

(No Model.)

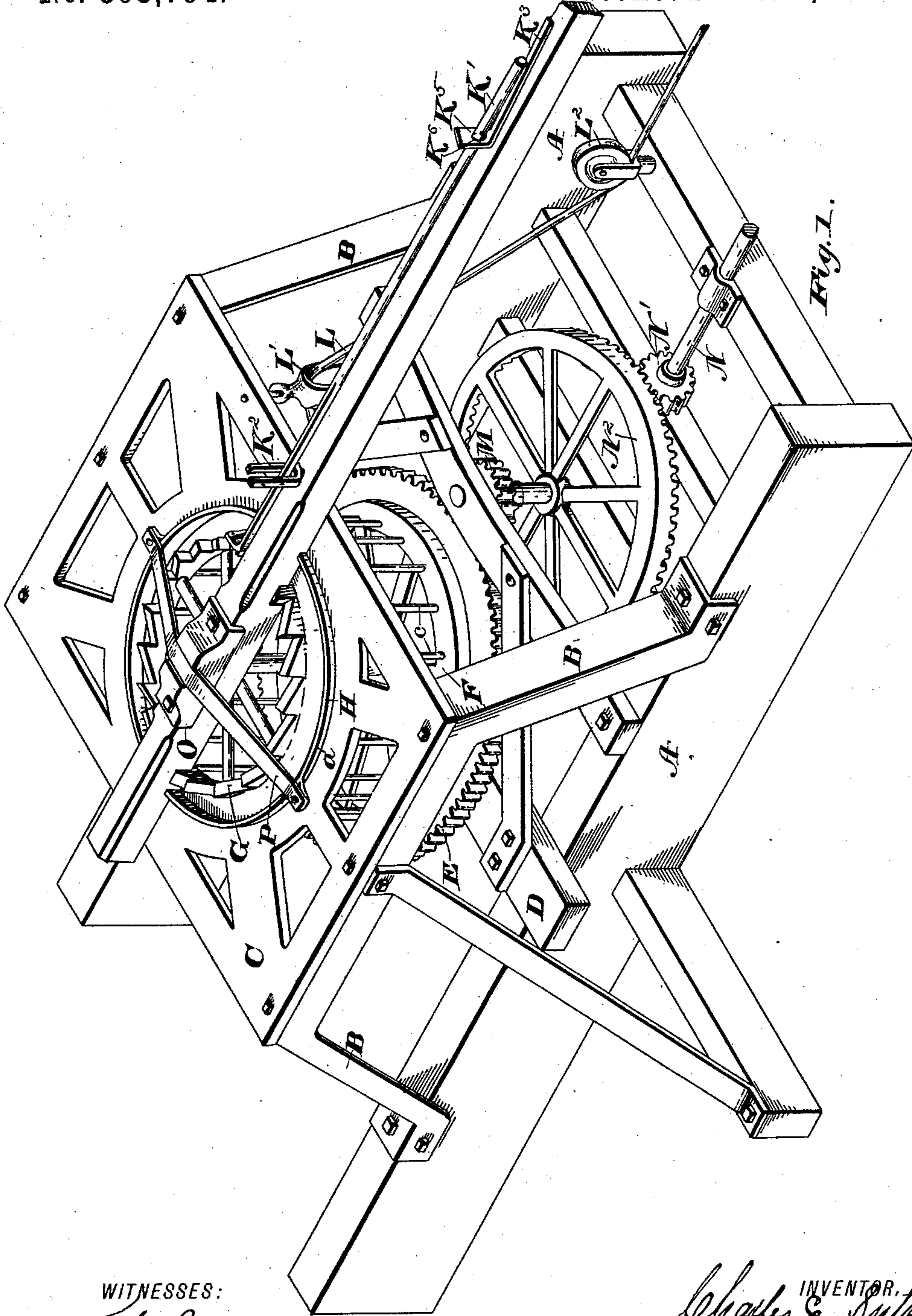
3 Sheets—Sheet 1.

C. E. SUTTON.

HORSE POWER.

No. 393,794.

Patented Dec. 4, 1888.



WITNESSES:

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INVENTOR,
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(No Model.)

3 Sheets—Sheet 2.

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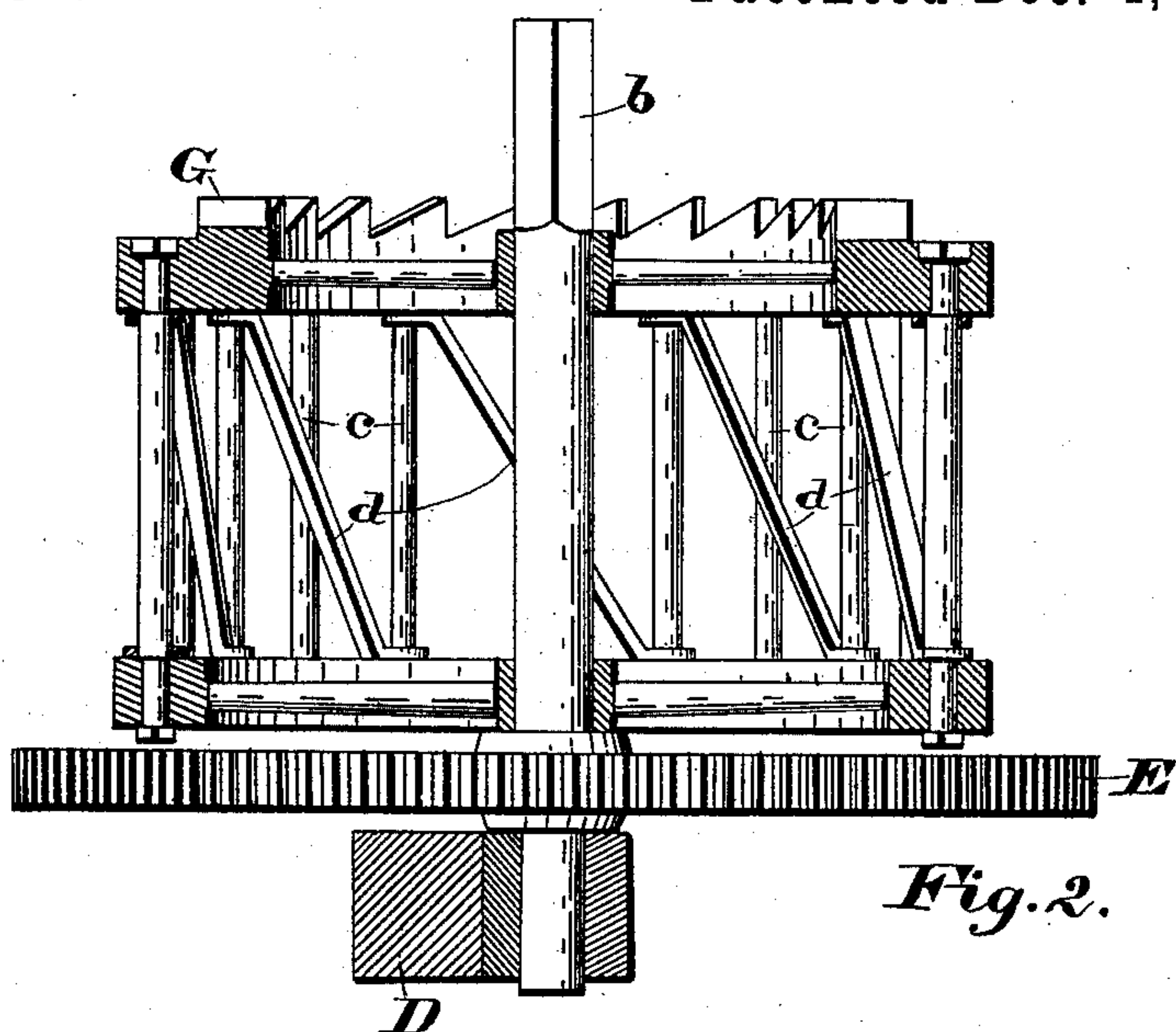


Fig. 2.

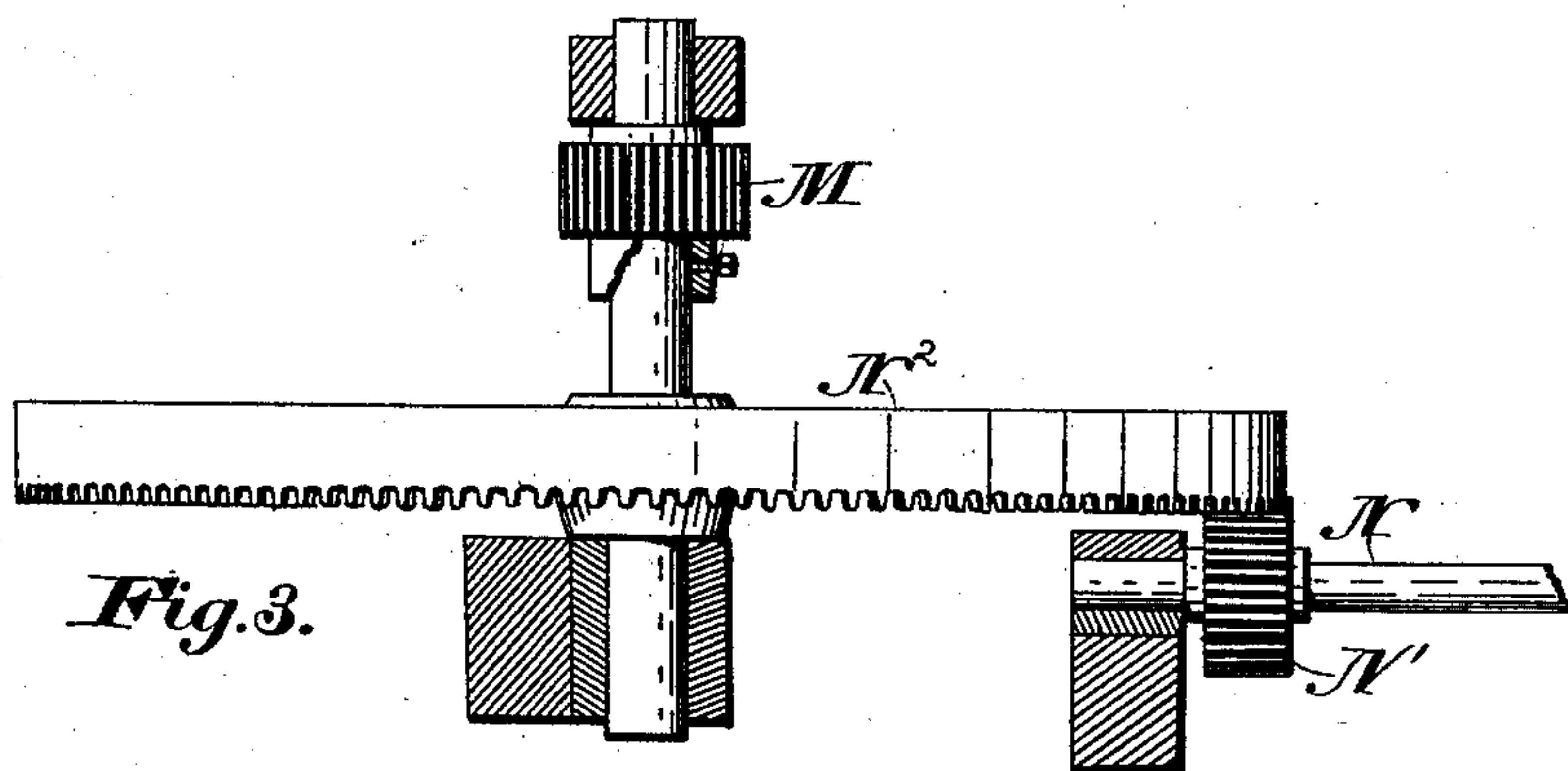


Fig. 3.

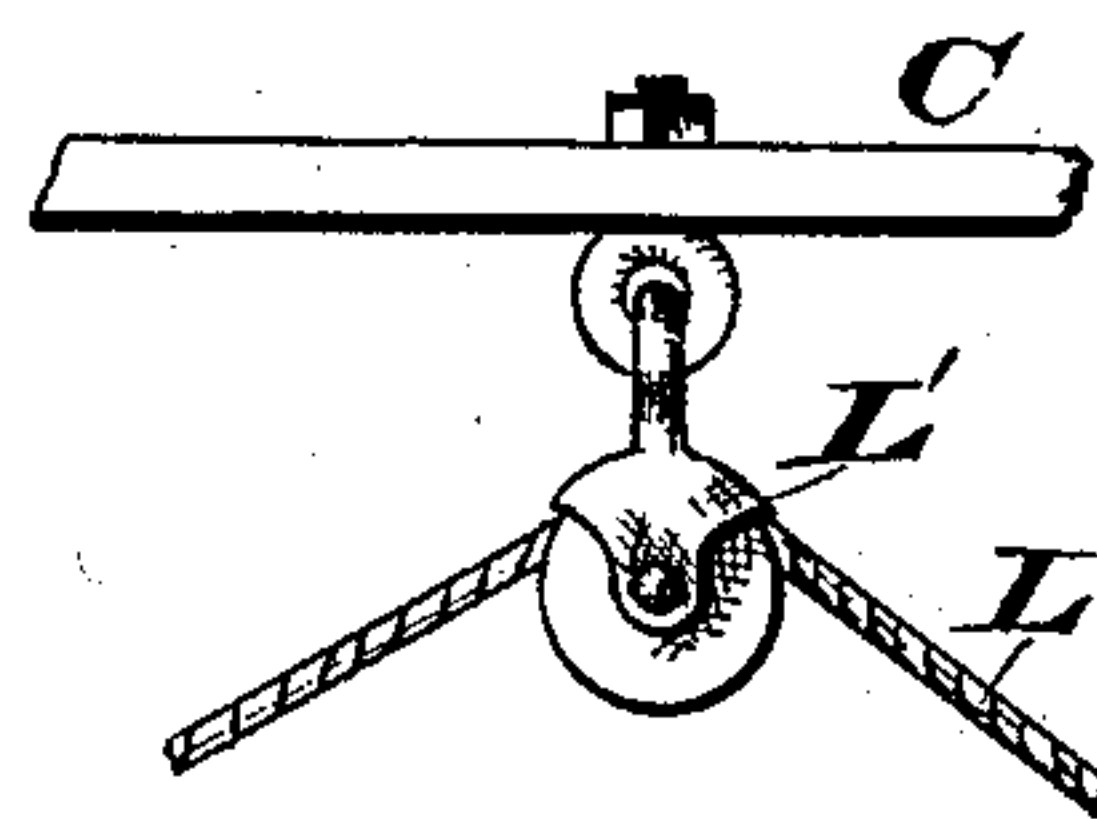


Fig. 4.

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Fig. 7.

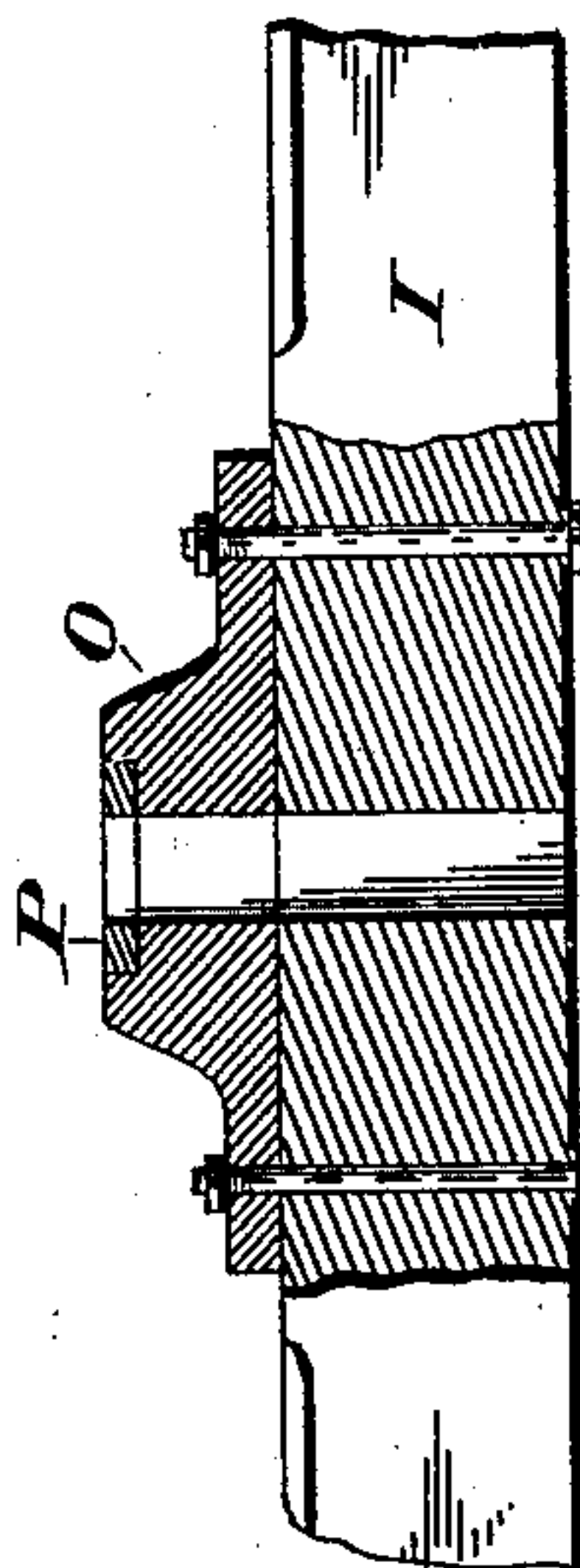


Fig. 6.

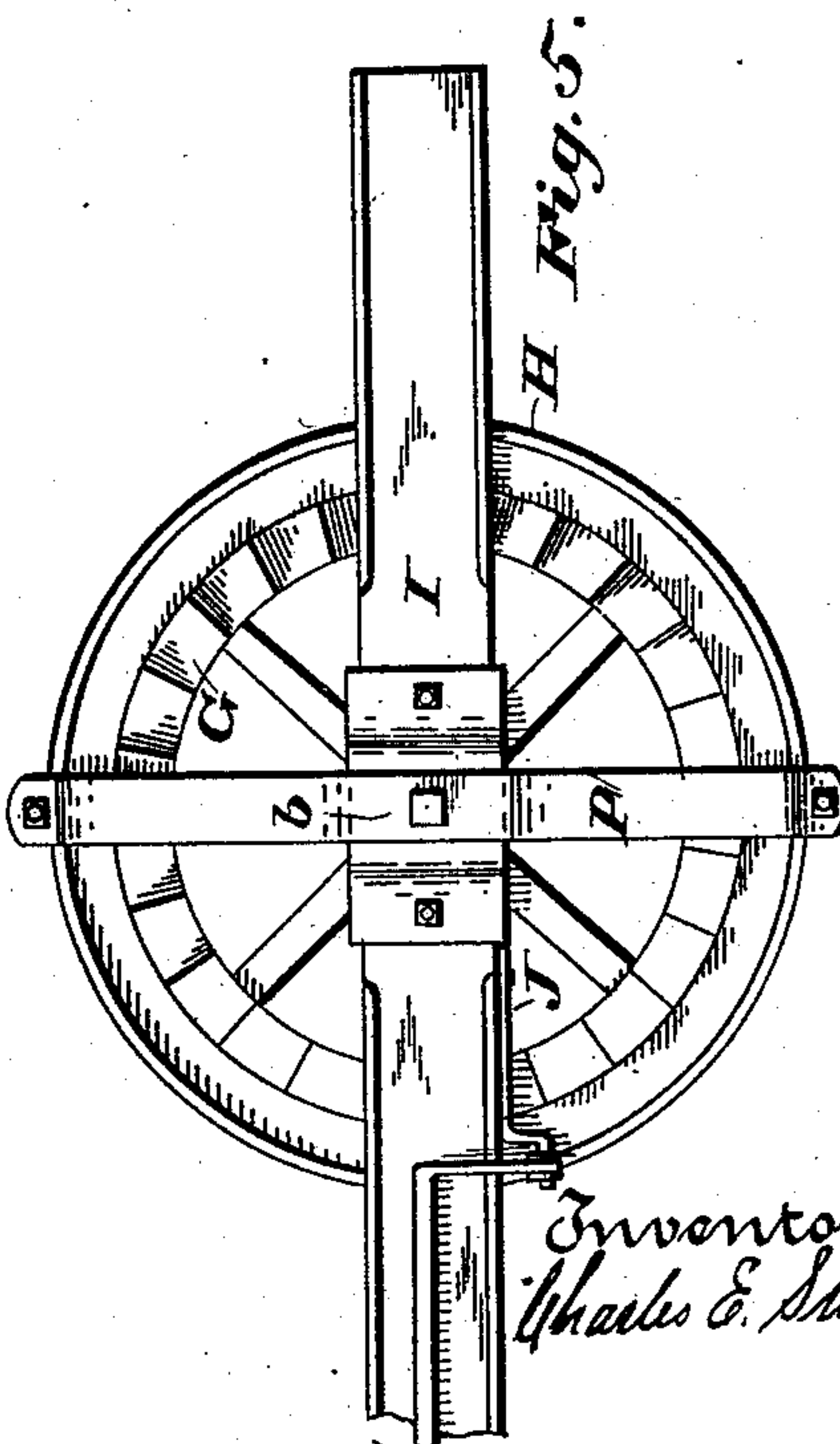


Fig. 5.

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UNITED STATES PATENT OFFICE.

CHARLES E. SUTTON, OF RICHMOND, OHIO.

HORSE-POWER.

SPECIFICATION forming part of Letters Patent No. 393,794, dated December 4, 1888.

Application filed July 9, 1888. Serial No. 279,425. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. SUTTON, a citizen of the United States, residing at Richmond, in the county of Jefferson and State of Ohio, have invented certain new and useful Improvements in a Combined Horse-Power and Hay-Elevating Device; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon, in which—

Figure 1 is an isometrical view of the entire device. Fig. 2 is a vertical section of the winding-drum. Fig. 3 is a detached view of a portion of the gearing mechanism. Fig. 4 is a detached view of one of the pulleys. Fig. 5 is a top view of the winding-drum, showing a portion of the draft-bar or sweep. Fig. 6 is a longitudinal section of the strengthening-plate and a portion of the draft-bar or sweep. Fig. 7 is a side elevation of the draft-bar, showing the winding-drum ring attached thereto.

The present invention has relation to horse-powers and hay-elevating devices; and its nature consists in the different parts and combination of parts hereinafter described, and particularly pointed out in the claims.

Similar letters of reference indicate corresponding parts in all the figures of the drawings.

In the accompanying drawings, A represents the base-frame, which consists of the sills and cross-pieces, substantially as illustrated in Fig. 1. To the sills of the base-frame A are securely attached the side pieces, B, which may be substantially of the form shown in Fig. 1. These side pieces are preferably formed of angle-iron, so as to lighten the construction and at the same time give the desired amount of strength. To the top of the side pieces, B, is securely attached the plate C, which is substantially of the form shown, and is provided with the circular opening *a*, which is for the purpose hereinafter described.

To the sills of the base-frame A is securely attached the cross-bar D, which is for the purpose of providing a bearing for the bottom or lower end of the master-shaft *b*. To the master-shaft *b* is securely attached the master-wheel E, which is located substantially as

shown in Fig. 1. On the master-shaft *b* is loosely mounted the winding-drum F, which is located above the master-wheel E, substantially as illustrated in Fig. 1. The winding-drum is preferably formed by attaching two wheels together by means of the rods *c*, said rods being provided with screw-threaded nuts or their equivalents. For the purpose of strengthening the winding-drum, the zigzag braces *d* are provided, which are securely attached to the top and bottom of the winding-drum, substantially as illustrated in Fig. 2. The top or upper wheel of the winding-drum is provided with the notched ring G, which is for the purpose hereinafter described.

The annular ring H is securely attached to the draft-bar in any convenient and well-known manner, and is so adjusted that its outer periphery will fit the circular opening *a* when the draft-bar I is properly adjusted on the master-shaft *b*, and its inner periphery will fit the outer periphery of the top wheel of the winding-drum. The annular ring H is for the purpose of holding the master-shaft *b* and the top or upper end of the winding-drum in an upright position. To the draft-bar I is pivotally attached the detent J, which is located substantially as illustrated in Figs. 5 and 7. To the free end of the detent J is pivotally attached the connecting-link K, the opposite end of said connecting-link being pivotally attached to the lever K'. Said lever K' is pivotally attached to the draft-bar I by means of the standard K². To the outer end of the draft-bar I is pivotally attached the lever K³ by means of the standard K⁴. One end of the lever K³ is provided with the arm K⁵, which is provided with the aperture K⁶, which is for the purpose of receiving the lever K', substantially as shown in Fig. 1. The opposite end of the lever K³ is provided with the eye *d'*, or its equivalent, which is for the purpose of attaching the whiffletree rope or chain *d*². Said rope or chain passes down under the anti-friction roller *e*, as shown in Fig. 7.

To the winding-drum is attached the elevating-rope L, which passes over the pulley L' and under the pulley L², from which point it leads to a hay-elevator carriage and is attached in the ordinary manner.

In use, when it is desired to elevate and convey a load of hay or any other load, the horse

or horses are attached to the rope or chain d^2 . The draft of the horse or horses will cause the outer end of the lever K^3 to be drawn down, thereby elevating the opposite end of said lever K^3 and the outer end of the lever K' , thereby depressing the opposite end of said lever K' and allowing the detent J to engage one of the notches in the annular ring G , thereby causing the winding-drum to rotate with the draft-bar I and wind the elevating-rope L around the winding-drum until the load has reached the place of deposit and has been released. The horse or horses are stopped and the outer end of the lever K' and the inner end of the lever K^3 drop, thereby elevating the detent J and disengaging said detent from the notch f , thereby releasing the winding-drum and permitting the elevating-rope L to be unwound.

In case it is desired to use the device as a horse-power only, the pinion M is thrown in gear with the master-wheel E and rotary motion communicated to the shaft N by means of the pinion N' and the wheel N^2 , from which power is conveyed to a feed-mill or other machinery. The pinion M may be thrown into and out of gear with the wheel E by moving said pinion on its shaft.

The metal block O is securely attached to the top or upper side of the draft-bar I and

is for the purpose of providing a strong attachment to the master-shaft b . The brace P is attached to the ring H , substantially as shown in Fig. 1, and is for the purpose of assisting in holding said ring in proper position.

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

1. The combination of the supporting-frame adapted to hold a winding-drum, the said drum, the top or upper end of which is provided with a notched ring, the master-shaft b , provided with the master-wheel E , the pinion M , the wheel N^2 , and their shaft, the pinion N' , the shaft N , the detent J , the link K , the lever K' , the lever K^3 , and the draft-bar I , substantially as and for the purpose specified.

2. The combination, with a supporting-frame, of a winding-drum provided with a notched ring, the detent J , the link K , the lever K' , the lever K^3 , and the draft-bar I , provided with the anti-friction roller, substantially as and for the purpose specified.

In testimony that I claim the above I have hereunto set my hand in the presence of two witnesses.

CHARLES E. SUTTON.

Witnesses:

FRED W. BOND,
L. C. WISE.