(Model.)

E. C. NORTHROP.

STRAW CUTTER.

No. 259,579. Patented June 13, 1882.

Fig. 1.

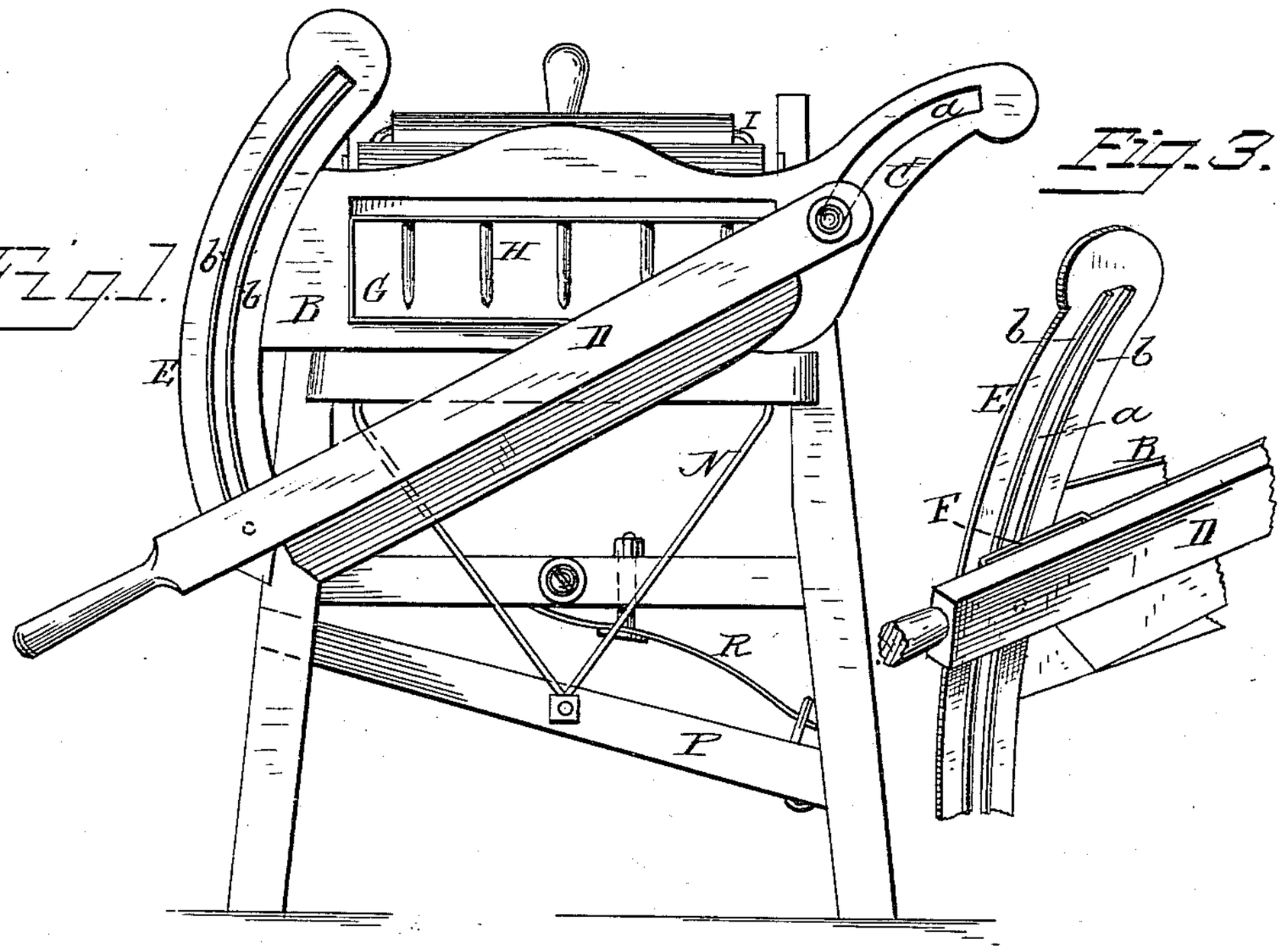

Fig. 3.

Fig. 2.

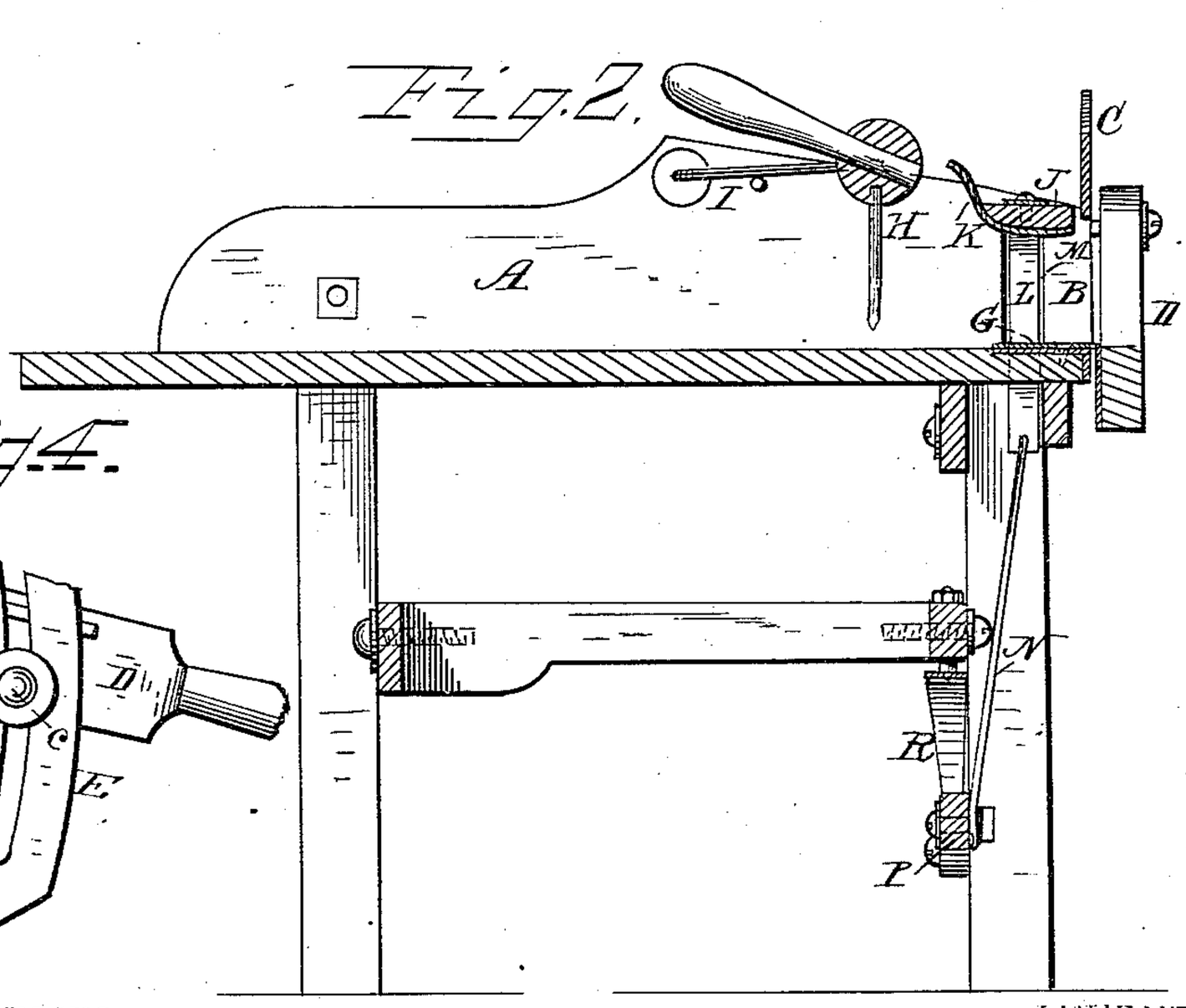

Fig. 4.

WITNESSES

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ELIHU C. NORTHROP, OF FORKS TOWNSHIP, SULLIVAN COUNTY, PA.

STRAW-CUTTER.

SPECIFICATION forming part of Letters Patent No. 259,579, dated June 13, 1882.

Application filed March 14, 1882. (Model.)

To all whom it may concern:

Be it known that I, ELIHU CLIFT NORTHROP, a citizen of the United States, residing at Forks township, in the county of Sullivan and State of Pennsylvania, 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 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 front elevation of my invention. Fig. 2 is a longitudinal central section thereof; and Fig. 3 is a detail view in perspective, showing the slotted guide-plate and knife-beam. Fig. 4 is a detail view of the rear side of the slotted guide-plate and knife-beam, showing the bolt passing through said plate.

The present invention has relation to certain new and useful improvements in feed-cutters, and the object thereof is to provide a simple and practical machine that can be operated to give a draw-cut across the straw or hay with the least possible labor, and the same held while being subjected to the action of the knife, and also the supply regulated. These objects I attain by the construction substantially as shown in the drawings and hereinafter described.

In the accompanying drawings, A represents the trough, mounted or supported upon suitable legs, said trough at its forward end having a cast-metal head, B, with a rectangular opening, through which the feed to be cut passes.

The head B, at one side, has an extension, C, formed with a segmental or curved slot, *a*, and at its opposite side a slotted segmental plate, E.

To the extension C is connected one end of a knife-beam, D, by a suitable bolt passing through the slot *a*, and a nut secured to the screw-threaded end of said bolt, the latter traveling in the slot as the knife-beam is oscillated.

The opposite end of the knife-beam D is connected to the slotted plate E by a bolt, *c*, passing through the slot in the plate, said bolt being secured to the knife-beam; or any suitable means may be employed that will allow the knife-beam to be oscillated and guided in its movement by the slot in said plate.

The plate E, at each side of the slot, has ribs *b*, against which bears a spring, F, secured to the inner side of the knife-beam D, as shown in Fig. 3, the object of which is to lessen the friction and wear upon the handle and render the point of contact between the plate and knife-beam susceptible of yielding when cutting the feed, and at the same time keep the spring in close contact with the ribs and insure the knife coming properly against the edge of a projecting frame, G, said frame being secured in the head B, against the lower edge of which the feed is cut.

The hay or straw is fed forward by means of a rake, H, mounted upon a swinging frame, I, connected to the inner sides of the trough A. This frame is constructed of wire, which loosely passes through the body of the rake, so as to enable the latter to be brought at any desired angle to the frame, so that the rake can not only be thrown back out of the way or advanced to its work, but the rake-teeth adjusted to the required angle to accommodate it to the quantity of feed passing through the trough.

At the forward end of the trough, at the rear of the cast-metal head B, is located a cross-beam, J, provided upon its under side with a curved deflecting-plate, K, extending upward at the rear, the purpose thereof being to guide the feed through the opening in the head B, said beam vertically reciprocating within guides formed in the sides of the trough by means of a foot-treadle, P. This treadle has connected to it a wire frame, N, which in turn is secured to the depending ends of a metal strap, L, secured to the upper side of the beam J across its entire length.

The strap L at the ends of the beam J is bent down to form vertical extensions, which move in ways M, as shown in Fig 2, thereby guiding the beam in its reciprocating movement.

The foot-treadle P is pivoted to one of the legs of the machine, and has loosely connected to it one end of a leaf-spring, R, the opposite end of said spring being secured to the frame of the machine, by means of which the reciprocating beam is returned and held to its normal position.

The operation of my invention is as follows: The straw or hay is fed forward by means of the oscillating rake H, and the straw or hay is

held in position to be cut by depressing the beam J upon it at the proper time by operating the foot-treadle P. The knife is then drawn across the projecting feed by depressing the beam D, the slots in both the extension C and plate E causing the knife to be drawn or forced across the feed obliquely, giving the proper draw-cut.

The rake H, it should be understood, is operated and held down in position by the handle connected thereto, the teeth of the rake penetrating the straw or hay, the position of said rake when thus brought down being shown in Figs. 1 and 2.

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

1. In a feed-cutter, the trough A, provided with metal head B, slotted extension C, and slotted plate E, with ribs *b*, in combination with the knife-beam D, having upon its inner side the spring F to bear against said ribs, substantially as and for the purpose set forth.

2. In a feed-cutter, the combination, with the frame I, pivoted to the sides of the trough A, of the rake H, loosely connected to said frame, whereby it is capable of movement at any angle from a perpendicular independent of the swinging motion of the pivoted frame, substantially as and for the purpose specified.

3. In a feed-cutter, the knife-beam D and beam J, carrying deflecting-plate K, constructed to operate as described, in combination with the rake H, loosely connected to the swinging frame, whereby said rake may be brought to any angle required with relation to said frame, substantially as and for the purpose described.

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

ELIHU CLIFT NORTHROP.

Witnesses:
J. ANDREW WILT,
B. S. DARTT.