L. BECKER.

FEED-CUTTER.

No. 192,218. Patented June 19, 1877.

Fig 1

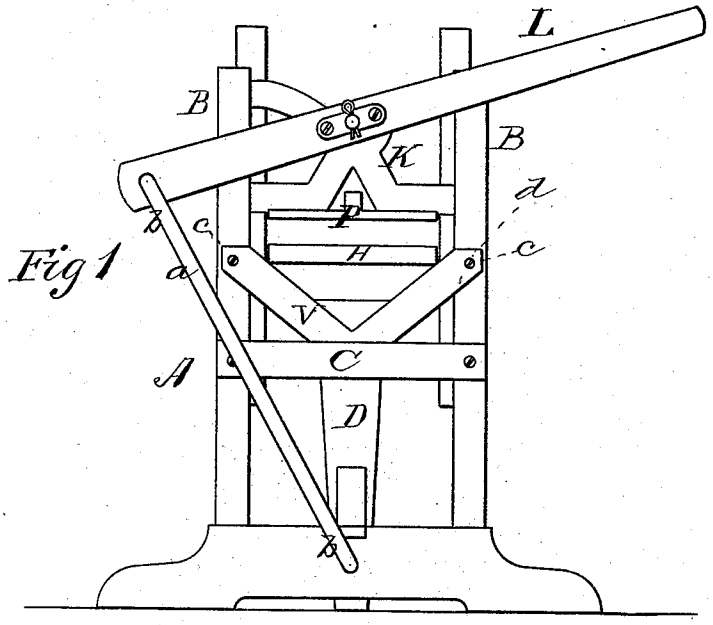
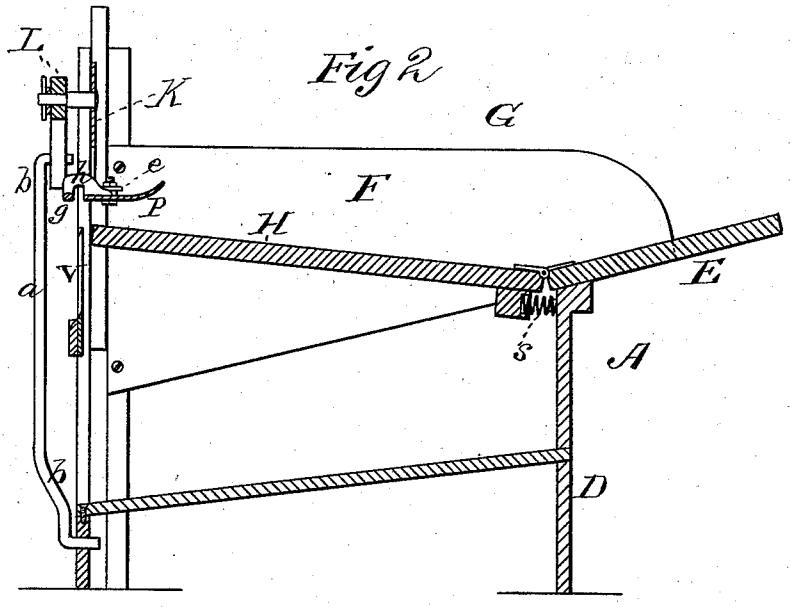


Fig 2



WITNESSES

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UNITED STATES PATENT OFFICE.

LEANDER BECKER, OF YORK, PENNSYLVANIA.

IMPROVEMENT IN FEED-CUTTERS.

Specification forming part of Letters Patent No. **192,218**, dated June 19, 1877; application filed May 26, 1877.

To all whom it may concern:

Be it known that I, LEANDER BECKER, of York, in the county of York and State of Pennsylvania, have invented a new and valuable Improvement in Feed-Cutters; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of an end view of my improved feed-cutter, and Fig. 2 is a longitudinal central section thereof.

This invention has relation to feed-cutters; and it consists in the construction and novel arrangement of the broad side walls and yielding bottom of the box; the spring and its bearings, whereby the upward pressure of said bottom is effected; the fixed knife behind which the bottom plays; the pressure-head working against the yielding table; its connecting-bridge, in combination with the angular knife and its adjustable connection to the slide-gate, and the reversible lever, whereby the cutter may be converted readily into a right or left hand machine, as hereinafter shown and described.

In the accompanying drawings, the letter A designates the frame of the machine. At the cutting end are two vertical standards, B, having suitable cross-ties C, and in rear is arranged the support D under the feed-board E, which connects the feeding ends of the broad sides F of the box G, which are connected in front to the vertical standards B, and are of sufficient breadth to allow full play to the motions of the bottom-board H, which is arranged to vibrate upon a hinge-joint at the inner edge of the feed-board E, rising and falling between the side walls F, and extending forward to the knife. Underneath, a spring, *s*, preferably of rubber, is arranged between a fixed bearing and a suitable abutment on the bottom-board, and designed to give said bottom-board the proper degree of upward pressure. Suitable slideways are provided in connection with the vertical standards in front for the slide-gate K, which is made to rise and fall by means of a transverse lever, L, pivoted to it in the median line, and connected to the front cross-brace or tie-board by means of a connecting-rod, *a*, pivoted to said brace or tie-board, also in the median line. Either or both ends of this connecting-rod may be bent, as shown at *b*, so that it can be detached in a moment at its end to allow of the reversal of its lever and re-attachment. In this manner the machine may be adapted to the right hand or left hand with the utmost facility.

The knife V is angular or otherwise shaped, with the apex down in the construction illustrated, and is seated in rabbeted end and apex bearings *c*, being secured by means of screws *d*, so that it can be readily detached for sharpening. Its highest level, or the line between its ends, is even with or above the end of the spring board or bottom H, when the latter is in the raised position. The distance between the level and the re-entrant angle of the knife is the vertical stroke.

To the slide-gate K is attached, by means of clamp-nuts and screws and slotted lugs *e*, projecting inward from said gate, the pressure-head P, which is curved upward toward its feed-edge, to readily admit the feed, and is provided with an exterior or front bar, *g*, for pressing down the projecting ends of the feed, which is supported by a raised and notched or bent bridge or arm, *h*, centrally placed in the construction illustrated, and adapted to receive the angular edge of the knife as the slide descends to the end of the stroke.

The feed received upon the spring-board is pushed forward according to the length of cut required, and, being compressed between the presser-head and said spring-board, is carried down against the oblique edges of the knife in a sort of condensed or packed condition, so that the cut is crisp and true. The broad sides of the box prevent the escape of feed at the sides during the play of the spring-board, and at the same time give the box strength, because of the broad bearings in connection with the vertical end posts—a matter of some importance, as the transverse bracing action of a rigid bottom is foreign to the construction.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a feed-cutter, the combination, with the broad sides F of the box, of its yielding or hinged bottom H, and spring, substantially as specified.

2. The combination, with the broad sides and spring bottom, the pressure-head P and pressure-bar *g*, of the angular knife V, rigidly secured to the frame, substantially as specified.

3. The combination, with the feed-board E and the bottom-board H, having a hinge-joint connection therewith, of their respective abutments or bearings, and the spring *s*, substantially as specified.

4. The pressure-head P, having the outside pressure-bar *g*, supported by the notched or bent arm *h*, substantially as specified.

5. The combination, with the slide-gate, having the slotted lugs *e* projecting inward, of the adjustable pressure-head and its clamp-nuts and screws, substantially as specified.

6. The combination, with the yielding bottom, fixed sides, and fixed knife, of a rising-and-falling pressure-head and pressure bar, substantially as specified.

7. The combination, with the yielding bottom H and angular fixed knife V, of the rising-and-falling pressure-head P and its outside pressure-bar *g*, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

LEANDER BECKER.

Witnesses:

D. BEAVERSON,

JNO. A. NUTZELL.