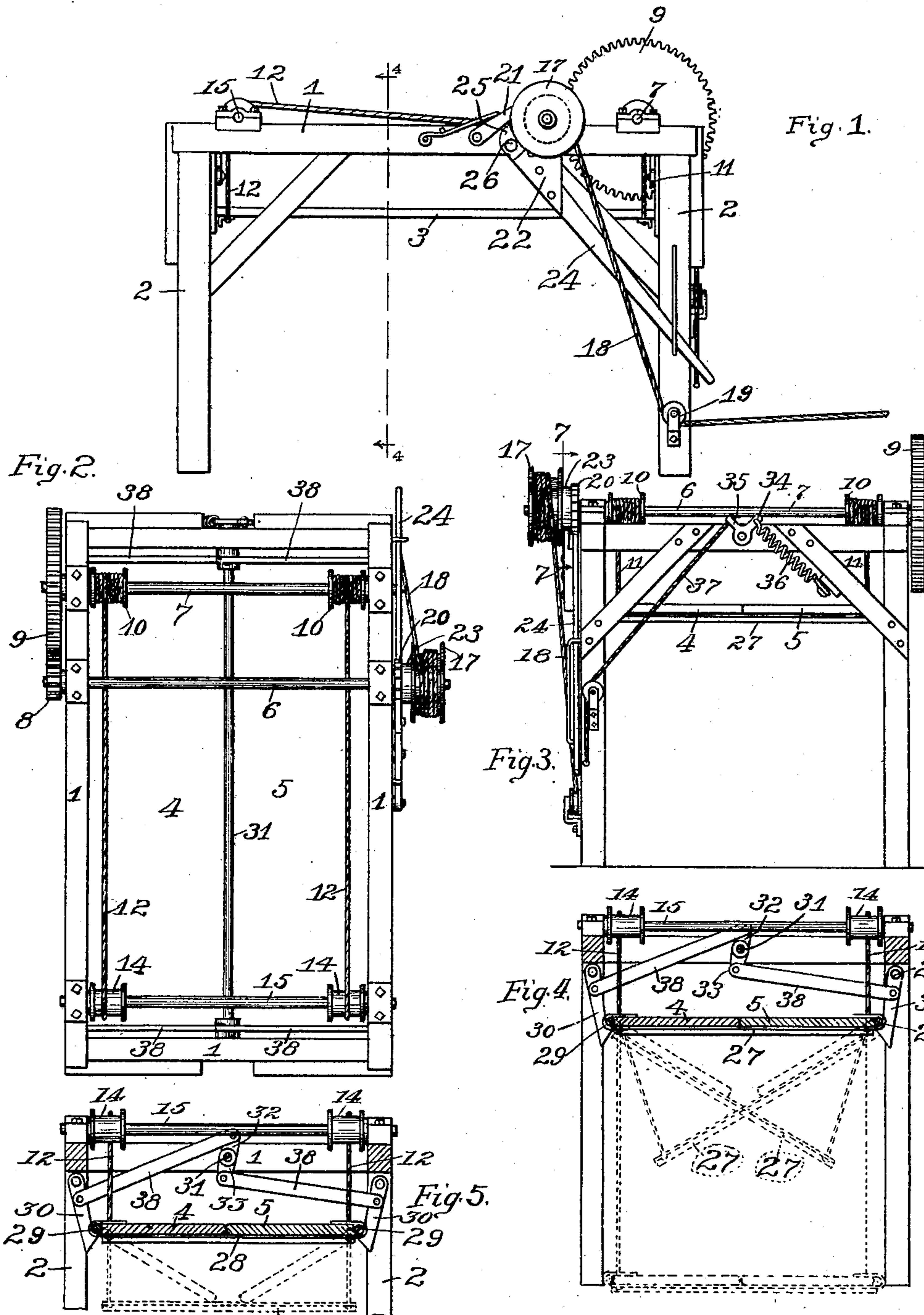
No. 885,952.

PATENTED APR. 28, 1908.

T. J. QUALLEY
LOADER.

APPLICATION FILED MAY 23, 1906.

2 SHEETS—SHEET 1.



Witnesses:
John Braunwalder

Charles J. Cobb

Inventor:

Thomas J. Qualley
By Hill & Hill
Att'ys.

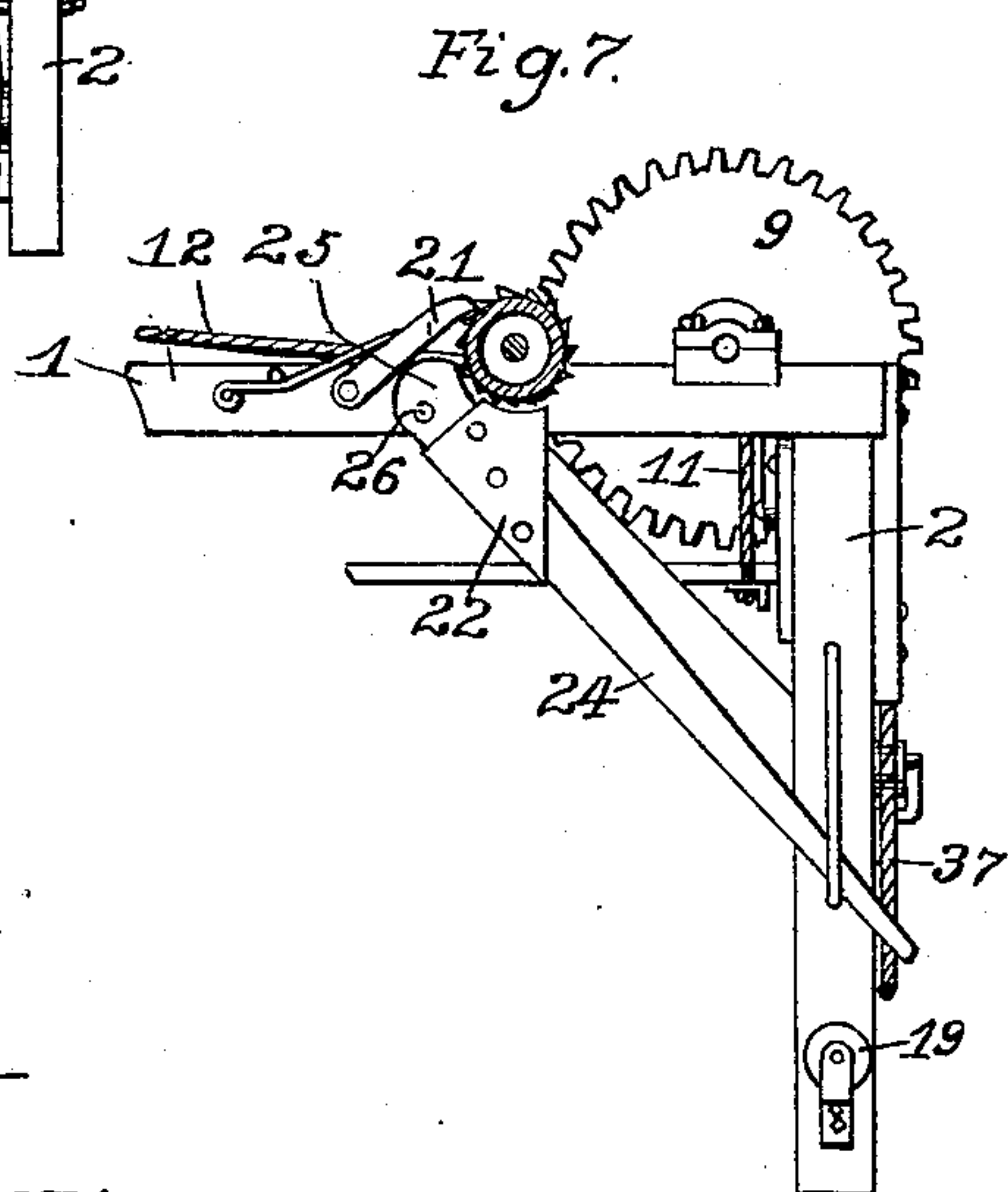
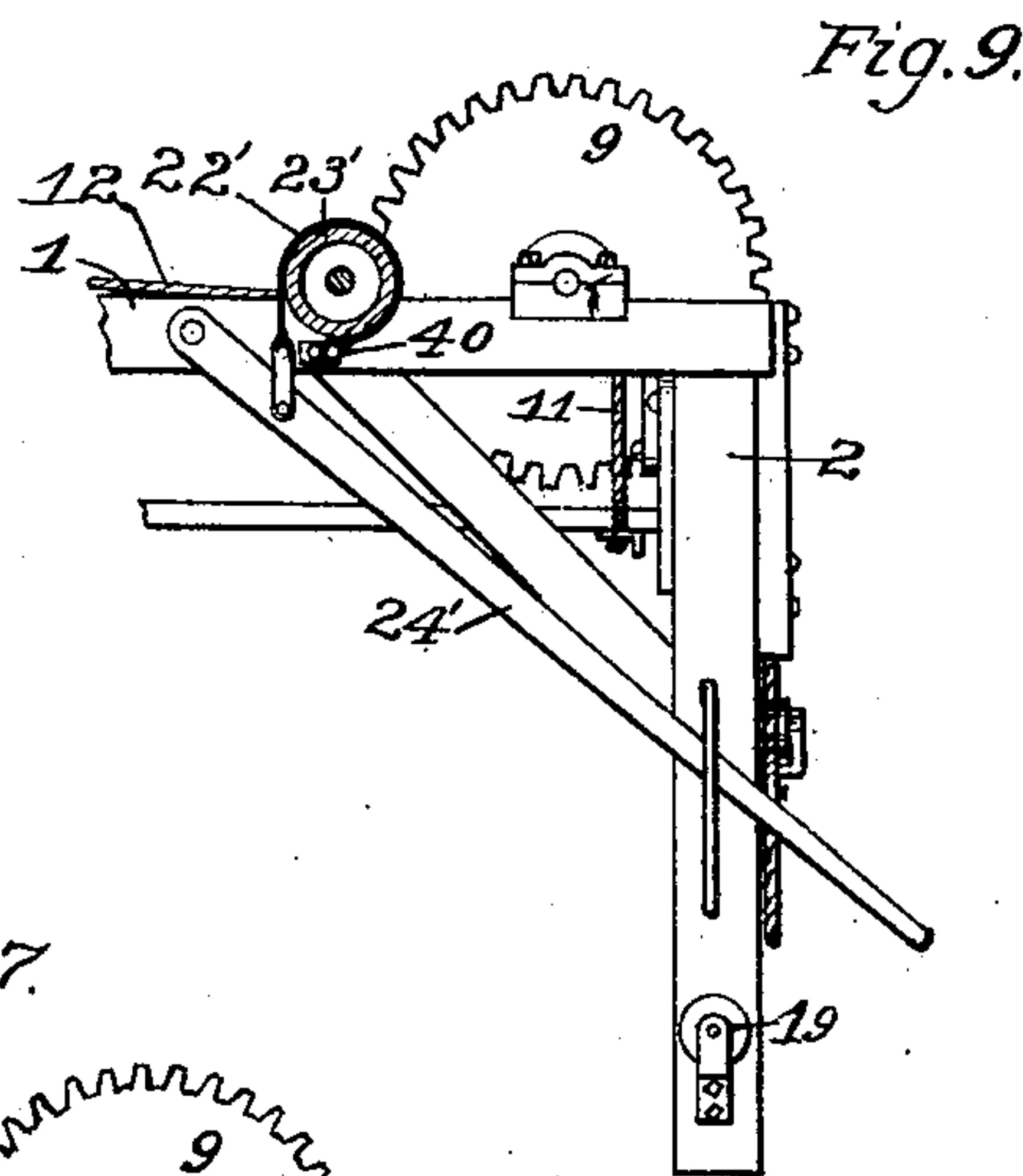
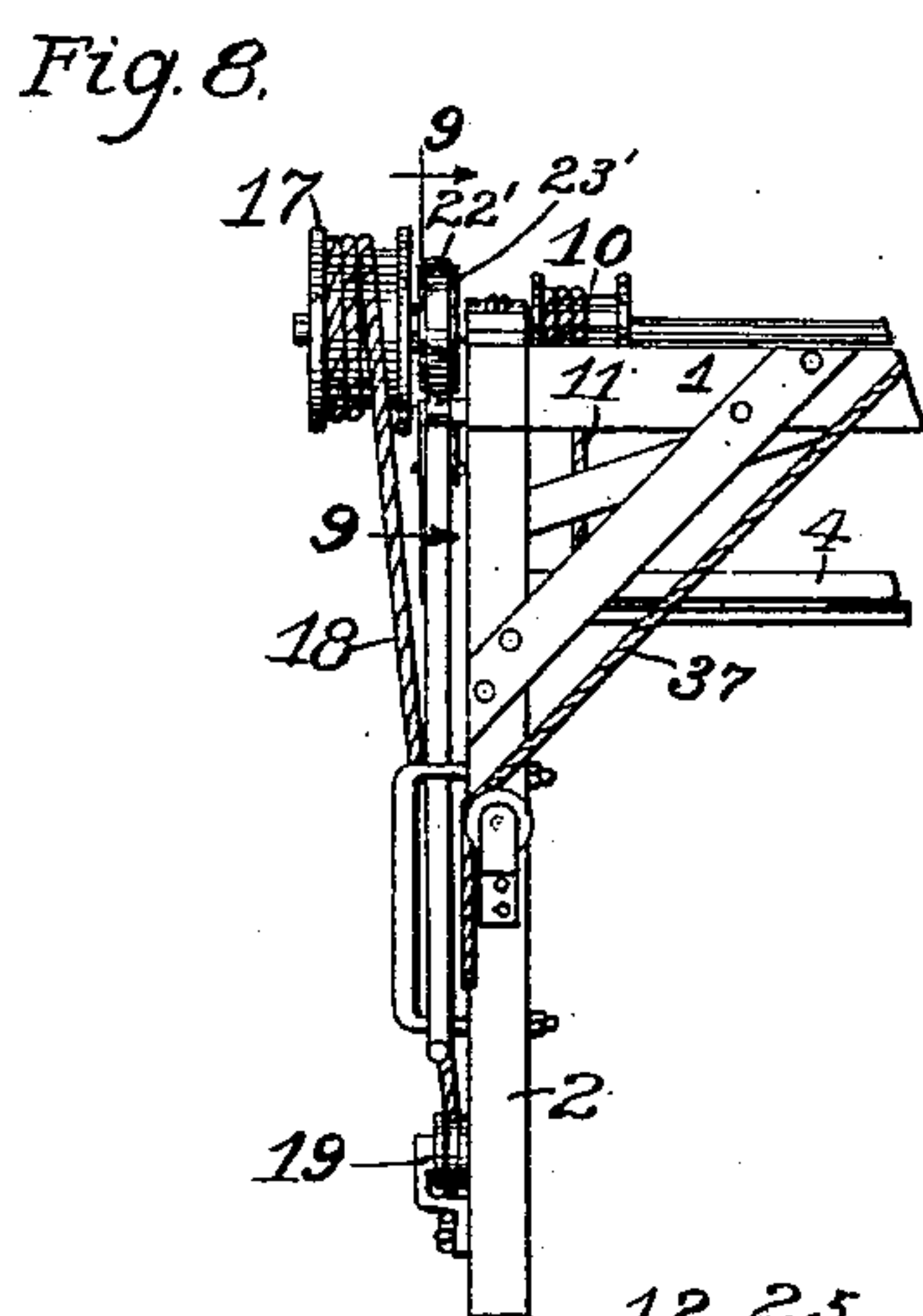
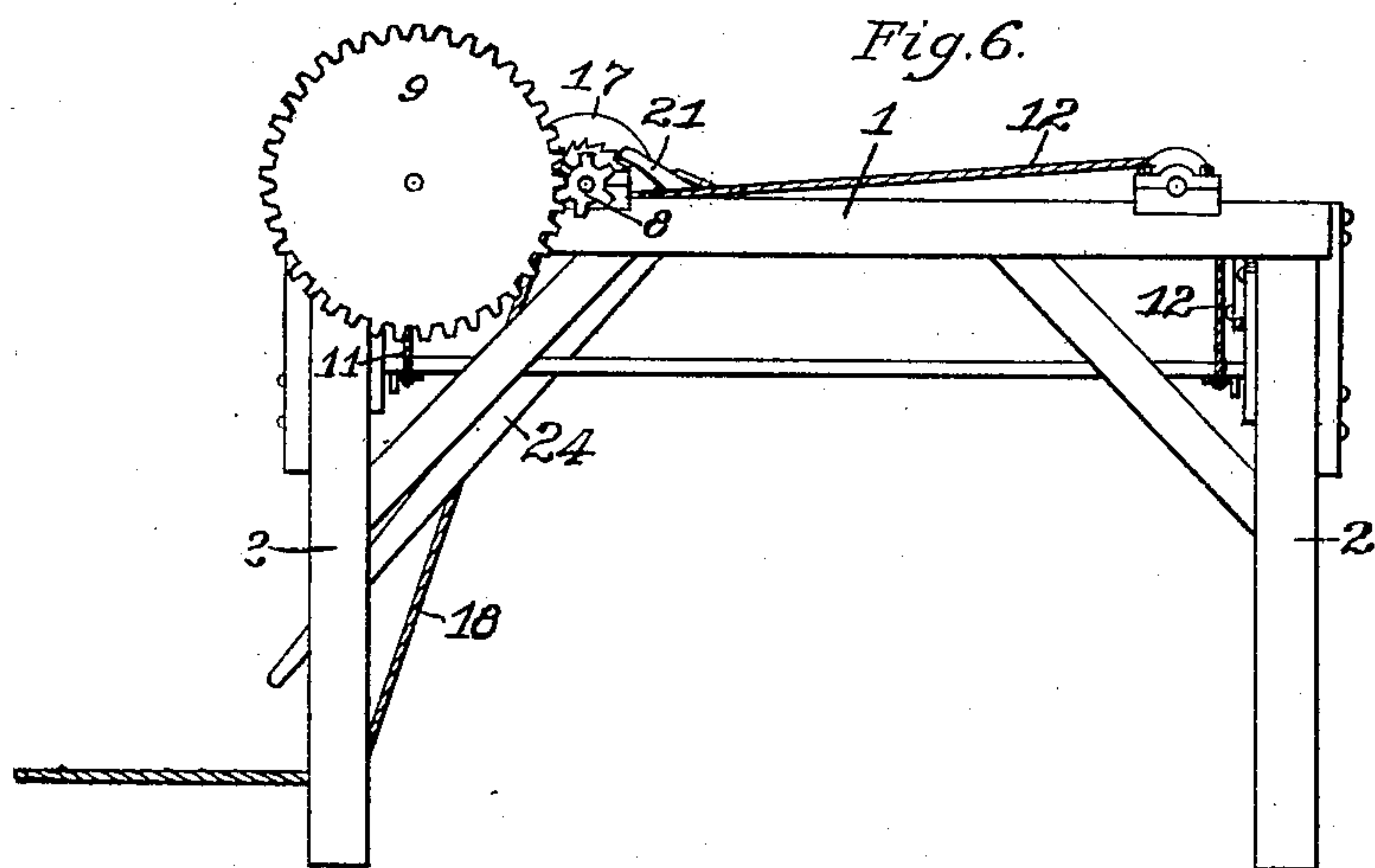
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2 SHEETS—SHEET 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

THOMAS J. QUALLEY, OF DECORAH, IOWA.

LOADER.

No. 885,952.

Specification of Letters Patent.

Patented April 28, 1908.

Application filed May 23, 1906. Serial No. 318,416.

To all whom it may concern:

Be it known that I, THOMAS J. QUALLEY, a citizen of the United States, residing at Decorah, county of Winneshiek, and State of Iowa, have invented certain new and useful Improvements in a Loader, of which the following is a description.

My invention relates to means for receiving a load of material elevating the same to a suitable height and then dumping any desired portion of the load upon a wagon, or other suitable means for receiving the same for transportation.

The object of my invention is to provide a strong, convenient, and durable device of the kind described which may be rapidly and easily operated.

To this end my invention consists in the novel construction, arrangement, and combination of parts, herein shown and described and more particularly pointed out in the claims.

In the accompanying drawings wherein like or similar reference characters indicate like or corresponding parts; Figure 1 is a front side elevation of my device. Fig. 2 is a top plan view. Fig. 3 is an end elevation. Fig. 4 is a section taken substantially on line 4—4 of Fig. 1. Fig. 5 is a section similar to that shown in Fig. 4 but showing a modified form of my device. Fig. 6 is a rear side elevation of my device. Fig. 7 is a section taken substantially on line 7—7 of Fig. 3. Fig. 8 is a partial end view of a slightly modified form of my device; and Fig. 9 is a section taken substantially on line 9—9 of Fig. 8.

In the preferred form of my device shown in the drawings, 1 is a frame mounted at the top of four upright posts 2—2. A vertically movable rectangular platform 3 composed preferably of two equal and similarly formed parts 4 and 5 is positioned below the frame 1 and arranged to substantially fill the space between the posts 2 which may be employed as guides to control the position of the platform laterally. Any suitable means may be provided to control the vertical position of the platform 3. In the form shown a winch comprising a drive shaft 6 and a drum shaft 7 mounted upon the frame 1 and connected by suitable gearing 8 and 9. Suitable winding drums 10—10 may be mounted upon the shaft 7 at any preferred points and connected by suitable ropes, chains, cables or equivalent means to the platform 3. In the form shown two winding drums 10—10 are pro-

vided each connected by two cables 11 and 12 to the platform 3. The cables 11 preferably lead directly from the drums to points at one end of the platform near its corners, while the cables 12 lead from the drums over suitable idlers 14, 14, preferably mounted upon a shaft 15, to the opposite corners of the platform.

Any suitable means may be provided for operating the above described winch. As shown a drum or bull wheel 17 is rigidly mounted upon the shaft 6 and a rope or other suitable means 18 is attached to and wound upon the periphery of the bull wheel with the free end of the rope so positioned that the same may be employed to rotate the shaft. If desired a suitable block 19 or equivalent means may be provided to so change the direction of the rope that horses or other convenient means may be attached thereto to operate the winch and elevate the platform if desired. Suitable means are also preferably provided upon the winch to hold the platform in its elevated position in case the rope 18 should break, or the tension be removed accidentally or for any reason while the platform is being elevated. In the form shown in Figs. 1 to 7 inclusive, a ratchet wheel 20 is mounted upon the shaft 6 and a spring-actuated pawl 21 provided to engage the teeth of the ratchet wheel 20 and securely hold the load at any desired position. When it is desired to lower the platform or slack the cables 11 and 12, the pawl 21 is forced out of engagement with the ratchet wheel and a brake 22 is applied to a friction wheel 23 upon the shaft 6 to temporarily control the operation of the winch. Any suitable means may be employed to disengage the pawl 21 from the wheel 20 and to control the operation of the brake. In the form shown this is accomplished by means of a lever 24 provided with a suitable part 25 adapted to force the pawl 21 out of engagement with the ratchet as the lever 24 is operated to bring the brake 22 into engagement with the friction wheel 23. As shown the lever 24 is pivotally attached to the frame 1 at 26 with its free end extended downward into a convenient position to be operated from the ground to control the position and movements of the platform 3. In the form shown in Figs. 8 and 9 the ratchet wheel 20 and pawl 21 are dispensed with and a band brake 22' is provided in place of the block brake shown in the preceding figures. As shown one end of the

band brake 22' is fixedly attached to the frame 1' at 40 and the movable end of the band is connected to the lever 24' the parts being preferably so arranged that when elevating the platform 3 the direction of movement of the periphery of the brake wheel is from the movable toward the fixed end of the brake band thus tending to slacken the grip of the brake. When so arranged the weight of the lever usually proves ample to insure the automatic action of the brake to support the platform in case of accident.

To properly support a load of sand, earth, or like material in the preferred form the parts 4 and 5 of the platform 3 are held in a common plane when supported by the cables 11 and 12. This may be accomplished in any preferred manner. As shown in Figs. 3 and 4 the parts 4 and 5 are each provided with a bar 27 rigidly attached near their ends of sufficient length to extend substantially across the entire platform 3, and each cable in place of attaching directly to the platform is attached near the free end of one of the bars 27. This proves a very strong and satisfactory method of supporting the central portion of the platform. In Fig. 5 a single bar 28 is provided at each end of the platform 3 the cables 11 attaching near the opposite ends of one and the cables 12 attaching in a similar manner at the other, the parts 4 and 5 merely resting upon the bars which are preferably not directly attached to either. If now the platform 3 is elevated to any desired height and the outer edges of the parts 4 and 5 are supported independently of the cables 11 and 12 and the bars 27 or 28 in the forms shown, it is evident that by slacking the cables the inner edges of the parts 4 and 5 will be left unsupported and will descend as shown in broken lines in Figs. 4 and 5, thus sliding the material upon the platform toward its center where it will be discharged through the opening between the inner edges of the parts.

Any suitable means may be provided to engage and hold the outer edges of the platform 3 in an elevated position independently of the cables 11 and 12. As shown a cylindrical bar 29 or equivalent means is provided at the outer edge of each of the parts 4 and 5 and any desired number of hooks 30 or equivalent engaging means are provided to engage the bars 29 when the platform is sufficiently elevated. In the preferred form suitable means are also provided to resiliently hold the hooks 30 in engaging position and to simultaneously retract the hooks when desired. In the form shown a rotatable shaft 31 is mounted upon the frame 1 extending longitudinally thereof, and a plurality of arms 32 and 33 are fixed upon the shaft extending substantially in diametrically opposite directions. The free ends of the arms 32 and 33 are connected by means of suitable rods 38

or equivalent means to hooks 30 upon opposite sides of the frame respectively so that a partial rotation of the shaft 31 will move the hooks at opposite sides of the platform 3 in opposite directions that is, a partial rotation of the shaft 31 will simultaneously move all the hooks 30 at both sides of the platform 3 either into or out of engaging position. In the form shown a bell crank 34, 35 is mounted upon the shaft 31, and a spring 36 or other suitable means connected to the arm 34 arranged to normally hold the shaft so that the hooks 30 are in engaging position. A rope 37 or other convenient connecting means is attached to the arm 35 so that when desired by merely pulling upon the rope 37 the hooks 30 will be retracted from their engaging position.

It is believed that from the foregoing description of the machine its operation is apparent and that further description of its operation is unnecessary and undesirable.

In the foregoing description and in the drawings only the preferred form of my improvement is described and shown, but it is obvious that various immaterial modifications may be made in my device without departing from the spirit of my invention, hence I do not wish to be understood as limiting myself to the exact form and construction shown.

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

1. A device of the kind described, comprising a frame, a vertically movable substantially two-part platform therefor, each of said parts provided with a plurality of supporting members extended under the adjacent part, and means for lifting and supporting the free ends of said supporting members, and means for temporarily engaging and supporting the outer edges of said platform parts.

2. A device of the kind described, comprising a frame, a vertically movable two-part platform therefor, each of said parts provided with a plurality of supporting members extended under the adjacent part, means for lifting and supporting the free ends of said supporting members comprising a plurality of supporting cables secured thereto drums for operating said cables, means for operating said drums, and means for temporarily engaging and supporting the outer edges of said platform part.

3. A device of the kind described, comprising a frame, a vertically movable two-part platform therefor, each of said parts provided with a plurality of supporting members extending under the adjacent part, means for lifting and supporting the free ends of said supporting members comprising a plurality of supporting cables secured thereto drums for operating said cables, means for operating said drums comprising a bull-wheel, gearing connecting the said operating

drums and bull-wheel, and means for operating said bull-wheel, means for temporarily engaging and supporting the outer edges of said platform parts and means for simultaneously disengaging said temporary engaging and supporting means.

4. A device of the kind described, comprising a frame, a vertically movable two-part platform therefor, each of said parts being provided with a plurality of supporting members extending under the adjacent part means for lifting and supporting the free ends of said supporting members comprising a plurality of supporting cables secured thereto, drums for operating said cables, means for operating said drums comprising a bull-

wheel gearing connecting the said operating drums and bull-wheel and means for operating said bull-wheel, hooks for temporarily engaging and supporting the outer edges of said platform parts, means for simultaneously engaging said hooks as desired, and means for preventing the accidental lowering operation of the bull-wheel.

In testimony whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

THOMAS J. QUALLEY.

Witnesses:

J. H. BLAESS,
S. E. BRICKNER.