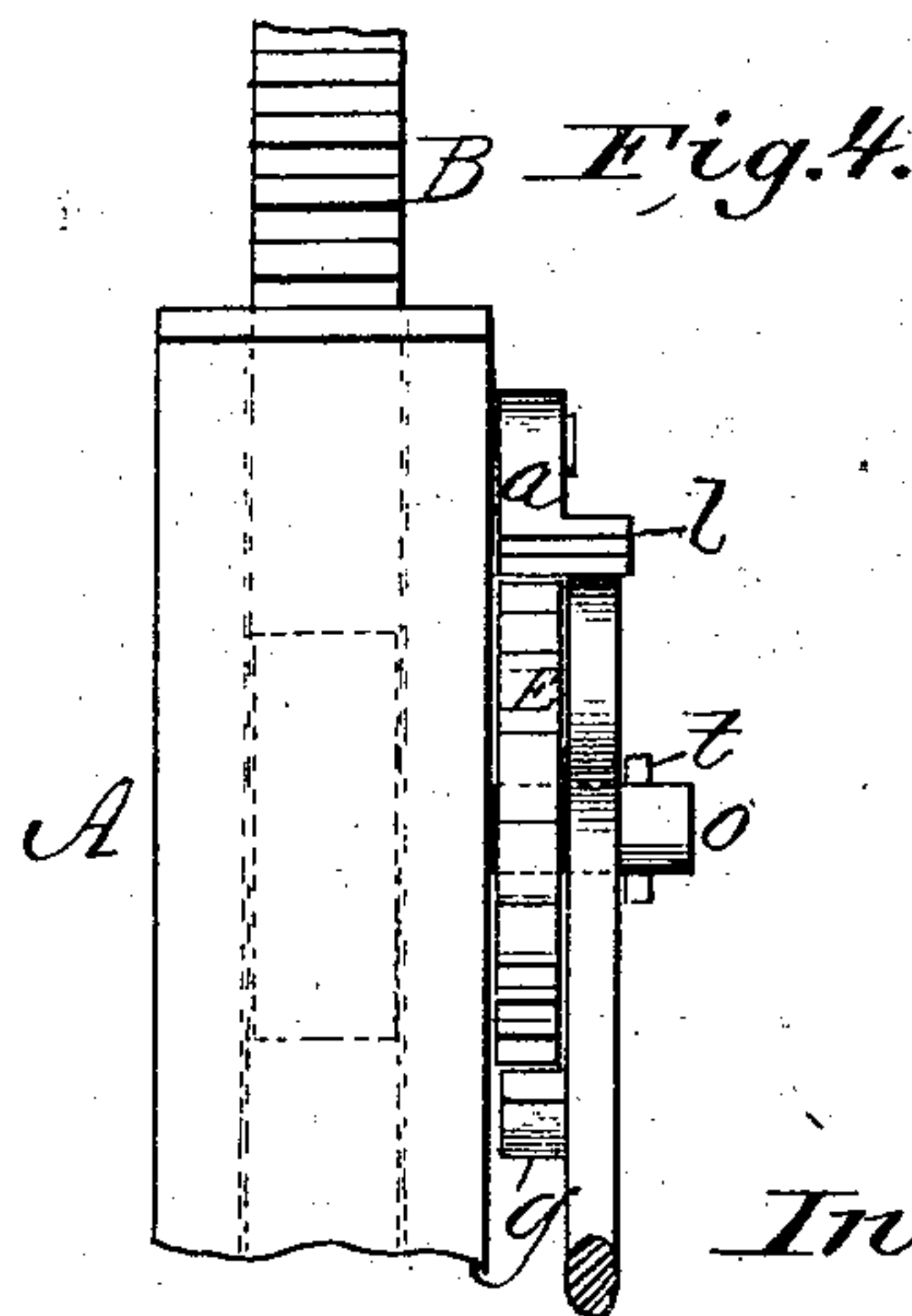
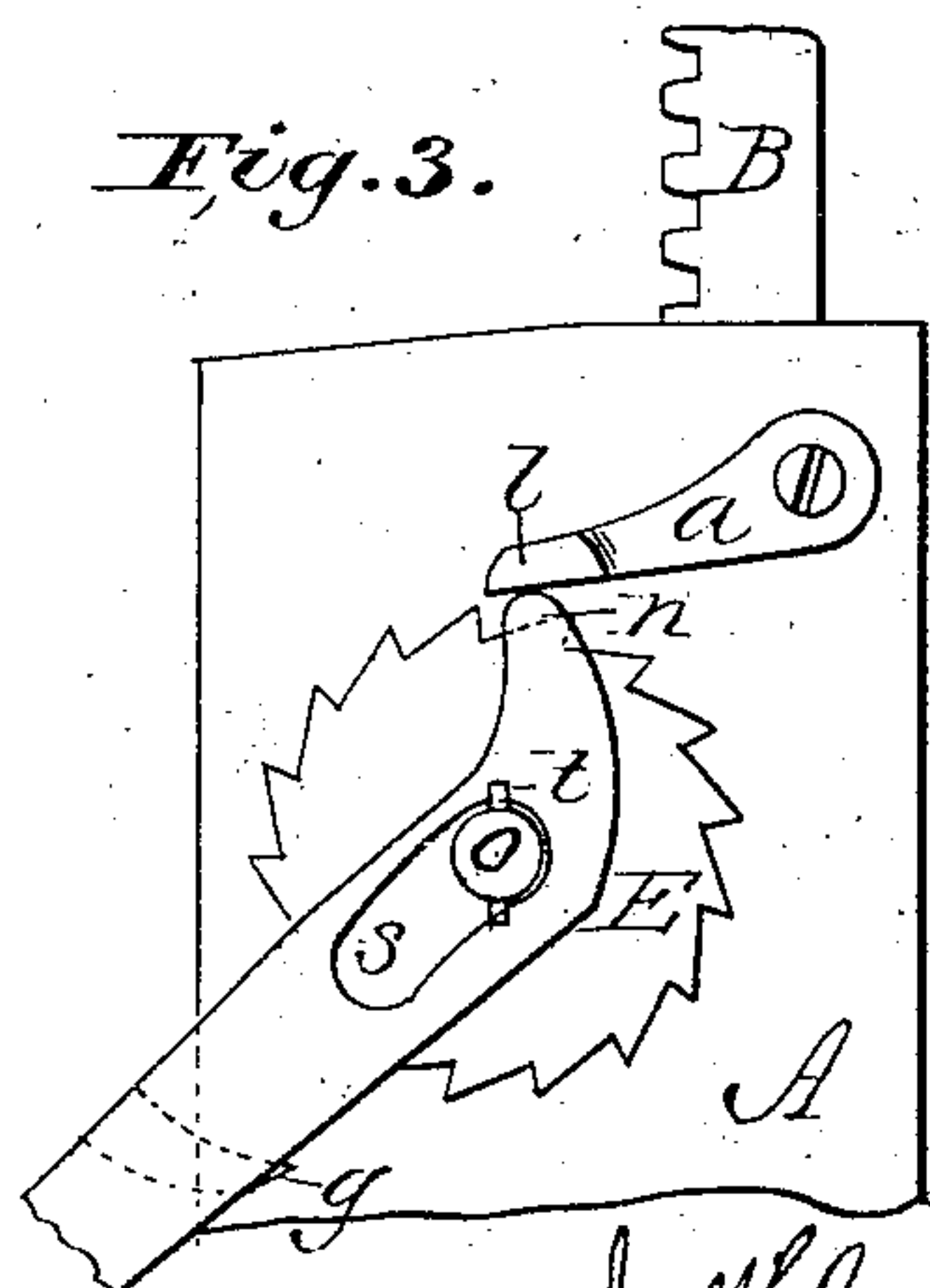
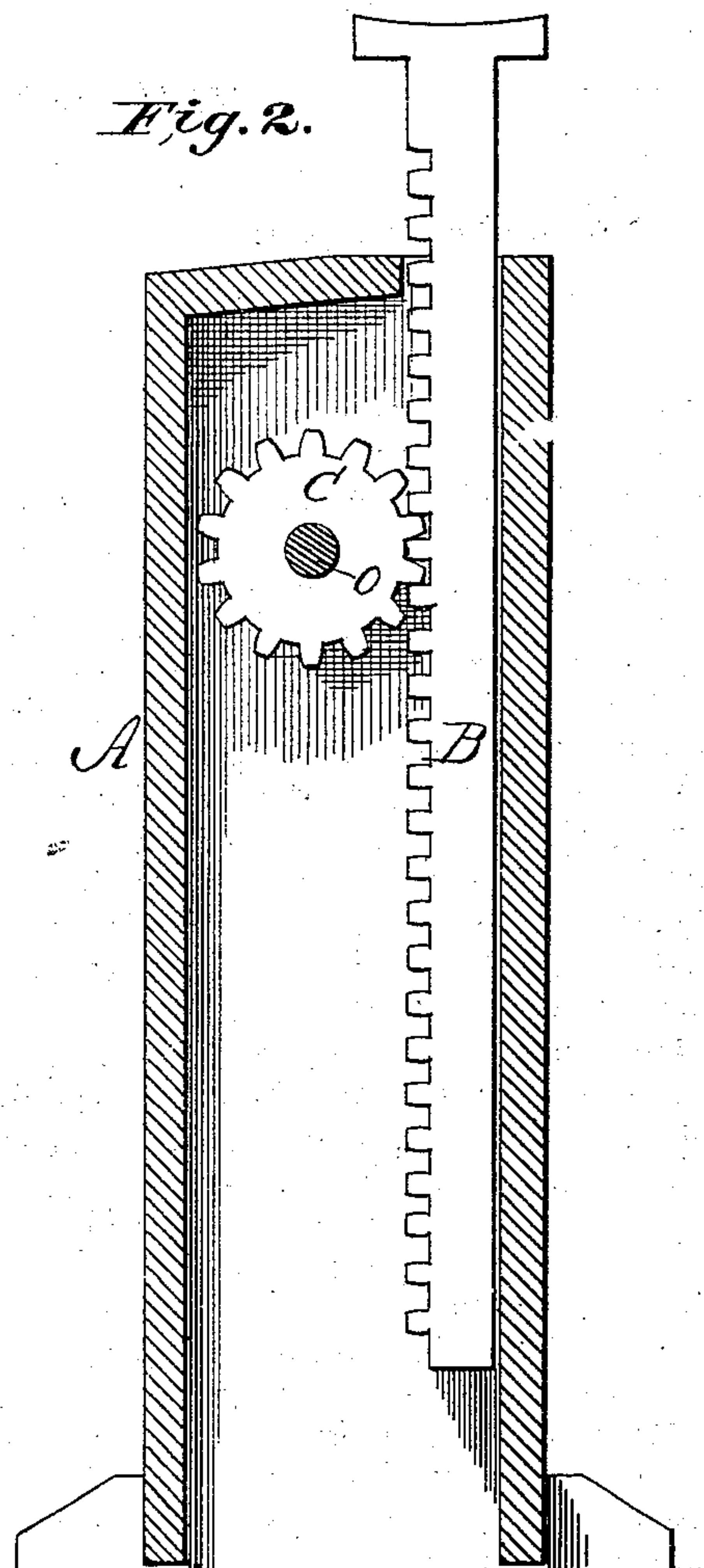
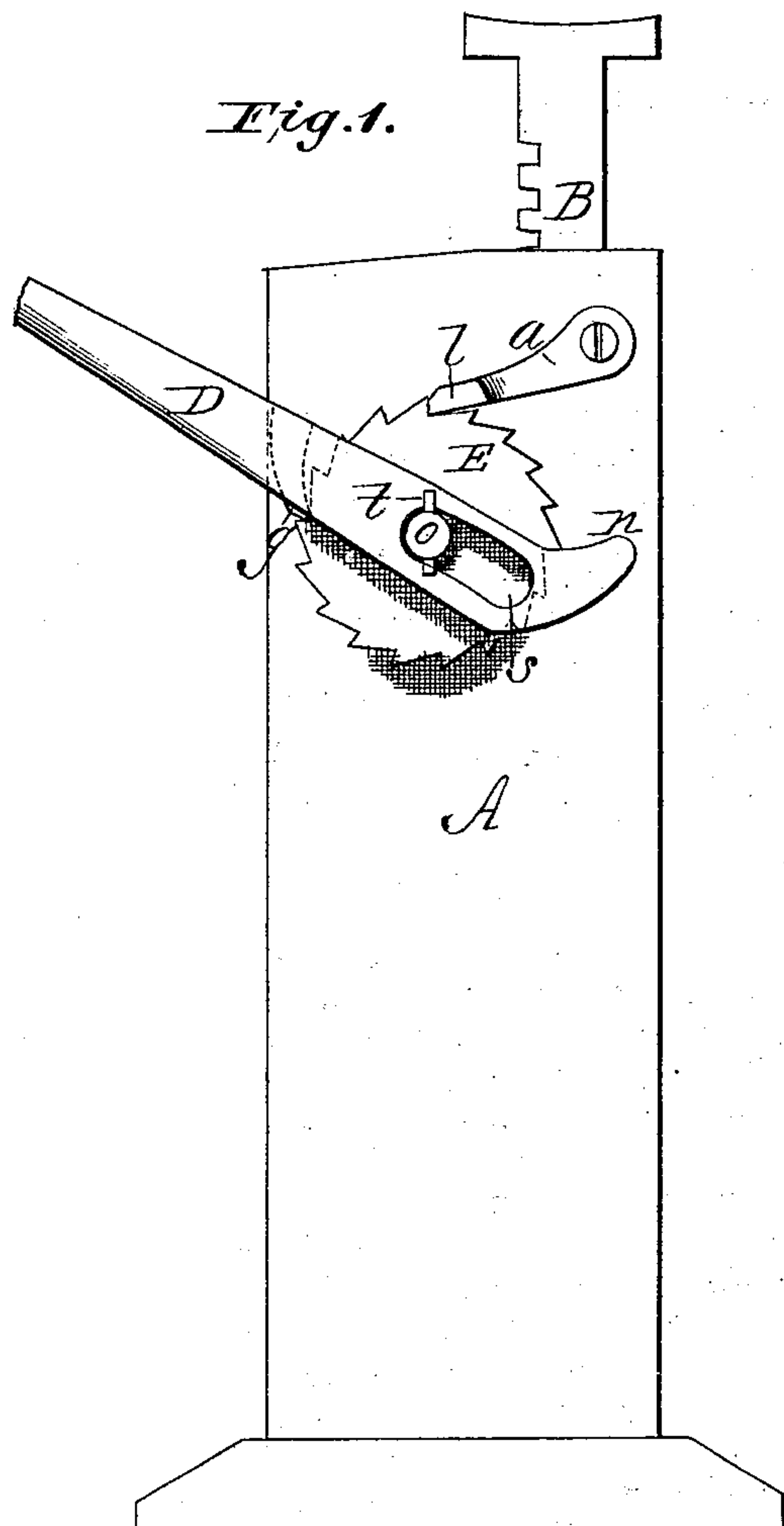


J. J. UPHAM.
Wagon-Jacks.

No. 153,731.

Patented Aug. 4, 1874.



Witnesses:

John Greene.
John Alexander.

Inventor:

James J. Upham

UNITED STATES PATENT OFFICE

JAMES J. UPHAM, OF BLACK CREEK, NEW YORK.

IMPROVEMENT IN WAGON-JACKS.

Specification forming part of Letters Patent No. **153,731**, dated August 4, 1874; application filed April 16, 1874.

To all whom it may concern:

Be it known that I, JAMES J. UPHAM, of Black Creek, Allegany county, New York, have invented a Wagon-Jack, of which the following is a specification:

My invention consists in certain improvements in wagon-jacks; and relates more particularly to that class using a rack-bar and pinion, as hereinafter more fully explained.

Figure 1 is a side view of my improved device complete; Fig. 2, a longitudinal vertical section of the same; Fig. 3, a side view of a portion of my device, showing the manner in which the rack-bar is released; and Fig. 4 an edge or face view of the same.

The object of my invention is to produce a wagon-jack which shall be cheap and durable, and not liable to get out of order easily.

To accomplish these results, I proceed as follows: I first provide a suitable frame or body, A, and mount in the upper part thereof a transverse shaft, *o*, as shown in Figs. 1, 2, 3, and 4. On this shaft *o* I secure a pinion, C, inside of the case or body A, and a ratchet-wheel, E, outside of the same, as shown in the drawing. Above the ratchet-wheel E I pivot a pawl or catch, *a*, the object of which will be explained hereafter. I next provide a rack-bar, B, which is arranged to pass up and down through an opening in the top of the case or body A, said bar B being operated by means of the pinion C, which gears into it, as clearly shown in Fig. 2. The shaft *o*, on which the pinion C is mounted, extends out through the side of the case or body A a sufficient distance to carry the ratchet-wheel E, before mentioned, and also a slotted lever, D, by which the ratchet-wheel E is caused to rotate.

This lever D is of peculiar construction, and constitutes an important feature of my invention.

Near the forward end of said lever I provide a slot, S, which is elongated in the direction of the length of the lever, as shown in Figs. 1 and 3, and I also curve the forward end of the lever D upward, and terminate it in a rounded point or nose, *n*, as shown in the same figures. Having thus constructed the lever, I place it on the shaft *o*, the end of the shaft *o* passing through the slot S, and pre-

vent the lever from coming off by means of a pin, *t*, passing through the end of the shaft *o*, as shown in Figs. 1, 3, and 4. On the side of the lever D, next to the case or body A, I form a stud or projection, *g*, which serves as a pawl or dog to engage in the ratchet-wheel E.

Having arranged the different parts, as above described, the operation is as follows: The end of the lever D being raised up, the lug or pawl *g* raises out of the teeth or notches of the ratchet-wheel E, the slot S permitting it to move back away from the said wheel. The lever D being raised up to the position shown in Fig. 1, the movement is reversed, and the slot S, being then in an inclined position, causes the forward end of the lever to fall downward until the lug or pawl *g* engages again in the teeth of the ratchet-wheel E. The movement of the lever being continued in a downward direction, causes the wheel E to rotate, and as the wheels E and C are secured rigidly to the same shaft *o*, the turning of wheel E causes wheel C to revolve in the same direction; and as the wheel C gears into the rack-bar B, the said bar will be raised up as the lever D is depressed. As the ratchet-wheel E rotates or revolves, the pawl or catch *a* drops into the notches or teeth of the same, and prevents it from turning backward, and thus, through the medium of the shaft *o* and pinion C, prevents the bar B from dropping down. This operation is continued until the bar B has attained the desired height, when the lever D is raised up and the lug or pawl *g* made to engage in the ratchet-wheel E, thus holding the lever D up out of the way, and in a convenient position.

When it is desired to release the rack-bar B, the lever D is drawn back until the lug or pawl *g* is drawn out of the wheel E, and until the end of the shaft *o* comes into contact with the forward end of the slot S, as shown in Fig. 3, and the end of the lever D is moved downward until the forward end of the same, which, as before mentioned, is curved upward and terminates in a rounded point or nose, *n*, comes in contact with the under side of the pawl *a*, and raises the same out of the wheel E, and, acting through the intermediate mechanism, allows the slide or rack-bar B to drop down, the pawl *a*, as shown in Fig. 4, being

provided with a lateral projection, *l*, for the lever to strike against. When the rack-bar is raised it is, of course, held up by the pawl *a*, acting through the medium of the ratchet-wheel and pinion, and when desired to leave it in that position, the lever *D* is dropped down with its curved point *n* resting against the rear edge of the lip *l* of the pawl *a*, thus holding the pawl in contact with the ratchet-wheel, and also holding the lever in position convenient for the hand.

Having thus described my invention, what I claim is—

1. The slotted lever *D*, mounted on the shaft *o*, and provided with the tooth or lug *g*, in combination with the ratchet-wheel *E* and pawl *a*, all constructed and arranged to operate substantially as described.

2. The combination of the lever *D* with its curved point *n*, and the pawl *a* provided with the projection *l*, constructed to operate as set forth.

JAMES J. UPHAM.

Witnesses:

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