

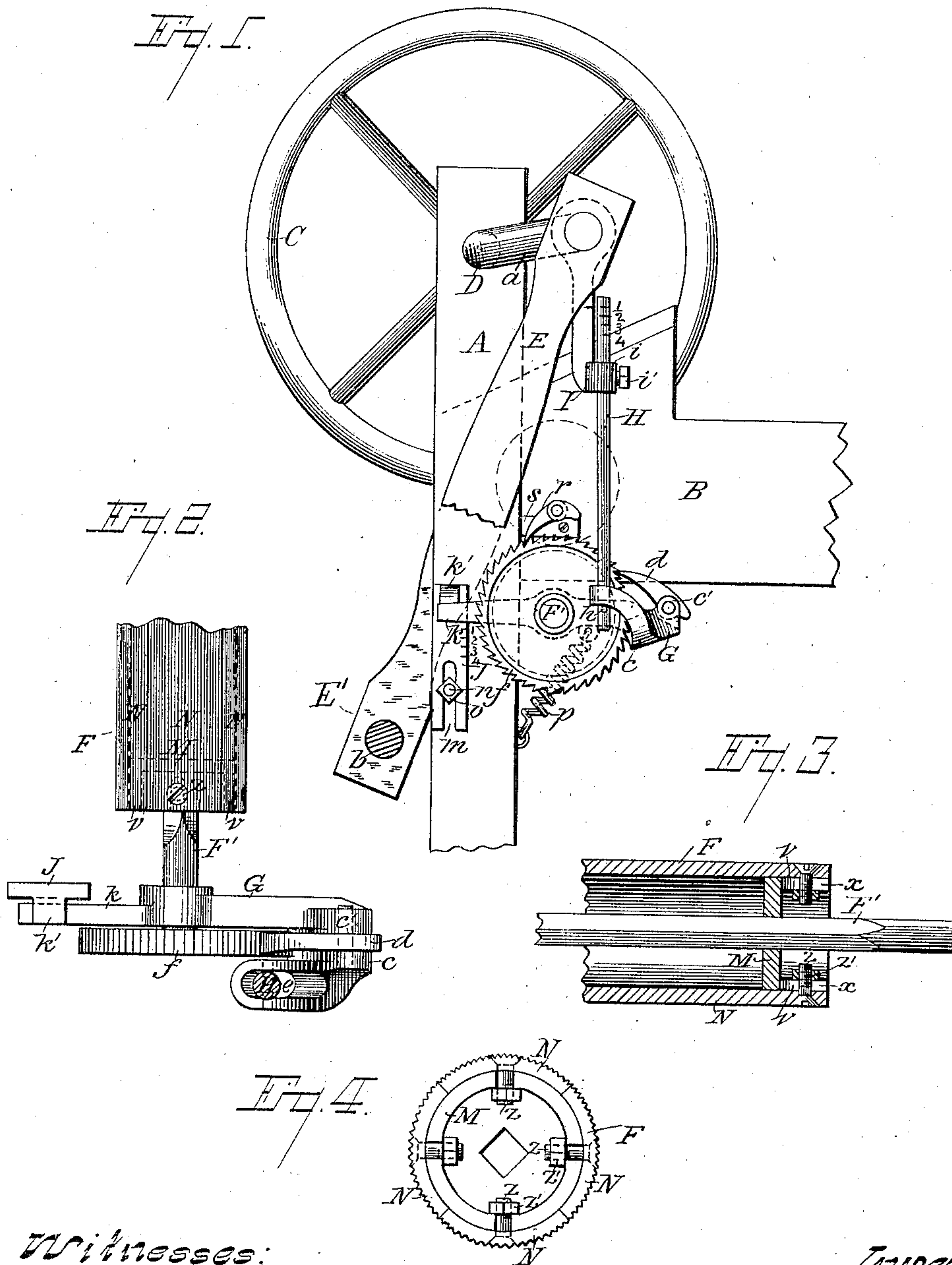
(No Model.)

A. M. FORRESTER.

FEED CUTTER.

No. 313,662.

Patented Mar. 10, 1885.



Witnesses:

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UNITED STATES PATENT OFFICE.

ABRAHAM M. FORRESTER, OF RACINE, WISCONSIN.

FEED-CUTTER.

SPECIFICATION forming part of Letters Patent No. 313,662, dated March 10, 1885.

Application filed December 1, 1883. (No model.)

To all whom it may concern:

Be it known that I, ABRAHAM M. FORRESTER, of Racine, in the county of Racine, and in the State of Wisconsin, have invented certain new and useful Improvements in Feed-Cutters; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to improvements in feed-cutters, and will be fully described hereinafter.

In the drawings, Figure 1 is a broken side elevation of a portion of a feed-cutter fitted with my improved feed-regulator. Figs. 2, 3, and 4 show details.

A is the frame; B, the feed-box, and C is the fly-wheel keyed on the end of driving-shaft D, mounted in proper bearings of said frame. Said shaft D has a double crank on the fly-wheel end and a single crank, *a*, on its other end, and on said cranks are hung the upper ends of pitmen E and E', in the lower ends of which is journaled the bar *b*, supporting the sliding cutter-frame.

Fastened onto the end of the shaft F' of the lower feed-roller, F, is the ratchet-wheel *f*, and hung on said shaft F', between the ratchet-wheel *f* and the side of the feed-box B, is the pawl-carrier G, which is provided on the outer face of its rear end with an irregular flange, *c*. The first half of said flange has a slotted ear, *c'*, wherein the lifting-pawl *d* is suitably hinged. The outer half of said flange is curved up forward and provided with an oblong vertical slot, *e*, in which plays the lower end of a rod, H. This rod is perforated to carry the stop-pin *h*, which bears against the under side of the flange which has the slot *e*. The upper end of said rod H passes up through a sleeve, *i*, formed on the lower end of the bar I, wherein it is held in proper adjustment by means of the set-screw *i'*. The pawl-carrier G has at its front end the finger *k*, which oscillates on the outer face of the plate J. This plate, which is the feed-regulator, has the stop-lug *k'* and the open slot *m*, whereby and by means of the bolt *n* and of the nut *o* the regulating-plate may be given the adjustment desired. A spiral spring, *p*, suitably attached to the under side of the carrier G and to the frame A, is designed to bring down the carrier and pawl *d* after every successive upstroke of the rod H.

Hung on a suitable bracket, *s*, fastened on

the side of the feed-box B, is the stop-pawl *r*, which engages with the ratchet-teeth and prevents the lower roll from turning backward after having been moved forward by the lifting-pawl *d* of carrier G.

The operation of my feed device is as follows: The crank-shaft D being rotated, every downstroke of the crank lowers the rod H, and the spring *p* causes the carrier G to follow the stop-pin *h* on the lower end of said rod H, and the point of pawl *d* slips over the teeth of the ratchet. The upstroke of the crank raises the rear end of the carrier G, and the pawl *d* engages with the ratchet *f* and turns the feed-roller F.

I have shown two ways of adjusting the feed, one of which is the shortening or lengthening of the rod H by sliding it more or less into the sleeve *i* of the hinging-bar I, wherein it is secured by the set-screw *i'*. The pawl *d* is thus made to engage with more or less teeth of the ratchet. The other adjustment, which as the first may be used independently, is effected by means of the removable plate J, in which case the number of teeth of the ratchet *f* with which the pawl *d* will engage will be determined by the position given to the said plate J by the fastening-nut *o* of bolt *n*.

Graduated lines 1 2 3, as shown on face of plate J and rod H, may be provided to serve as guides for the adjustment required.

In Figs. 3 and 4 is shown the improved construction of my feed-rollers. They are made of staves or sections N, N, the ends of which are fastened and held together around the hubs M. These hubs are provided on their outer faces with a wide flange, *v*, through which open slots *x x* are cut, wherein screw-bolts *z z*, passing through said staves N, are held in place by the nuts *z' z'*. Said hubs M may be made with a central square hole to fit on the square shaft of the roller, or they may be keyed on a round shaft, as desired.

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

1. In a feed-cutter, the lifting-rod H and devices connected thereto, ratchet-wheel *f*, roller-shaft F', and carrier G, having finger *k*, in combination with the graduated plate J, having lug *k'* and an open slot, *m*, and with bolt *n*, nut *o*, and the pawl *r*, as set forth.

2. In a feed-cutter, the combination, with the

ratchet-wheel *f*, shaft *F'*, and the carrier *G*, pivoted on said shaft, and having a slot, *e*, of pawl *d*, finger *k*, link *I*, sleeve *i*, set-screw *i'*, lifting-rod *H*, provided with stop-pin *h*, plate
5 *J*, having the slot and securing devices, pawl *r*, and spring *p*, as set forth.

3. A feed-roller for a straw-cutter, consisting of the staves or sections *N N N*, the shaft *F'*, carrying the hubs *M*, slotted at *x x*, fasten-
10 ing screw-bolts *z z*, and nuts *z' z'*, all construct-

ed as shown and described, and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand, at Racine, in the county of Racine and State of Wisconsin, in the pres- 15
ence of two witnesses.

ABRAHAM M. FORRESTER.

Witnesses:

STANLEY S. STOUT,
M. LAWSON.