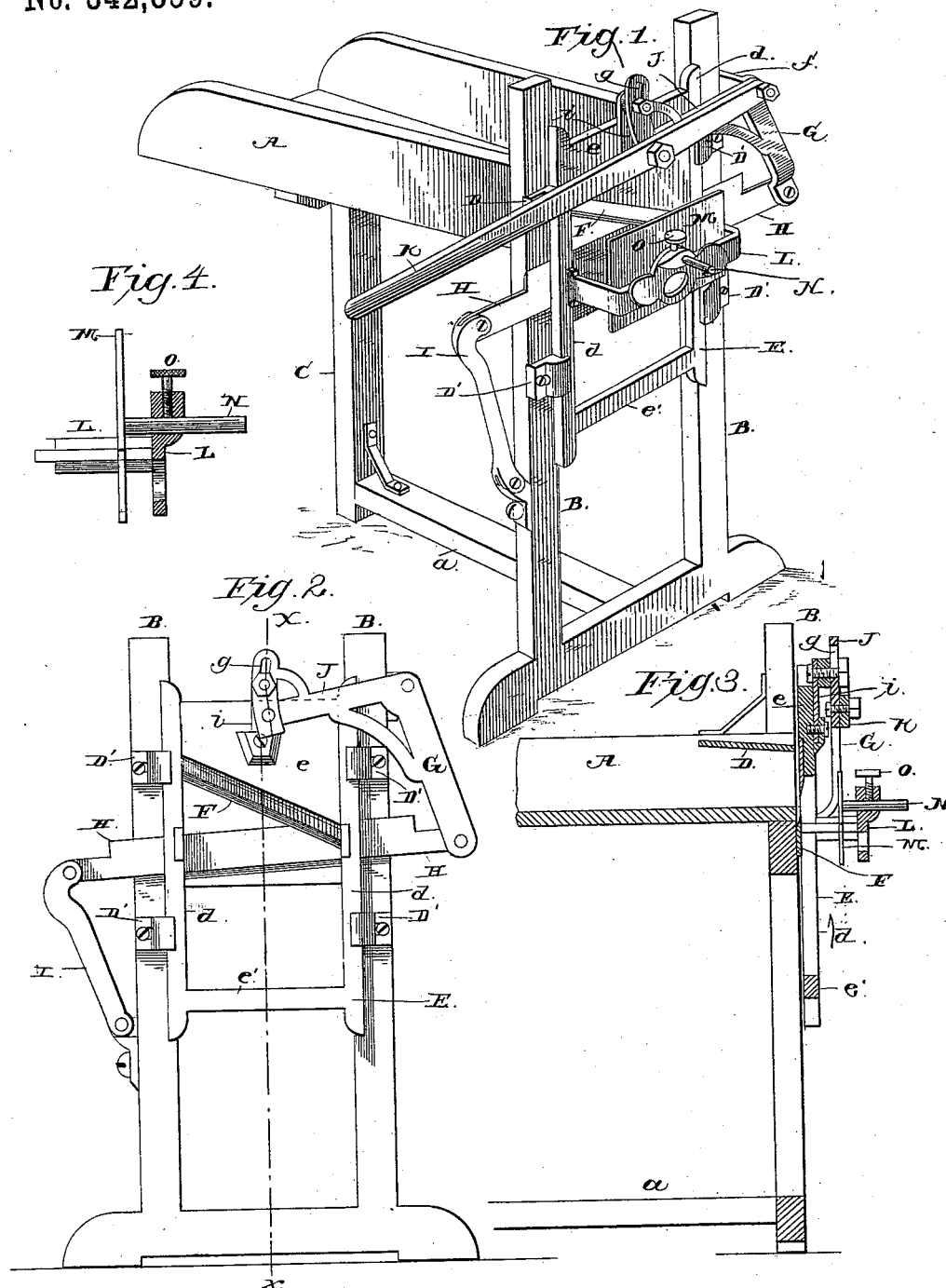


(No Model.)

J. BUCK.  
FEED CUTTER.

No. 342,859.

Patented June 1, 1886.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

JOSEPH BUCK, OF CROTON, MICHIGAN.

## FEED-CUTTER.

SPECIFICATION forming part of Letters Patent No. 342,859, dated June 1, 1886.

Application filed July 6, 1885. Serial No. 170,830. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH BUCK, a citizen of the United States, residing at Croton, in the county of Newaygo and State of Michigan, have invented a new and useful Improvement in Feed-Cutters, of which the following is a specification, reference being had to the accompanying drawings.

My invention has relation to improvements in feed-cutters; and the novelty consists in the peculiar construction and combination of parts, substantially as hereinafter set forth, and particularly pointed out in the claims.

In the drawings, Figure 1 is a perspective view of a feed-cutter embodying my invention. Fig. 2 is a front elevation with the operating handle or lever and gage removed. Fig. 3 is a vertical section on the line *x x* of Fig. 2, and Fig. 4 is a sectional view of the gage detached.

In the accompanying drawings, in which like letters of reference indicate corresponding parts in all the figures, A represents the feed table or hopper, which is supported at its forward end by standards B, which extend a slight distance above the upper end of the feed table. The feed-table is supported at its other end by a standard, C, which is connected with a beam, *a*, extending from a cross-piece, *b*, connecting the standards B. At the front end of the feeding-table is secured to the upper faces of the sides thereof a board, D, under which the feed passes to the cutters.

Upon the outer or front sides of the standards B are secured guide-brackets D', in which is adapted to slide vertically a frame, E. This frame E is composed of the vertical strips *d*, connected at their upper and lower ends by strips *e e'*. The strip *e* is, as shown, provided with an inclined or oblique lower edge, and secured to the inner side of said strip *e*, at an incline, is a cutting-knife, F. This cutting-knife F may be perfectly straight, and secured to the strip *e* obliquely or at an incline; or it may have just its lower end provided with an inclined cutting-edge. It will be observed that when the frame E is lowered the lower edge of the cutting-knife will pass the floor of the feeding-table first, and as the frame descends the upper cutting-edge of the knife will gradually approach the said floor, from

which it will be seen that a shearing motion is obtained.

Extending outwardly from one of the standards B, near the upper end thereof, is an arm, *f*, to the outer end of which is pivoted a depending rod, G. The lower end of this rod extends inwardly, and to said lower end is pivoted at one end a cutting-knife, H. This cutting-knife H extends across the front of the machine, and is located in rear of the cutting-knife F. The other end of the knife H extends beyond the frame of the machine, and is pivoted to a rod, I, which is pivoted at its lower end to one of the standards B. By this means of suspending or hanging the cutting-knife H it will be seen that the same may move across the path or plane of movement of the cutting-knife F. As the rod G is moved outwardly from the frame, it causes the rod I to be drawn inwardly, thus gradually raising the cutting-knife H from the end at which it is pivoted to G its entire length above the floor of the feeding-table.

Projecting inwardly from the rod G is an extension, J, which is connected with the rod G near the upper end thereof. This extension J is provided with a slot, *g*, in its inner end, and pivotally connected with said extension is a weight, *i*, which is pivoted at its lower end to the strip *e*, the bolt and nut connection engaging the slot in the extension.

K represents an operating handle or lever, which is preferably pivoted at one end upon the same bolt or pin that the rod G is mounted on. This handle or lever K is also pivotally connected with the inner end of the extension J, said lever extending out beyond the side of the machine, from which point it may be operated.

Secured to the sliding frame E, about midway the ends thereof, and projecting outwardly thereof, is a bracket, L, which is provided on its inner sides with ribs, and working in said bracket is a gage-board, M, which has grooves on its ends to receive the ribs.

Projecting outwardly from the board M is a bar, N, which works in an opening in the outer side of the bracket L, and communicating with said opening is a set-screw, O, whereby the board may be moved inwardly or outwardly, and clamped at any desired ad-

justment by tightening the set-screw on the bar N. By this means the length of the feed to be cut can be regulated, the end of the bunch of hay or straw fed to the cutters abutting against the board M, which serves as a stop. If short feed is to be cut, the set-screw is loosened and the board moved inwardly, and the feed cut, and if long feed is to be cut the board is moved outwardly and clamped at the desired adjustment.

The operation is as follows: The frame E is raised by the pivoted handle or lever, thereby causing the cutting-knife to be raised above the floor of the table, and causing the knife H to be located below the table. As the outer end of the handle or lever is lowered, it will through its connection with the frame lower the same. The lower knife, H, is caused to move across the path of the knife F and upwardly by the rod G, which is forced outwardly by the extension J, which connects with said rod G both at its upper end, where it is pivoted, and below said point. The extension J is caused to move inwardly since it is pivoted at one end and connected with the extension at a point between its ends. It will be seen that as the knives are moved, one downwardly and the other horizontally and at the same time upwardly, and as the vertically-moving knife is set at an incline or angle, that said knives will have a shearing motion and will serve to effectually cut the feed with but little or no exertion.

The cutter is simple in its construction, may be so adjusted as to cut the feed in any desired length, is not likely to get out of order, and is strong and durable.

I am aware that it is not new to employ a vertically-moving knife-frame, a laterally-moving blade, and means for simultaneously operating the same, and hence I disclaim such construction.

Having thus described my invention, I claim—

1. The combination of a table, a knife-carrying frame, an operating-lever, a bracket mounted on said frame, a laterally-adjustable gage-plate having a guide-rod, and a clamping-screw, substantially as described.

2. In a feed-cutter, and in combination with a reciprocating knife carrying frame, a bracket secured to said frame and having guideways, an adjustable gage-plate mounted on said guides, a shaft or pin secured to said plate and passing through the bracket, and a tightening-screw working in said bracket and bearing on the shaft or pin of the gage-plate, as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JOSEPH BUCK.

Witnesses:

SETH S. WATROUS,  
MYRTIE B. WATROUS.