

A. A. HAGEN.  
AUTOMATIC STOP-MOTION.

No. 173,537.

Patented Feb. 15, 1876.

Fig: 1.

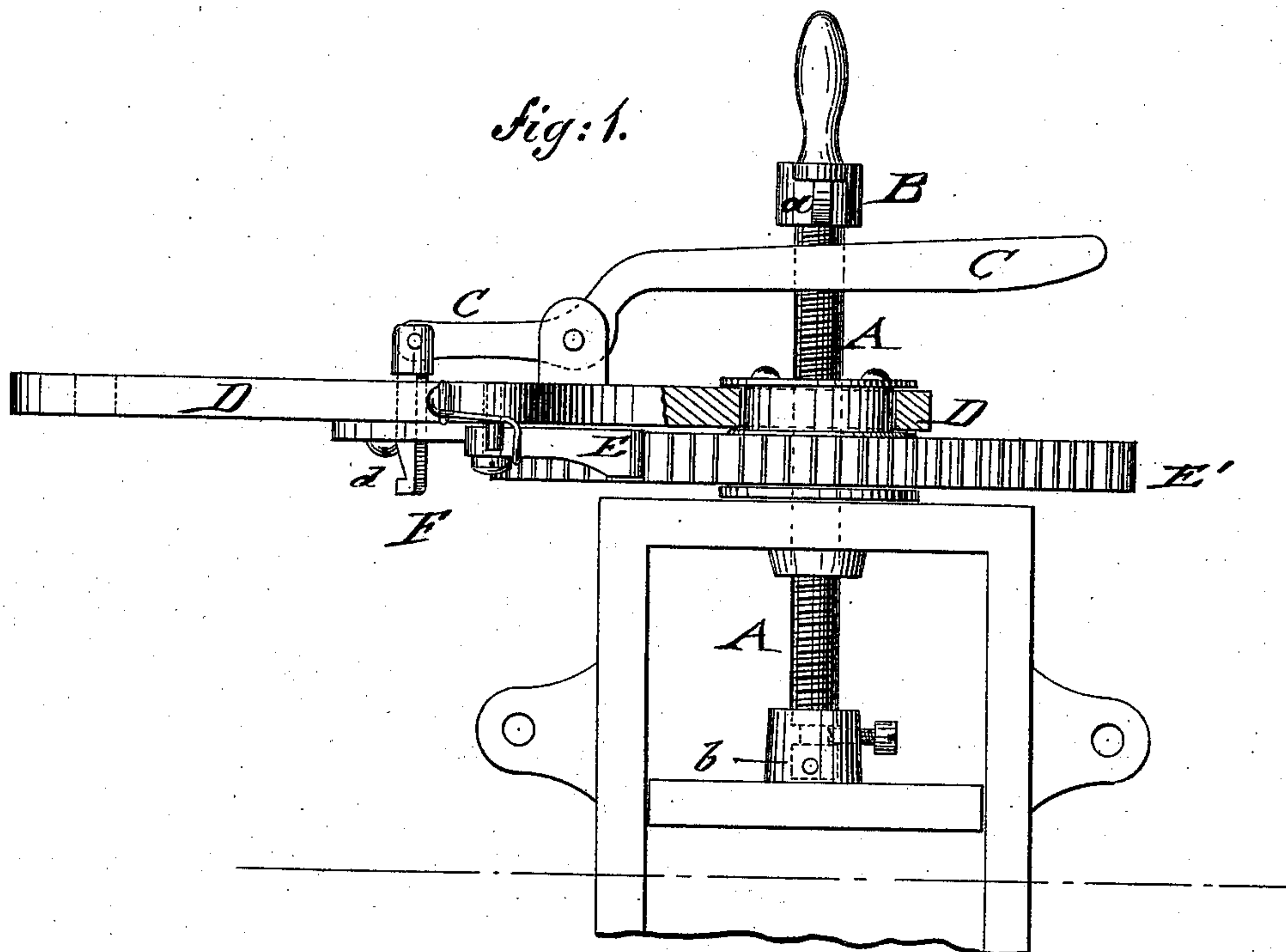


Fig: 2.

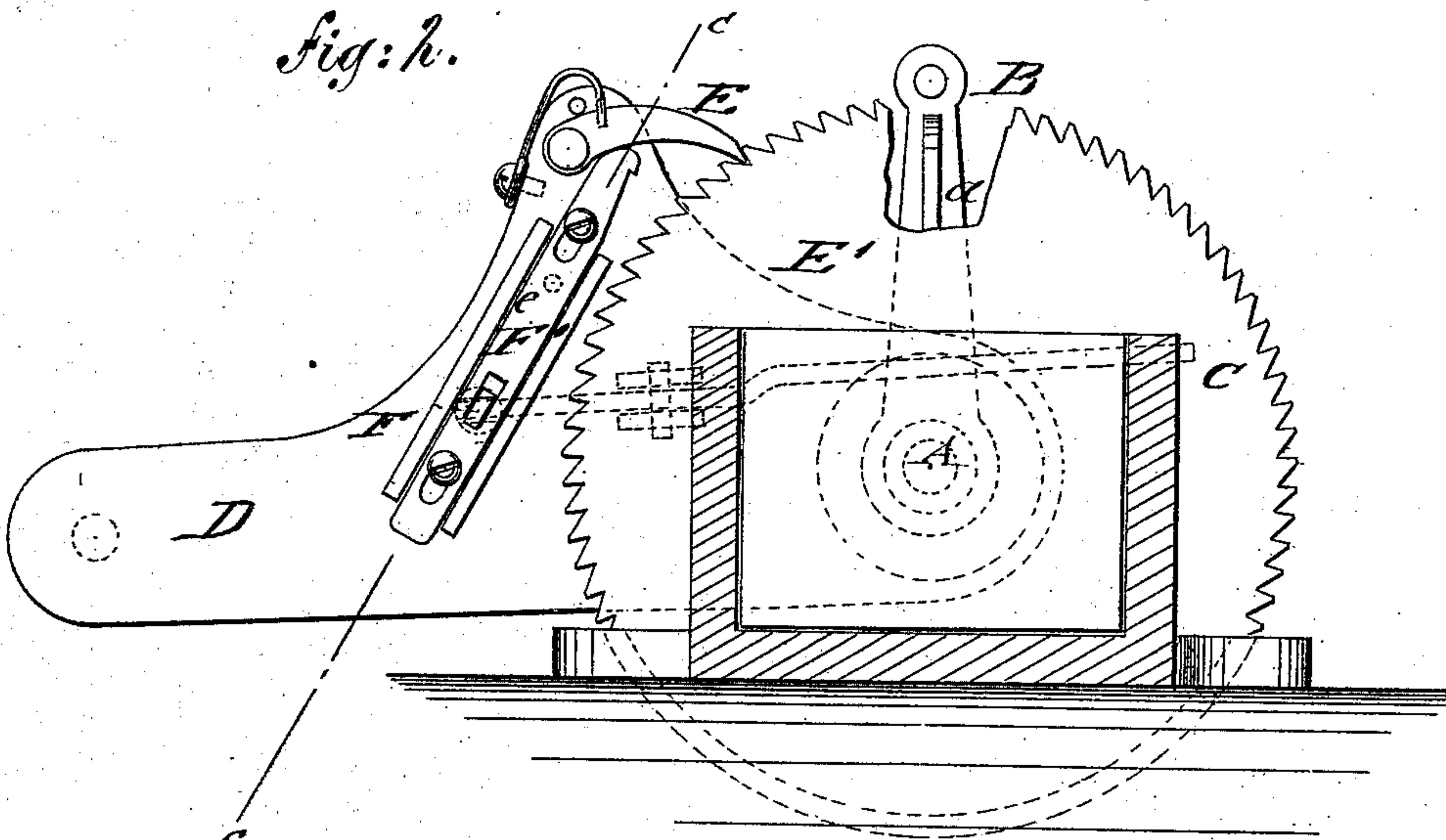
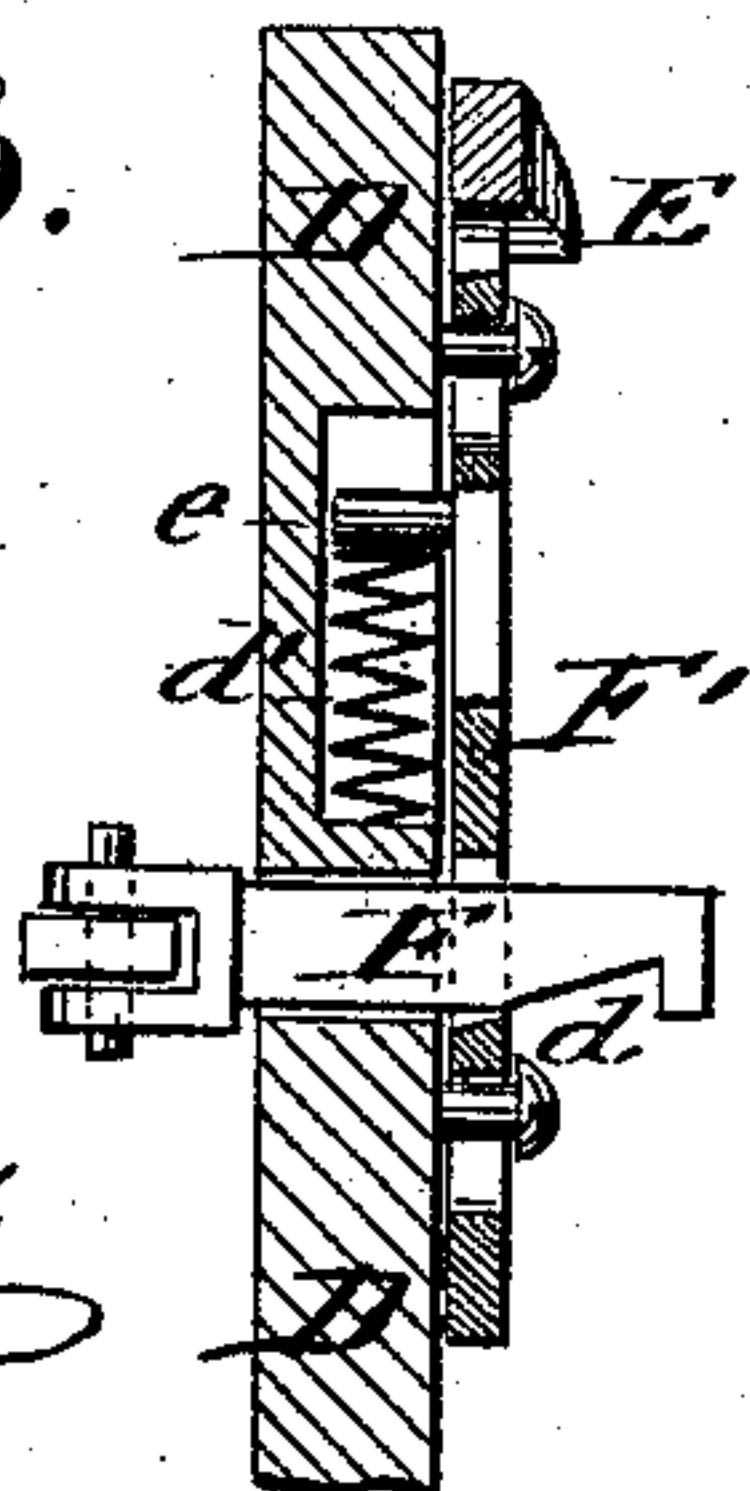


Fig: 3.



WITNESSES:

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# UNITED STATES PATENT OFFICE,

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## IMPROVEMENT IN AUTOMATIC STOP-MOTIONS.

Specification forming part of Letters Patent No. **173,537**, dated February 15, 1876; application filed January 27, 1876.

*To all whom it may concern :*

Be it known that I, AUGUSTUS A. HAGEN, of the city, county, and State of New York, have invented a new and Improved Automatic Stop-Motion, of which the following is a specification :

Figure 1 represents a top view, Fig. 2 a side view, and Fig. 3 a vertical transverse section, of my improved automatic stop-motion for feed devices.

Similar letters of reference indicate corresponding parts.

The object of my invention is to provide an improved automatic stop-motion for feed-wheels in tobacco cutting and other machines; and it consists of a fulcrumed lever, that operates, by contact with a raised part of the feed-screw, a transverse slide-piece, and, by a connecting swinging slide, the spring-pawl of the ratchet feed-wheel, so as to throw the same out of gear.

In the drawing, A represents the feed-screw of the follower of a tobacco-cutting or other machine, which may be turned forward or backward by a hand-crank, B, at the outer end. The hand-crank B is provided with a raised flange, *a*; or any other equivalent contact device may be arranged on the feed-screw, to be brought in contact with a lever, C, fulcrumed to the swinging arm D, that, by its spring-pawl E, operates the feed ratchet-wheel. When the follower is to be fed forward, the feed-screw A is secured, with a flange or other contact-stop, *a*, in upright position by a pin, *b*, of the follower, that locks the feed-screw against lateral motion, but allows, by the turning of the feed-ratchet, its forward motion in longitudinal direction. To the end of the fulcrumed lever C is pivoted the transversely-sliding link F, which moves in a guide-hole of the oscillating arm D, and engages, by an inclined recess, *d*, the recessed slide-piece F', that is guided by side flanges and stop-pins along the swinging arm D. A spring, *d'*, set into a recess of arm D, acts on a pin, *e*, of the slide-piece F, and forces

the same forward, when the slide-link F is withdrawn, by pressure on the fulcrumed lever, the inclined recess *d* admitting then the easy motion of the slide-piece F', so that it bears against the spring-pawl, and throws the same out of the teeth of the ratchet, and interrupts instantly the forward motion of the feed-screw A. By withdrawing the stop-pin *b*, that fastens the feed-screw to the follower, and screwing the follower back with the hand-crank, the fulcrumed lever may be set again by carrying the arm of the same that was in contact with the stop away from the swinging arm. This carries the slide-link at the opposite end of the lever forward again, so that the incline of its recess forces the pawl-governing slide-piece back, causing thereby the release of the pawl, and its re-engaging of the teeth of the ratchet-wheel. The forward feeding of the screw by the oscillating arm is automatically interrupted when the stationary stop of the feed-screw bears on the fulcrumed lever, which causes the throwing out of the pawl to interrupt the feeding at the exact moment required.

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

1. The combination, with a fixed flange or contact-stop of the feed screw, of a fulcrumed lever of the oscillating arm, said lever producing the disengaging of the ratchet operating pawl, to interrupt the feed-motion of the screw, substantially as specified.

2. The combination of the fulcrumed lever C and the transversely-sliding link F, having inclined recess *d*, with the perforated and spring-acted slide-piece F' and the spring-pawl E of the oscillating arm, to raise or drop the pawl by motion of lever, substantially as described.

AUGUSTUS A. HAGEN.

Witnesses :

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