

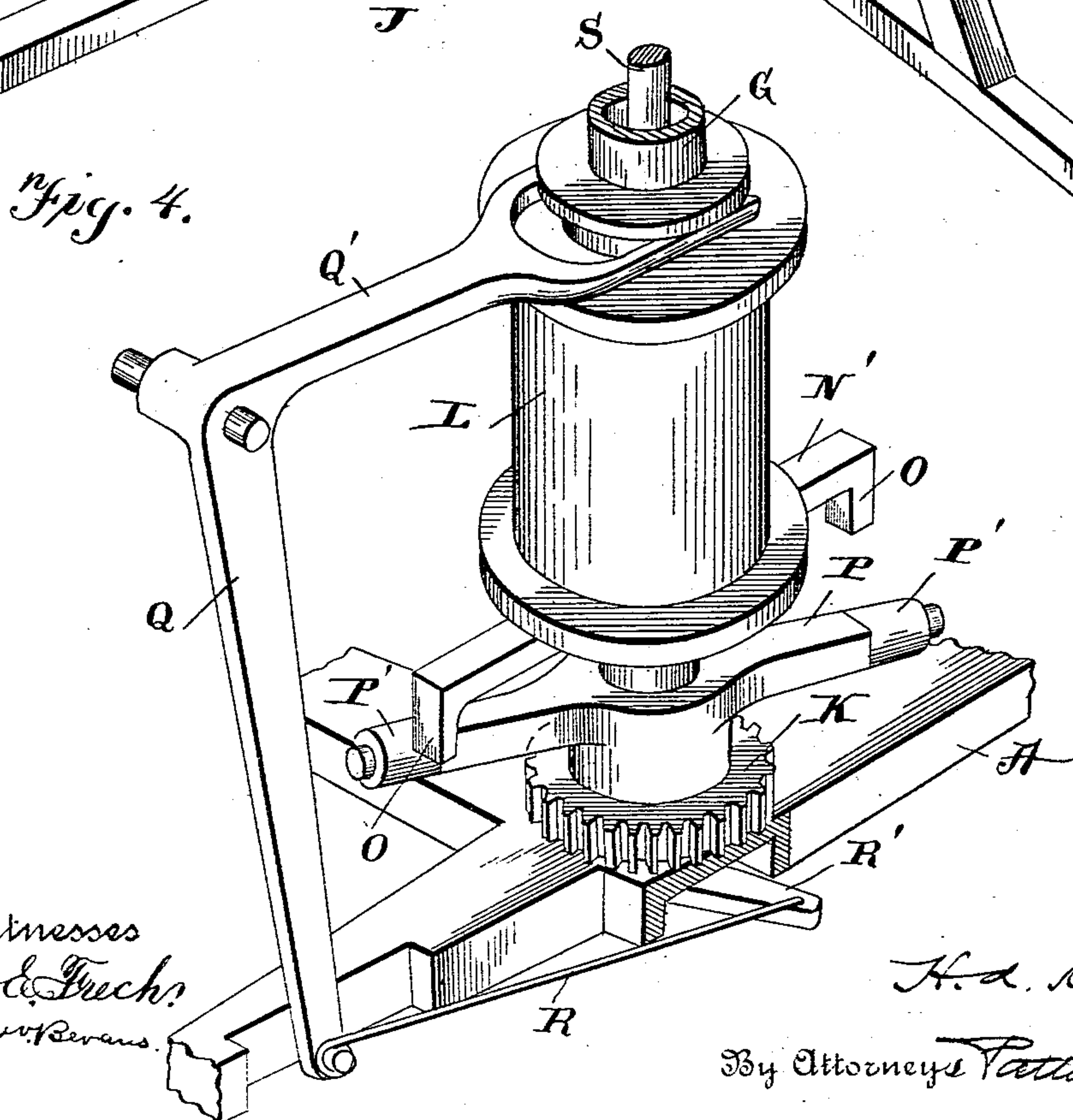
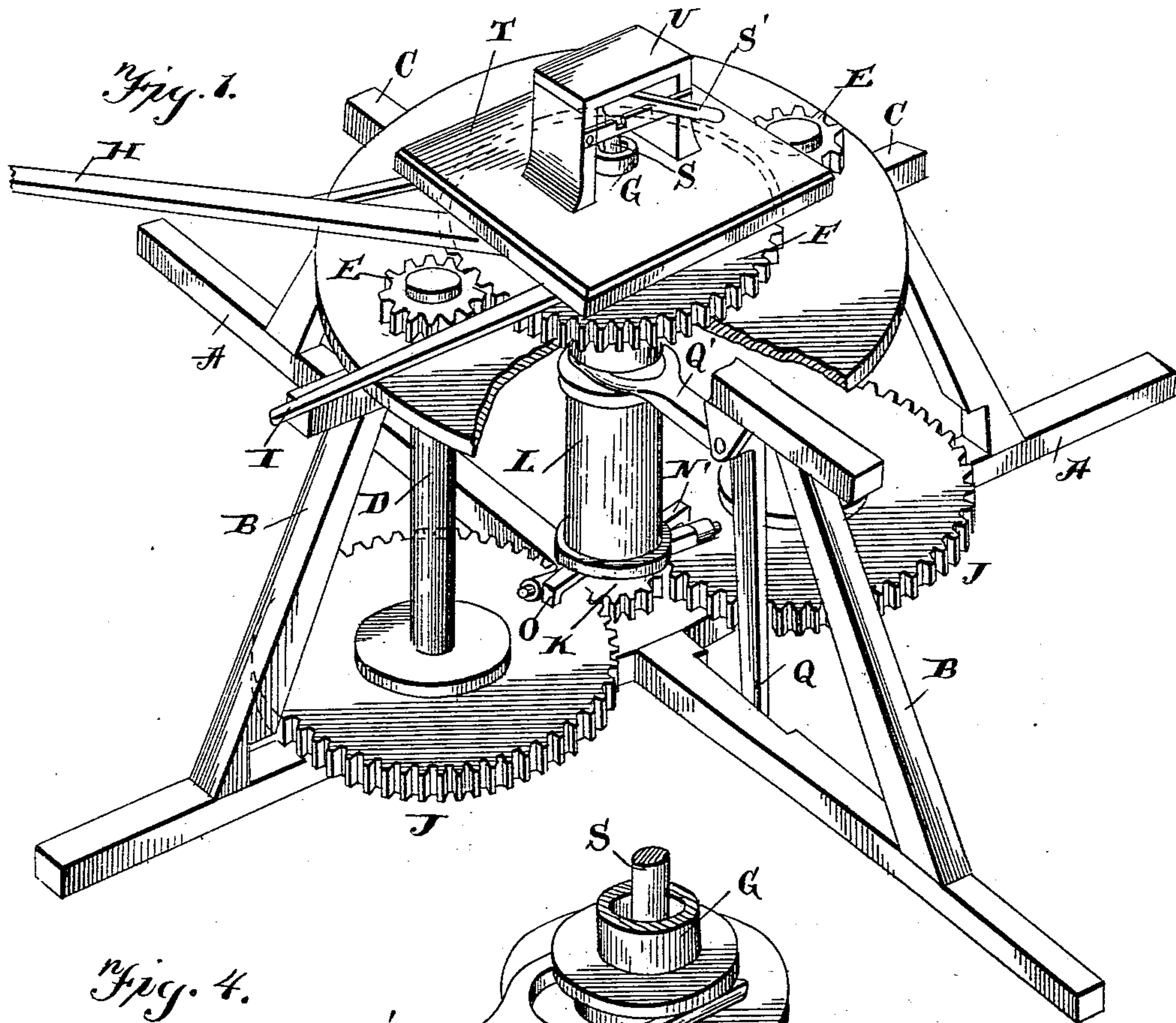
(No Model.)

2 Sheets—Sheet 1.

H. A. KRUPKE.
HORSE POWER.

No. 560,139.

Patented May 12, 1896.



Witnesses
Geo. E. Trech.
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(No Model.)

2 Sheets—Sheet 2.

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Fig. 2.

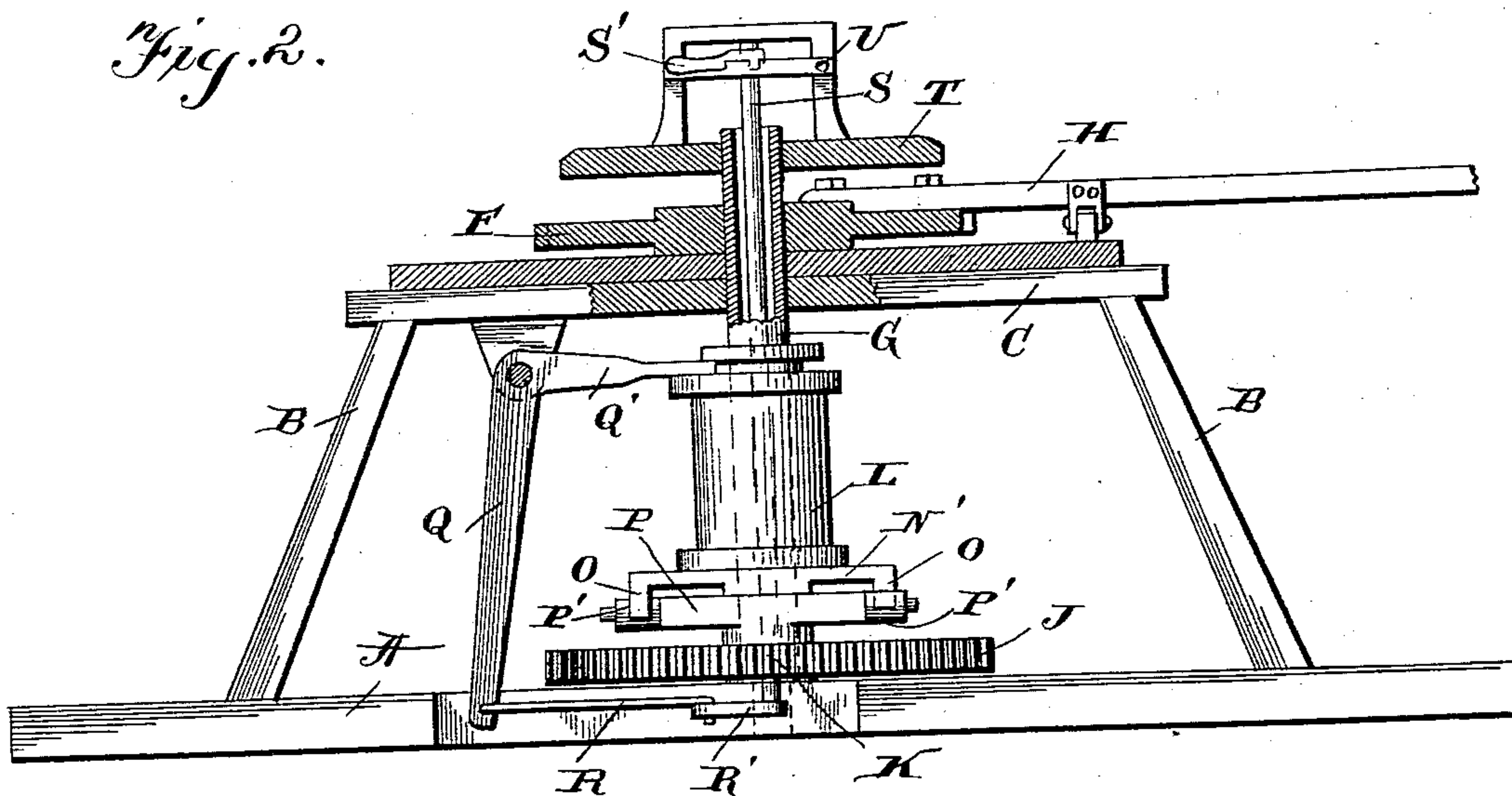
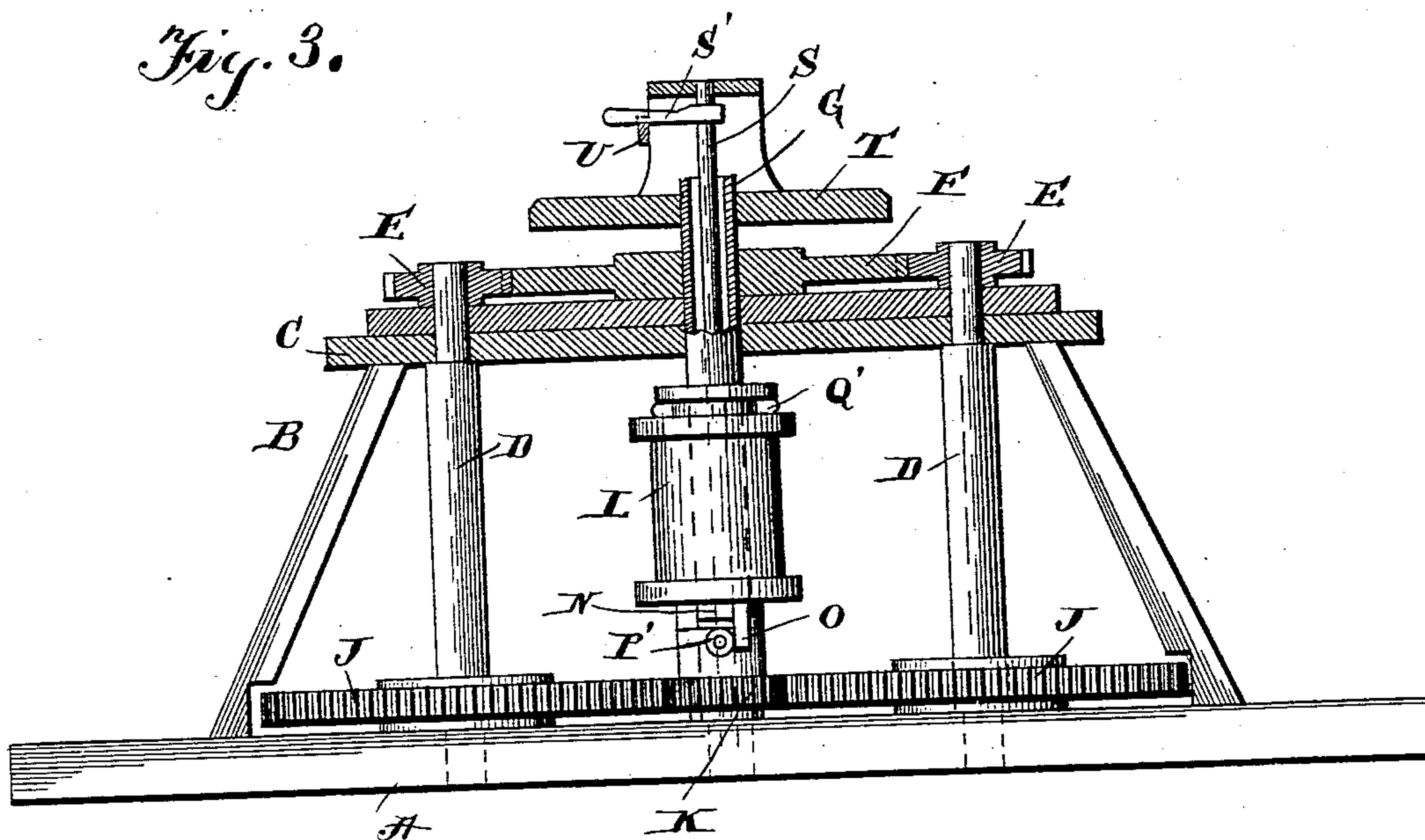


Fig. 3.



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UNITED STATES PATENT OFFICE.

HERMAN A. KRUPKE, OF PAYNESVILLE, MINNESOTA.

HORSE-POWER.

SPECIFICATION forming part of Letters Patent No. 560,139, dated May 12, 1896.

Application filed January 3, 1896. Serial No. 574,226. (No model.)

To all whom it may concern:

Be it known that I, HERMAN A. KRUPKE, of Paynesville, in the county of Stearns and State of Minnesota, have invented certain new and useful Improvements in Horse-Powers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

This invention pertains to horse-powers, and is designed especially for use in operating a rope-winding drum; and it also has reference to an improved-mechanism for instantly releasing the drum from the rotating mechanism, so as to permit the rope to unwind.

While the machine embodying my invention is adapted for many different uses, yet I design it more especially for operating hay-elevating forks, which require a quick taking-up or winding of the rope, so as to elevate the fork with its load to the desired height, when the rope is permitted to unwind, so that the fork may be moved over an elevated carrier or other way to the point where the hay is to be deposited. The fork, elevated carrier, &c., are here mentioned only for the purpose of indicating the use to which my machine is especially adapted and forms no part of this invention and are not shown in the drawings.

The invention consists in the novel features of construction hereinafter fully described and claimed and illustrated by the accompanying drawings, in which—

Figure 1 is a perspective view of my improved power, with a portion of the framework broken away, so as to more clearly illustrate the parts of the machine which would otherwise be hidden from view. Figs. 2 and 3 are vertical sectional views taken at right angles to each other. Fig. 4 is a detail perspective view of the drum-shifting device.

The foundation of the power-frame consists of the crossed timbers or bars A, and raised therefrom are posts B, supporting the cross-frame C. Two shafts D are mounted vertically in the framework thus formed and are positioned upon diametrically opposite sides of the frame center, and carried by the upper extremities of these shafts are the pinions E,

which are engaged and rotated by the large gear F, mounted loosely upon the central vertical post G. A lever H is secured to and extends outward from this large gear-wheel, to which the horse or horses are hitched for operating the power, the same being led in a circular manner about the machine by the tie-bar I, also carried by the said large gear-wheel.

Within the framework and carried by the lower ends of shafts D are gears J, which rotate the pinion K, loosely mounted upon the lower portion of central post G. Drum L, about which rope N is wound, is arranged loosely and vertically upon the post G above pinion K, and carried by the lower end of drum L is the cross-arm N', having at its ends the depending lugs O. Carried by pinion K is cross-arm P, having the friction-rollers P', mounted upon its extremities, and when the drum is in a lowered or winding position the lugs O interlock with the cross-arm P, the same bearing against friction-rollers P', and in this manner the drum is caused to rotate.

For raising the drum for the purpose of throwing it out of gear, so as to stop the winding of the rope and permit it to unwind, the bell-crank lever Q is provided, which is fulcrumed to the upper cross-frame C with its horizontal bifurcated arm Q', embracing the grooved upper extremity of the drum, while the lower end of the bell-crank lever is connected by rod R to crank R', secured to the lower end of rod S, extended vertically through the hollow central post G. This rod S at its upper end carries the handle or lever S', which when turned in the proper direction will cause the bell-crank lever to turn upon its fulcrum through the medium of the mechanism just described, thus free to revolve in a reverse or unwinding direction. The upper end of post G supports the small platform T, which in turn supports the horizontal bracket U, which is suitably notched upon its upper edge for holding the hand-lever S' in the desired adjustment, as will be readily understood.

By means of the mechanism herein shown and described a rope-winding drum may be operated to the point desired and then instantly and effectually thrown out of gear, so as to permit the unwinding of the rope as the work in hand may require.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination of a central shaft or spindle, a drum movable longitudinally thereon, a cross-arm carried by the drum having depending lugs, a power-wheel, a cross-arm carried by the power-wheel, friction-rollers carried by the extremities of the last-named cross-arm, the said arms adapted to interlock in the manner specified, and a mechanism for moving the drum so as to break the said engagement, substantially as shown and described.
2. The combination of a central post or spindle, a drum movable longitudinally thereon, a power mechanism adapted to rotate the drum when in engagement therewith, a bell-crank lever having its bifurcated arm embracing the grooved extremity of the drum, and a mechanism for turning said bell-crank lever so as to move the drum from engagement with the power mechanism, substantially as shown and described.

3. The combination of the hollow post or spindle, a drum movable longitudinally thereon, the power-wheel revoluble on said post or spindle, and adapted to actuate the drum when in engagement therewith, rod S extending longitudinally through the hollow post, a means for turning the said rod, and a mechanism adapted to be actuated by said rod for disengaging the drum with the power mechanism, substantially as shown and described.

4. The combination of a central post G, gear K loose thereon, shafts D, gears J on said shafts, each gear meshing with gear K, gear F also loose on post G, pinions E on shafts D, each pinion meshing with gear F, a sweep for rotating gear F, and a drum adapted to be actuated by gear K, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

HERMAN A. KRUPKE.

Witnesses:

C. F. WENDLANDT,
HERMAN MAEDE.