

J. B. SCHUMAN.

SHOCK LOADER.

APPLICATION FILED MAY 22, 1906.

938,611.

Patented Nov. 2, 1909.

3 SHEETS—SHEET 1.

Fig. 2.

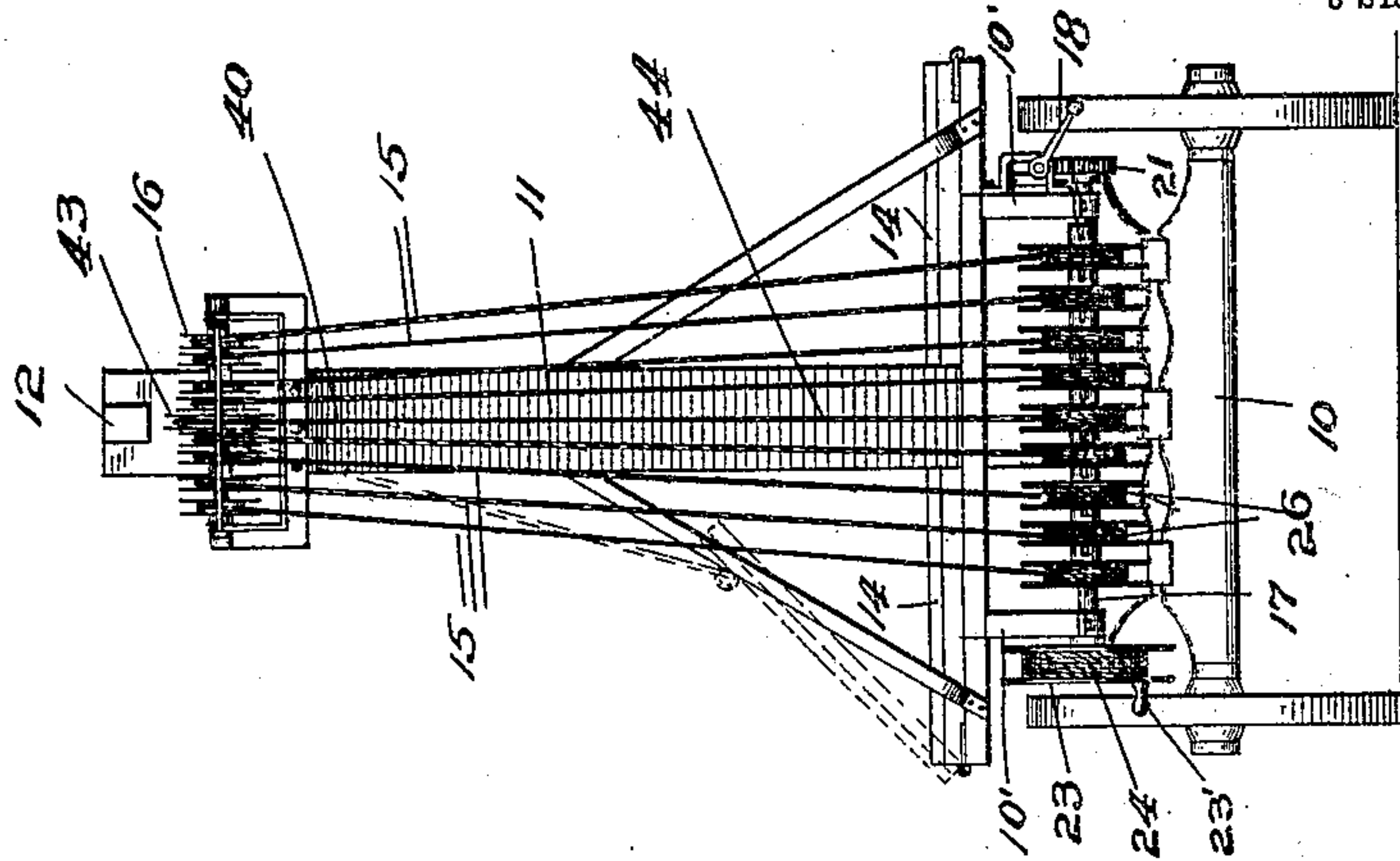
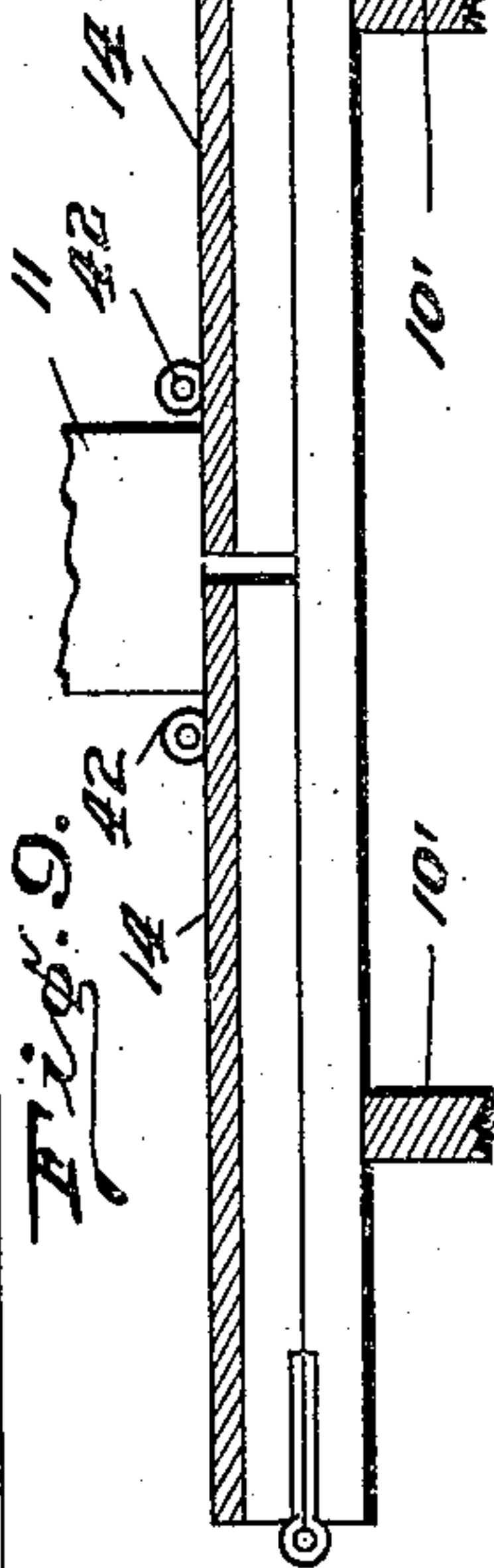
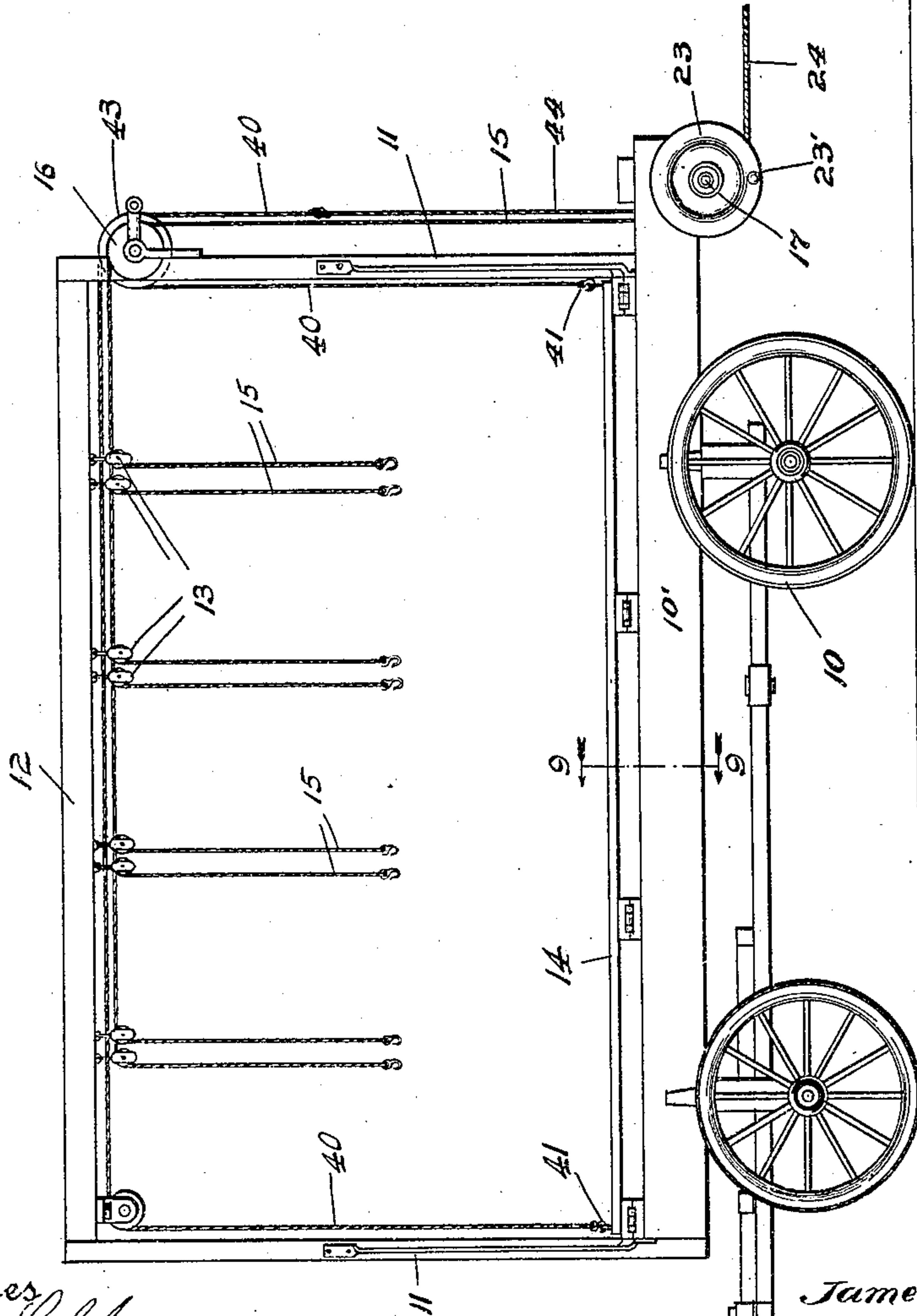


Fig. 1.



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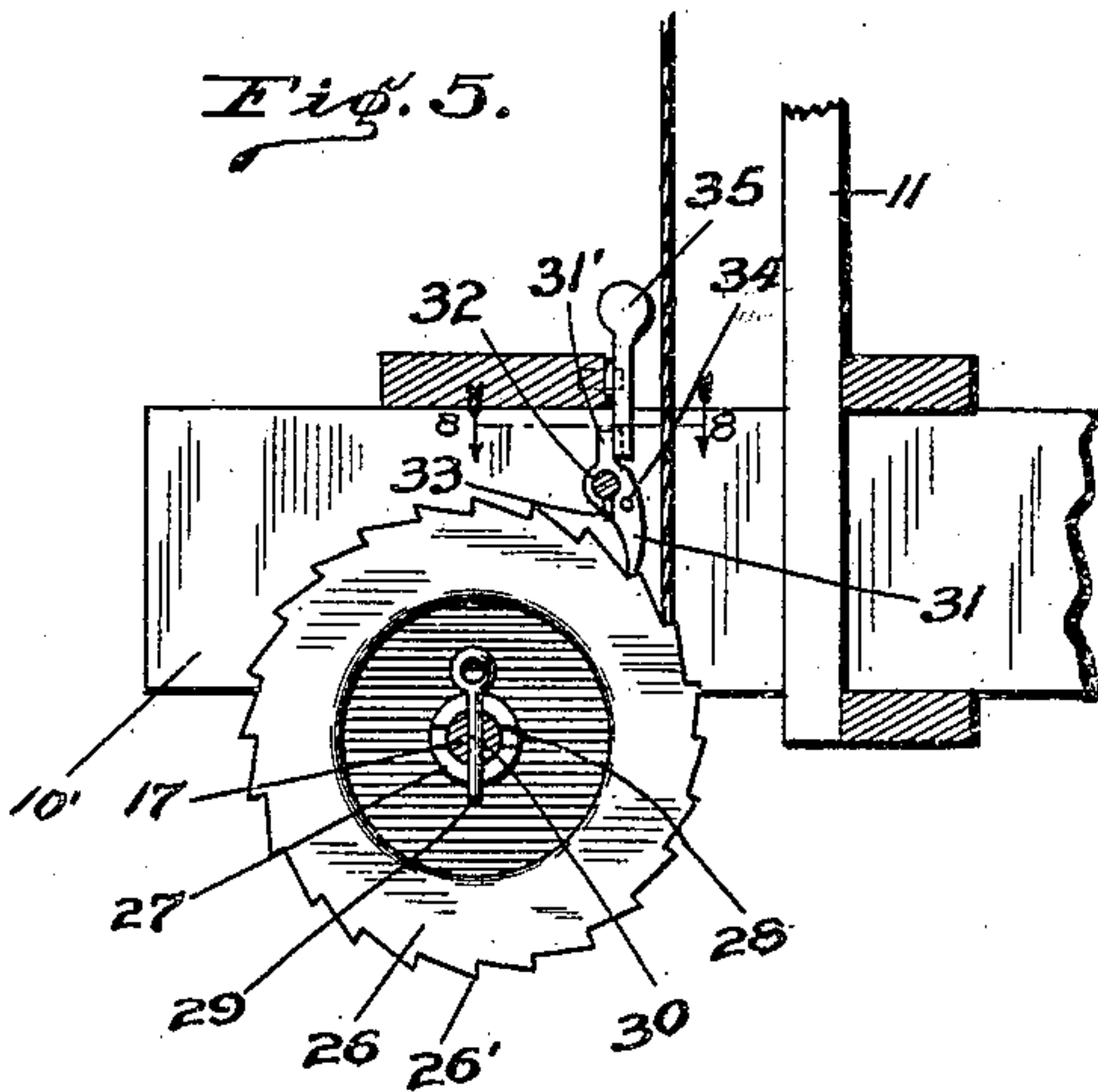
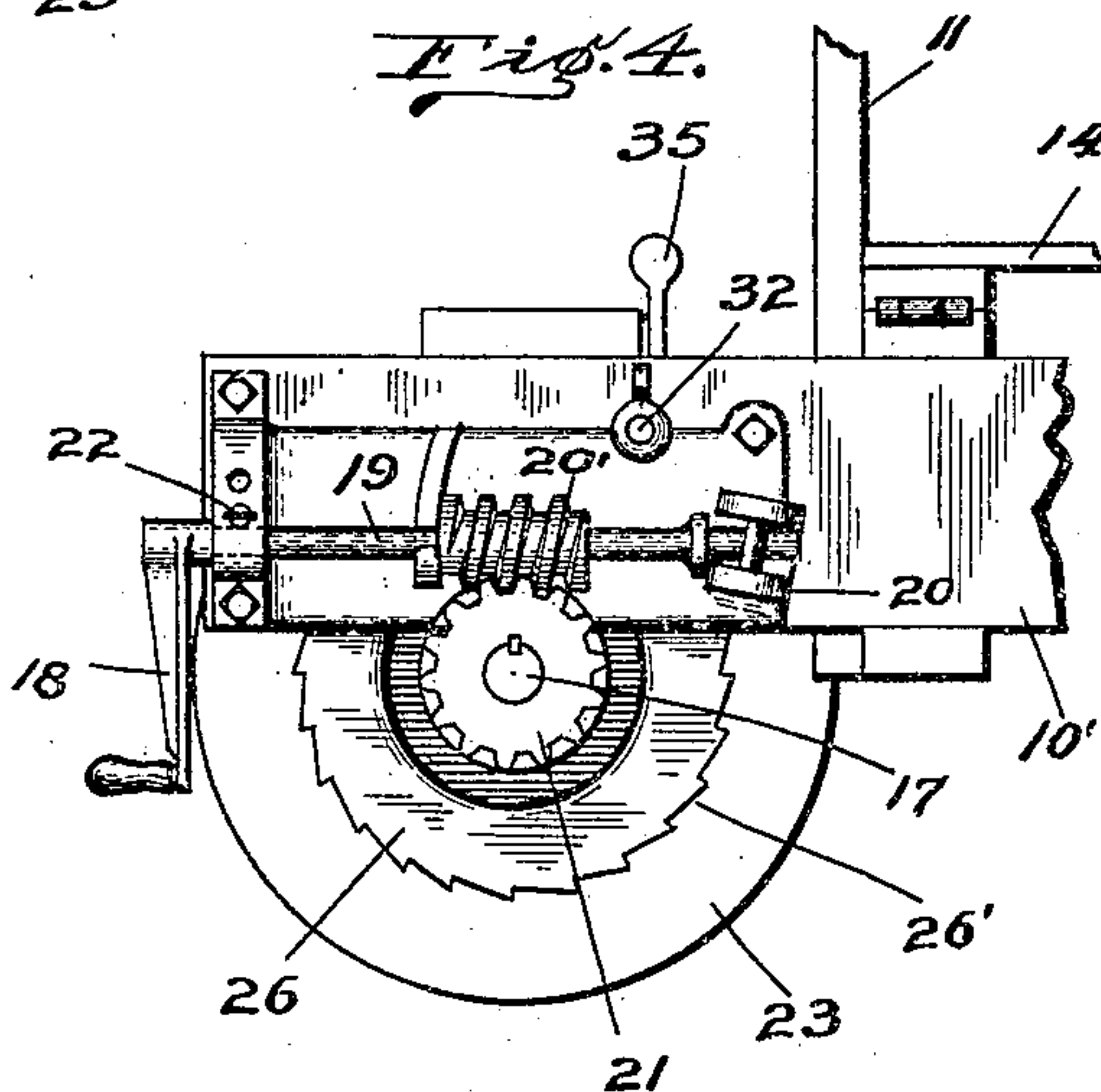
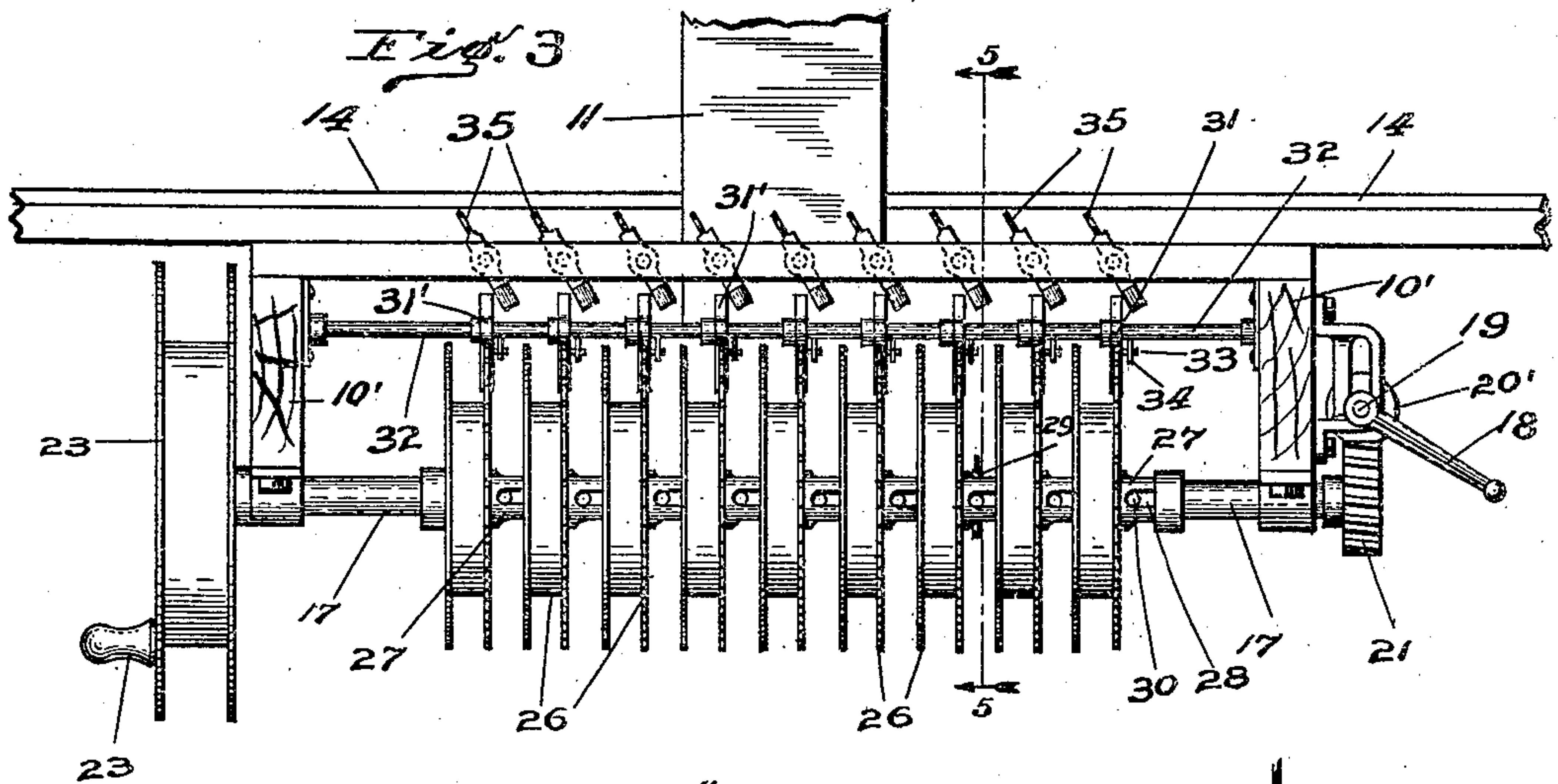
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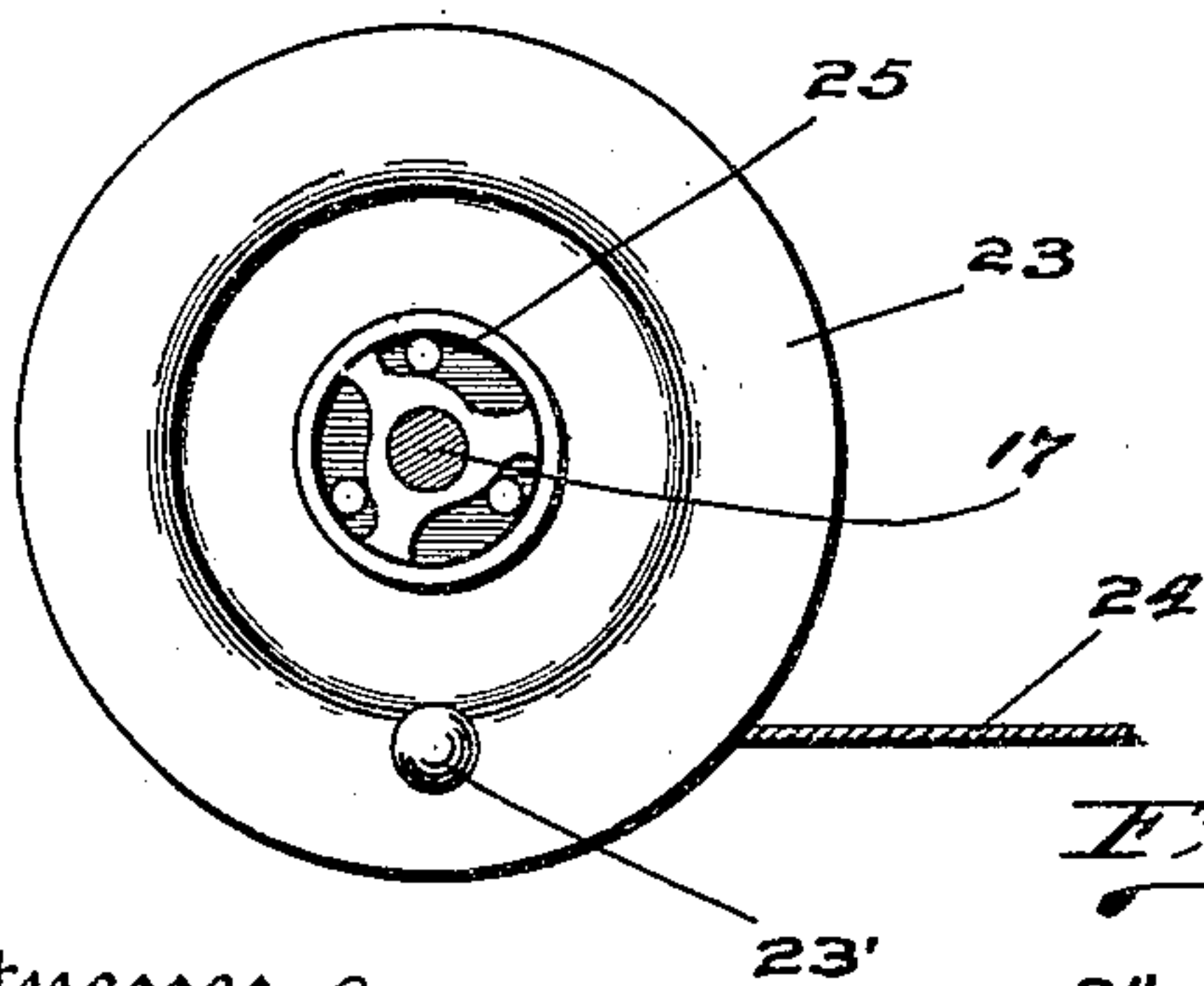
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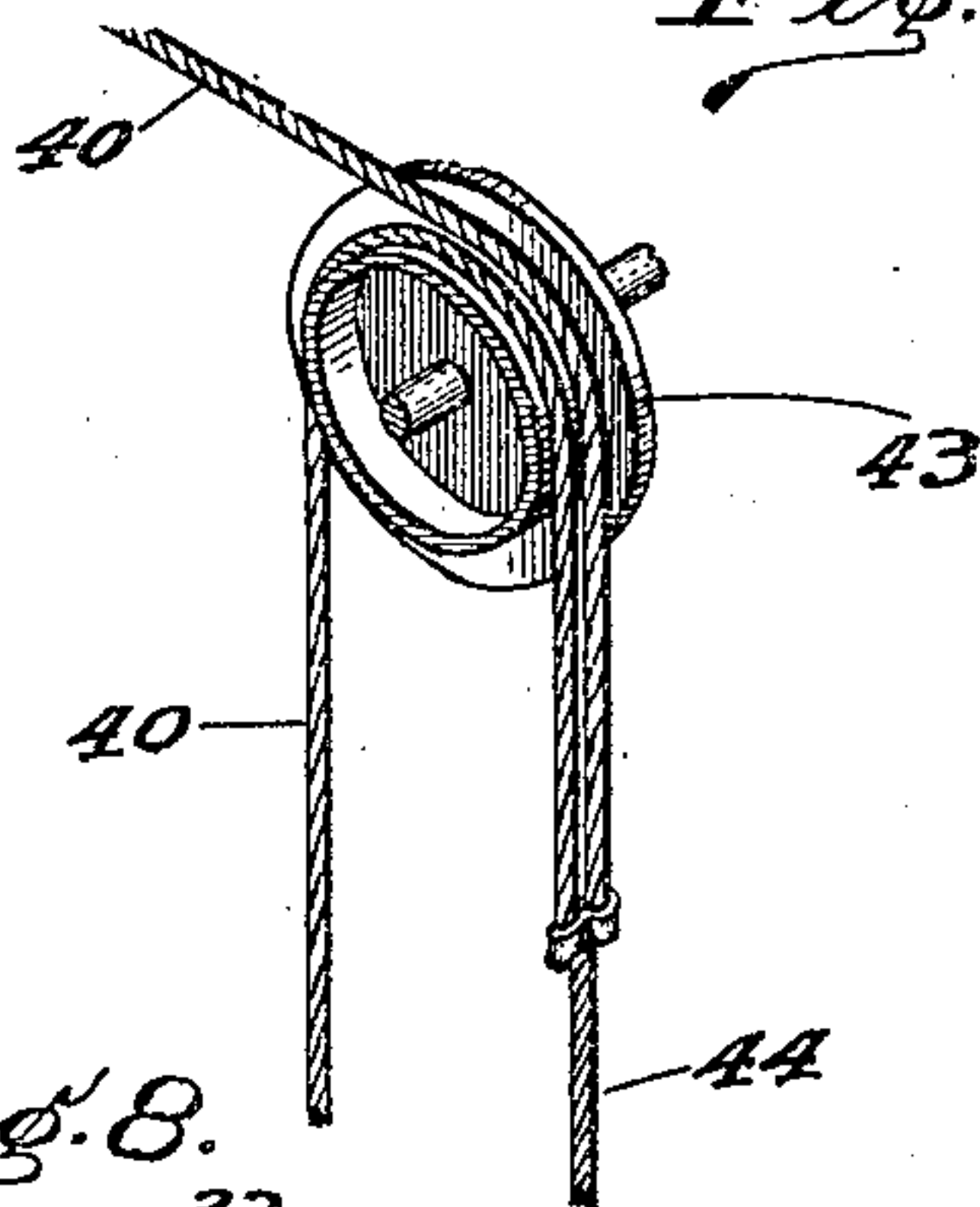
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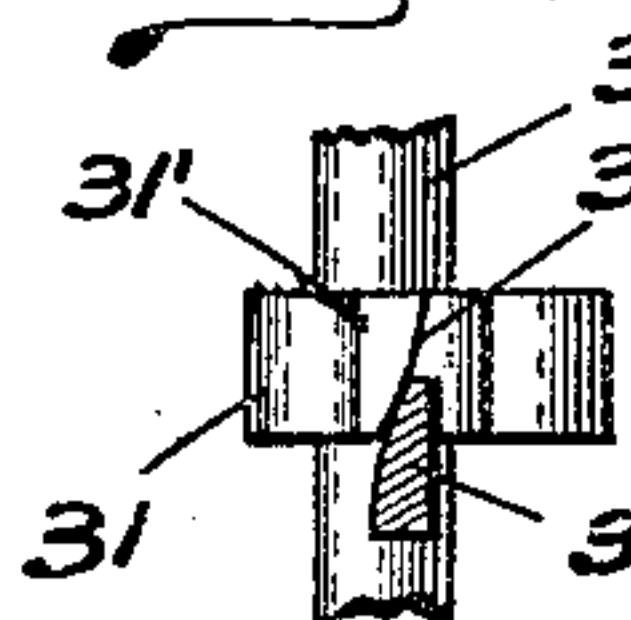
*Fig. 6.*



*Fig. 7.*



*Fig. 8.*



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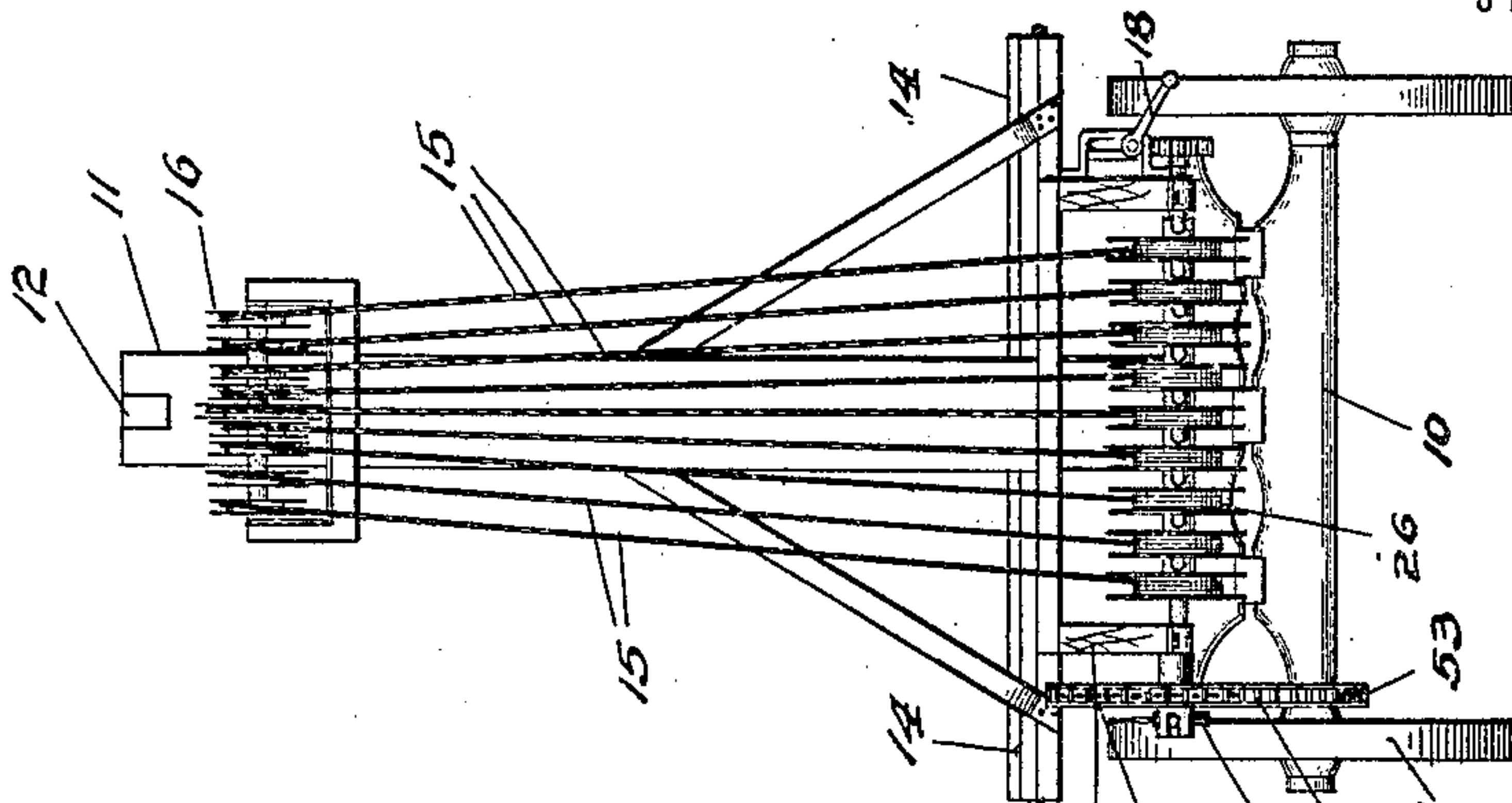
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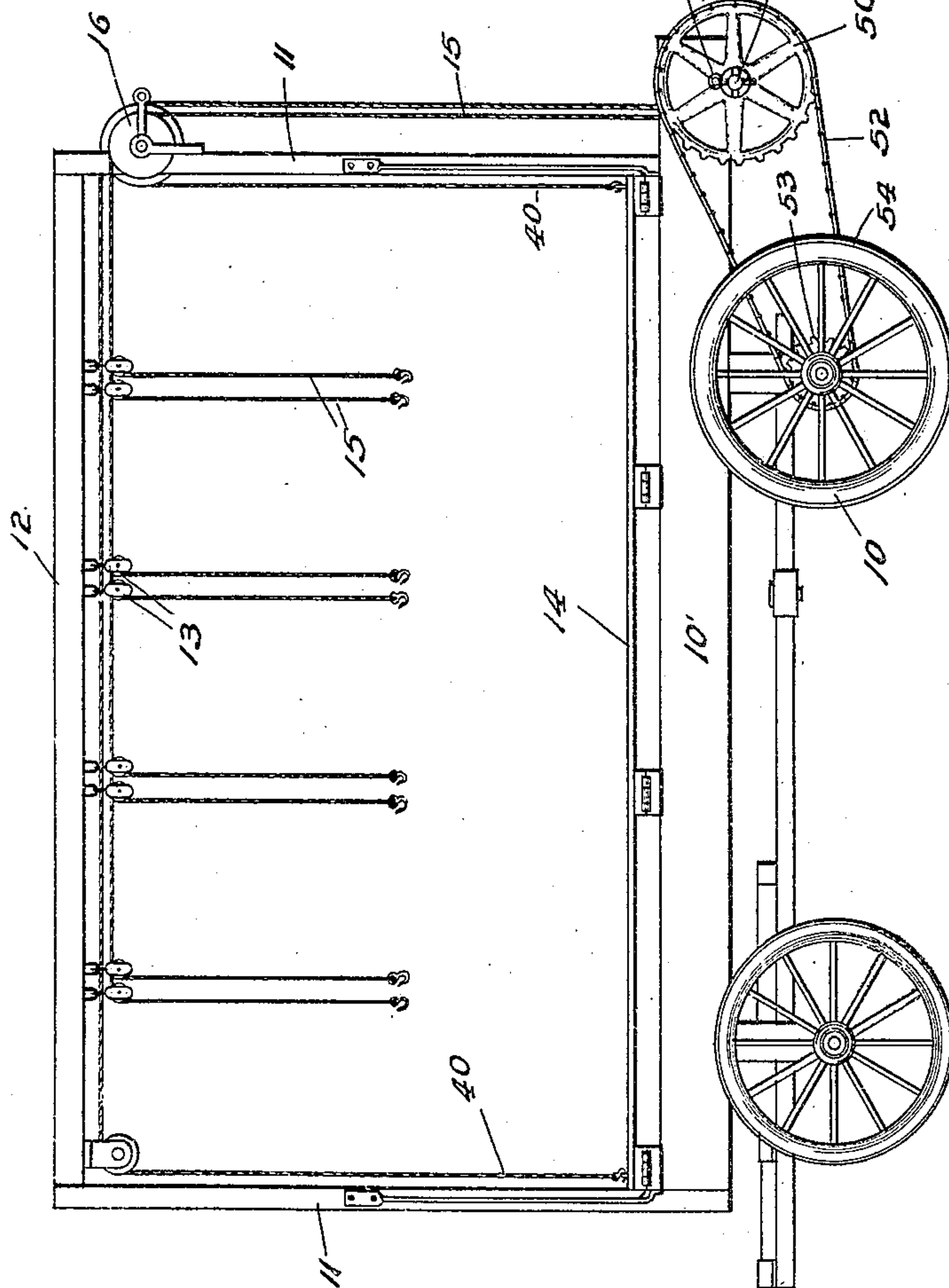
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3 SHEETS—SHEET 3.

*Fig. 11.*



*Fig. 10.*



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# UNITED STATES PATENT OFFICE.

JAMES B. SCHUMAN, OF INDIANAPOLIS, INDIANA, ASSIGNOR TO THE SCHUMAN COMPANY, OF INDIANAPOLIS, INDIANA, A CORPORATION OF MAINE.

## SHOCK-LOADER.

938,611.

Specification of Letters Patent.

Patented Nov. 2, 1909.

Application filed May 22, 1906. Serial No. 318,166.

*To all whom it may concern:*

Be it known that I, JAMES B. SCHUMAN, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Shock-Loaders, of which the following is a specification.

The object of my invention is to produce a portable structure by means of which shocked crops, such as corn, may be readily lifted from the ground to the vehicle and retained in place thereon during transportation.

The accompanying drawings illustrate my invention.

Figure 1 is a side elevation of a vehicle embodying my invention; Fig. 2 a rear end elevation with the pawl mechanism omitted; Fig. 3 a detail on a larger scale, of the winding drums; Fig. 4 an elevation of the right hand end of Fig. 3; Fig. 5 a section on line 5—5 of Fig. 3; Fig. 6 a detail of the power-drum; Fig. 7 a detail of the platform-lifting ropes; Fig. 8 a detail of one of the pawls, Fig. 9 a section on line 9—9 of Fig. 1; Fig. 10 a side elevation of a modified form; and Fig. 11 a rear elevation with the pawls omitted.

In the drawings, 10 indicates a vehicle, such as an ordinary farm-wagon-running-gear, upon which is detachably mounted a frame 10' provided at its ends with posts 11, 11, the upper ends of which are firmly connected by a longitudinal bar 12 upon which is hung, or otherwise supported, a plurality of pulley blocks 13, said pulley blocks being arranged at suitable distances along the length of the bar 12 at about the distance occupied by the shocks which are to be handled. Hinged upon frame 10' are two inwardly folding platforms 14, 14 upon which the material is to be deposited. Running through each pulley block 13 is a lifting cable 15 and each of said lifting cables is passed over one of a series of idle pulleys 16 supported at the upper end of the rear post 11. Journaled in suitable bearings at the rear of the frame 10', and as low down as may be convenient, is a windlass shaft 17 which may be operated by the hand crank 18 geared thereto. Crank 18 is carried by a shaft 19 journaled in a pivoted head 20 and carrying a worm 20' meshing with a worm wheel 21 attached to shaft 17, the arrangement being such that the worm may

be lifted away from the wheel and held out of engagement by a pin 22.

Mounted loosely upon shaft 17 is a drum 23 upon which is wound a cable 24 which may be attached to a suitable draft animal. Drum 23 is connected to shaft 17 by a clutch connection 25, and is provided with a suitable handle 23' by means of which the cable may be rewound upon the drum.

Journaled upon the shaft 17 is a plurality of winding drums 26, there being as many as there are lifting cables 15, and each of said lifting cables is carried to one of said winding drums. In order to connect any one of the winding drums 26 to the shaft 17 I provide each drum with a hub 27 diametrically perforated or slotted at 28 for the reception of a pin 29 which may pass through a registering perforation 30 in the shaft. Each drum 26 is provided on the rim of one of its flanges with ratchet teeth 26' and a series of pawls 31 is arranged on a shaft 32 in position to engage such teeth, a separate pawl being provided for each drum 26.

Shaft 32 carries a series of fingers 33 adapted to engage pins 34 carried by the pawls 31 so that by turning the shaft, all of the pawls may be simultaneously withdrawn from their drums. In order to withdraw any one of the pawls, each pawl is provided with an arm 31' having an inclined surface 31'' and adjacent each pawl is a lever 35 adapted to engage said surface to swing its pawl away from its drum.

In order to lift the platform 14 I provide a pair of ropes 40, 40 which descend at opposite ends of the platforms and are provided with hooks 41 adapted to enter one or the other of the eyes 42 attached to the inner ends of the platforms 14. The two ropes 40 are brought over an idler 43 and attached to a single rope 44 which is led to one of the drums 26.

The operation is as follows: The vehicle will be driven up alongside a shock and one of the lifting cables 15 attached thereto. The corresponding drum 26 will then be connected to the shaft 17 in the manner already described and shaft 17 rotated, either by hand, or by the draft animal, so as to wind the said cable 15 upon its drum 26. When the shock has been lifted to the platform the cable 15 will be allowed to remain in engagement with the shock, and the cor-



responding pawl 31 will hold the drum against reverse rotation. The operation will be repeated with a different cable 15 until the vehicle is loaded. When the load is to be discharged the cables 40 are attached first to one platform 14 and then the other and the inner end of the platform lifted, as shown in dotted lines in Fig. 2, until the shocks slide off, their attachment to the cables 15 preventing them from tipping over on their sides.

In Figs. 10 and 11 I show a construction by means of which the greater part of the work of lifting the shock may be accomplished automatically as the machine is driven to the next shock. In this form I journal a sprocket wheel 50 on the shaft 17 and connect it to the shaft by any suitable separable clutch mechanism, as for instance the removable pin 51. Wheel 50 is connected by a chain 52 with a sprocket wheel 53 attached to one of the vehicle wheels 54. In operation; the shock will be lifted just clear of the ground, in the manner already described, by means of the hand crank 18 and worm 20'. Wheel 50 will then be connected with the shaft 17 and worm 20' thrown out of engagement with worm-wheel 21. The vehicle will then be driven forward to the next shock and, as it moves forward, the shock will be automatically lifted to the platform. It will be noticed that the cables 15 may be extended laterally from the vehicle in opposite directions and that when shocks are lifted by the several cables onto the vehicle said shocks are arranged close to the middle line of the vehicle and balanced on each side so that there is no danger of the vehicle tipping over either during the progress of loading or transportation. The load is also well centralized so that it may be driven through standard gates.

I claim as my invention:

1. The combination of a transporting vehicle having a platform, a plurality of lifting cables, a plurality of means for supporting said lifting cables above the platform of the vehicle at different points in its length, and a plurality of means carried by the vehicle for independently operating said lifting cables.

2. The combination of a transporting vehicle having a platform, a plurality of lifting cables above the platform of the vehicle at different points in its length, and means carried by the vehicle for independently operating said lifting cables.

3. The combination of a transporting vehicle having a platform, a plurality of lifting cables, a plurality of means for supporting said lifting cables at various points in the length of the platform of the vehicle above the same, a windlass shaft, a plurality of winding drums journaled on said shaft, one for each of the lifting cables, means for

rotatably connecting any one of said lifting drums with the shaft, and means for holding each of said lifting drums against reverse rotation, all carried by the vehicle.

4. The combination, with a vehicle having a swinging platform and means for swinging the same on a substantially horizontal axis, of a plurality of lifting cables, a plurality of means for supporting said lifting cables above the platform at different points in its length, and a plurality of means for independently operating said lifting cables.

5. The combination, with a vehicle having a swinging platform and means for swinging the same on a substantially horizontal axis, of a plurality of lifting cables, a plurality of means for supporting said lifting cables above the platform at different points in its length, and means for independently operating said lifting cables.

6. The combination, with a vehicle having a swinging platform and means for swinging the same on a substantially horizontal axis, of a plurality of lifting cables, a plurality of means for supporting said lifting cables at various points in the length of the platform above the same, a windlass shaft, a plurality of winding drums journaled on said shaft, one for each of the lifting cables, means for rotatably connecting any one of said lifting drums with the shaft, and means for holding each of said lifting drums against reverse rotation.

7. The combination of a transporting vehicle, a plurality of lifting cables, a plurality of means for supporting said lifting cables at various points in the length of the platform of the vehicle above the same, a windlass shaft, a plurality of winding drums journaled on said shaft, one for each of the lifting cables, means for rotatably connecting any one of said lifting drums with the shaft, means for holding each of said lifting drums against reverse rotation, and means for simultaneously releasing said holding means, all carried by said vehicle.

8. The combination, with a vehicle having a swinging platform and means for swinging the same on a substantially horizontal axis, of a plurality of lifting cables, a plurality of means for supporting said lifting cables at various points in the length of the platform above the same, a windlass shaft, a plurality of winding drums journaled on said shaft, one for each of the lifting cables, means for rotatably connecting any one of said lifting drums with the shaft, means for holding each of said lifting drums against reverse rotation, and means for simultaneously releasing said holding means.

9. The combination, with a vehicle, of a plurality of lifting cables arranged at various points on said vehicle, a plurality of winding drums for said lifting cables, hand-operated driving means, means for connect-



ing any of said winding drums with said hand-operated driving means, and means for connecting any of said winding drums with a traction wheel of the vehicle.

5 10. The combination of a vehicle, winding mechanisms mounted thereon, a plurality of shock-lifting cables running from said winding mechanisms and supported above the body of the vehicle to be extended laterally therefrom to engage a distant shock, and means for operating said winding mechanisms to draw said shocks to and above said vehicle in substantially upright positions and for discharging said shocks from the ve-  
15 hicle in substantially upright positions.

11. The combination, with a vehicle, of an elevated support thereon, a plurality of cables supported by said support above the body of the vehicle, and extensible laterally therefrom, and winding mechanism for operating said cables to draw the shocks above and over said vehicle, and means for guiding material beyond the sides of the vehicle when unloading the same.

25 12. The combination with a vehicle, of an elevated support thereon, a plurality of cables supported by said support above the body of the vehicle, at various points in its length, and extensible laterally therefrom for elevating a plurality of shocks from each side thereof, and winding mechanism for operating said cables to draw the shocks above and over said vehicle.

35 13. The combination, with a vehicle, of an elevated support thereon, a plurality of cables supported by said support above the body of the vehicle at various points in its length and extensible laterally therefrom for elevating a plurality of shocks from each side thereof, and a single means for operating each of said cables to draw the shocks above and over the vehicle.

45 14. The combination, with a vehicle, of an elevated support mounted thereon, cable winding mechanism associated with the vehicle, cable guides mounted in said vehicle, cable guides mounted in said elevated support at various points in its length, cables running from said winding mechanisms and guides and laterally extensible from said support, and means for actuating said winding mechanism to operate said cables.

15. The combination of a vehicle, an elevated support thereon, winding mechanisms, a plurality of flexible shock-lifting means 55 running from said mechanisms and each supported above said vehicle by an elevated support and extensible laterally therefrom to be attached to a distant shock, and means for operating said lifting means to draw 60 such shocks bodily to and centralize them above said vehicle in substantially upright positions.

16. The combination of a vehicle, an elevated support mounted thereon, a plurality 65 of shock-lifting cables mounted on said support at various points in its length and extensible laterally from each side thereof, and means for operating said cables to draw the shocks to each side of said support above 70 and over the vehicle.

17. The combination of a vehicle, an elevated support mounted medially and longitudinally thereof, cables disposed along said support and extensible laterally therefrom 75 at different points thereof, and means for winding each of said cables to draw the shocks over the sides of said vehicle and above the same.

18. The combination of a vehicle, an elevated support mounted medially and longitudinally thereof, cables disposed along said support and extensible laterally therefrom at different points thereof, and a single means for winding each of said cables to 85 draw the shocks over the sides of said vehicle and above the same.

19. The combination, with a vehicle, of an elevated support carried thereby, a plurality of cables supported by said support above 90 the body of the vehicle and extensible laterally therefrom, winding mechanism for operating said cables, and inclined means for guiding the material supported by the cables from the vehicle when unloaded. 95

In witness whereof, I have hereunto set my hand and seal at Indianapolis, Indiana, this 9th day of May, A. D. one thousand nine hundred and six.

JAMES B. SCHUMAN. [L. s.]

Witnesses:

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