

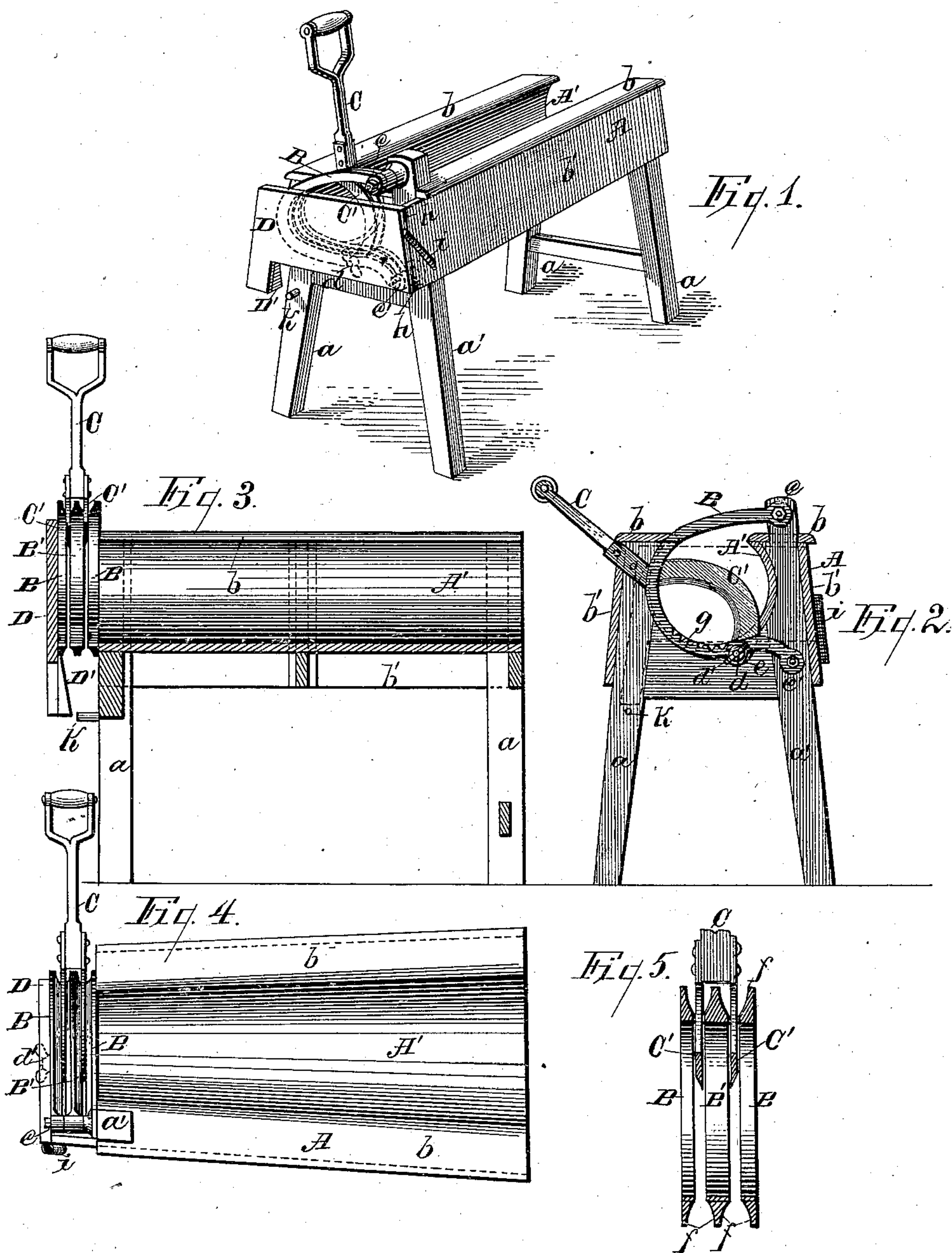
(No Model.)

W. H. HALLOCK & A. N. SMITH.

FEED CUTTER.

No. 255,429.

Patented Mar. 28, 1882.



Witnesses:

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UNITED STATES PATENT OFFICE.

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FEED-CUTTER.

SPECIFICATION forming part of Letters Patent No. 255,429, dated March 28, 1882.

Application filed December 7, 1881. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM H. HALLOCK and ALONZO N. SMITH, both of Racine, in the county of Racine, and in the State of Wisconsin, have invented certain new and useful Improvements in Feed-Cutters; and we do hereby declare that the following is a full, clear, and exact description thereof.

Our invention relates to hand feed-cutters; and it consists in certain peculiarities of construction, as will be more fully set forth hereinafter.

In the drawings, Figure 1 is a perspective of our improved machine. Fig. 2 is an end view of the same with the gage-board removed and its position indicated by dotted lines. Fig. 3 is a longitudinal vertical section, and Fig. 4 is a plan view, of the entire machine. Fig. 5 is a detail view.

A represents the body or box of our machine, supported on any ordinary frame-work, preferably on four legs, and put together and braced as shown.

A' represents the interior of the body, which is made nearly circular in cross-section, and which tapers longitudinally, decreasing in diameter as it approaches the cutting-bars. The legs or standards *a a a a'* project up into the box between the inner circular surface, A', and the outside of the box, and the upper portions of three of them are concealed by the top and side boards, *b* and *b'*, of the said box, while one of the standards, *a'*, projects up above the top board, *b*, and to this standard the guiding and cutting bars B B' B are securely bolted at *c* and *c'*.

C represents the shank or handle of the knife, having two or more blades, C' C', curved, as shown, in opposite direction to the curve of the cutting-bars, between which they work, and to which they are secured by a bolt, *d*, and thumb-nut *d'*, the bolt passing through perforations in the ends of the knives, and through similar perforations in the lugs *e*, cast on the under side of the cutting-bars. The knives are sharpened to a bevel-edge on opposite sides, as shown in the detail view, Fig. 5, and the center bar, B', forms a cutting edge or plate from the point where the knife edges and the edges of the said bar come in contact, so that the machine works on the principle of a pair

of shears. These bars are beveled or cut away on their outer edges, as shown at *f f*, to prevent lodgment of the cut material between the bars, and the said bars are notched or corrugated on their lower inner edges, as shown at *g*, to keep the straw, hay, or stalks which are being cut well and evenly distributed, and prevent this material from being crowded toward one side by the pressure of the knives.

D represents a gage-board, hinged at *h h* to one of the side boards, *b'*, of the box A, which board projects far enough forward to clear the cutting-bar attachment. This board has the incline D', secured at the side opposite the hinges on the inner side of said board, so that the knife C C' C', in its downward sweep, will encounter this incline, and thus force the gage-board open, permitting the cut ends of straw, &c., to readily drop down, while a spring, *i*, at the hinged end will restore the gage-board to its original position as soon as the knife is raised. This gage-board insures the equal length of all the cut feed, as the board is placed at a distance beyond the outer knife equal to the distance between the two knives, and thus all the feed will be cut the same length without the necessity of either skill or care on the part of the operator. A pin, *k*, on the other front standard, *a*, prevents the knife from going too far in its downward sweep.

Our machine possesses several advantages over those now in use. By making the inside of the feed-box circular and tapering we can take any ordinary-sized bundle of hay, straw, oats in the bundle, or even cornstalks with ears of corn on them, and insert the bundle at the wide end of the box. Then as we push the bundle forward the gage-board will prevent it from going too far, while at the same time the corrugated surface of the cutting-bars will keep the straws or stalks well distributed, and then by a single downward sweep of the knife the material is cut twice, and as the same sweep of the knife automatically opens the gage-board all the cut feed instantly drops down into the proper receptacle, being aided in this by the beveled or cut-away construction of the outer edges of the cutting-bars. As the machine works on the principle of shears, it will cut clean and clear without drawing the feed

through uncut, as rollers frequently do. Its simplicity of construction is another point in its favor, as are the ease and facility with which the knives can be removed for sharpening by simply unscrewing the thumb-nut and pushing back the bolt.

It is obvious that more cutting-blades could be added, if desired, without departing from the spirit of our invention; but for all practical purposes we deem two sufficient.

The guiding and cutting bars B B' B are readily detachable, and an extra center bar of different width can be furnished, if desired to at any time vary the length of cut; but these details do not affect the principle of our invention, the essential features of which remain unchanged, whether two or more blades are secured to the knife-handle.

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

1. In a feed-cutter, the combination of the guiding and cutting bars B B' B with the knife C, having the blades C' C' sharpened to a bevel on opposite sides to form shear-edges in conjunction with the center bar, B', as shown and described.

2. In a feed-cutter, the combination of the box or body A A', guiding and cutting bars B B' B, and knife C C' C' with the hinged gage-board D, having incline D', and the spring i, as shown and described, and for the purpose set forth.

In testimony that we claim the foregoing we have hereunto set our hands this 23d day of November, 1881.

WILLIAM H. HALLOCK.
ALONZO N. SMITH.

Witnesses:

ALBERT S. RITCHIE,
SAM'L. RITCHIE.