

No. 630,016.

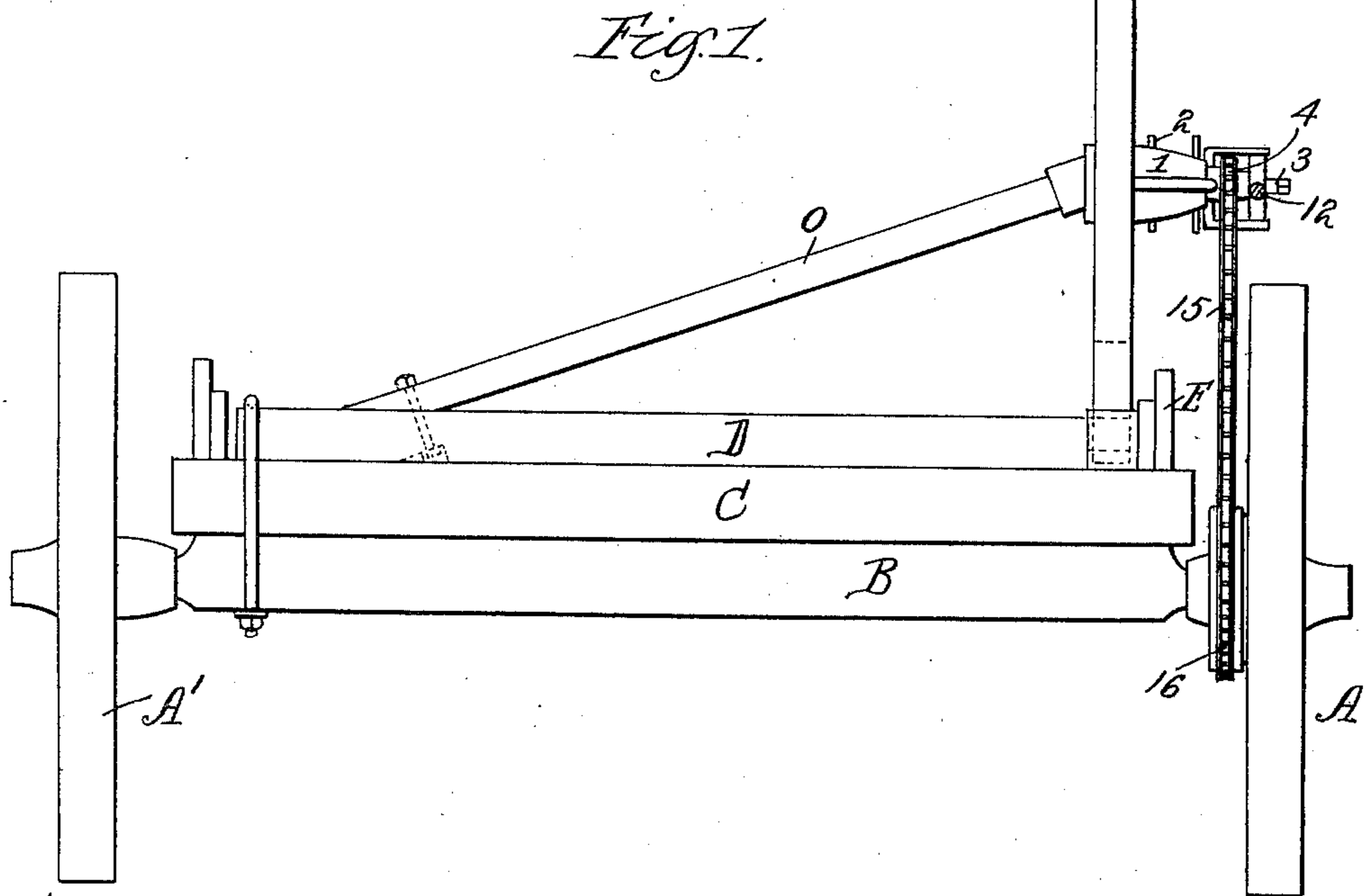
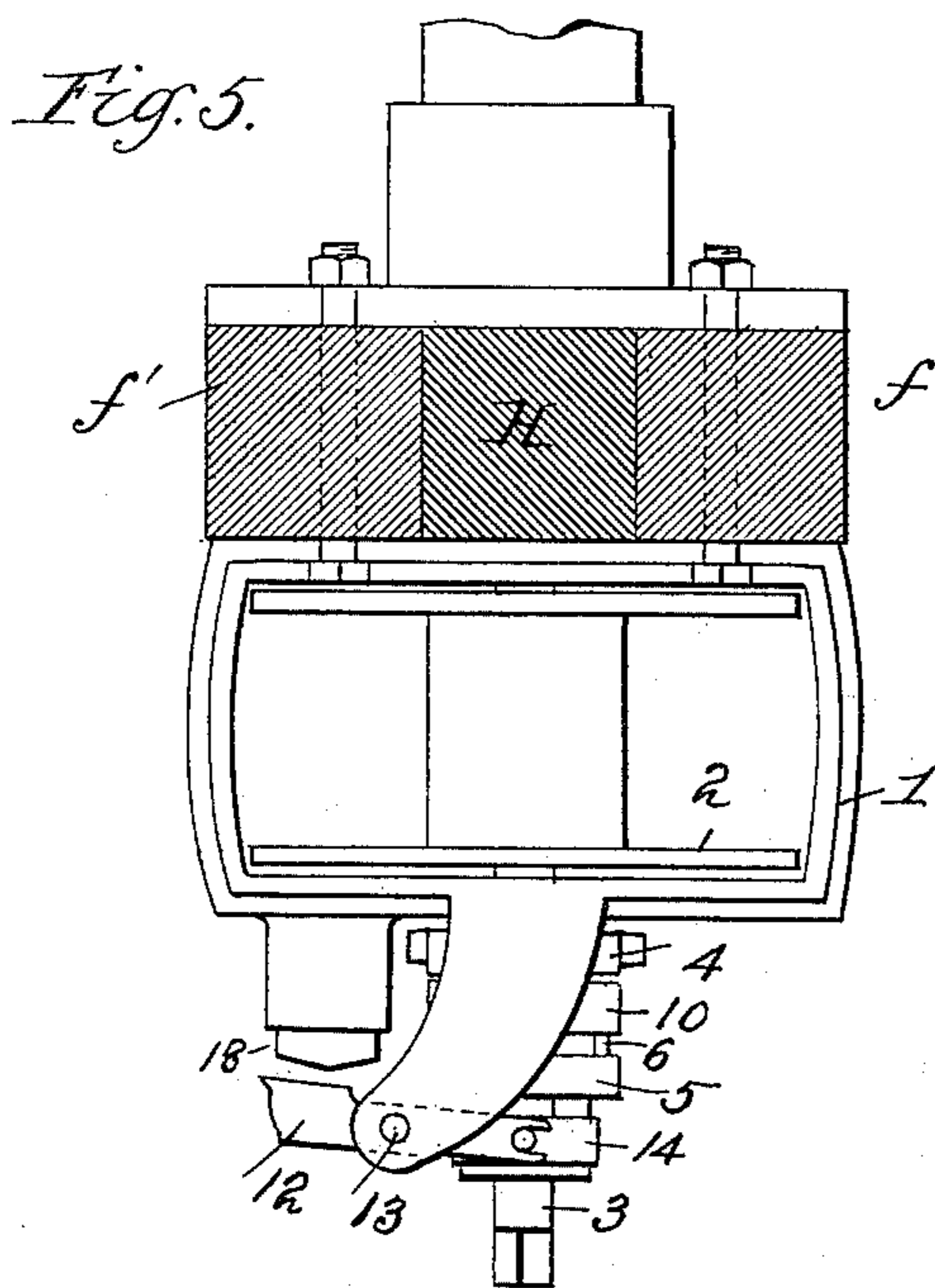
Patented Aug. 1, 1899.

W. C. WESTAWAY.  
CRANE.

(No Model.)

(Application filed Aug. 30, 1898.)

3 Sheets—Sheet 1.



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Harold G. Bennett.

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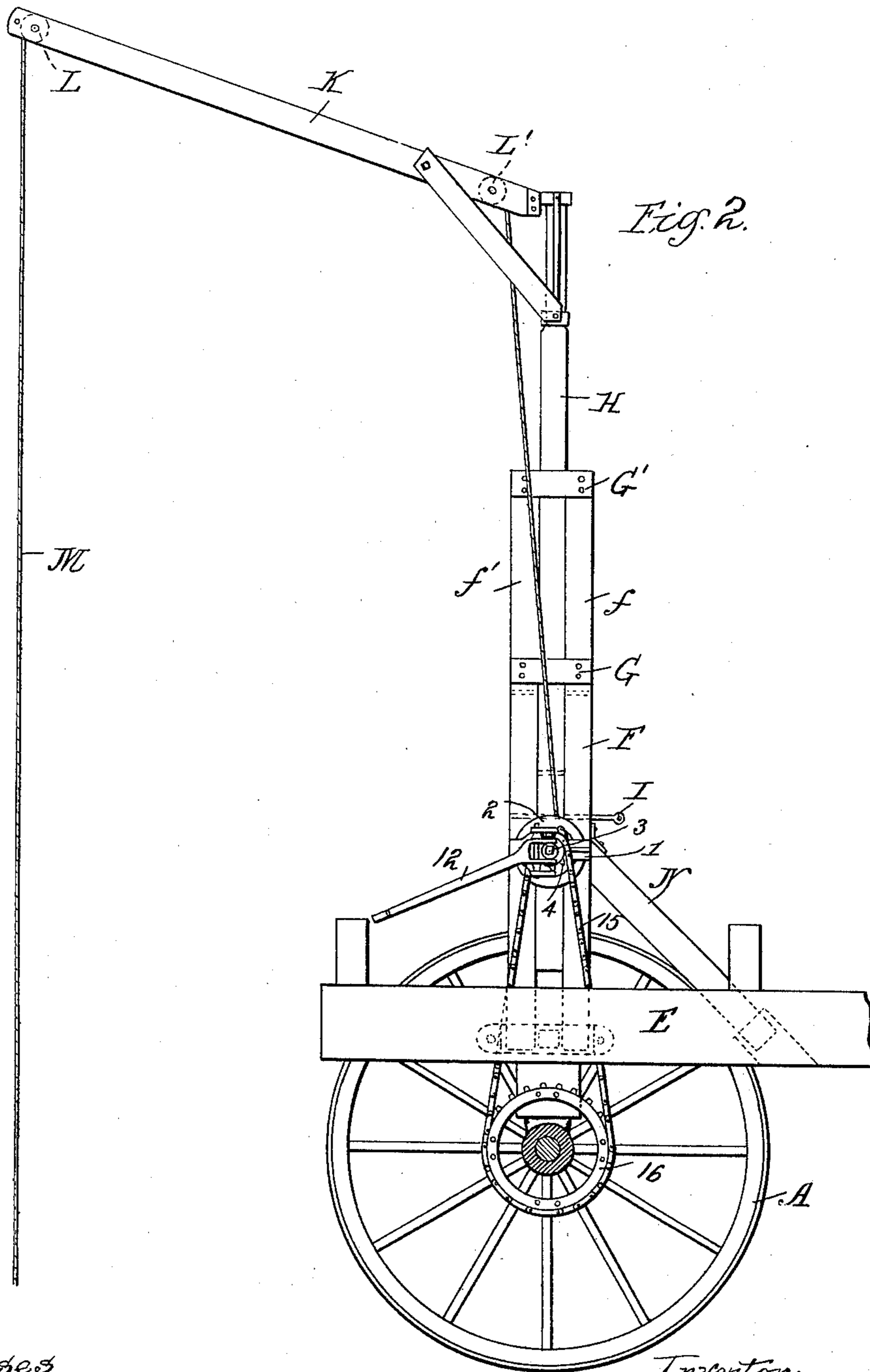
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3 Sheets—Sheet 3.

Fig. 3.

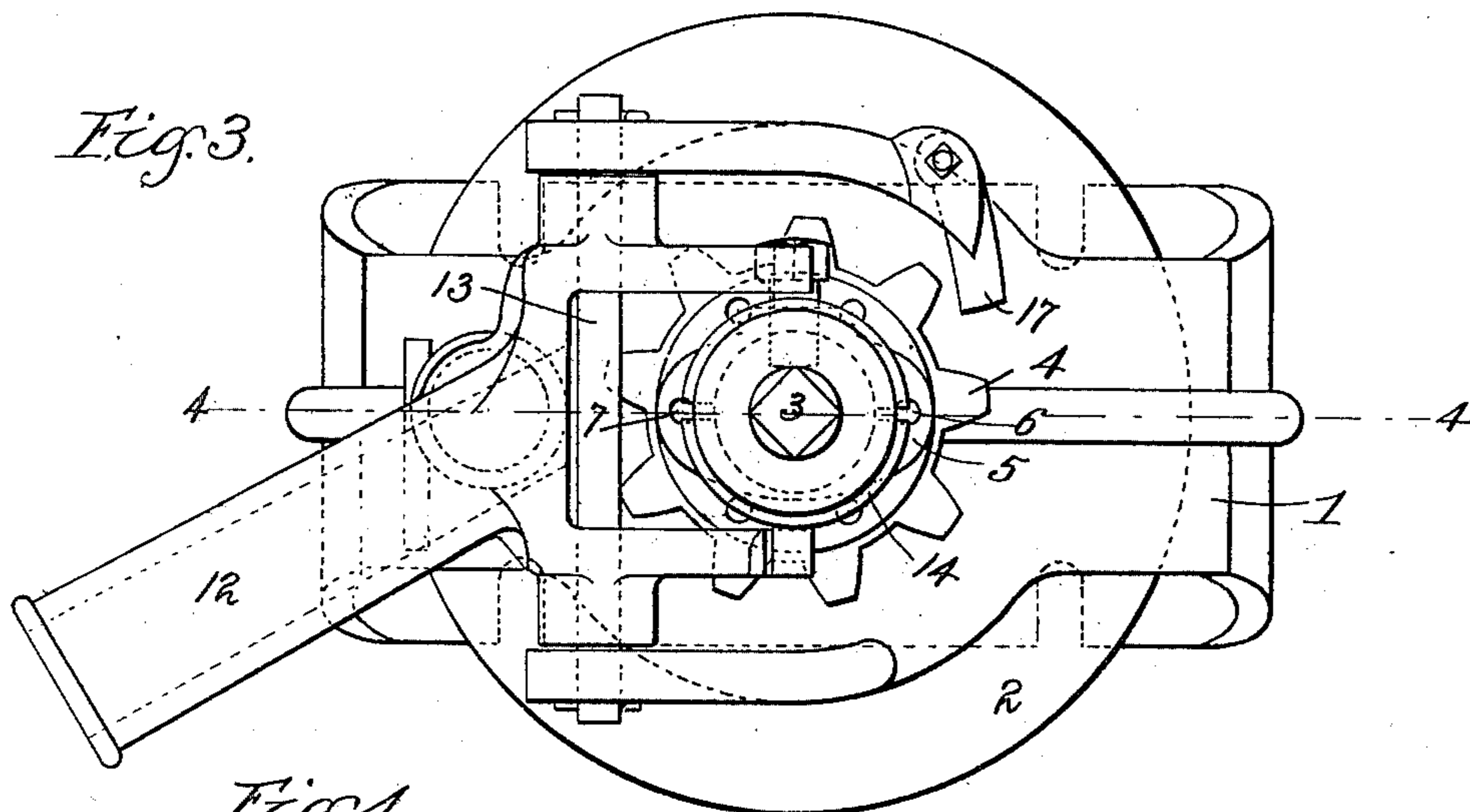


Fig. 4.

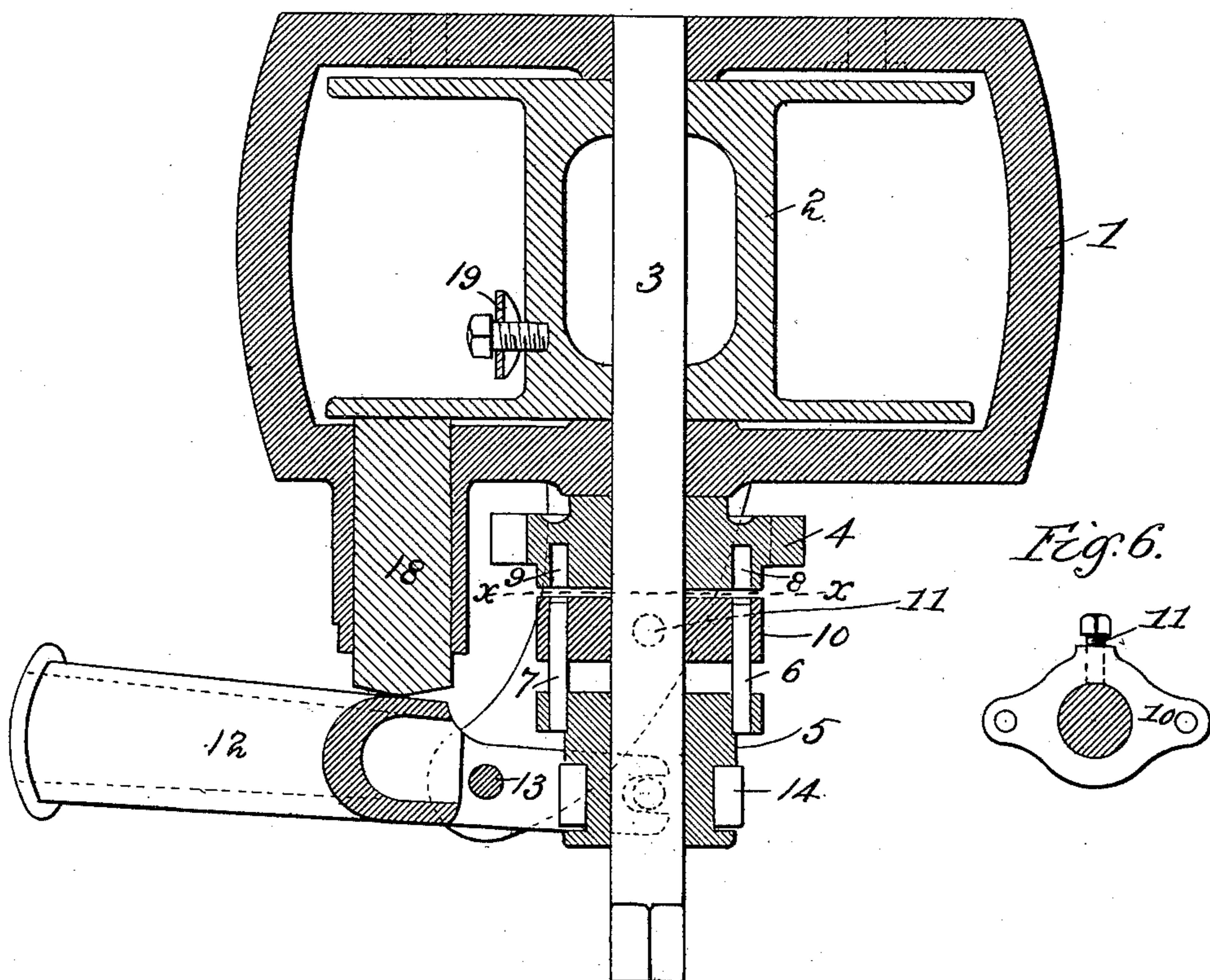
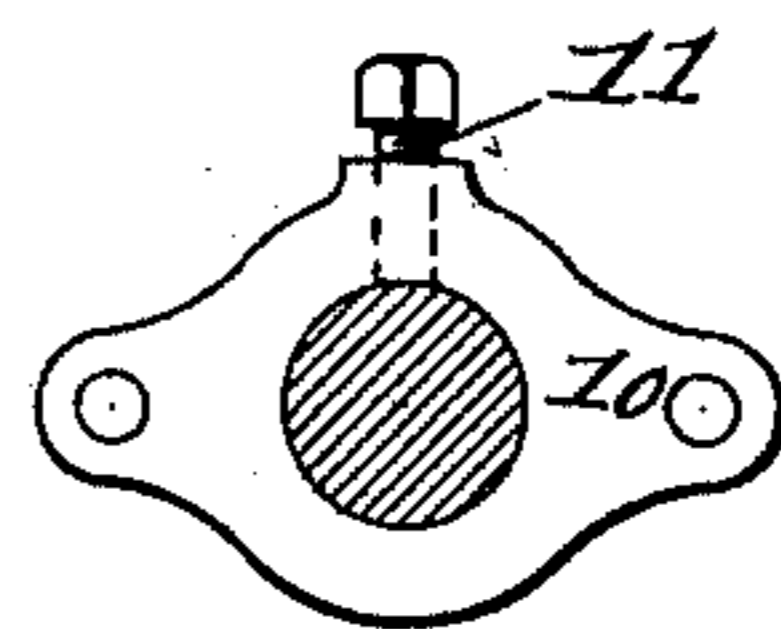


Fig. 6.



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# UNITED STATES PATENT OFFICE.

WALTER C. WESTAWAY, OF MOLINE, ILLINOIS, ASSIGNOR TO THE MOLINE PUMP COMPANY, OF SAME PLACE.

## CRANE.

SPECIFICATION forming part of Letters Patent No. 630,016, dated August 1, 1899.

Application filed August 30, 1898. Serial No. 689,890. (No model.)

*To all whom it may concern:*

Be it known that I, WALTER C. WESTAWAY, a citizen of the United States of America, residing at Moline, in Rock Island county, Illinois, have invented certain new and useful Improvements in Cranes and Similar Devices, of which the following is a description.

Referring to the accompanying drawings, wherein like reference letters and figures indicate like or corresponding parts, Figure 1 is a rear elevation of my improved device. Fig. 2 is a side elevation of the same in partial section to better show the construction. Fig. 3 is a side view of the elevating mechanism. Fig. 4 is a longitudinal section of the same. Fig. 5 is a top plan view of the same, showing it in proper position; and Fig. 6 is a sectional view in line  $x x$  of Fig. 4.

The object of this invention is to provide a simple, efficient, and economical crane, preferably portable, as shown, and particularly adapted for use in loading comparatively heavy material upon wagons—such, for example, as shocks of corn upon farm-wagons in the field, &c. It is also adapted for use with and intended to be operated either by the forward movement of the vehicle on which it is supported or by hand-power, as is found most convenient. To this end my invention comprises the peculiar construction and combination of the parts shown and described, and particularly pointed out in the claims.

In the drawings, A A' represent the wheels of the vehicle in position on the axle B. This preferably represents the rear portion of a farm or other wagon.

C is a suitable bolster having secured thereto the beam D, extending longitudinally with the bolster. A suitable framework is positioned upon the wagon, timbers E serving to assist in retaining the parts in suitable position and furnishing a means for aiding in the connection of the upright F. The said upright preferably consists of the parts  $f f'$ , extending parallel with one another and held a sufficient distance apart by the cross-pieces G G', and the upright H, positioned between the uprights  $f f'$  and vertically adjustable therein, having a telescopic action. Any simple means may be provided for retaining the upright H in its adjusted position. Thus, for

example, the lower portion of the upright H may be provided with a series of transverse adjusting-holes and the pin I be arranged to extend through all three of the uprights and positioned in any one of the said series of adjusting-holes in the upright H. The upper portion of the upright H is provided with the arm K, pivotally supported on the end of the upright, the said arm being provided with the pulleys or blocks L L', over which the line M may run. Suitable braces N O hold the uprights  $f f'$  fixedly in position.

Firmly secured to the uprights  $f f'$ , but in no wise interfering with the vertical movement of the upright H, is the mechanism for operating the device. This consists of a support 1, adapted to be bolted to said uprights, Fig. 5. Positioned within said support is a spool or drum 2, fixed upon and rotating with the shaft 3. This shaft 3 may be operated either by a crank attached to the outer end of the same and operated by hand-power or by the sprocket-wheel 4 and suitable driving-power, as hereinafter described. When the latter method is employed, I prefer to mount the sprocket-wheel loosely upon the shaft 4 and make it one member of a clutch device. The clutch device here shown is what is commonly known as a "pin-clutch," in which a casting 5, mounted upon the shaft 3 and adapted to slide thereon, is provided with pins 6 7. The pins 6 7, as here shown, pass through suitable openings in the casting 10, which is firmly fixed to and rotates with the shaft 3. A set-screw 11 or other equivalent means serves to secure the casting 10 upon the shaft. After passing through the casting 10 the ends of the pins 6 7 are adapted to enter suitable holes in the sprocket-wheel 4, thus engaging with and firmly locking the sprocket-wheel to the fixed casting 10 and causing the power driving the sprocket-wheel to rotate the shaft as well as the spool 2, attached thereto. To operate the clutch, a lever 12, pivoted at 13 and at its inner end engaging with the sleeve 14 upon the casting 5, serves as a means to slide said casting backward and forward and thus operate the clutch. The sprocket-wheel is driven by a sprocket-chain 15, extending to and engaging with a sprocket-wheel 16, secured to the wheel A.

It will thus be seen that when in proper engagement the forward movement of the vehicle bearing the device will serve, when desired, to turn the spool and thus operate the  
 5 crane. In order to secure proper control of the device, a pawl 17 is provided to engage with the sprockets on the sprocket-wheel 4 or with an independent ratchet thereon. Thus when the load is lifted to the desired height  
 10 the clutch is released by means of the lever, and the arm K may be swung about to deposit the load on the vehicle or at any desired point within the limits of the crane. When the load has been swung to the desired point,  
 15 the ratchet may be released and the load will be permitted to settle at the desired point.

In order to secure more complete control of the device, a simple brake mechanism may be employed. For this purpose I prefer to em-  
 20 ploy the brake here shown, in which a piece of wood 18 or equivalent material passes loosely through an opening in the casting 1 and is so proportioned that when the lever 12 is thrown over to its utmost limit to dis-  
 25 gage the clutch it will bear upon the outer end of the brake-piece 18, forcing it inward and causing the inner end to come in contact with and bear upon the outer surface of the spool 2, retarding its motion and serving as an ef-  
 30 ficient brake for this purpose. It will thus be seen that the lever 12 has a double function—first, that of operating the clutch mechanism, and, second, by the same movement setting or releasing the brake, since upon  
 35 moving the lever to throw the clutch into connection it releases the brake-piece 18, when the first movement of the drum moves it backward through its loose seat and disconnects the brake. The collar and set-screw 19 serve  
 40 as a convenient means for securing the rope M to the spool. The mode of operation is obvious from the description already given.

If it is desired, the crane may be removed from the vehicle and placed in a convenient  
 45 position either on the ground or in a building, when it may be operated by means of a crank, as heretofore described, or, if preferred, by other power connected with the sprocket-wheel. The lever 12 will still serve to operate  
 50 the brake and cause the load to be deposited gently instead of permitting it to fall too rapidly.

After having described my invention and the purposes for which it is intended it is ob-

vious that various immaterial modifications 55 may be made without departing from the spirit of my invention, and hence I do not wish to be understood as limiting myself to the exact details herein shown and described.

Having thus fully described my invention, 60 what I claim as new, and desire to cover by Letters Patent, is—

1. In an operating mechanism for cranes or similar devices, the combination of a support, a shaft journaled thereon, a drum on said shaft 65 and rotating therewith, a drive-wheel on said shaft, a clutch device adapted to cooperate with said drive-wheel, a brake adapted to control the movements of the drum, and a lever for operating said clutch device acting di- 70 rectly on said brake to apply the latter when the clutch is released, substantially as described.

2. In an operating mechanism for cranes or similar devices, the combination of a support, 75 a shaft journaled thereon, a drum on said shaft and rotating therewith, a drive-wheel loosely mounted on said shaft and forming one member of a clutch device, a second clutch mem- 80 ber fixed to said shaft and adapted to cooperate with said drive-wheel, a brake adapted to control the movement of the drum, and a lever for operating said clutch members, acting di- 85 rectly on the brake and adapted to apply the same upon the disengagement of the clutch members, substantially as described.

3. In a device of the kind described, the support 1, shaft 3 having mounted thereon the drum 2 rotating with said shaft, the drive- 90 wheel 4 forming one member of the clutch device, the clutch member 5 6 7 10 adapted to cooperate with the drive-wheel, and the brake 18, in combination with the lever 12 adapted to operate both the clutch and the brake, sub- 95 stantially as and for the purpose set forth.

4. In an operating mechanism for cranes or the like, the combination of a support, a shaft journaled on said support, a drum on said shaft, a drive-wheel cooperating therewith, a 100 longitudinally-movable brake-block mounted on said support, and a single lever fulcrumed on said support for operating said clutch and said brake-block to apply the brake, substantially as described.

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Witnesses:

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H. M. LAGE.