

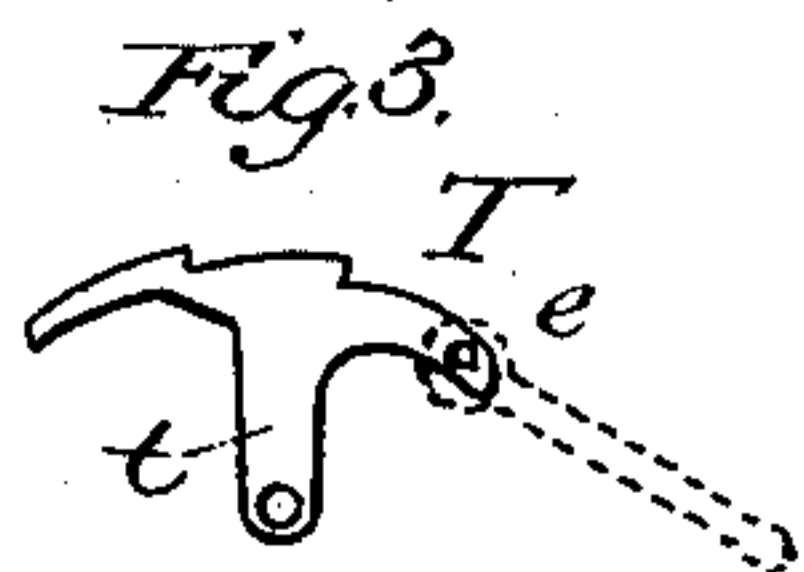
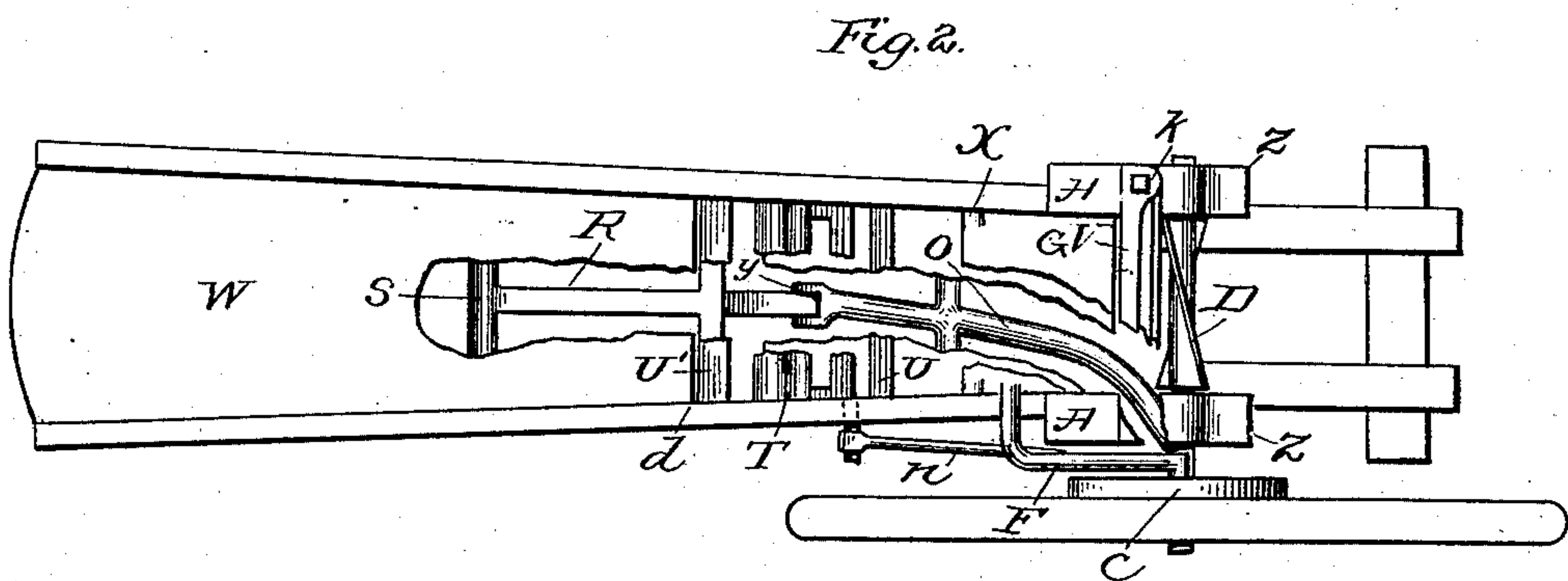
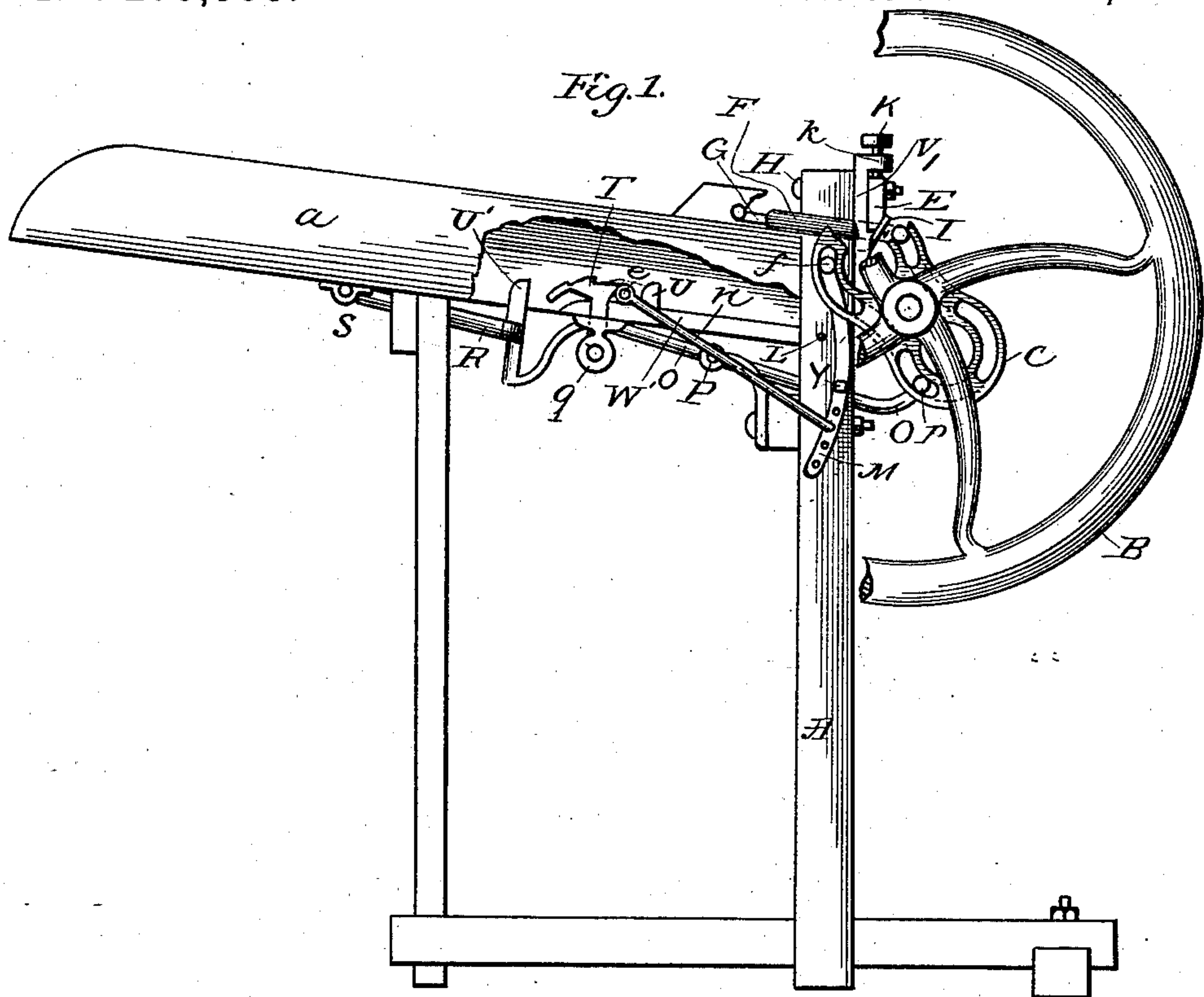
(No Model.)

H. A. BUCK.

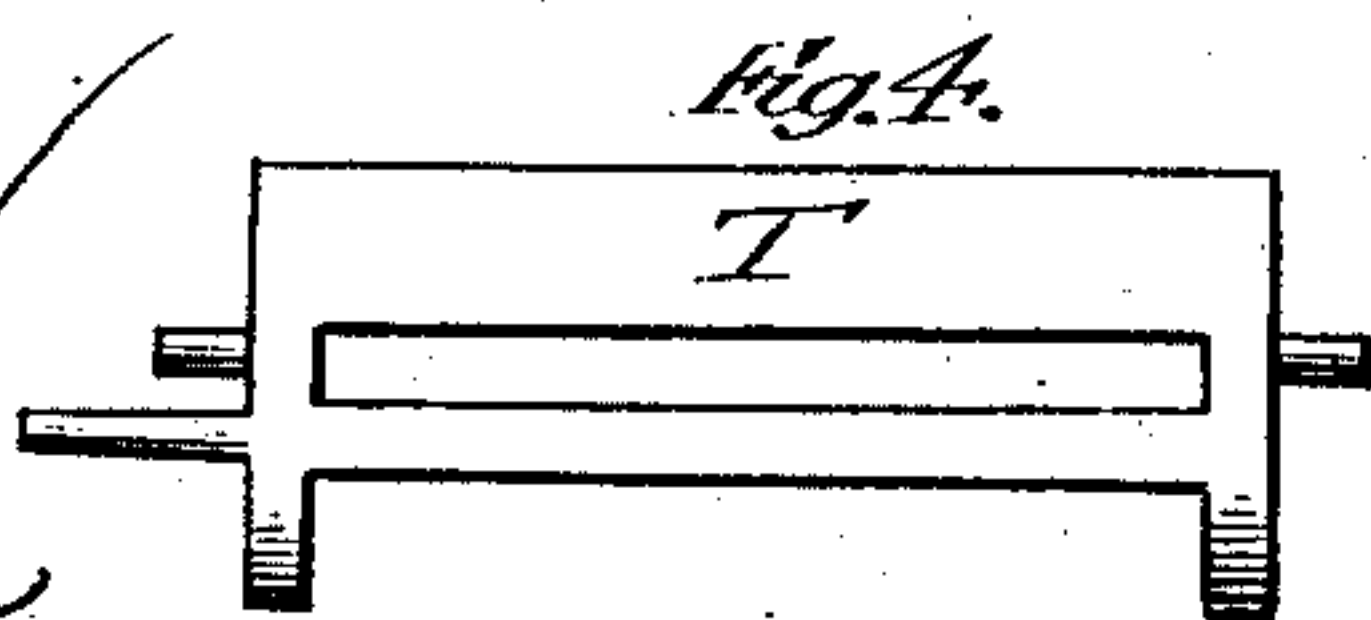
FEED CUTTER.

No. 279,533.

Patented June 19, 1883.



Attest:
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Inventor
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Atty

UNITED STATES PATENT OFFICE.

HENRY A. BUCK, OF FREDONIA, NEW YORK.

FEED-CUTTER.

SPECIFICATION forming part of Letters Patent No. 279,533, dated June 19, 1883.

Application filed December 18, 1882. (No model.)

To all whom it may concern:

Be it known that I, HENRY A. BUCK, of Fredonia, in the county of Chautauqua and State of New York, have invented a new and useful Improvement in Feed-Cutters; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates to feed-cutters. The improvements relate to the cutting mechanisms, and to mechanism for advancing and directing the cutters and the material to be operated on. These features, with the special and auxiliary details, I have fully described hereinafter, and have illustrated in the accompanying drawings, in which—

Figure 1 represents a side elevation; Fig. 2, a top or plan view, parts in both figures being broken away to disclose more clearly the details. Figs. 3 and 4 represent details.

Fig. 1 shows clearly the general frame-work, in which A is one of the two main supports or standards, and a the box which holds the feed and guides it to the cutter. The standards project above the box, and to their inner faces is bolted a transverse plate, V, provided with horizontal ears k, one being at each end and projecting over the bed-plate E. The same bolts, H, which connect the plate V to the standards pass through slots in the plate E and hold it thereto. By means of the slots and the set-screw K the plate E may be accurately adjusted to the revolving blades, hereinafter described. The stationary knife I is straight and bolted firmly to the lower edge of the plate E, in a plane nearly tangential to the circle formed by the revolution of the cutting-edges of the revolving spiral blades D. The plate V has also projections Z, which form bearings for the shaft of the spiral blades. On one side this shaft extends far enough outside of the machine-frame to give room for a cam, C, and certain hereinafter-described mechanisms operated by the cam. This cam (shown more clearly in Fig. 1) is fixed to the fly-wheel B, or cast therewith, and has a groove on its inner face. This groove is shown in full in dotted lines in Fig. 1, the full lines indicating openings through the cam. On the top of the box at X is pivoted a plate, G, which extends forward to the plate V. To it, on one side, is fixed an arm, F, which extends forward be-

tween the fly-wheel and box, and at the extreme forward end has a pin projecting laterally into the cam-groove. Revolution of the cam operates the arm and causes the plate G to vibrate up and down twice in every complete revolution of the wheel and cam. The parts are so adjusted that the plate G is brought down a little before the revolving blades pass the knife, thus pressing down and directing the material to the cutters. The bottom of the box is in part stationary and in part movable. The stationary part W extends from the open end to the point d. The movable part W' is pivoted at L in the standard A, and extends rearward, as shown in the figures, leaving an open space between its rear and the forward end of the section W. In the rear of this open space, next the front end of W, is a bar, U', extending across the opening. It is fixed to the lever R, which is attached to a transverse rod, S, having its bearings on the under edges of the sides of the box. The lever R extends forward and rests upon and engages with the rear end of the lever O at the point y. The lever O is pivoted at P on brackets fixed to or between the standards. Its front end is bent laterally, as shown in Fig. 2, and engages with the groove in the cam at p. The rear end of the movable bottom section, W', rests on the free end of the lever O, and is thereby vibrated vertically, such movement being due to the revolution of the cam. In connection with the vibrating bottom section is a pusher, T. (Shown clearly in Fig. 3.) It is a bar extending across the inside of the box, with an upper curved surface, in position and form shown in Figs. 1 and 3. The plate is provided with a leg, t, on each end, pivoted on a pin in ears q. The legs are long enough to allow the pusher T to swing in a considerable arc, and the arm R is bent to allow the rear and downwardly-bent edge of the pusher to come down below the bottom of the box. A pin, e, from the forward edge of the pusher extends laterally through a slot in the side of the box, and is connected by the rod n with the lever M. This lever is provided with a series of holes whereby the motion of the pusher may be varied. It is pivoted at Y, and the upper end is provided with a pin, f, working in the slot of the cam. A bar, U, in the

form of a cleat, is placed on the bottom section, like in form and position to the bar U'. The function of these bars and of the bottom section, W', is to lift the material to be cut while the pusher is going back to take a new hold, and the parts are so arranged and the movements so timed that the forward end of lever O is depressed while the lower end of lever M is going back. The plate G is depressed to guide the material to the cutters while the pusher is coming forward.

Having thus described my invention, what I claim is—

1. In a feed-cutter, and in combination, a stationary knife, a rotating shaft carrying blades, a cam on the blade-shaft, a vibrating plate, G, and an arm connecting said plate to the cam, substantially as described.

2. In a feed-cutter, the combination of a box having a hinged bottom section, a driving-shaft upon which is mounted a cam, a pusher operating within an opening in the bottom of

the feed-box, and connecting-rods from the said cam to the said hinged bottom section and pusher, said parts being arranged to operate in connection with a revolving cutter, substantially as described.

3. In a feed-cutter, the combination of the pusher and its connecting-rod, the lever R, the bar U', secured thereto, the pivoted lever O, the cam C, and the hinged bottom section, W', of the feed-box, substantially as described.

4. In a feed-cutter, and in combination, a pusher, T, pivoted below the bottom opening and shaped as described, rod n, lever M, and cam, the bent lever O, and bar U, and the hinged bottom W', substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY A. BUCK.

Witnesses:

WM. A. NOBLE,
A. Z. MADISON.