(No Model.)

J. WALKER.

STRAW CUTTER.

No. 245,331. Patented Aug. 9, 1881.

Fig. 1.

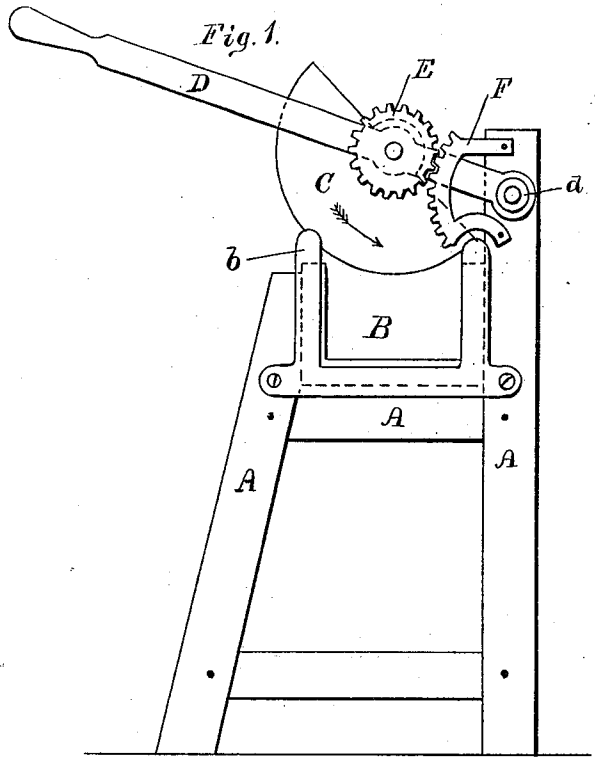


Fig. 2.

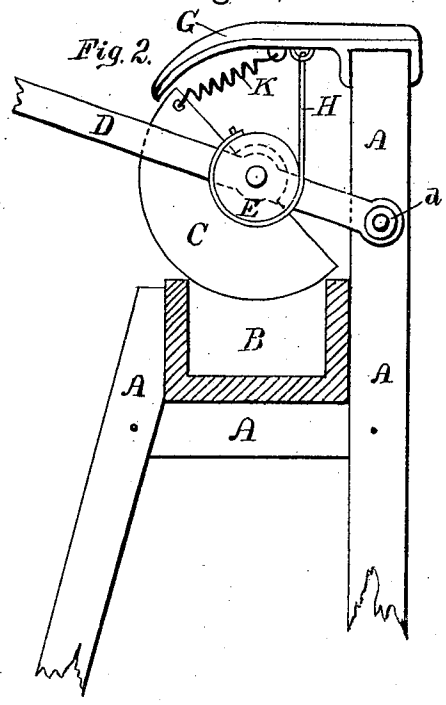


Fig. 3.

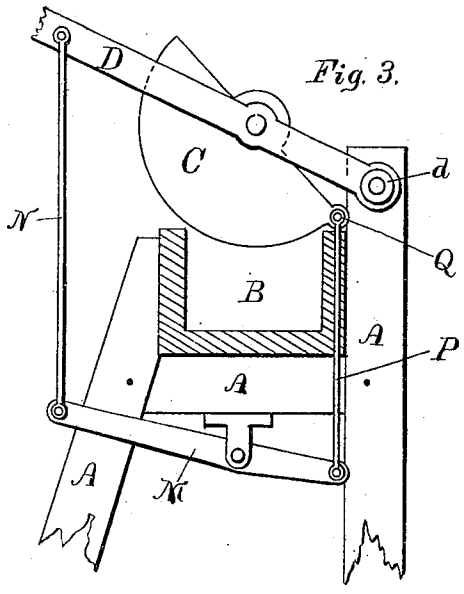
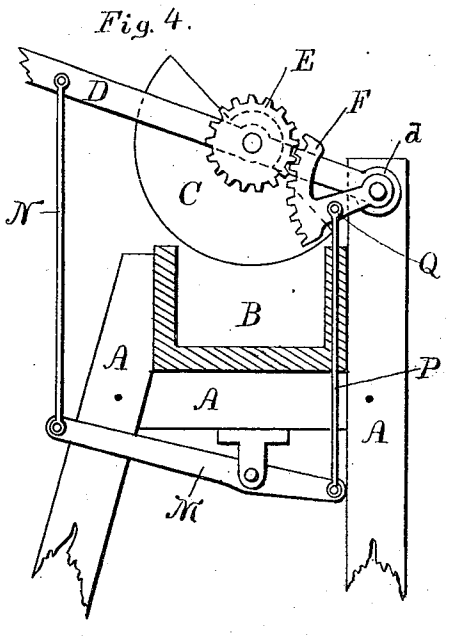


Fig. 4.



Witnesses:

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STRAW-CUTTER.

SPECIFICATION forming part of Letters Patent No. 245,331, dated August 9, 1881.

Application filed January 19, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH WALKER, of Manchester, in the county of Chesterfield and State of Virginia, have invented a new and useful Improvement in Straw-Cutters; and I do hereby declare that the following is a full and exact description of the same, reference being had the accompanying drawings, and to the letters of reference marked thereon.

The object of my invention is to provide a compact, cheap, and yet efficient machine for cutting straw, hay, and other fodder. This I accomplish by providing a curved, circular, or semicircular knife attached to the hand-lever and revolved in a plane at a right angle to the material to be cut by suitable mechanism, as hereinafter described.

In the drawings, Figure 1 is a front view of my invention, while Figs. 2, 3, and 4 are simply modifications of the mechanism for revolving the knife.

In Fig. 1, A A is the frame; B, the box in which the material to be cut is placed. The knife C is curved, circular, or semicircular, and pivoted to the hand-lever D immediately above the center of the cutting-box B. The shaft to which the knife C is fixed passes through the lever D, and has fixed upon it the cog-wheel E, which engages the toothed segment F, fixed to the frame A. The knife-guide *b* is fixed to the front of the cutting-box B, and at such distance from it as to allow the knife C to pass freely up and down between it and the end of the cutting-box B.

The operation of my machine is a follows, viz: The machine being in the position shown in Fig. 1, the material to be cut is placed in the cutting-box B and pushed out under the knife C. The lever D being depressed, the cutting-edge of the knife C, moving in a plane at a right angle to the material in the cutting-box, is brought forcibly against the straw. At the same time the cog-wheel E, engaging the fixed toothed segment F, is revolved, carrying with it the knife C, in direction of the arrow, thus drawing the cutting-edge of the knife C across the straw in a plane at a right angle thereto, and with a natural cutting-stroke, whereby great cutting effect is obtained with the least expenditure of power. The guide *b* holds the knife C to its place and prevents it from crowding off from the edge of the cutting-box B and leaving a portion of the straw uncut.

In Fig. 2 the parts are similar, except that the cog-wheel E is replaced by the roller E, upon which a chain or cord, H, fixed to the guard G, is wound, and by which the knife C is revolved, while the spiral spring K keeps the chain H always tight, and revolves the knife C backward when the lever D is raised.

In Fig. 3 the knife C is simply pivoted to the lever D, and is revolved by the connecting-rod N, acting through the lever M, and connecting-rod P, attached to the knife C at Q.

Fig. 4 is a combination of the principles of Figs. 1 and 3. The cog-wheel E engages the toothed segment F, which is pivoted with the lever D at *d*. The segment F is operated by the connecting-rod N, acting through the lever M, and connecting-rod P, attached to the segment F at Q. These are the most natural variations of the device shown in Fig. 1, which latter I claim as my original device.

I am aware that a knife-guide similar to that shown at *b*, Fig. 1, has been often used; but

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

1. In a straw-cutter, the hand-lever D, provided with a revolving knife, C, and cog-wheel E, constucted and arranged substantially as described.

2. The combination, in a straw-cutter, of the revolving knife C, constructed and arranged as described, and suitable mechanism, substantially as described, for operating said knife in the manner substantially as and for the purpose set forth.

3. The combination, in a straw-cutter, of the revolving knife C, lever D, cog-wheel E, and toothed segment F, the several parts constructed and arranged substantially as described and shown.

4. In a straw-cutter, the combination, with the cutting-box B, provided with knife-guide *b*, of the revolving knife C, operated by lever D, in combination with cog-wheel E and toothed segment F, the several parts constructed and arranged substantially as shown.

This specification signed and witnessed this 18th day of January, 1881.

JOSEPH WALKER.

Witnesses:
OSCAR E. PERRIGO,
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