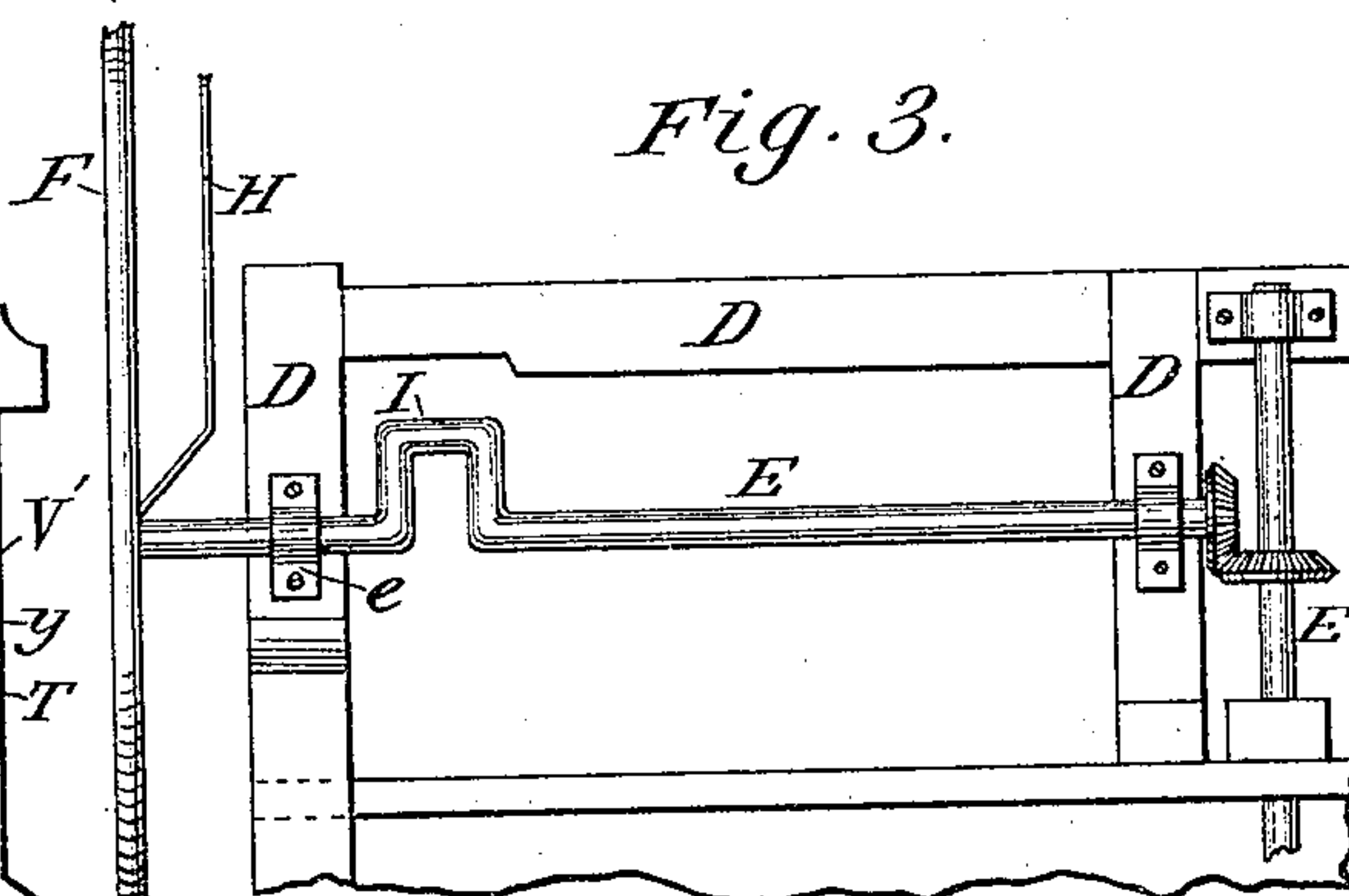
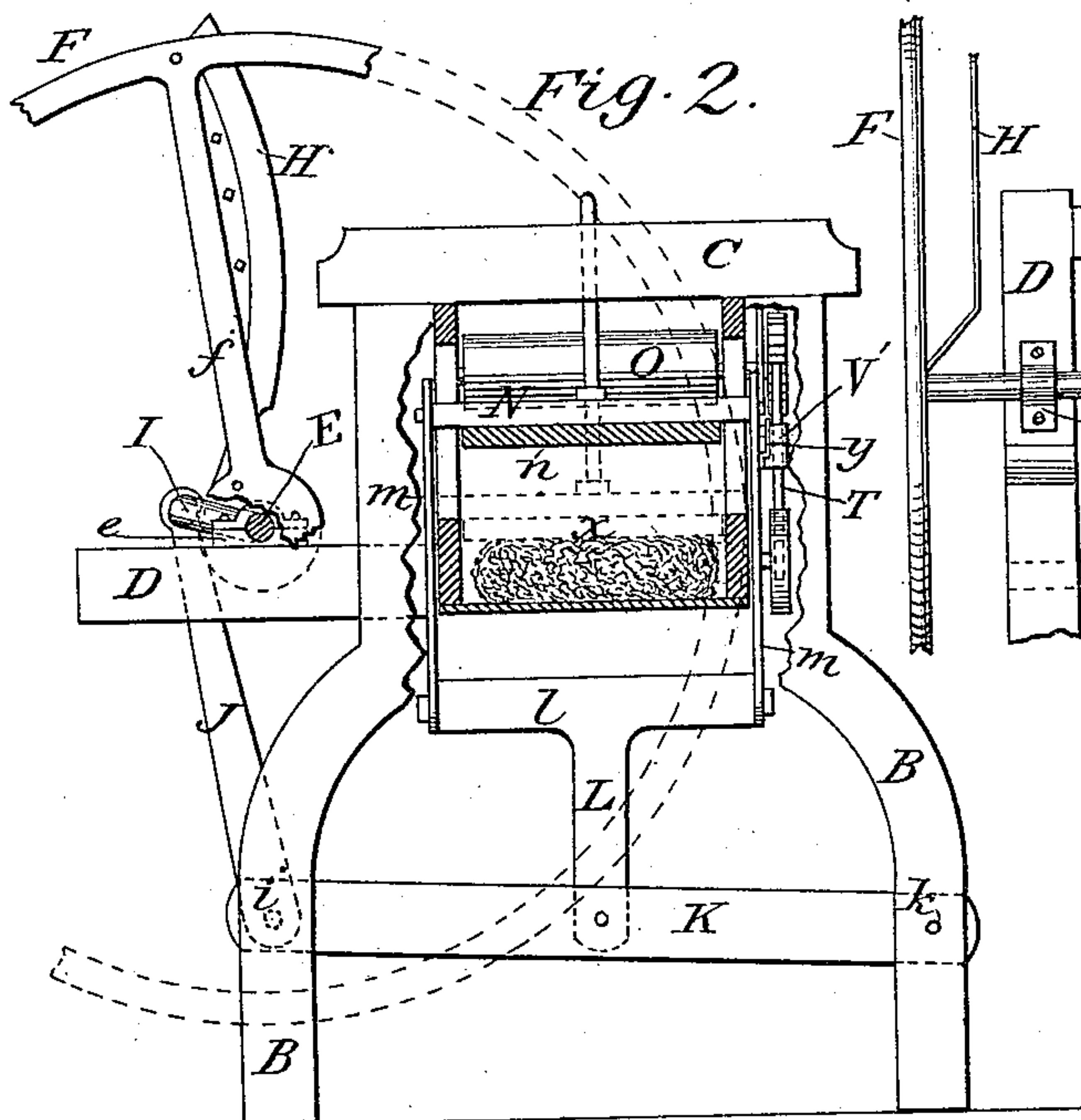
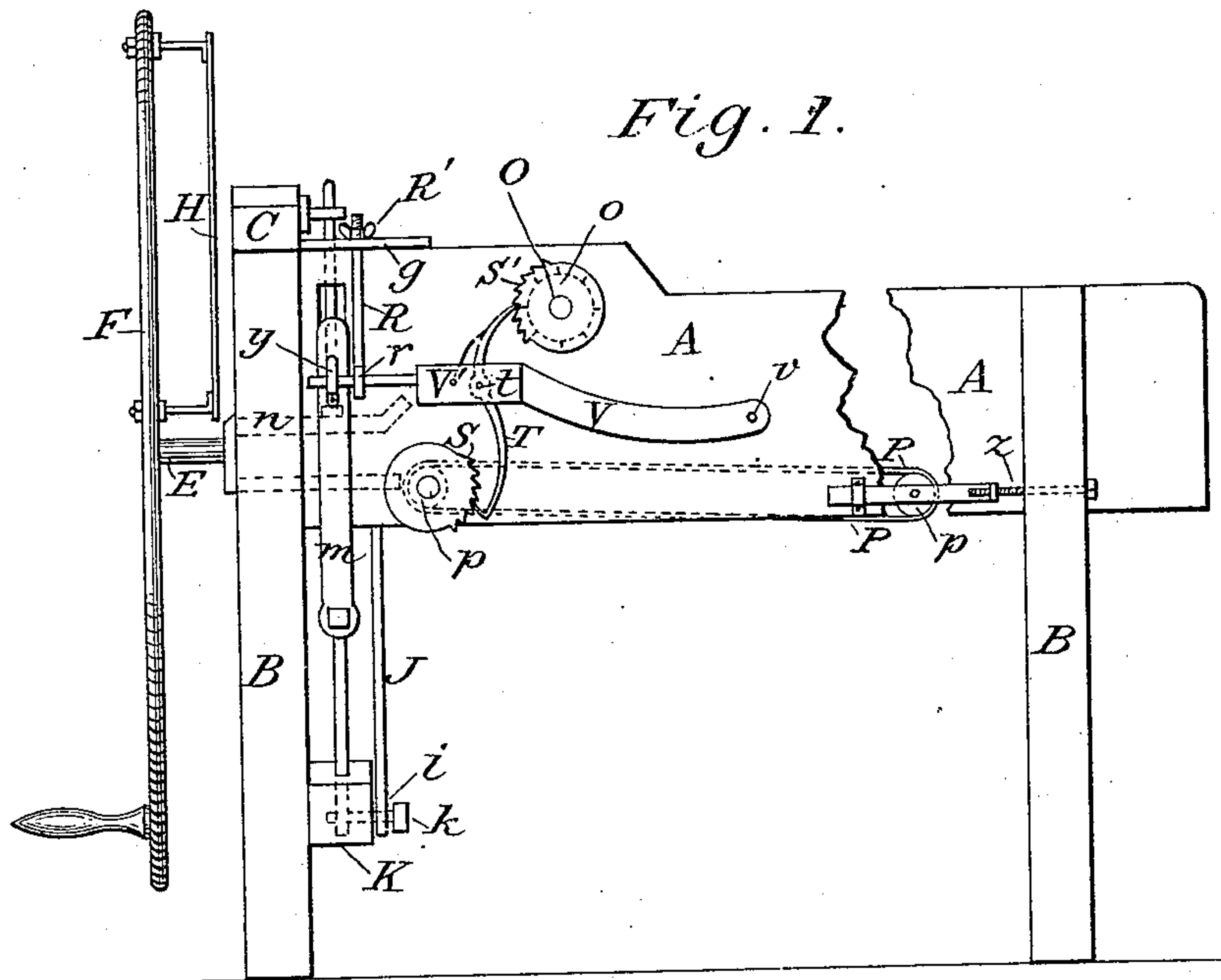


(No Model.)

P. STUERHOLDT.
STRAW CUTTER.

No. 248,623.

Patented Oct. 25, 1881.



Witnesses:
John E. Kent
J. Henry M. Keel

Inventor:
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UNITED STATES PATENT OFFICE.

PETER STUERHOLDT, OF RED WING, MINNESOTA.

STRAW-CUTTER.

SPECIFICATION forming part of Letters Patent No. 248,623, dated October 25, 1881.

Application filed June 16, 1881. (No model.)

To all whom it may concern:

Be it known that I, PETER STUERHOLDT, a citizen of the United States, residing at Red Wing, in the county of Goodhue and State of Minnesota, have invented a new and useful Feed-Cutting Machine, of which the following is a specification.

My invention relates to improvements in feed-cutting-machines in which a vertically-reciprocating press operates in conjunction with a knife attached to and rotating with a fly-wheel; and the objects of my improvements are, first, to provide a press actuated from the main shaft of the machine and reciprocating simultaneously with the revolution of the fly-wheel bearing the knife; second, to provide an automatic feed of the material to be cut; and, third, to regulate the feed of material by adjustable pawls and ratchets. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a vertical longitudinal section of the machine. Fig. 2 is a vertical transverse section of the machine. Fig. 3 is a top view of the main shaft and its hanger.

Similar letters refer to similar parts throughout the several views.

The box A, its standards B B, and braces C, and the hanger D constitute the frame-work of the machine. In journal-boxes *ee*, supported by the hanger D, the shaft E turns, carrying a fly-wheel, F, to the radius-arm *f* of which is attached the cutter or knife H. The link J and pin *i* connect with the double crank I to the shaft E, and the beam K, which is pivoted at *k*, to the standard B, and imparts the vertical reciprocating motion to a press. This press is composed of the rod and cross-head L *l*, the guides *m m*, and cross-head N, carrying a follower, *n*, secured to its under side. This reciprocating press, actuated by the main shaft E through the double crank, link, and beam, as aforesaid, descends and compresses the straw or other material (*x*, Fig. 2) as it is fed to the knife and coincident with the stroke of the knife on the fly-wheel, while, after the stroke and passage of the knife with the further revolution of the fly-wheel, the press is raised and opened for the passage of straw to

and through the jaws of the box. An endless apron, P, carrying and feeding the straw to the knife, is moved by the drums *pp*. The forward drum is provided on its outer axis or journal with a ratchet wheel or pinion, S, which is actuated by the lower arm of the pawl T. On the outside of the box of the machine is a lever, V, pivoted to the box at *v* and extending to the guide *m*, its end resting in the hook or slot *y* affixed to the guide. This lever V is provided with a frame, V', in which is hung and supported by pin *t* the double pawl T. The vertical reciprocating movement of the guide *m*, by means of its hook or slot *y*, communicates the power and motion to the double pawl T.

Inside the box A, and at a suitable distance in the rear of the press and over the apron, the feed-roller O is placed transversely with the box and apron. This feed-roller consists of a revolving cylinder, ribbed on its surface longitudinally, and is provided on its outer journal with a ratchet wheel or pinion, S', by means of which ratchet, engaging with the upper arm of the pawl T, the feed-roller is revolved.

Through a lug, *g*, on the upper edge of the box, parallel with and near to the upper portion of the slotted guide, is suspended the rod R, which is threaded and furnished with a thumb-nut, R', at its upper end, and provided with a hook, *r*, at its lower end. This hook *r* catches the end of the lever V. The adjustment of this hooked rod R *r*, by means of its screw-thread and thumb-nut R', will lengthen or shorten the stroke of the lever V, and consequently the engagement of the pawl T with the respective ratchets S S', thus controlling and regulating the movements of the apron P and feed-roller O, and thereby the length and volume of the cut straw.

The device *zz* is an ordinary means of tightening the apron, for which I make no claim.

The main shaft E may be driven by hand from a shaft, E', furnished at one end with a handle, and at the other with bevel-gear to connect with shaft E, as shown in Fig. 3, or by horse or other power attached by means of pulleys, clutch, &c., which forms no part of my present invention. I am aware that prior to my invention feed-cutting machines have been

made with knives operating in conjunction with devices to compress the straw or material to be cut.

I therefore do not claim such a combination, 5 broadly; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. In a straw or feed cutting machine, the combination of the press-guide *m*, provided with 10 a hook, *y*, with the lever *V V'*, carrying a double pawl, *T*, and the feed-apron *P* and rollers *p O*, respectively provided with ratchets *S S'*, en-

gaging with and receiving motion from the arms of the pawl, substantially as described.

2. The combination, in a straw-cutter, of the 15 cross-head *N*, hook *y*, hooked rod *R r*, apron *P*, lever *V V'*, pawl *T*, and ratchet-wheels *S* and *S'*, substantially as and for the purposes described.

PETER STUERHOLDT.

Witnesses:

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