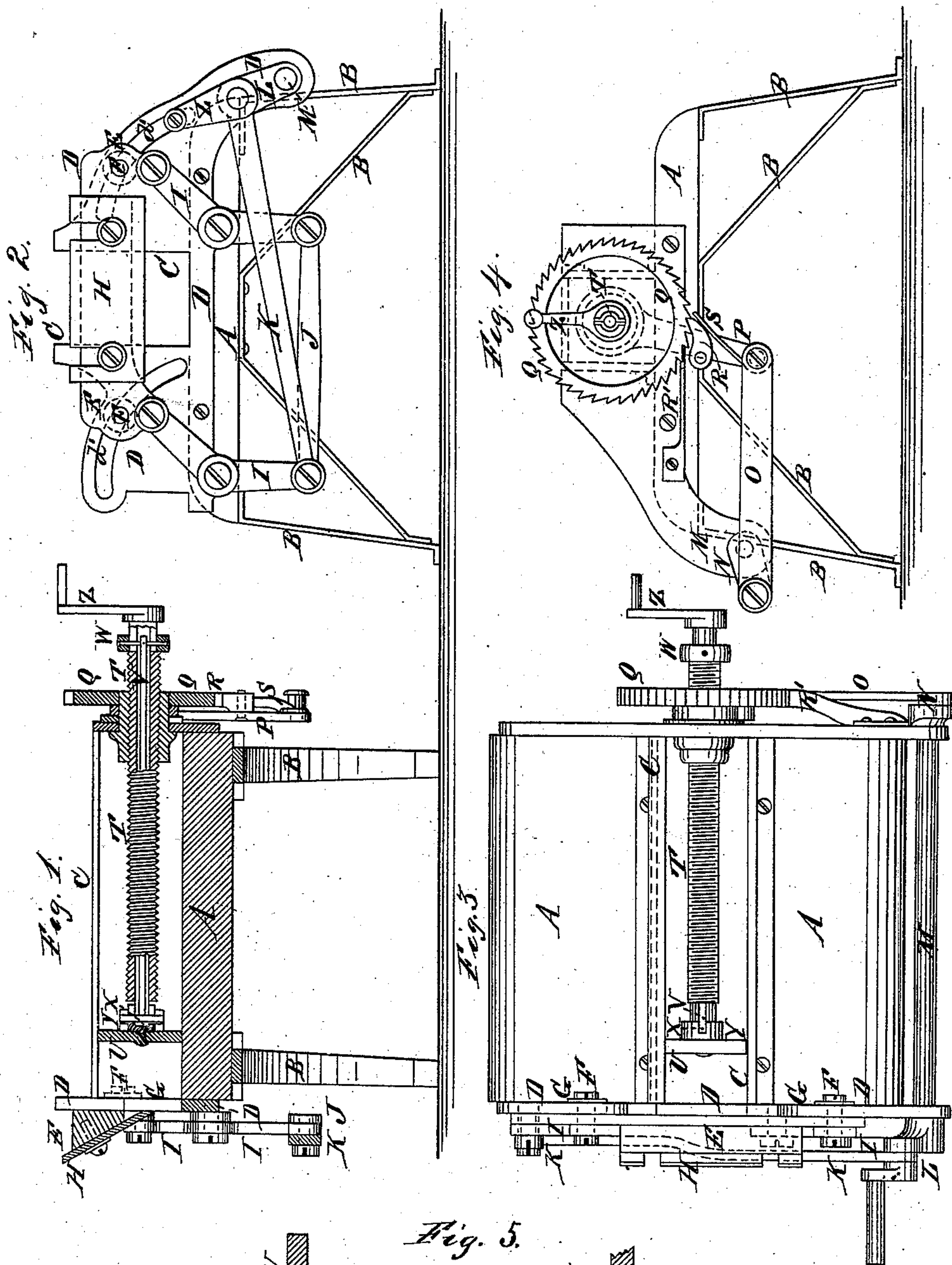


J. W. CROSSLEY & A. A. HAGEN.
Tobacco-Cutting Machine.

No. 227,959.

Patented May 25, 1880.



Witnesses.
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UNITED STATES PATENT OFFICE.

JAMES W. CROSSLEY AND AUGUSTUS A. HAGEN, OF NEW YORK, N. Y.,
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TOBACCO-CUTTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 227,959, dated May 25, 1880.

Application filed January 3, 1879.

To all whom it may concern:

Be it known that we, JAMES W. CROSSLEY and AUGUSTUS A. HAGEN, of the city, county, and State of New York, have invented certain
5 Improvements in Tobacco-Cutting Machines, of which the following is a specification.

This invention relates to the connection of the follower with the feeding device, and its purpose is to disengage the follower from the
10 operation of the feed when the said follower has been advanced as nearly to the knife as it should properly be driven. Said invention consists in the combinations of parts herein-
after more fully set forth for effecting that pur-
15 pose.

In the accompanying drawings, Figure 1 is a vertical longitudinal section of our machine, taken through the line *xx* of Fig. 3, with the exception that the follower is only partly in
20 section. Fig. 2 is a front view of the same machine. Fig. 3 is a plan or top view of the same. Fig. 4 is a rear view of the same. Fig. 5 is a detail section of the nut, screw, and fol-
lower.

25 A is the bed-plate of the machine, which plate is supported upon legs or frame-work B, of suitable height. C is a feed-box designed and adapted to contain the tobacco to be cut. This feed-box is attached to the middle por-
30 tion of the upper side of the bed-plate A.

D is a plate attached to the forward end of the feed-box and the forward edge of the bed-plate, and having an opening corresponding in size with the interior of the feed-box, through
35 which opening the tobacco is forced out to be cut, said plate D having a face, in close proximity with which the knife works. M is a shaft, to which power is applied for driving the machine, and N is a crank or crank-wheel
40 on said shaft, which crank or crank-wheel is connected by the connecting-rod O to the lower end of the arm P, the upper end of which is hung upon the nut Q and vibrates upon it as a center. The driving-nut Q is fitted to re-
45 volve in the back end plate of the feed-box, and has ratchet-teeth formed on its periphery.

R is a pawl, which is hung upon the arm P, and which engages with the ratchet-teeth of the nut Q, being kept to its work by the spring
50 S, so as to give an intermittent rotary motion

to the nut Q as the crank N revolves, the de-
tent-pawl R' preventing the nut Q from being
turned backward by the backward movement
of the pawl R. T is a screw, which is fitted
into the nut Q, and its inner end is fitted to
revolve in the follower U, so as to advance the
55 follower (and consequently the tobacco to be cut) as the nut Q is turned by the feed at each revolution of the crank N corresponding with
each stroke of the knife, the operation of the
60 feed being so arranged as not to interfere with the action of the knife. The distance which the follower shall be moved forward at each
stroke of the knife may be varied to corre-
65 spond with the work to be done by setting
the crank-wrist at a greater or less distance
from the center of the shaft M.

For the purpose of disengaging the follower from the action of the feeding appliances when it has been advanced as far as it ought to go,
70 the screw T is made hollow, and contains within it a rod, V, which is connected at its outer end to the collar W by a pin or screw extend-
ing transversely through a slot in the shaft of the screw T, and the rod V is made fast at its
75 inner end to the short cross-head X, which projects transversely through a slot in the shaft of the screw T into slots or notches in the hub Y of the follower U. As the follower
U approaches the limit to which it is allowed
80 to be driven toward the knife the advance of the screw T brings the collar W in contact with the nut Q, which stops its advance, and consequently that of the rod V, which carries
the cross-head X, and as the screw T con-
85 tinues to advance the cross-head X will be drawn out of the slots in the hub Y of the fol-
lower U, leaving the screw T free to revolve with the nut Q, which it accordingly does as
90 the feed continues to turn the latter, and consequently the follower is advanced no farther.

Z is a crank attached to the outer end of the screw T, to furnish a convenient means for turning the latter back to withdraw the fol-
95 lower for recharging the feed-box.

If desired, the rod V may be placed in a lon-
gitudinal groove in the side of the screw T; but the construction previously described is
100 preferred, as it leaves the threads of the screw T entire and allows the rod V to be made of

any desirable size, besides conferring other advantages.

Any suitable cutting device may be used in connection with this invention; but we prefer that invented by James W. Crossley, and which we are about to describe as the best.

In said cutting device, E is the knife-bar, the ends of which are attached by proper journals to the levers I I, which latter are hung in the middle upon journals attached to the bed-plate, and the lower ends of which are connected to each other by the connecting-bar J, so that the said levers may always be held parallel to each other, and may thus hold the knife horizontal while making the cut, but at the same time giving to the knife a motion which corresponds with the circular motion of the journals by which it is hung to the levers I I, thus making what is known as a "draw-cut." A connecting-rod, K, extends from a journal at the end of one of the levers I I to the crank or crank-wheel L on the shaft M, already referred to.

The knife-bar E is made with a vertical face on its inner side next to the plate D, as shown in Fig. 1, and to its outer or inclined face is bolted the knife H, which is slotted transversely from its upper edge to receive the fastening-bolts, so that it may be readily moved down as it wears. The knife-bar E is held in

close proximity to the face-plate D by bolts F F, extending from the knife-bar through curved slots $d' d'$, and washers G G, properly adjusted to the inner side of the face-plate D, and secured in such adjustment by jam-nuts or other suitable means. The slots $d' d'$ are concentric with the fixed axes of the levers I I.

We claim as our invention—

1. In a tobacco-cutting machine, the combination of the revolving nut, the follower, the feed-screw swiveled thereto, and a clutch or key for temporarily locking them together, and a connecting-rod or equivalent device connected at its forward end to said clutch or key, and having at its rear end a stop, W, in virtue of which the forward movement of the connecting-rod and clutch or key is arrested when the stop W comes in contact with the nut or with some other object that is stationary.

2. The combination of the rod V, provided with the collar W upon its outer end and a cross-head, X, upon its inner end, with the feed-screw T, the driving-nut Q, and the slotted or notched collar Y of the follower U, substantially as herein shown and described.

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Witnesses:

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