J. A. SCHWERDT.

Feed-Cutter.

No. 161,448. Patented March 30, 1875.

Fig: 1.

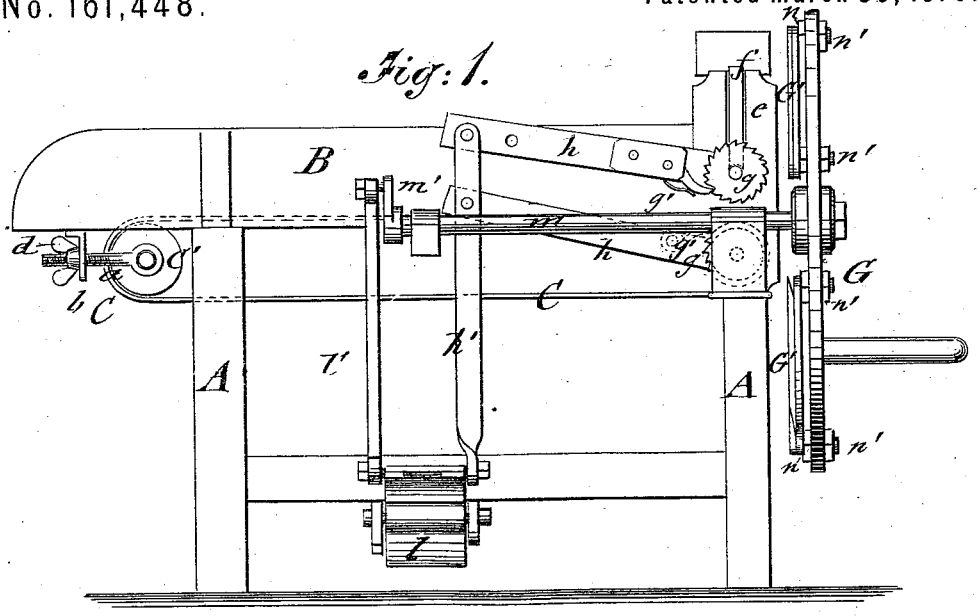


Fig: 2.

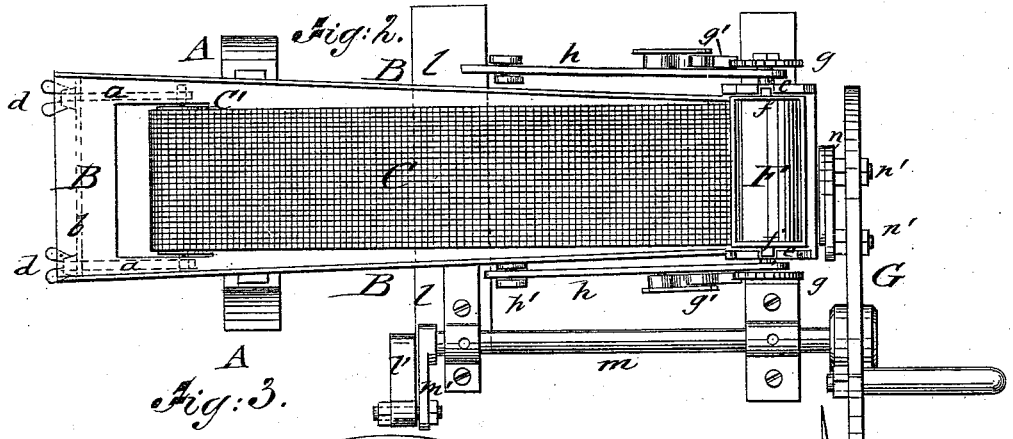


Fig: 3.

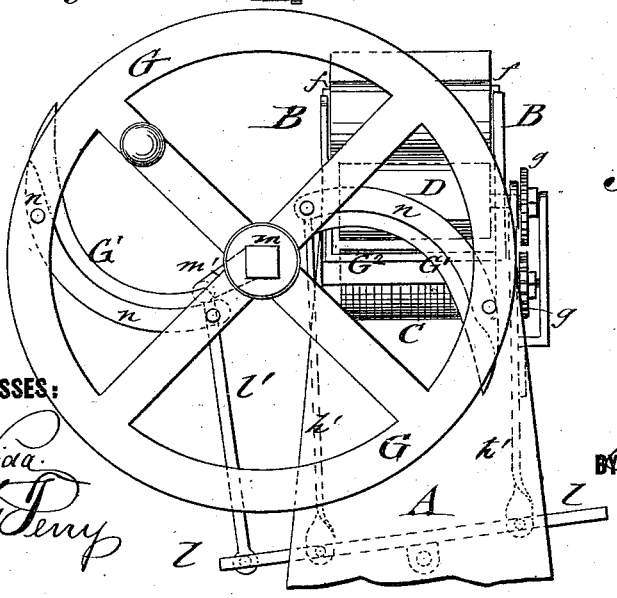
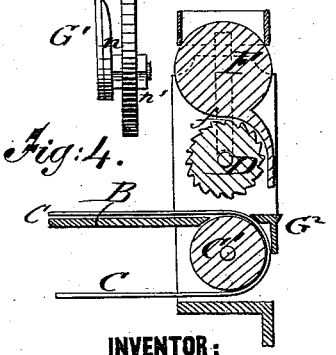


Fig: 4.



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UNITED STATES PATENT OFFICE.

JOHANN A. SCHWERDT, OF NEW YORK, N. Y.

IMPROVEMENT IN FEED-CUTTERS.

Specification forming part of Letters Patent No. **161,448**, dated March 30, 1875; application filed September 26, 1874.

To all whom it may concern:

Be it known that I, JOHANN A. SCHWERDT, of New York city, in the county and State of New York, have invented a new and Improved Feed-Cutter, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a side elevation of my improved feed-cutter; Figs. 2 and 3, respectively, top and end views of the same; and Fig. 4 a detail vertical transverse section of the feeding mechanism.

Similar letters of reference indicate corresponding parts.

The invention consists in an arrangement of feed-rollers, pawl-levers, connecting-rods, a treadle-lever, and a wheel carrying two blades or cutters, and mounted on a crank-shaft, said parts being so connected that the rollers are simultaneously operated at each half-revolution of the wheel, and the straw or other material fed forward just previous to the cutting-stroke of each blade.

Heretofore in machines of this particular variety the arrangement has been such as admitted of but one intermittent rotary movement of the feed-rollers during the time the rollers in my machine make two.

The upper grooved feed-roller D slides by its shaft vertically in slotted recesses *e* of the side standards of the cutter-box, the shaft ends being acted upon by sliding rods *f* fitting into recesses *e*, and carrying a lateral box, F, for the insertion of a suitable regulating-weight. The weighted top roller D bears firmly on the hay, straw, or other material to be cut, and adjusts itself to a greater or less thickness of the same as it passes forward to the cutting-knives. The intermittent feeding of the belt and top roller is produced by side ratchets *g*, which are engaged by spring-pawls *g'* acting in opposite direction to each other, and being applied to pivoted lever-arms *h*, which are adjustably connected by a pivoted lever-rod, *h'*, with a lateral treadle, *l*, fulcrumed centrally to the lower part of the frame. Another lever-rod, *l'*, connects the swinging treadle *l* adjustably to the end of a crank, *m'*, of shaft *m*, for changing thereby the length of forward feeding of the material. Shaft *m* turns in suitable bearings of frame A, being placed parallel to the longitudinal axis of the cutter, and carrying at the front end a fly-wheel, G, of suitable size, which rotates in front of the feeding mechanism. To supporting arc-shaped bearing-plates *n* of the fly-wheel G, which are attached from a point at the circumference to a point near the center, are applied by set-screws *n'*, preferably two scythe-shaped cutting-knives, G^1, which are adjusted to pass closely along a steel blade, G^3, set into the bottom of the cutter-box B in front of the bolt. The powerful action of the cutting-knives cuts the material as soon as exposed to the same by the feeding mechanism, the motion being produced either by a handle attached to the fly-wheel, or by foot-power on the treadle.

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

In a feed-cutter, the wheel G, provided with two cutting-blades, G^1 G^1, the crank-shaft *m*, centrally pivoted treadle-lever *l*, connecting-rods *l' h' h'*, pawl-levers *h h*, the two feed-rollers C and D, the latter made vertically-adjustable, and each having ratchet-wheels *g g*, all combined and arranged to operate as shown and described.

JOHANN A. SCHWERDT.

Witnesses:
ADAM E. SCHWERDT,
PAUL GOEPEL.