

(No Model.)

W. J. CARLIN.

FRICTION DRUM.

No. 315,239.

Patented Apr. 7, 1885.

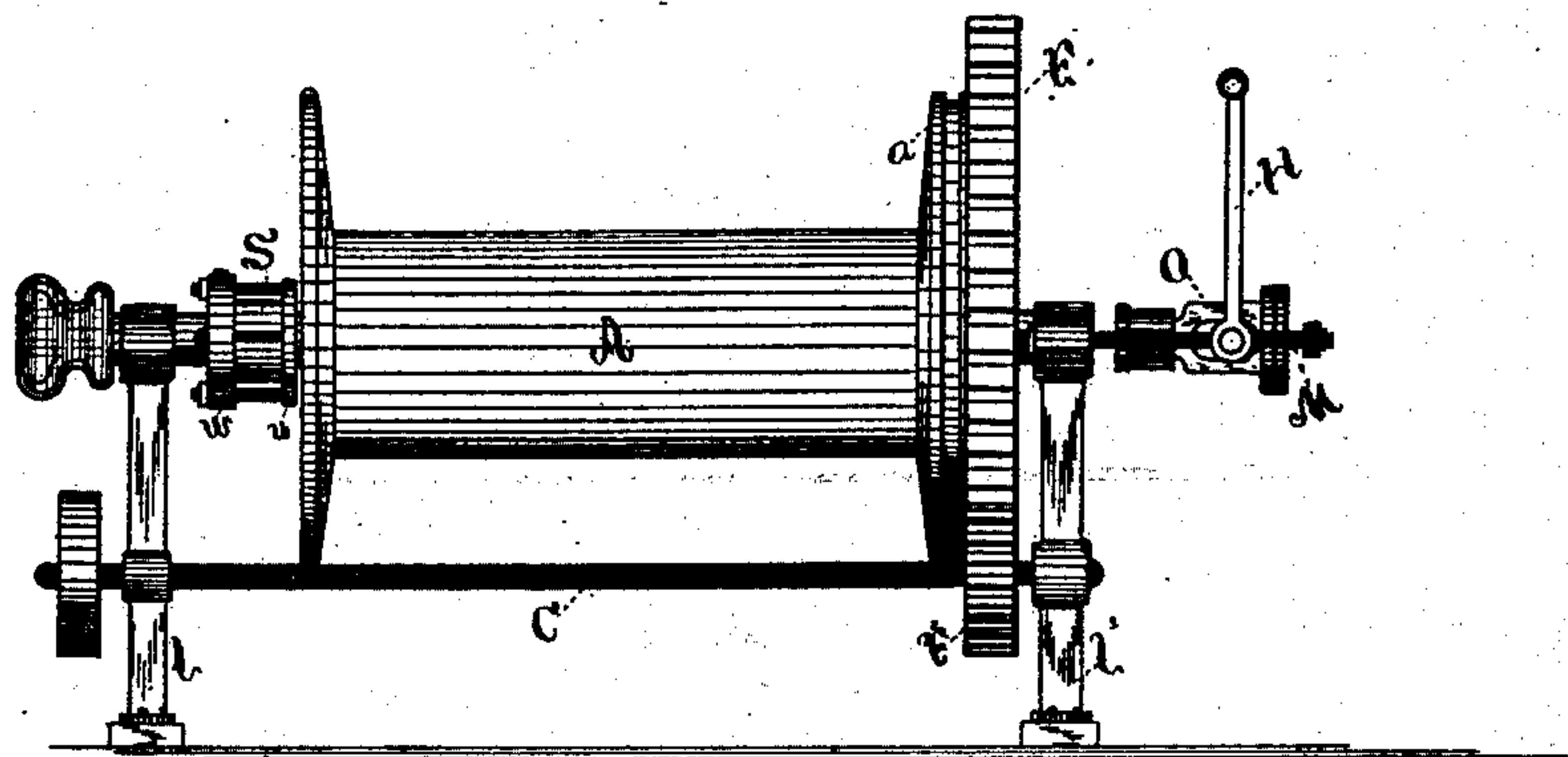


Fig. 1.

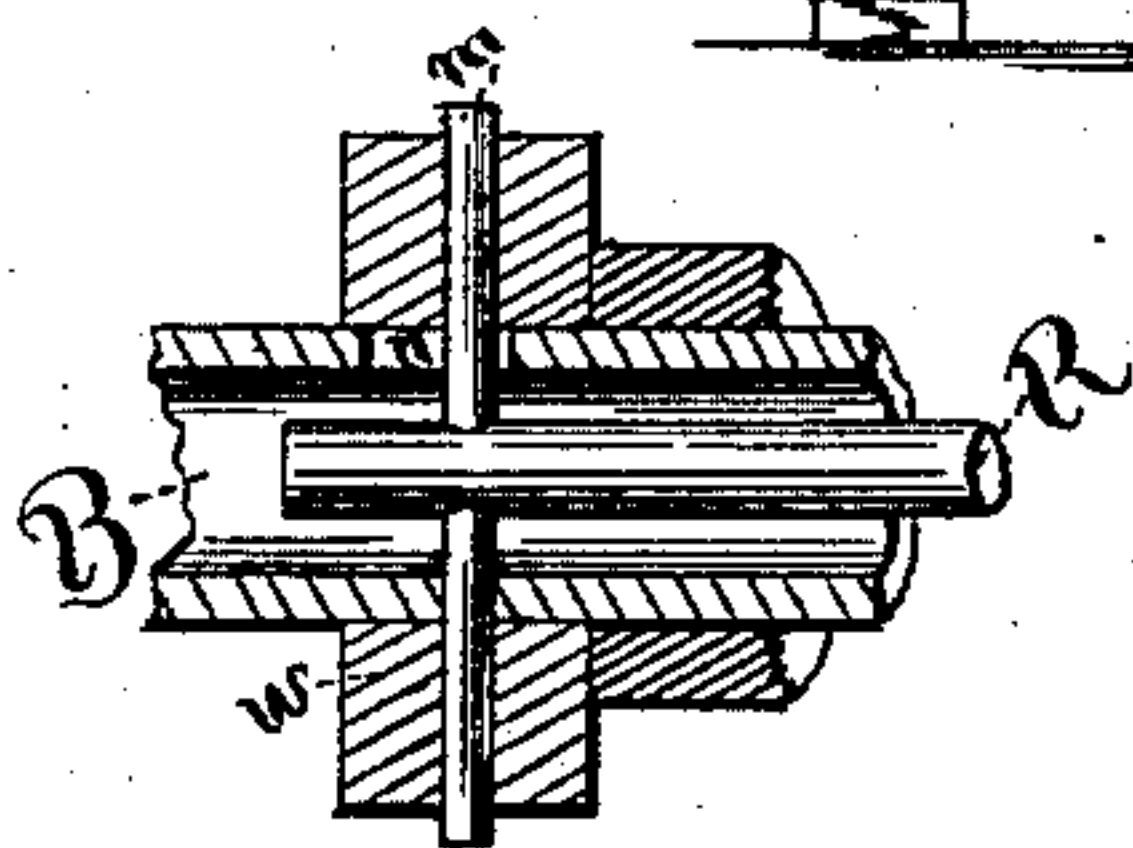


Fig. 3.

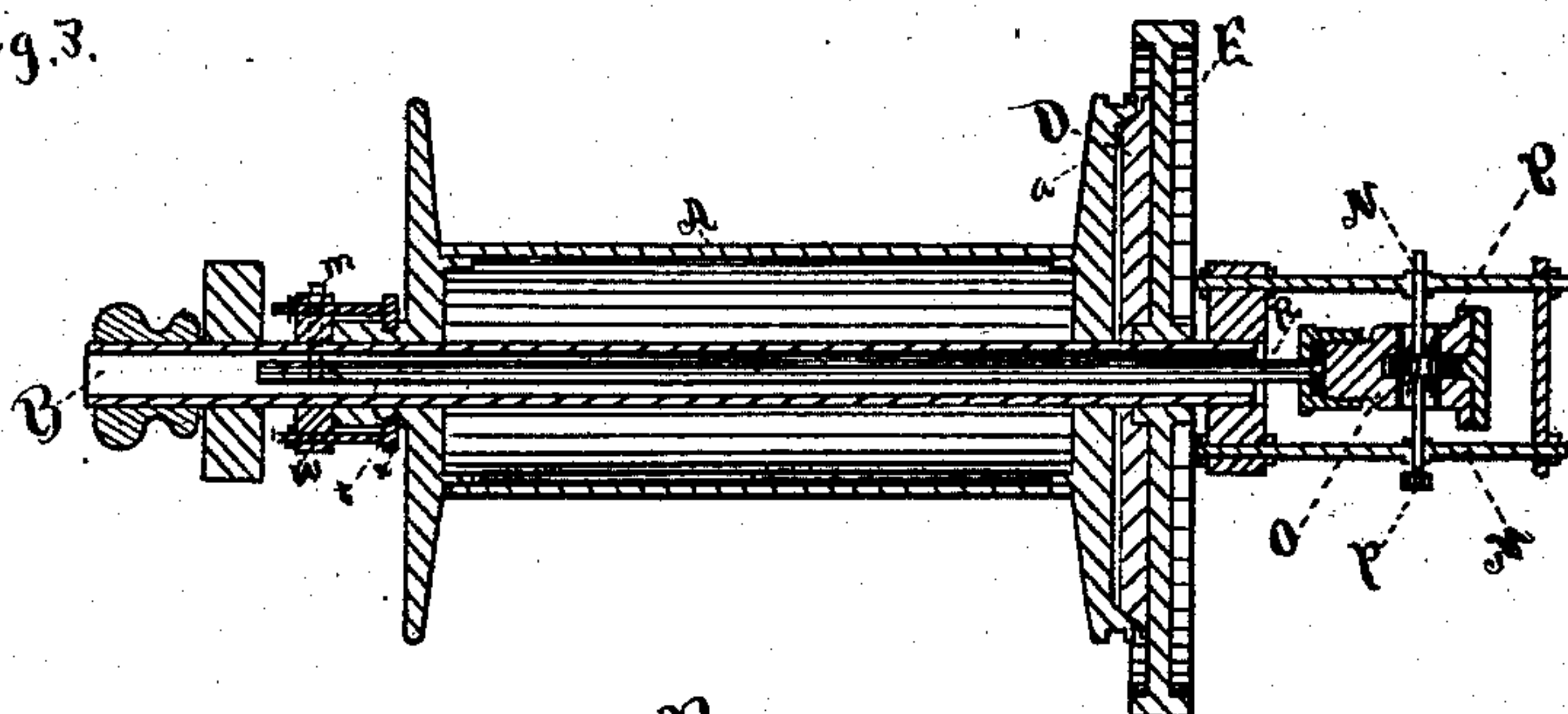


Fig. 2.



Fig. 4.

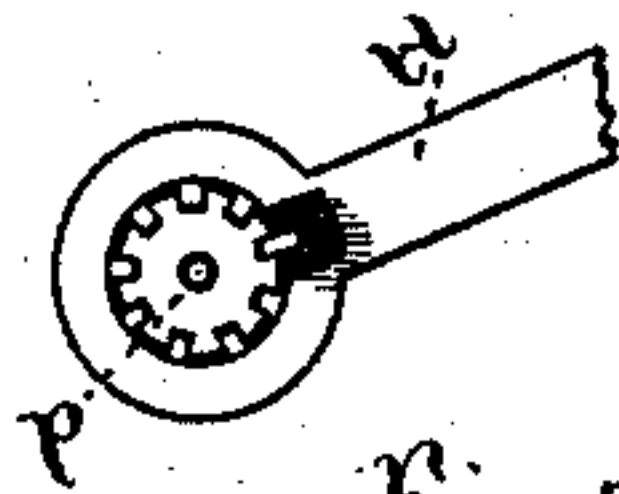


Fig. 5.

Witnesses.
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UNITED STATES PATENT OFFICE.

WILLIAM J. CARLIN, OF ALLEGHENY, PENNSYLVANIA.

FRICITION-DRUM.

SPECIFICATION forming part of Letters Patent No. 315,239, dated April 7, 1885.

Application filed March 2, 1885. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. CARLIN, of Allegheny, in the county of Allegheny and State of Pennsylvania, have invented certain
5 new and useful Improvements in Friction-Drums; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use
10 the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention has relation to improvements in friction-drums of that class employed in
15 hoisting-machines, pile-drivers, &c.; and it consists in the construction, combination, and arrangements of parts for engaging and disengaging the drum from the power, as herein-after more fully described and claimed.

20 To enable others skilled in the art in which my invention appears, I will now proceed to describe the same, reference being had to the accompanying drawings, which form a part of this specification.

25 Figure 1 is an elevation of my improved device; Fig. 2, a plan section through the middle; Fig. 3, an enlarged portion showing position of shafts and pin; Figs. 4 and 5, detail views of the construction I employ
30 to adjust the lever.

Similar letters of reference refer to similar parts throughout the drawings.

A is the drum having at one end the conical flange *a*, adapted to be forced against or
35 away from the friction-cone D, cast on or attached to the gear-wheel E, which is keyed on a hollow shaft, B, upon which drum A is free to rotate, shaft B being journaled in suitable standards, L L'. To standard L', I bolt
40 the yoke M, in which transversely I journal a rock-shaft, N, which passes through the slotted stirrup O, and is keyed or fastened to an eccentric or crank, B, whose periphery is limited by the slot of said stirrup. Upon
45 rocking the shaft N by a lever, H, (or other means,) the resulting movement of the cam or eccentric P produces a horizontal thrust of the stirrup O in either direction, according to the direction the lever H is given.

50 To the stirrup O, I fasten in a suitable manner the inner rod or spindle, R, which then passes into the hollow shaft B, and through the same, being out of frictional contact with

said hollow shaft. The further end of drum A is provided with a projecting sleeve, S, 55 having an external groove, *t*, in which I place a loose collar, *u*, to which, by means of bolts, I attach an angular flange, *w*, carrying a fixed pin or key, *m*, projecting internally through a slot, *n*, in hollow shaft B, and fixed inside 60 the spindle R, as shown. Wheel E is constantly rotated by a pinion, F, on a counter-shaft, C, revolved by any suitable motor. By throwing lever H to the left, (in Fig. 1,) the eccentric P forces stirrup O to the left, and 65 with it spindle R, which, by means of the pin *m*, flange *w*, bolts, and loose collar *u*, draws the drum-cone away from friction-cone D, and the drum is then free to revolve in one direction, while the wheel E, hollow shaft B, 70 clutching device, and spindle R are revolving in the opposite direction, spindle R being, of course, swiveled in the stirrup O.

To adjust the throw of the eccentric I construct the rock-shaft N with a notched collar, 75 *p*, fixed thereon. The lever H encircles this collar *p*, and has a single notch in its face. A cap or cover plate, *q*, is adapted to be secured on the end of shaft N, having a lug, *r*, which falls into one of the notches on collar 80 *p* and into the notch on lever H. If the position of lever H is desired to be changed, cap *q* is loosened and shaft N or the lever H moved to the required position, and cap *q* re-
85 set.

Having described my invention, I claim—

1. A friction-drum hoist having its drum loosely mounted on a hollow shaft, in combination with a clutch-operating spindle passing through said hollow shaft, and adapted to 90 receive endwise thrust, and clutching mechanism, substantially as described.

2. The combination, with drum A, having grooved sleeve S, and the rotating gear E on slotted hollow shaft B, adapted to frictional 95 contact with said drum, of the rocking shaft N, eccentric P, stirrup O, spindle R, flange *w*, loose collar *u*, and pin *m*, connecting said flange and spindle, substantially as described.

In testimony that I claim the foregoing as my 100 own I have hereto affixed my signature in presence of two witnesses.

WILLIAM J. CARLIN.

Witnesses:

A. A. MOORE,
C. L. STRAUB.